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SURFACE WATER SUPPLY *of the* UNITED STATES 1942

PART 12

PACIFIC SLOPE BASINS IN WASHINGTON AND
UPPER COLUMBIA RIVER BASIN

Prepared under the direction of
GLENN L. PARKER, Chief Hydraulic Engineer
AND OF T. R. NEWELL, A. H. TUTTLE, AND F. M. VEATCH, District Engineers

In cooperation with the States of
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and other agencies



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SURFACE WATER SUPPLY OF PACIFIC SLOPE BASINS IN WASHINGTON AND UPPER COLUMBIA RIVER
BASIN, 1942

SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of stage and flow made on streams, lakes, and reservoirs in the United States during the water year ending September 30, 1942. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of the flow of streams and of the stage and contents of lakes and reservoirs have been made at about 9,400 gaging stations in the United States and also at many gaging stations in Alaska and Hawaii. In July 1942, 4,970 gaging stations were being maintained by the Geological Survey and cooperating organizations. Miscellaneous discharge measurements were made at many other points.

In the execution of the work many State and private organizations have cooperated, either by furnishing data or by assisting in collecting data. Cooperation of the first kind is acknowledged in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 11.

DEFINITION OF TERMS

The units in which stream-flow data are presented in this report and other terms used herein are defined as follows:

"Second-foot" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

"Second-foot 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 draining from it in a given period were uniformly distributed on its surface. It is used for comparing run-off with rainfall, which is usually expressed in inches.

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

"Second-foot-day" is the volume of water represented by a flow of 1 second-foot for 24 hours. It is equivalent to 86,400 cubic feet, 1.983471 acre-feet, or 646,317 gallons and represents a run-off of 0.0372 inch from 1 square mile.

"Stage-discharge relation" is an abbreviation for the term "relation between gage height and discharge."

"Control" is a term used to designate a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural section, a reach of the channel, or an artificial structure.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the records of stage 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. Structures in use at gaging stations are shown on plates 1 and 2.

Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily mean gage height to these rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the "shifting-control method," in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. At times the stage-discharge relation for a station may be temporarily changed by the presence of aquatic growth or debris on the control. For such times the daily mean discharge is computed by what is essentially the "shifting-control" method, described above.

At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources, which necessitates the use of the "slope method," in which the slope or fall in a reach of the stream is a factor in the determination of discharge. Information requisite for determining the slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage, and for them the rate of change of stage is used as a factor in the determination of discharge.

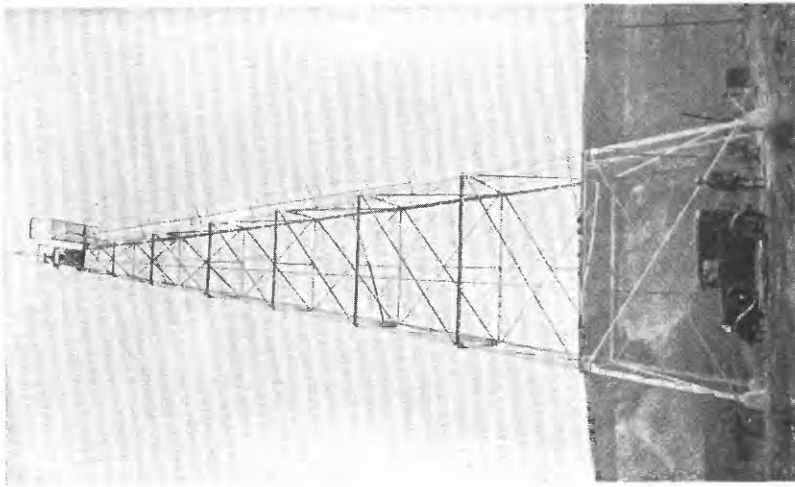
At most gaging stations in the northern part of the United States and at some in the mountainous regions of other parts the stage-discharge relation is affected by ice during the winter, which makes it impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for stations in the same or nearby basins. The days included in the periods of ice effect and the days during the winter period on which discharge measurements were made are indicated in the table by symbols referring to footnotes or are given in a general note following the table.

For most of the gaging stations on streams in the area covered by this report the data presented 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. Skeleton rating tables are published for all stations except those at which the daily discharge for the greater part of the year was determined by the shifting-control method, the slope method, or other special methods.

The description of the station gives the type of gage, its latitude and longitude determined from the best available maps, and information in regard to diversions that



A. COLUMBIA RIVER AT TRINIDAD, WASH.
Recording gage shelter and stilling well.



B. COLUMBIA RIVER AT TRINIDAD, WASH.
East cable tower.

GAGING-STATION STRUCTURES.



A. YAKIMA RIVER AT UMTANUM, WASH.
Measuring river discharge.



B. YAKIMA RIVER AT UMTANUM, WASH.
Gaging car and gaging-car garage.

GAGING-STATION STRUCTURES.

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. Under "Extremes" are given 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 (also the minimum discharge if useful); and the minimum gage height (unless 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 discharge represents the lowest stage, unless otherwise qualified. Selected peak discharges with the times of their occurrence are given below the table of monthly discharge for some stations. This supplementary information is generally omitted for stations having drainage areas of less than 10 square miles or more than 10,000 square miles or if the peak discharges usually exceed the corresponding mean discharges for the day by less than 10 percent.

For stations equipped with nonrecording gages, the table of daily discharge gives the discharge in second-feet corresponding to once-daily readings of the gage or the mean of twice-daily readings. For flashy floods the daily mean discharge is determined from gage-height graphs based on gage readings made once or twice daily or oftener, as stated in the station description. For stations equipped with water-stage recorders, except those on streams subject to sudden or rapid fluctuation, the table gives the discharge corresponding to the daily mean gage height. For stations subject to such fluctuation the daily mean gage height may not indicate the true daily mean discharge, which must be obtained by averaging the discharge for parts of the day or by using the discharge integrator, an instrument for obtaining the daily mean discharge from a continuous gage-height graph and containing as an essential element a curve representing the stage-discharge relation at the station.

In the table of monthly discharge the column headed "Second-foot-days" gives the sum for each month of the figures given in the table of daily discharge. The column headed "Maximum" gives the maximum daily discharge and not the momentary discharge when the water surface was at crest stage. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" gives the average flow in cubic feet per second during the month.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents is given. A skeleton table of capacity at given stages is usually given in the first report in which data for a station are published but is omitted from succeeding reports.

TIME BASIS

At 2 a.m. on February 9, 1942, as an emergency measure, the Nation shifted from standard time to "war time," and clock time in the several zones of the country was moved ahead 1 hour, or to 3 a.m. This made February 9 a 23-hour day. Time prior to 2 a.m.

February 9 as given herein refers to standard time; time after 2 a.m. February 9 refers to war time. To convert war time to standard time, subtract 1 hour.

Records of daily discharge prior to February 9, 1942, published herein have been computed on the basis of standard time. Records subsequent to that date have been computed on the basis of war time. The discharge given for February 9 is the mean for 23 hours. The mean discharge and run-off for the month of February have been computed from the total second-foot-days for the month without adjustment for the fact that February 9 was a 23-hour day. The small error resulting from this procedure has been disregarded.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily on (1) the permanency of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements and (2) the accuracy of observations 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 or a higher percent. The records of monthly and yearly mean discharge and run-off are, in general, more accurate than the daily records.

Yield at some stations as indicated by monthly means may vary widely from natural yield, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or other factors. For such stations figures of "second-feet per square mile" and "run-off in inches" are not published unless storage or diversion records are included indicating the extent of the regulation or diversion or unless satisfactory adjustments can be made for changes in contents of reservoirs or for other changes incident to use and control. Figures of second-feet per square mile and run-off in inches are also omitted if the drainage area includes large noncontributing areas or if the average annual rainfall over the drainage area 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 therefore the discharge recorded does not show the water supply available for further development, as prior appropriations below the station must first be satisfied.

The table of monthly discharge presents in summary the distribution of the flow past the station. The table of daily discharge affords opportunity for more detailed studies of the variation in flow. As further observations in each succeeding year may be expected to throw new light on data previously published, it should be borne in mind that such data are subject to revision in succeeding water-supply papers.

PUBLICATIONS

The results of stream-flow measurements are now published annually in 14 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. Pacific slope basins in Washington and upper Columbia River Basin.
13. Snake River Basin.
14. Pacific slope basins in Oregon and lower Columbia River Basin.

Water-supply papers and other publications of the Geological Survey containing data on the water resources of the United States may be obtained or consulted as explained 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:

East of the Mississippi River:

Albany, N. Y., 528 Federal Building.
 Atlanta, Ga., 3 North Rhodes Center, N. W.
 Augusta, Maine, Statehouse.
 Baton Rouge, La., 124 Geology Building, Louisiana State University.
 Boston, Mass., 939 Post Office Building.
 Charleston, W. Va., 408 Union Building.
 Charlottesville, Va., House G, Dawson Row, University of Virginia.
 Chattanooga, Tenn., 442 Post Office Building.
 College Park, Md., 105 Engineering Building, University of Maryland.
 Columbia, S. C., 119 United States Courthouse.
 Columbus, Ohio, 404 Engineering Experiment Station, Ohio State University.
 Harrisburg, Pa., 490 Education Building.
 Hartford, Conn., 203 Federal Building.
 Indianapolis, Ind., 205 Underwriters Building.
 Jackson, Miss., 208 Millsaps Building.
 Knoxville, Tenn., 337 Post Office Building.
 Louisville, Ky., 531 Federal Building.
 Madison, Wis., 666 State Office Building.
 Montgomery, Ala., 507 Post Office Building.
 New Philadelphia, Ohio, Muskingum Watershed Conservancy District Building.
 Ocala, Fla., 302 Post Office Building.
 Pittsburgh, Pa., 438-M New Federal Building.
 Raleigh, N. C., 242 Education Building.
 St. Paul, Minn., 1427 New Post Office Building.
 Trenton, N. J., 228 Federal Building.
 Urbana, Ill., 14 Post Office Annex, Elm Street.
 Williamsburg, Ky., Kentucky Highway Building.

West of the Mississippi River:

Austin, Tex., 302 West 15th Street.
 Boise, Idaho, 429 Federal Building.
 Denver, Colo., 230 Customhouse.
 Fort Smith, Ark., 6 Post Office Building.
 Helena, Mont., 408 Federal Building.
 Honolulu, Hawaii, 225 Federal Building.
 Idaho Falls, Idaho, 204 Federal Building.
 Iowa City, Iowa, 505 Hydraulic Laboratory, University of Iowa.
 Lincoln, Nebr., 1404 Statehouse.
 Los Angeles, Calif., 423-F United States Post Office and Courthouse.
 Oklahoma City, Okla., 503 Capital Office Building.
 Portland, Oreg., 606 Post Office Building.
 Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines and Metallurgy.
 St. Louis, Mo., 1002 New Federal Building.
 Salt Lake City, Utah, 303 Federal Building.
 San Francisco, Calif., 625 Market Street Building.
 Santa Fe, N. Mex., 204 United States Courthouse.
 Tacoma, Wash., 207 Federal Building.
 Topeka, Kans., 305 Federal Building.
 Tucson, Ariz., 210 Post Office Building.

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

Early records of the flow of streams in the United States are published in the reports listed below:

Stream-flow data for the years 1884-1901, in reports of the Geological Survey

(A = Annual Report; B = Bulletin; W = Water-Supply Paper)

| Report | Character of data | Year |
|---------------|---|------------------------|
| 10th A, pt. 2 | Descriptive information only. | |
| 11th A, pt. 2 | Monthly discharge and descriptive information..... | 1884 to 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 of streams east of the Mississippi River and Missouri River and tributaries above Kansas River. | 1897. |
| W 16..... | Descriptions, measurements, and gage heights of streams west of the Mississippi River except Missouri River and tributaries above Kansas River. | 1897. |
| 19th A, pt. 4 | Descriptions, measurements, ratings, and monthly discharge (also some long-time records). | 1897. |
| W 27..... | Measurements, ratings, and gage heights of streams east of the Mississippi River and Missouri River and tributaries. | 1898. |
| W 28..... | Measurements, ratings, and gage heights of streams west of the Mississippi River except Missouri River and tributaries. | 1898. |
| 20th A, pt. 4 | Monthly discharge (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 78..... | Monthly discharge..... | 1901. |

Papers on surface water supply containing records from 1899 to date, grouped by years and drainage basins, are listed by number on page 7. The data for any particular station will, in general, be found in the reports covering the years during which the station was maintained. For example, the data for 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years.

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, the streams and points of measurement listed appearing in the same relative order as the streams and gaging stations in the body of the report. An index of the records obtained prior to 1904 has been published in Water-Supply Paper 119.

Each of the reports on surface water supply for the year 1939, issued as Water-Supply Papers 871 to 884 (see table on p. 7), contains a summary of yearly discharge at gaging stations in the area covered by that report. Gaging stations at which 10 or more complete years of record have been collected are represented. These summaries are available also as separate reprints.

Numbers of water-supply papers containing results of stream measurements, 1899-1942
(For basins included see p. 4)

| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|-------------|------------------|---------|--------|--------|--------|----------|--------|--------|----------|----------|--------|--------|--------|--------|
| 1899 a..... | 35 | 355, 36 | 36 | 36 | 36 | 359, 37 | 37 | 37 | 437, 38 | 38, 39 | 38, 39 | 38 | 39 | 38 |
| 1900 g..... | 47, 148 | 49 | 49 | 49 | 49 | 150 | 50 | 50 | 50 | 51 | 51 | 51 | 51 | 51 |
| 1901..... | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 | 65, 75 |
| 1902..... | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 | 82 |
| 1903..... | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 | 83 |
| 1904..... | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 |
| 1905..... | 124, p125, q126 | 128 | 128 | 128 | 128 | 128, 131 | 131 | 131 | 133 | 133, 134 | 134 | 136 | 136 | 136 |
| 1906..... | o185, p186, q187 | 189 | 189 | 189 | 189 | 172 | 172 | 172 | 176, 177 | 177 | 177 | 178 | 178 | 178 |
| 1907..... | o186, p186, q187 | 203 | 203 | 203 | 203 | 203 | 203 | 203 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1908..... | o187, p187, q188 | 204 | 204 | 204 | 204 | 204 | 204 | 204 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1909..... | 205 | 205 | 205 | 205 | 205 | 205 | 205 | 205 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1910..... | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 206 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1911..... | 207 | 207 | 207 | 207 | 207 | 207 | 207 | 207 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1912..... | 208 | 208 | 208 | 208 | 208 | 208 | 208 | 208 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1913..... | 209 | 209 | 209 | 209 | 209 | 209 | 209 | 209 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1914..... | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 210 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1915..... | 211 | 211 | 211 | 211 | 211 | 211 | 211 | 211 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1916..... | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 212 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1917..... | 213 | 213 | 213 | 213 | 213 | 213 | 213 | 213 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1918..... | 214 | 214 | 214 | 214 | 214 | 214 | 214 | 214 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1919..... | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 215 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1920..... | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 216 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1921..... | 217 | 217 | 217 | 217 | 217 | 217 | 217 | 217 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1922..... | 218 | 218 | 218 | 218 | 218 | 218 | 218 | 218 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1923..... | 219 | 219 | 219 | 219 | 219 | 219 | 219 | 219 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1924..... | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 220 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1925..... | 221 | 221 | 221 | 221 | 221 | 221 | 221 | 221 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1926..... | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 222 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1927..... | 223 | 223 | 223 | 223 | 223 | 223 | 223 | 223 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1928..... | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 224 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1929..... | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 225 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1930..... | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 226 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1931..... | 227 | 227 | 227 | 227 | 227 | 227 | 227 | 227 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1932..... | 228 | 228 | 228 | 228 | 228 | 228 | 228 | 228 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1933..... | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 229 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1934..... | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 230 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1935..... | 231 | 231 | 231 | 231 | 231 | 231 | 231 | 231 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1936..... | 232 | 232 | 232 | 232 | 232 | 232 | 232 | 232 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1937..... | 233 | 233 | 233 | 233 | 233 | 233 | 233 | 233 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1938..... | 234 | 234 | 234 | 234 | 234 | 234 | 234 | 234 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1939..... | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 235 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1940..... | 236 | 236 | 236 | 236 | 236 | 236 | 236 | 236 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1941..... | 237 | 237 | 237 | 237 | 237 | 237 | 237 | 237 | 211, 212 | 212 | 212 | 214 | 214 | 214 |
| 1942..... | 238 | 238 | 238 | 238 | 238 | 238 | 238 | 238 | 211, 212 | 212 | 212 | 214 | 214 | 214 |

a Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 69. Tables of monthly discharge for 1899 in 21st Annual Report, part 4.

b Kansas River only.

c Arkansas River only.

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

e Mojave River only.

f Kings and Kern Rivers and south Pacific slope basins.

g Rating tables and index to Water-Supply Papers 47-52 and data on precipitation, wells, and irrigation in California and Utah contained in Water-Supply Paper 52.

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

i Wisconsin and Schuykill Rivers to James River.

j Salado River.

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

k Tributaries of Mississippi River from east.

m Sacramento and tributaries to St. Lawrence River proper.

n Hudson River only.

o New England rivers only.

p Hudson River to Delaware River, inclusive.

q Susquehanna River to York River, inclusive.

r Platte and Kansas Rivers.

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

t Below mouth of Gila River.

u Rogue, Umpqua, and Siletz Rivers only.

From time to time reports have been published that are compilations of records for various areas, usually a single State or drainage basin. These reports contain records previously published (some of which have been revised), as well as some records not contained in the annual series of water-supply papers. The following table gives the numbers and titles of these reports, arranged in alphabetical order by States and drainage basins.

Reports containing compilation of discharge by States and drainage basins

| Water-supply Paper | Period | State or drainage basin and title |
|--------------------|-----------|--|
| STATE | | |
| 107 | 1895-1903 | Alabama, Water powers of, with an appendix on stream measurements in Mississippi. |
| 298 | 1887-1912 | California, Water resources of, part 1, Stream measurements in Sacramento River Basin. |
| 299 | 1878-1912 | California, Water resources of, part 2, Stream measurements in San Joaquin River Basin. |
| 300 | 1891-1912 | California, Water resources of, part 3, Stream measurements in the Great Basin and Pacific Coast river basins. |
| 477 | 1890-1918 | California, southern, Surface water supply of Pacific slope of. |
| 597-E | 1895-1927 | California, Surface water supply of Sacramento River Basin. |
| 636-D | 1895-1927 | California, Surface water supply of San Joaquin River Basin. |
| 636-E | 1894-1927 | California, southern, Surface water supply of Pacific slope basins in. |
| 637-A | 1895-1927 | California, Surface water supply of minor San Francisco Bay, northern Pacific, and Great basins in. |
| 74 | 1884-1900 | Colorado, Water resources of. |
| 197 | 1895-1905 | Georgia, Water resources of. |
| 415 | 1845-1915 | Massachusetts, Surface waters of. |
| 230 | 1894-1906 | Nebraska, Surface water supply of. |
| 370 | 1878-1910 | Oregon, Surface water supply of. |
| 860 | 1898-1937 | Texas, Summary of records of surface waters of. |
| 424 | 1875-1916 | Vermont, Surface waters of. |
| 492 | 1878-1919 | Washington, Summary of hydrometric data in. |
| 870 | 1919-35 | Washington, Summary of records of surface waters of. |
| 186 | 1895-1905 | Wisconsin, northern, Water powers of. |
| 469 | 1894-1921 | Wyoming, Surface waters of, and their utilization. |
| DRAINAGE BASIN | | |
| 395 | 1888-1914 | Colorado River (Ariz., Colo., N. Mex., Utah, Wyo.) and its utilization. |
| 617 | 1897-1927 | Colorado River, upper (Colo., Utah), and its utilization. |
| 517 | 1889-1920 | Great Salt Lake Basin, Water powers of. |
| 618 | 1894-1926 | Green River (Utah, Wyo.) and its utilization. |
| 198 | 1890-1906 | Kennebec River Basin (Maine), Water resources of. |
| 491 | 1898-1917 | Milk River. See St. Mary and Milk Rivers. |
| 536 | 1895-1920 | New Kanawha River Basin (N. C., Va., W. Va.), Surface water supply of. |
| 279 | 1904-9 | Penobscot River Basin (Maine), Water resources of. |
| 192 | 1895-1906 | Potomac River Basin (D. C., Md., W. Va.) |
| 358 | 1898-1913 | Rio Grande Basin (Colo., N. Mex., Tex.), Water resources of, 1888-1913. |
| 491 | 1898-1917 | St. Mary and Milk Rivers (Mont., Canada), Water supply of. |
| 109 | 1890-1904 | Susquehanna River Basin (Pa., Md.), Hydrography of. |

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

State reports containing compilation of records of discharge

| State | Period | Report | Issued by |
|------------------|-----------|---|--|
| Alabama..... | 1895-1915 | Bull. 17, Water powers of Alabama..... | Geological Survey of Alabama. |
| Arkansas..... | 1887-1923 | Stream-gaging Rept. 1..... | Arkansas Geological Survey. |
| Colorado..... | 1881-1935 | Water resources of Colorado, Appendix 2, Data on stream-gaging stations of Colorado. ¹ | State Planning Commission, Water Conservation Board, State engineer. |
| Do..... | 1881-1938 | Water resources of Colorado, Appendix 3, vols. 1 and 2, Stream-flow data of Colorado. | Do. |
| Connecticut..... | 1900-1927 | Bull. 44, Water resources of Connecticut. | State Geological and Natural History Survey. |
| Do..... | 1912-33 | 5th biennial report ² | Connecticut State Water Commission. |
| Georgia..... | 1895-1906 | Bull. 16, Water powers of Georgia..... | Geological Survey of Georgia. |
| Do..... | 1907-19 | Bull. 38, Water powers of Georgia..... | Do. |
| Illinois..... | 1908-11 | Water resources of Illinois..... | Rivers and Lakes Commission. |
| Do..... | 1900-1934 | Stream-flow data of Illinois..... | Division of Waterways. |

1 Contains records of yearly discharge only.

2 Contains records of monthly discharge in second-feet per square mile.

State reports containing compilation of records of discharge--Continued

| State | Period | Report | Issued by |
|-----------------|-----------|--|--|
| Indiana..... | 1923-27 | Pub. 72, Surface water supply of Indiana. | Department of Conservation. |
| Do..... | 1927-30 | Pub. 112, Surface water supply of Indiana. | Do. |
| Iowa..... | 1873-1932 | Stream-flow records of Iowa..... | Iowa State Planning Board. |
| Do..... | 1873-1940 | Summaries of flow relating to Iowa streams. | Iowa Geological Survey. |
| Kansas..... | 1895-1919 | Surface waters of Kansas..... | Kansas Water Commission. |
| Do..... | 1919-24 |do..... | Do. |
| Do..... | 1924-28 |do..... | Kansas State Board of Agriculture. |
| Do..... | 1928-35 | Stream-flow data of Kansas..... | Do. |
| Do..... | 1935-39 |do..... | Do. |
| Kentucky..... | 1910-20 | Surface waters of Kentucky..... | Kentucky Geological Survey. |
| Louisiana... | 1903-58 | Geol. Bull. 16, Surface water supply of Louisiana. | Department of Conservation. |
| Maine..... | 1887-1920 | 1st annual report ² | Maine Water Power Commission. |
| Maryland..... | 1929-37 | Flow data and draft storage curves for major streams in Maryland. | State Planning Commission and Water Resources Commission. |
| Minnesota... | 1909-12 | Water-resources investigation of Minnesota. | State Drainage Commission. |
| Missouri.... | 1857-1926 | Vol. 20, 2d series, Water resources of Missouri. | Missouri Geological Survey and Water Resources. |
| Do..... | 1927-39 | Vol. 26, 2d series, Surface waters of Missouri. | Do. |
| Montana..... | 1889-1911 | 5th biennial report..... | Office of the State engineer. |
| Do..... | 1881-1938 | Special Rept. 10, vols. 1-4, Water resources of Montana. | Montana Agricultural Experiment Station. |
| Nebraska.... | 1894-1914 | 1st hydrographic report..... | Bureau of Water Power, Irrigation, and Drainage. |
| Do..... | 1914-28 | 2d hydrographic report..... | Do. |
| New Jersey.. | 1891-1928 | Bull. 35, Surface water supply of New Jersey. | Department of Conservation and Development. |
| Do..... | 1928-34 | Special Rept. 5, Surface water supply of New Jersey. | State Water Policy Commission. |
| New Mexico.. | 1888-1925 | Surface water supply of New Mexico..... | Office of the State Engineer. |
| North Carolina. | 1889-1923 | Bull. 34, Discharge records of North Carolina streams. ³ | Department of Conservation and Development. |
| Do..... | 1889-1936 | Bull. 39, Discharge records of North Carolina streams. ⁴ | Do. |
| North Dakota | 1919-21 | Report to Governor of North Dakota on flood control. | State chief engineer. |
| Do..... | 1882-1938 | Surface water in North Dakota..... | State Planning Board. |
| Ohio..... | 1898-1921 | Bull. 73, Ohio stream flow..... | Engineering Experiment Station, Ohio State University. |
| Do..... | 1902-39 | Bull. 200, Compilation of stream-flow records of Ohio. | Department of Agriculture, Division of Conservation and Natural Resources. |
| Do..... | 1898-1939 | Bull. 111, Ohio stream-drainage areas and flow-duration tables. | Engineering Experiment Station, Ohio State University. |
| Oregon..... | 1878-1914 | Bull. 4, Water resources of the State of Oregon. | Office of the State Engineer. |
| Do..... | 1914-24 | Bull. 7, Water resources of the State of Oregon. | Do. |
| Do..... | 1924-30 | Bull. 8, Water resources of the State of Oregon. | Do. |
| Do..... | 1930-36 | Bull. 9, Water resources of the State of Oregon. | Do. |
| Pennsylvania | 1890-1911 | Report of the Water Supply Commission of Pennsylvania. | Water Supply Commission of Pennsylvania. |
| Do..... | 1928-32 | Stream-flow records of Pennsylvania..... | Department of Forests and Waters. |
| Rhode Island | 1929-41 | 7th annual report..... | Department of Public Works. |
| Tennessee... | 1874-1924 | Bull. 34, Water resources of Tennessee. | Department of Education. |
| Do..... | 1920-30 | Bull. 40, Surface Waters of Tennessee. ⁵ | Do. |
| Utah..... | 1889-1905 | 5th biennial report, State engineer..... | Office of the State Engineer. |
| Do..... | 1906-10 | 7th biennial report, State engineer..... | Do. |
| Do..... | 1911-1916 | 10th biennial report, State engineer..... | Do. |
| Virginia..... | 1895-1927 | Bull. 31, Water resources of Virginia..... | Conservation Commission. |
| Washington.. | 1878-1933 | Bull. 6, Monthly and yearly summaries of hydrometric data. | Department of Conservation and Development. |
| Wisconsin... | 1888-1914 | 1st report of Railroad Commission of Wisconsin to Legislature on water powers. | Railroad Commission of Wisconsin. |
| Do..... | 1914-23 | 2d report of Railroad Commission of Wisconsin to Legislature on water powers. | Do. |

² Contains records of monthly discharge in second-feet per square mile.

³ Contains records of weekly discharge.

⁴ Contains records of maximum and minimum daily, weekly, and monthly discharge and yearly mean discharge.

Note.— In addition to the records contained in the reports listed above, the following States have issued annual or biennial reports in which are contained records of discharge: California, Colorado, Connecticut, Idaho, Indiana, Maine, Missouri, Montana, Nebraska, Nevada, New Mexico, New York (also New York City Board of Water Supply and City of Rochester), North Dakota, Oregon, Pennsylvania, Washington, and Wyoming.

The reports listed in the foregoing tables contain the customary records of discharge collected during the systematic operation of gaging stations. Detailed information on the stage and discharge of many streams during major floods has been included in special reports on these floods published by the Geological Survey. The more recent of these reports also contain other pertinent hydrologic information and analyses and compilations of data relating to earlier noteworthy floods. The following list gives the numbers and titles of these reports.

| Water-Supply Paper | Title |
|-----------------------|---|
| 88 | The Passaic flood of 1902. |
| 92 | The Passaic flood of 1903. |
| 96 | Destructive floods in the United States in 1903. |
| 147 | Destructive floods in the United States in 1904. |
| 162 | Destructive floods in the United States in 1905. |
| 334 | The Ohio Valley flood of March-April 1913. |
| 426 | Southern California floods of January 1916. |
| 487 | The Arkansas River flood of June 3-5, 1921. |
| 488 | The floods in central Texas in September 1921. |
| 520-G | Some floods in the Rocky Mountain region. |
| 636-C | The New England flood of November 1927. |
| 771 | Floods in the United States, magnitude and frequency. |
| 773-E | The New York State flood of July 1935. |
| 796-B | Flood on Republican and Kansas Rivers, May and June 1935. |
| 796-C | Flood in La Canada Valley, Calif., January 1, 1934. |
| 796-G | Major Texas floods of 1935. |
| 798 | The floods of March 1936, part 1, New England Rivers. |
| 799 | The floods of March 1936, part 2, Hudson River to Susquehanna River region. |
| 800 | The floods of March 1936, part 3, Potomac, James, and upper Ohio Rivers. |
| 816 | Major Texas floods of 1936. |
| 836-A | Stages and flood discharges of the Connecticut River at Hartford, Conn. |
| 838 | Floods of Ohio and Mississippi Rivers, January-February 1937. |
| 842 | Floods in Canadian and Pecos River Basins of New Mexico, May and June 1937. |
| 843 | Floods of December 1937 in northern California. |
| 844 | Floods of March 1938 in southern California. |
| 847 | Maximum discharges at stream-measurement stations through September 1938. |
| 867 | Hurricane floods of September 1938. |
| 869 | Flood of August 1935 in Muskingum River Basin, Ohio. |
| 914 | Texas floods of 1938 and 1939. |

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The following table contains a list of gaging stations for the area covered by this report at which records of daily discharge were collected during the water year October 1941 to September 1942 by agencies other than the Geological Survey. The records for these stations are not contained in the publications of the Geological Survey except as noted.

| Records of discharge collected by agencies other than the Geological Survey | | | | |
|---|--|------------------------------|--------------------------|-----------------------------|
| Stream | Location | Period | Collected by | Remarks |
| Yakima River..... | Easton, Wash..... | 1904, 1910-15, 1940-42 | Bureau of Reclamation... | †Unpublished since 1915. |
| Reservation drain | Alfalfa, Wash..... | 1912-42 | Office of Indian Affairs | †Unpublished since 1923. |
| Satus Creek..... | Downstream from Dry Creek, near Toppenish, Wash. | 1913-42 | ...do..... | †Unpublished since 1924. |
| Do..... | Near Satus, Wash..... | 1932-42 | ...do..... | Unpublished. |
| Toppenish Creek.. | Near Fort Simcoe, Wash.. | 1909-42 | ...do..... | †Unpublished since 1924. |
| Do..... | Near Alfalfa, Wash..... | 1932-42 | ...do..... | Unpublished. |

† Records for earlier years published in water-supply papers of Geological Survey.
 Note.—Records of daily discharge for many canals and drains in Washington for 1942 and earlier years have been collected by the Bureau of Reclamation and the Office of Indian Affairs in connection with irrigation and drainage projects. These records have not been published. The Soil Conservation Service began in 1932 to make studies of run-off from one area of about 700 acres and three areas of less than 70 acres each in vicinity of Pullman, Wash., and in 1939 from one area of 19.2 acres in vicinity of Dayton, Wash. The records are in the files of that organization. The Northern Rocky Mountain Forest and Range Experiment Station collects run-off records from an area of 960 acres on Benton Creek near Priest River, Idaho.

COOPERATION

The work in the several States was done under cooperative agreements with the organizations listed below:

Idaho: State Department of Reclamation, E. V. Berg, commissioner.

Montana: Office of State engineer, F. E. Bück; State Water Conservation Board.

Washington: Department of Conservation and Development, Ed Davis, director, and C. J. Bartholet, supervisor of hydraulics, Division of Water Resources; Department of Fisheries, F. J. Foster, director; Department of Game, E. T. McCauley, director; cities of Aberdeen, Bellingham, Everett, Seattle, and Tacoma; King and Pierce Counties, through the Intercounty River Improvement Commission; and Skagit and Whatcom Counties.

Financial assistance was furnished by the Corps of Engineers, United States Army, for the operation of one gaging station in Idaho, five in Montana, and ten in Washington.

Acknowledgment of financial assistance in collecting records published herein is due also to the United States Department of State; Bureau of Reclamation and Office of Indian Affairs, United States Department of the Interior; Forest Service and Soil Conservation Service, United States Department of Agriculture; Weather Bureau, United States Department of Commerce; and the Federal Power Commission.

Full cooperation exists between this organization and the Dominion Water and Power Bureau, Department of Mines and Resources, 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 herein designated "international gaging stations."

Assistance in collecting the records was also rendered by the following municipalities, corporations, and individuals:

Idaho: Washington Water Power Co.

Montana: Montana Power Co.

Washington: Crown Zellerbach Corporation; Electric Land Co.; Puget Sound Power & Light Co.; and Washington Water Power Co.

DIVISION OF WORK

The stream-gaging work was conducted by the water resources branch of the Geological Survey, Glenn L. Parker, chief hydraulic engineer, Carl G. Paulsen, assistant chief hydraulic engineer, and Rudolph G. Kasel, chief of the division of surface waters. The data for the stations in the several States were collected and prepared for publication under supervision of district engineers as follows: In Idaho and for Clark Fork near Heron, Mont., T. R. Newell; in Montana (except for station noted above), A. H. Tuttle; in Washington, F. M. Veatch.

The records were reviewed and the manuscript prepared for publication under the direction of B. J. Peterson, engineer in charge, and J. W. Gambrell, assistant engineer, section of reports.

Basins between Columbia River and Puget Sound

NASELLE RIVER BASIN

Naselle River near Naselle, Wash.

Location.- Staff gage, lat. 46°22'25", long. 123°44'45", in SW $\frac{1}{4}$ sec. 1, T. 10 N., R. 9 W., 1 $\frac{1}{2}$ miles upstream from Salmon Creek and 3 $\frac{1}{2}$ miles east of Naselle.

Drainage area.- 55 square miles.

Records available.- May 1929 to September 1942.

Average discharge.- 13 years, 418 second-feet.

Extremes.- Maximum discharge during year, 4,520 second-feet Dec. 18 (gage height, 9.77 feet, from graph based on gage readings); minimum observed, 30 second-feet Sept. 23-26 (gage height, 2.04 feet).

1929-42: Maximum discharge observed, 10,400 second-feet Jan. 22, 1935 (gage height, 15.9 feet, from floodmarks), from rating curve extended above 3,000 second-feet; minimum observed, 22 second-feet Oct. 6, 7, 1929; minimum gage height observed, 1.72 feet Aug. 29, 1935.

Remarks.- Records good. Gage read twice daily. No diversion or regulation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 18 to Sept. 30)

| | | | | | |
|-----|-----|-----|-------|-----|-------|
| 2.0 | 27 | 3.0 | 258 | 6.0 | 1,780 |
| 2.2 | 57 | 3.5 | 435 | 7.0 | 2,440 |
| 2.4 | 95 | 4.0 | 640 | 9.0 | 3,870 |
| 2.6 | 142 | 5.0 | 1,180 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|------|-------|------|------|-----|------|------|------|-------|
| 1 | 227 | 158 | 550 | 291 | 945 | 191 | 291 | 435 | 172 | 169 | 83 | 40 |
| 2 | 191 | 155 | 2,230 | 274 | 855 | 227 | 255 | 452 | 158 | 158 | 81 | 40 |
| 3 | 242 | 396 | 1,950 | 242 | 890 | 227 | 414 | 150 | 147 | 79 | 40 | |
| 4 | 258 | 378 | 1,780 | 227 | 2,090 | 227 | 227 | 360 | 142 | 142 | 77 | 40 |
| 5 | 227 | 685 | 1,420 | 212 | 1,640 | 274 | 197 | 308 | 137 | 134 | 75 | 41 |
| 6 | 212 | 470 | 1,420 | 197 | 1,480 | 258 | 194 | 291 | 142 | 127 | 73 | 41 |
| 7 | 242 | 396 | 1,060 | 212 | 1,120 | 242 | 180 | 258 | 137 | 122 | 70 | 40 |
| 8 | 242 | 325 | 855 | 258 | 1,000 | 242 | 169 | 227 | 142 | 117 | 66 | 38 |
| 9 | 291 | 291 | 685 | 414 | 945 | 595 | 164 | 227 | 227 | 115 | 64 | 38 |
| 10 | 595 | 274 | 550 | 378 | 1,060 | 550 | 166 | 227 | 396 | 117 | 64 | 38 |
| 11 | 785 | 342 | 452 | 308 | 890 | 452 | 153 | 197 | 325 | 137 | 64 | 35 |
| 12 | 835 | 291 | 396 | 291 | 685 | 396 | 150 | 183 | 258 | 137 | 59 | 35 |
| 13 | 640 | 1,300 | 378 | 258 | 595 | 396 | 137 | 169 | 227 | 113 | 59 | 35 |
| 14 | 490 | 1,600 | 435 | 242 | 490 | 360 | 164 | 161 | 212 | 120 | 55 | 35 |
| 15 | 414 | 1,060 | 735 | 227 | 414 | 342 | 160 | 153 | 435 | 142 | 55 | 35 |
| 16 | 452 | 1,120 | 1,240 | 227 | 378 | 342 | 142 | 142 | 735 | 274 | 54 | 35 |
| 17 | 452 | 1,000 | 1,180 | 212 | 325 | 452 | 153 | 134 | 765 | 274 | 52 | 33 |
| 18 | 396 | 785 | 2,440 | 197 | 291 | 452 | 142 | 127 | 550 | 197 | 52 | 33 |
| 19 | 360 | 640 | 3,790 | 189 | 274 | 414 | 132 | 147 | 470 | 161 | 51 | 33 |
| 20 | 325 | 470 | 2,090 | 180 | 258 | 378 | 127 | 156 | 378 | 145 | 52 | 33 |
| 21 | 308 | 435 | 1,420 | 169 | 227 | 342 | 120 | 134 | 325 | 134 | 52 | 31 |
| 22 | 291 | 378 | 1,180 | 164 | 212 | 342 | 140 | 130 | 291 | 124 | 49 | 31 |
| 23 | 258 | 325 | 1,600 | 169 | 227 | 325 | 142 | 122 | 274 | 115 | 49 | 30 |
| 24 | 242 | 308 | 1,180 | 490 | 242 | 308 | 227 | 117 | 242 | 110 | 47 | 30 |
| 25 | 227 | 414 | 890 | 510 | 212 | 325 | 242 | 166 | 274 | 106 | 49 | 30 |
| 26 | 212 | 342 | 685 | 595 | 194 | 325 | 227 | 186 | 258 | 102 | 52 | 30 |
| 27 | 212 | 308 | 550 | 595 | 191 | 308 | 242 | 258 | 227 | 97 | 49 | 33 |
| 28 | 212 | 342 | 470 | 640 | 189 | 291 | 242 | 258 | 212 | 93 | 51 | 33 |
| 29 | 191 | 510 | 414 | 510 | - | 274 | 227 | 227 | 197 | 93 | 47 | 33 |
| 30 | 175 | 550 | 360 | 452 | - | 258 | 325 | 197 | 183 | 91 | 44 | 40 |
| 31 | 166 | - | 325 | 435 | - | 242 | - | 183 | - | 85 | 43 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 10,370 | 835 | 166 | 335 | 6.09 | 7.01 | 20,570 |
| November..... | 16,044 | 1,600 | 163 | 535 | 9.73 | 10.85 | 31,820 |
| December..... | 34,698 | 3,790 | 325 | 1,119 | 20.3 | 23.46 | 68,520 |
| Calendar year 1941..... | 124,710 | 3,790 | 31 | 342 | 6.22 | 84.32 | 247,400 |
| January..... | 9,763 | 640 | 164 | 315 | 5.73 | 6.60 | 19,560 |
| February..... | 18,499 | 2,090 | 189 | 661 | 12.0 | 12.51 | 36,690 |
| March..... | 10,388 | 595 | 191 | 335 | 6.09 | 7.02 | 20,600 |
| April..... | 5,647 | 325 | 120 | 188 | 3.42 | 3.82 | 11,200 |
| May..... | 6,744 | 452 | 117 | 218 | 3.96 | 4.56 | 13,880 |
| June..... | 8,658 | 765 | 137 | 289 | 5.25 | 5.86 | 17,170 |
| July..... | 4,198 | 274 | 85 | 135 | 2.45 | 2.84 | 8,330 |
| August..... | 1,817 | 83 | 43 | 58.6 | 1.07 | 1.23 | 3,600 |
| September..... | 1,059 | 41 | 30 | 35.3 | .642 | .72 | 2,100 |
| Water year 1941-42..... | 127,686 | 3,790 | 30 | 350 | 6.36 | 86.46 | 253,600 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

North River near Raymond, Wash.

Location.- Water-stage recorder, lat. 46°49', long. 123°51', in sec. 6, T. 15 N., R. 9 W., 1 1/4 miles upstream from Salmon Creek and 10 miles northwest of Raymond.

Drainage area.- 219 square miles.

Records available.- August 1927 to September 1942.

Average discharge.- 15 years, 938 second-feet.

Extremes.- Maximum discharge during year, 7,890 second-feet Dec. 20 (gage height, 7.37 feet); minimum, 48 second-feet Sept. 22-24 (gage height, 1.28 feet).

1927-42: Maximum discharge, 35,000 second-feet Dec. 10, 1933 (gage height, 15.8 feet, from floodmarks), from rating curve extended above 6,300 second-feet; minimum, 24 second-feet Sept. 17, 1938 (gage height, 1.18 feet).

Remarks.- Records good except those for periods of doubtful or no gage-height record, which are fair. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 20 | | | | Dec. 21 to Sept. 30 | | | | | |
|-------------------|-------|-----|-------|---------------------|-----|-----|-------|-----|-------|
| 2.3 | 277 | 4.0 | 1,600 | 1.3 | 50 | 2.3 | 255 | 5.0 | 2,870 |
| 2.6 | 401 | 5.0 | 2,870 | 1.4 | 64 | 2.6 | 410 | 6.0 | 4,600 |
| 3.0 | 635 | 6.0 | 4,600 | 1.6 | 97 | 3.0 | 670 | 7.0 | 6,850 |
| 3.5 | 1,060 | 7.0 | 6,850 | 1.8 | 135 | 3.5 | 1,110 | | |
| | | | | 2.0 | 185 | 4.0 | 1,620 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|--------|--------|-------|-------|------|------|-------|------|------|-------|
| 1 | 266 | 285 | 750 | a860 | 1,410 | 450 | 614 | 831 | 243 | 268 | a135 | a70 |
| 2 | 281 | 277 | 1,800 | a780 | 1,590 | 508 | 966 | 232 | 246 | 188 | a115 | a70 |
| 3 | 288 | 411 | 3,400 | a700 | 1,490 | 569 | 534 | 939 | 215 | 229 | a130 | a70 |
| 4 | 281 | 746 | 3,080 | a660 | 2,020 | 541 | 496 | 849 | 200 | 212 | a125 | a65 |
| 5 | 300 | 1,190 | 2,590 | a640 | 2,800 | 534 | 466 | 734 | 191 | 206 | a125 | a65 |
| 6 | 274 | 1,340 | 2,330 | a620 | 2,800 | 598 | 440 | 630 | 212 | 197 | 123 | a70 |
| 7 | 292 | 947 | 2,140 | a660 | 2,260 | 598 | 415 | 562 | 260 | 188 | a115 | a70 |
| 8 | 360 | 758 | 1,780 | a720 | 1,960 | 555 | 396 | 502 | 268 | 185 | a110 | a65 |
| 9 | 490 | 635 | 1,470 | a1,400 | 1,840 | 939 | 383 | 466 | 325 | 182 | a105 | a65 |
| 10 | 702 | 555 | 1,240 | a1,500 | 1,840 | 1,460 | 365 | 450 | 425 | 180 | a105 | a60 |
| 11 | 984 | b549 | 1,050 | a1,100 | 1,780 | 1,300 | 353 | 430 | 514 | 215 | a105 | a60 |
| 12 | 1,290 | b608 | 911 | a900 | 1,590 | 1,080 | 345 | 396 | 425 | 289 | a95 | a55 |
| 13 | 1,230 | h1,220 | 824 | a820 | 1,380 | 1,050 | 337 | 374 | 357 | 313 | a95 | a55 |
| 14 | 902 | 2,660 | 832 | 777 | 1,200 | 1,000 | 317 | 345 | 361 | 243 | a90 | a55 |
| 15 | 702 | 2,800 | 1,070 | 734 | 1,060 | 885 | 374 | 335 | 478 | 236 | a90 | a55 |
| 16 | 695 | 2,460 | 1,960 | 670 | a950 | 849 | 349 | 321 | 734 | 305 | a90 | a55 |
| 17 | 742 | 2,200 | 2,660 | 622 | a840 | 921 | 325 | d300 | 1,000 | 368 | a85 | a55 |
| 18 | 774 | 1,780 | 3,500 | 583 | a750 | 993 | 321 | d290 | 966 | 410 | a85 | 54 |
| 19 | 672 | 1,370 | 6,360 | 541 | a660 | 939 | d280 | d410 | 786 | 317 | a85 | 53 |
| 20 | 621 | 1,090 | 7,620 | 502 | a610 | 831 | d260 | d390 | 646 | 264 | a85 | 50 |
| 21 | 543 | 920 | 6,360 | 478 | a570 | 759 | d260 | d350 | 555 | 222 | a85 | 49 |
| 22 | 495 | 807 | 3,930 | 450 | a540 | 768 | d250 | d340 | 478 | 203 | a80 | 49 |
| 23 | 451 | 710 | 3,560 | 445 | a580 | 976 | d260 | d320 | 425 | 185 | a75 | 49 |
| 24 | 416 | 658 | 3,580 | 576 | 630 | 903 | 425 | d300 | 401 | 177 | a75 | 49 |
| 25 | 392 | 702 | 2,870 | 948 | 583 | 984 | 606 | d260 | 396 | 169 | a95 | 49 |
| 26 | 365 | 688 | a2,200 | 1,280 | 520 | 1,030 | 686 | 285 | 392 | 161 | a90 | 50 |
| 27 | 352 | 601 | a1,750 | 1,360 | 478 | 984 | 646 | 317 | 388 | 158 | a85 | 53 |
| 28 | 348 | 608 | a1,500 | 1,380 | 466 | 894 | 614 | 341 | 341 | 153 | a105 | 54 |
| 29 | 331 | 734 | a1,300 | 1,310 | - | 822 | 614 | 329 | 317 | 151 | a95 | 53 |
| 30 | 311 | 734 | a1,100 | 1,140 | - | 754 | 654 | 329 | 285 | 149 | a85 | 61 |
| 31 | 292 | - | a980 | 1,070 | - | 662 | - | 260 | - | 140 | a70 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off Inches | Run-off Acres-feet |
|-------------------------|------------------|---------|---------|-------|-----------------|-------------------|-----------------------|
| October..... | 16,442 | 1,290 | 266 | 530 | 2.42 | 2.79 | 32,610 |
| November..... | 31,045 | 2,800 | 277 | 1,035 | 4.73 | 5.27 | 61,670 |
| December..... | 76,517 | 7,620 | 750 | 2,468 | 11.3 | 12.99 | 151,800 |
| Calendar year 1941..... | 249,367 | 7,620 | 42 | 683 | 3.12 | 42.34 | 494,600 |
| January..... | 26,026 | 1,400 | 445 | 840 | 3.84 | 4.42 | 51,620 |
| February..... | 35,197 | 2,800 | 466 | 1,257 | 5.74 | 5.98 | 69,810 |
| March..... | 26,016 | 1,460 | 450 | 839 | 3.83 | 4.42 | 51,600 |
| April..... | 12,998 | 686 | 250 | 433 | 1.98 | 2.21 | 25,760 |
| May..... | 13,949 | 966 | 260 | 450 | 2.05 | 2.37 | 27,670 |
| June..... | 12,816 | 1,000 | 191 | 427 | 1.95 | 2.18 | 25,420 |
| July..... | 6,941 | 410 | 140 | 224 | 1.02 | 1.18 | 13,770 |
| August..... | 3,053 | 135 | 70 | 95.5 | .450 | .52 | 6,060 |
| September..... | 1,733 | 70 | 49 | 57.8 | .264 | .29 | 3,440 |
| Water year 1941-42..... | 262,721 | 7,620 | 49 | 720 | 3.29 | 44.62 | 521,100 |

a No gage-height record; discharge computed on basis of records for Naselle River near Naselle and Elokom River near Cathlamet.

d Doubtful gage-height record; discharge computed on basis of records for Naselle River near Naselle and Elokom River near Cathlamet.

h Computed from staff-gage readings.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Chehalis River near Doty, Wash.

Location.- Staff gage, lat. $46^{\circ}37'00''$, long. $123^{\circ}16'40''$, in NW $\frac{1}{4}$ sec. 14, T. 13 N., R. 5 W., $\frac{1}{2}$ miles upstream from Elk Creek, $\frac{1}{2}$ miles south of Doty, and $\frac{3}{4}$ miles north of Pe Ell.

Drainage area.- 113 square miles.

Records available.- October 1939 to September 1942.

Extremes.- Maximum discharge observed during year, 8,780 second-feet Dec. 19 (gage height, 11.50 feet; minimum observed, 28 second-feet Sept. 23-26 (gage height, 1.04 feet). 1939-42: Maximum discharge observed, 15,100 second-feet Dec. 15, 1939 (gage height, 15.76 feet); minimum observed, 22 second-feet Aug. 18, 19, 20, 21, 26, 1940 (gage height, 0.99 foot), but may have been less during period Oct. 1-3, 1939, before gage was installed.

Remarks.- Records good. Gage read twice daily. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet) (Shifting-control method used Aug. 26 to Sept. 30)

| Oct. 1 to Dec. 1 | | | | Dec. 2 to Sept. 30 | | | | | |
|------------------|-----|-----|-------|--------------------|-----|-----|-------|------|-------|
| 1.6 | 117 | 4.0 | 1,380 | 1.0 | 27 | 2.0 | 235 | 6.0 | 2,830 |
| 1.7 | 142 | 5.0 | 2,080 | 1.1 | 38 | 2.4 | 396 | 8.0 | 4,500 |
| 2.0 | 235 | 6.0 | 2,850 | 1.3 | 62 | 2.9 | 675 | 10.0 | 6,760 |
| 2.6 | 464 | 8.0 | 4,650 | 1.6 | 97 | 3.5 | 1,050 | | |
| 3.0 | 742 | | | 1.7 | 144 | 4.5 | 1,730 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|-------|-------|------|-----|------|------|------|-------|
| 1 | 137 | 117 | 662 | 377 | 1,660 | 236 | 364 | 506 | 158 | 155 | 78 | 40 |
| 2 | 117 | 114 | 3,520 | 359 | 1,390 | 256 | 405 | 511 | 147 | 142 | 78 | 39 |
| 3 | 112 | 232 | 2,760 | 326 | 1,240 | 302 | 359 | 484 | 156 | 154 | 76 | 38 |
| 4 | 153 | 378 | 2,080 | 298 | 2,600 | 270 | 326 | 456 | 129 | 129 | 78 | 40 |
| 5 | 129 | 622 | 1,940 | 274 | 2,760 | 290 | 294 | 372 | 124 | 122 | 73 | 39 |
| 6 | 122 | 428 | 1,760 | 260 | 1,940 | 306 | 270 | 330 | 136 | 115 | 68 | 38 |
| 7 | 153 | 355 | 1,340 | 266 | 1,390 | 310 | 252 | 294 | 129 | 110 | 65 | 36 |
| 8 | 176 | 292 | 985 | 302 | 1,150 | 302 | 235 | 266 | 154 | 106 | 62 | 34 |
| 9 | 226 | 264 | 795 | 364 | 1,120 | 1,120 | 225 | 249 | 290 | 106 | 62 | 34 |
| 10 | 534 | 232 | 653 | 415 | 1,080 | 1,020 | 212 | 242 | 522 | 101 | 61 | 33 |
| 11 | 536 | 312 | 555 | 568 | 952 | 669 | 202 | 222 | 462 | 115 | 59 | 32 |
| 12 | 652 | 254 | 484 | 342 | 825 | 544 | 202 | 202 | 350 | 152 | 67 | 32 |
| 13 | 481 | 2,130 | 450 | 322 | 687 | 511 | 184 | 190 | 278 | 117 | 54 | 31 |
| 14 | 378 | 3,610 | 609 | 306 | 591 | 456 | 225 | 184 | 260 | 115 | 54 | 31 |
| 15 | 312 | 2,290 | 1,000 | 286 | 516 | 415 | 199 | 178 | 568 | 158 | 61 | 32 |
| 16 | 292 | 1,940 | 2,980 | 270 | 462 | 410 | 184 | 175 | 639 | 196 | 51 | 32 |
| 17 | 334 | 1,520 | 2,460 | 260 | 415 | 462 | 196 | 158 | 711 | 270 | 49 | 30 |
| 18 | 292 | 1,060 | 3,890 | 246 | 377 | 528 | 181 | 150 | 616 | 209 | 49 | 30 |
| 19 | 272 | 772 | 7,670 | 232 | 350 | 478 | 172 | 166 | 405 | 172 | 47 | 30 |
| 20 | 254 | 622 | 3,940 | 218 | 326 | 426 | 164 | 172 | 350 | 150 | 48 | 30 |
| 21 | 228 | 508 | 2,160 | 209 | 310 | 405 | 152 | 155 | 294 | 132 | 49 | 29 |
| 22 | 208 | 454 | 1,700 | 202 | 252 | 478 | 169 | 152 | 256 | 122 | 48 | 29 |
| 23 | 139 | 378 | 2,450 | 209 | 274 | 436 | 161 | 139 | 236 | 112 | 47 | 28 |
| 24 | 176 | 355 | 1,700 | 568 | 273 | 425 | 242 | 134 | 238 | 106 | 44 | 28 |
| 25 | 164 | 536 | 1,240 | 1,080 | 263 | 420 | 274 | 155 | 260 | 97 | 43 | 28 |
| 26 | 156 | 428 | 920 | 1,180 | 242 | 405 | 298 | 172 | 245 | 93 | 45 | 28 |
| 27 | 143 | 378 | 765 | 1,240 | 235 | 390 | 290 | 190 | 222 | 89 | 48 | 29 |
| 28 | 142 | 355 | 645 | 1,180 | 228 | 377 | 314 | 209 | 199 | 86 | 60 | 30 |
| 29 | 134 | 652 | 550 | 952 | - | 368 | 294 | 199 | 184 | 88 | 55 | 30 |
| 30 | 127 | 652 | 469 | 765 | - | 342 | 364 | 190 | 169 | 86 | 47 | 32 |
| 31 | 122 | - | 415 | 1,420 | - | 326 | - | 172 | - | 82 | 45 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-foot |
| October..... | 7,565 | 652 | 112 | 244 | 2.16 | 2.49 | 14,990 |
| November..... | 22,230 | 3,610 | 114 | 741 | 6.56 | 7.32 | 44,090 |
| December..... | 53,577 | 7,670 | 415 | 1,725 | 15.3 | 17.63 | 106,500 |
| Calendar year 1941..... | 167,751 | 7,670 | 30 | 460 | 4.07 | 55.21 | 352,800 |
| January..... | 15,114 | 1,420 | 202 | 488 | 4.32 | 4.97 | 29,980 |
| February..... | 23,883 | 2,760 | 228 | 853 | 7.65 | 7.86 | 47,370 |
| March..... | 13,680 | 1,120 | 235 | 441 | 3.90 | 4.50 | 27,150 |
| April..... | 7,432 | 405 | 152 | 248 | 2.19 | 2.45 | 14,740 |
| May..... | 7,374 | 511 | 134 | 238 | 2.11 | 2.43 | 14,530 |
| June..... | 8,547 | 711 | 124 | 265 | 2.52 | 2.51 | 16,950 |
| July..... | 3,967 | 270 | 82 | 128 | 1.13 | 1.31 | 7,870 |
| August..... | 1,739 | 78 | 43 | 56.1 | .496 | .57 | 3,450 |
| September..... | 973 | 40 | 23 | 32.4 | .287 | .32 | 1,930 |
| Water year 1941-42..... | 166,071 | 7,670 | 28 | 455 | 4.03 | 54.66 | 329,400 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Chehalis River near Grand Mound, Wash.

Location.- Water-stage recorder, lat. 46°46'35", long. 123°02'05", in NE¼ sec. 22, T. 15 N., R. 3 W., at Meadow, 1½ miles southwest of Grand Mound and 6 miles downstream from Skookumchuck River. Datum of gage is 123.27 feet above mean sea level, datum of 1929.

Drainage area.- 897 square miles.

Records available.- October 1928 to September 1942.

Average discharge.- 14 years, 2,580 second-feet.

Extremes.- Maximum discharge during year, 26,900 second-feet Dec. 20 (gage height, 15.30 feet); minimum, 160 second-feet Sept. 20, 21.
1928-42: Maximum discharge, 48,400 second-feet Dec. 29, 1937 (gage height, 18.39 feet); minimum, 108 second-feet Sept. 24, 1938.

Remarks.- Records good. Cities of Centralia and Chehalis divert about 15 second-feet from Newaukum River, a tributary, for municipal use. No noticeable regulation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|--------|--------|------------------|---------|---------|-------|-----------------|---------|------------|------|-------|
| 1 | a470 | a580 | 2,040 | 2,270 | 4,790 | 1,340 | 1,630 | 1,910 | 1,180 | 876 | 385 | 218 |
| 2 | a540 | a560 | 3,700 | 2,030 | 6,200 | 1,350 | 1,910 | 2,450 | 1,010 | 804 | 374 | 211 |
| 3 | a620 | a550 | 9,390 | 1,910 | 5,400 | 1,740 | 1,680 | 2,330 | 930 | 750 | 368 | 204 |
| 4 | a800 | 1,560 | 9,390 | 1,740 | 8,280 | 1,580 | 1,520 | 2,090 | 858 | 700 | 368 | 197 |
| 5 | a700 | 1,680 | 8,970 | 1,630 | 12,200 | 1,520 | 1,440 | 1,800 | 813 | 674 | 368 | 204 |
| 6 | a600 | 2,100 | 7,750 | 1,520 | 11,300 | 1,800 | 1,340 | 1,580 | 822 | 658 | 363 | 200 |
| 7 | 744 | 1,680 | 7,180 | 1,520 | 8,470 | 1,680 | 1,250 | 1,390 | 946 | 611 | 331 | 194 |
| 8 | 1,050 | 1,380 | 5,750 | 1,800 | 6,360 | 1,580 | 1,190 | 1,280 | 921 | 588 | 326 | 197 |
| 9 | 1,170 | 1,170 | 4,430 | 2,640 | 6,720 | 1,970 | 1,130 | 1,170 | 1,140 | 552 | 312 | 190 |
| 10 | 1,310 | 1,060 | 3,510 | 3,920 | 5,560 | 4,640 | 1,070 | 1,160 | 1,680 | 545 | 307 | 184 |
| 11 | 2,290 | 1,240 | 2,880 | 3,430 | 6,240 | 3,640 | 1,060 | 1,100 | 2,450 | 581 | 302 | 171 |
| 12 | 2,360 | 1,800 | 2,480 | 2,900 | 4,640 | 3,040 | 984 | 1,030 | 2,090 | 627 | 298 | 174 |
| 13 | 2,160 | 2,030 | 2,160 | 2,580 | 3,920 | 3,100 | 948 | 957 | 1,680 | 650 | 288 | 171 |
| 14 | 1,740 | 10,500 | 2,160 | 2,270 | 3,360 | 3,300 | 1,070 | 885 | 1,400 | 558 | 279 | 171 |
| 15 | 1,580 | 13,200 | 2,560 | 2,090 | 2,970 | 2,900 | 1,190 | 840 | 1,910 | 551 | 271 | 168 |
| 16 | 1,180 | 12,700 | 9,280 | 1,910 | 2,640 | 2,520 | 1,020 | 822 | 2,780 | 725 | 254 | 171 |
| 17 | 1,250 | 9,610 | 13,600 | 1,850 | 2,390 | 2,390 | 966 | 786 | 3,640 | 1,160 | 254 | 168 |
| 18 | 1,230 | 6,810 | 13,200 | 1,740 | 2,150 | 2,710 | 912 | 742 | 3,160 | 1,070 | 254 | 174 |
| 19 | 1,260 | 4,750 | 17,200 | 1,630 | 1,970 | 2,450 | 876 | 716 | 2,580 | 840 | 245 | 174 |
| 20 | 1,190 | a3,600 | 25,600 | 1,520 | 1,850 | 2,210 | 840 | 786 | 2,150 | 700 | 237 | 162 |
| 21 | 1,070 | a3,000 | 22,900 | 1,440 | 1,800 | 2,090 | 768 | 804 | 1,800 | 588 | 237 | 160 |
| 22 | 964 | a2,500 | 16,300 | 1,390 | 1,630 | 2,090 | 795 | 750 | 1,520 | 552 | 237 | 168 |
| 23 | a900 | a2,000 | 13,700 | 1,370 | 1,580 | 2,150 | 849 | 849 | 1,360 | 516 | 237 | 165 |
| 24 | a850 | a1,750 | 12,700 | 1,910 | 1,630 | 2,090 | 849 | 858 | 1,350 | 483 | 215 | 165 |
| 25 | a790 | a1,650 | 9,230 | 4,340 | 1,520 | 2,090 | 1,060 | 867 | 1,350 | 463 | 215 | 168 |
| 26 | a750 | a1,850 | 6,870 | 5,720 | 1,440 | 2,090 | 1,190 | 1,100 | 1,510 | 444 | 234 | 181 |
| 27 | a700 | 1,620 | 5,400 | 6,360 | 1,420 | 1,970 | 1,120 | 1,380 | 1,370 | 432 | 254 | 177 |
| 28 | a660 | 1,500 | 4,200 | 6,530 | 1,410 | 1,910 | 1,160 | 1,460 | 1,220 | 426 | 256 | 171 |
| 29 | a640 | 1,860 | 3,500 | 6,200 | - | 1,800 | 1,130 | 1,520 | 1,070 | 420 | 234 | 177 |
| 30 | a620 | 2,040 | 3,040 | 4,940 | - | 1,680 | 1,060 | 1,490 | 984 | 420 | 226 | 177 |
| 31 | a600 | - | 2,640 | 4,060 | - | 1,580 | - | 1,340 | - | 408 | 222 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | | | |
| | | | | | | | | | Inches | Acres-feet | | |
| October..... | | | | 32,678 | 2,360 | 470 | 1,051 | 1.17 | 1.35 | 64,620 | | |
| November..... | | | | 98,330 | 13,200 | 550 | 3,278 | 3.65 | 4.08 | 195,000 | | |
| December..... | | | | 253,600 | 25,600 | 2,040 | 8,181 | 9.12 | 10.51 | 503,000 | | |
| Calendar year 1941..... | | | | 762,561 | 25,600 | 162 | 2,089 | 2.33 | 31.62 | 1,512,000 | | |
| January..... | | | | 87,160 | 6,530 | 1,370 | 2,812 | 3.13 | 3.61 | 172,900 | | |
| February..... | | | | 117,840 | 12,200 | 1,410 | 4,209 | 4.69 | 4.89 | 233,700 | | |
| March..... | | | | 69,000 | 4,640 | 1,340 | 2,226 | 2.48 | 2.86 | 136,900 | | |
| April..... | | | | 34,017 | 1,910 | 768 | 1,134 | 1.26 | 1.41 | 67,470 | | |
| May..... | | | | 38,222 | 2,450 | 716 | 1,233 | 1.37 | 1.58 | 75,810 | | |
| June..... | | | | 47,676 | 3,640 | 813 | 1,589 | 1.77 | 1.98 | 94,560 | | |
| July..... | | | | 19,332 | 1,160 | 408 | 625 | .697 | .80 | 38,440 | | |
| August..... | | | | 8,753 | 386 | 216 | 282 | .314 | .36 | 17,560 | | |
| September..... | | | | 5,412 | 218 | 160 | 180 | .201 | .22 | 10,730 | | |
| Water year 1941-42..... | | | | 811,970 | 25,600 | 160 | 2,226 | 2.48 | 33.66 | 1,610,000 | | |

Peak discharge.- Nov. 15-16 (11 p.m. to 1 a.m.) 13,500 sec.-ft.; Dec. 20 (6 to 6 p.m.) 26,900 sec.-ft.; Feb. 5 (8 p.m.) 12,700 sec.-ft.

a No gage-height record; discharge computed on basis of records for Satsop River near Satsop.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

CHEHALIS RIVER BASIN

Chehalis River at South Elma, Wash.

Location.- Wire-weight gage, lat. 46°59'00", long. 123°24'40", in NE1/4 sec. 10, T. 17 N., R. 6 W., at county bridge 1.1 miles downstream from Cloquallum Creek, at South Elma.

Drainage area.- 1,420 square miles.

Records available.- July to December 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Dec. 31, 18,300 second-feet Nov. 28 (gage height, 70.43 feet), from rating curve extended above 6,100 second-feet; minimum observed, 298 second-feet Sept. 30, Oct. 1.

Remarks.- Records good except those for period of shifting control, which are fair. Gage read twice daily. Cities of Centralia and Chehalis divert about 15 second-feet from Newaukum River, a tributary, for municipal use. No regulation.

Rating table, period July 1 to Dec. 31, 1942 (gage height, in feet,
and discharge, in second-feet)
(Shifting-control method used Aug. 23 to Oct. 30)

| | | | | | |
|------|-------|------|-------|------|--------|
| 55.7 | 400 | 58.0 | 2,300 | 64.0 | 8,900 |
| 56.0 | 565 | 59.0 | 3,300 | 66.0 | 11,600 |
| 56.5 | 920 | 60.0 | 4,300 | 70.0 | 17,600 |
| 57.0 | 1,360 | 62.0 | 6,500 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | July | Aug. | Sept. | Oct. | Nov. | Dec. |
|-----|--------|------|-------|--------|---------|---------|
| 1 | al,300 | 690 | 378 | 298 | g5,840 | g12,400 |
| 2 | al,200 | 658 | 378 | 315 | g6,740 | g13,100 |
| 3 | al,100 | 658 | 378 | 335 | g5,290 | g13,000 |
| 4 | 1,040 | 658 | 378 | 378 | g5,840 | g11,100 |
| 5 | 960 | 658 | 355 | 355 | g4,520 | g9,420 |
| 6 | 960 | 625 | 378 | 335 | g3,600 | g8,060 |
| 7 | 960 | 625 | 378 | 355 | 3,100 | g7,220 |
| 8 | 920 | 595 | 378 | 335 | 3,000 | g7,580 |
| 9 | 840 | 595 | 355 | 335 | 2,700 | g9,030 |
| 10 | 880 | 565 | 355 | 335 | 2,400 | g10,900 |
| 11 | 960 | 565 | 355 | 315 | 2,100 | g12,200 |
| 12 | 1,040 | 535 | 335 | 315 | 1,810 | g11,600 |
| 13 | 1,040 | 535 | 335 | 335 | 1,630 | g10,500 |
| 14 | 1,040 | 505 | 335 | 355 | 2,600 | g9,680 |
| 15 | 1,000 | 505 | 335 | 378 | g7,940 | g8,420 |
| 16 | 1,140 | 478 | 335 | 355 | g11,800 | g7,220 |
| 17 | 1,270 | 478 | 335 | 450 | g11,300 | 6,280 |
| 18 | 1,630 | 450 | 335 | 450 | g11,000 | 5,620 |
| 19 | 1,270 | 478 | 335 | 378 | g9,940 | 5,070 |
| 20 | 1,140 | 450 | 335 | 355 | g8,300 | 4,860 |
| 21 | 1,040 | 450 | 315 | 355 | g6,880 | 5,290 |
| 22 | 920 | 450 | 315 | 355 | g7,100 | g8,300 |
| 23 | 840 | 450 | 335 | 355 | g11,800 | g10,100 |
| 24 | 800 | 425 | 355 | 335 | g15,600 | g9,290 |
| 25 | 760 | 400 | 355 | 335 | g17,800 | g7,940 |
| 26 | 725 | 378 | 355 | 355 | g17,900 | g7,220 |
| 27 | 725 | 400 | 378 | 378 | g15,400 | g7,220 |
| 28 | 725 | 425 | 335 | 400 | g13,600 | g9,030 |
| 29 | 725 | 425 | 315 | 535 | g12,600 | g11,600 |
| 30 | 690 | 425 | 298 | g596 | g11,900 | g13,900 |
| 31 | 690 | 400 | - | g5,900 | - | 16,600 |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| July 1942..... | 30,330 | 1,630 | 690 | 978 | 0.689 | 0.79 | 60,160 |
| August..... | 15,934 | 690 | 378 | 514 | .362 | .42 | 31,600 |
| September..... | 10,437 | 378 | 298 | 348 | .245 | .27 | 20,700 |
| October..... | 14,960 | 3,900 | 228 | 483 | .340 | .39 | 29,670 |
| November..... | 241,710 | 17,900 | 1,630 | 8,057 | 5.67 | 6.33 | 479,400 |
| December..... | 289,540 | 16,600 | 4,860 | 9,340 | 6.58 | 7.58 | 574,300 |
| The period..... | - | - | - | - | - | - | 1,196,000 |

a No gage-height record; discharge computed on basis of records for Satsop River near Satsop and Chehalis River near Grand Mound.

g Computed from graph based on gage readings and records for Satsop River near Satsop.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Elk Creek near Doty, Wash.

Location.- Staff gage, lat. 46°37'40", long. 123°19'50", in NE $\frac{1}{4}$ sec. 8, T. 13 N., R. 5 W., half a mile upstream from Nine Creek, 1 mile upstream from Deer Creek, and 2.5 miles west of Doty.

Drainage area.- 46.3 square miles.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 80 second-feet July 16 (gage height, 2.00 feet); minimum observed, 12 second-feet Sept. 11-15, 19-25; minimum gage height observed, 1.22 feet Sept. 24.

Remarks.- Records good. Gage read twice daily prior to Aug. 19, once daily thereafter. No diversion or regulation.

Discharge, in second-feet, 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
|-----|------|------|-------|------|-----|------|------|-------|------|
| 1 | 60 | 28 | 14 | 15 | 16 | 72 | 18 | 13 | 15 |
| 2 | 55 | 28 | 13 | 15 | 17 | 70 | 18 | 13 | 15 |
| 3 | 51 | 26 | 13 | 15 | 18 | 55 | 18 | 13 | 15 |
| 4 | 50 | 28 | 14 | 15 | 19 | 46 | 18 | 12 | 14 |
| 5 | 48 | 27 | 15 | 15 | 20 | 39 | 18 | 12 | 14 |
| 6 | 45 | 25 | 13 | 15 | 21 | 35 | 18 | 12 | 14 |
| 7 | 45 | 24 | 13 | 15 | 22 | 35 | 18 | 12 | 14 |
| 8 | 43 | 24 | 13 | 15 | 23 | 32 | 16 | 12 | 14 |
| 9 | 41 | 24 | 13 | 15 | 24 | 32 | 16 | 12 | 15 |
| 10 | 40 | 24 | 13 | 15 | 25 | 29 | 16 | 12 | 16 |
| 11 | 46 | 24 | 12 | 15 | 26 | 30 | 19 | 13 | 18 |
| 12 | 54 | 21 | 12 | 14 | 27 | 30 | 18 | 13 | 26 |
| 13 | 43 | 20 | 12 | 15 | 28 | 29 | 18 | 13 | 29 |
| 14 | 44 | 20 | 12 | 15 | 29 | 30 | 17 | 14 | 32 |
| 15 | 47 | 18 | 12 | 15 | 30 | 30 | 15 | 16 | 36 |
| | | | | | 31 | 29 | 14 | - | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|------------------|------------------|---------|---------|------|-----------------|---------|-----------|
| | | | | | | Inches | Acre-feet |
| July..... | 1,336 | 72 | 29 | 43.1 | 0.931 | 1.07 | 2,650 |
| August..... | 656 | 26 | 14 | 20.5 | .443 | | 1,260 |
| September..... | 386 | 15 | 12 | 12.9 | .279 | .31 | 766 |
| October 1-30.... | 511 | 36 | 14 | 17.0 | .367 | .41 | 1,010 |
| The period.... | - | - | - | - | - | - | 5,690 |

South Fork of Chehalis River at Bolistfort, Wash.

Location.- Staff gage, lat. 46°32'45", long. 123°07'55", in SW $\frac{1}{4}$ sec. 1, T. 12 N., R. 4 W., a quarter of a mile southwest of Bolistfort and 6 miles upstream from mouth.

Drainage area.- 49.2 square miles.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 64 second-feet July 17 (gage height, 1.24 feet); minimum observed, 8.4 second-feet Sept. 23-26 (gage height, 0.79 foot).

Remarks.- Records good. Gage read twice daily. No diversion or regulation.

Discharge, in second-feet, 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
|-----|------|------|-------|------|-----|------|------|-------|------|
| 1 | 44 | 23 | 13 | 13 | 16 | 43 | 13 | 9.9 | 20 |
| 2 | 42 | a22 | 12 | 12 | 17 | 60 | 13 | 9.9 | 14 |
| 3 | 39 | 20 | 11 | 12 | 18 | 44 | 13 | 9.9 | 11 |
| 4 | a38 | 20 | 11 | 11 | 19 | 36 | 13 | 9.0 | 9.9 |
| 5 | a37 | 23 | 13 | 11 | 20 | 34 | 13 | 9.0 | 9.0 |
| 6 | 36 | 20 | 12 | 9.9 | 21 | 31 | 13 | 9.0 | 9.0 |
| 7 | 35 | 18 | 12 | 9.0 | 22 | 28 | 13 | 9.0 | 9.0 |
| 8 | 34 | 18 | 12 | 12 | 23 | 27 | 13 | 9.0 | 9.0 |
| 9 | 32 | 16 | a10 | 11 | 24 | 27 | 13 | 8.4 | 9.9 |
| 10 | 32 | 18 | 9.0 | 11 | 25 | 26 | 12 | 8.4 | 9.0 |
| 11 | 32 | 17 | 9.0 | 13 | 26 | 25 | 12 | 8.4 | 9.0 |
| 12 | a46 | 9.0 | 13 | 27 | 27 | 23 | 14 | a10 | 12 |
| 13 | 35 | 14 | 9.9 | 14 | 28 | 23 | 15 | 12 | 23 |
| 14 | 32 | 14 | 9.9 | a24 | 29 | 23 | 15 | 14 | 20 |
| 15 | 36 | 14 | 9.9 | 35 | 30 | 24 | 16 | 16 | 20 |
| | | | | | 31 | 23 | 14 | - | - |

| Month | Second foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|------------------|------------------|---------|---------|------|-----------------|---------|-----------|
| | | | | | | Inches | Acre-feet |
| July..... | 1,047 | 60 | 23 | 33.8 | 0.687 | 0.79 | 2,080 |
| August..... | 490 | 23 | 12 | 15.8 | .321 | .37 | 972 |
| September..... | 314.6 | 16 | 8.4 | 10.5 | .213 | .24 | 624 |
| October 1-30.... | 404.7 | 35 | 9.0 | 13.5 | .274 | .31 | 805 |
| The period.... | - | - | - | - | - | - | 4,480 |

a No gage-height record; discharge interpolated or computed on basis of records for Elk Creek near Doty.

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

CHEHALIS RIVER BASIN

Newaukum River near Chehalis, Wash.

Location.- Staff gage, lat. $46^{\circ}36'10''$, long. $122^{\circ}56'45''$, on line between secs. 9 and 16 (revised), T. 13 N., R. 2 W., 2.2 miles (revised) southeast of Chehalis and 3.4 miles (revised) upstream from mouth.

Drainage area.- 159 square miles (revised).

Records available.- March 1929 to September 1931, July to September 1942.

Extremes.- Maximum discharge observed during period July 1 to Sept. 30, 1942, 387 second-foot July 17 (gage height, 2.88 feet); minimum observed, 36 second-foot Sept. 26 (gage height, 1.25 feet).

1929-31, 1942: Maximum discharge, 5,240 second-foot Apr. 1, 1931 (gage height, 11.85 feet), from rating curve extended above 2,300 second-foot; minimum, 27 second-foot Sept. 23, 1930.

Remarks.- Records good. Cities of Chehalis and Centralia divert about 15 second-foot for municipal use. No regulation.

Discharge, in second-foot, 1942

| Day | July | Aug. | Sept. | Day | July | Aug. | Sept. | Day | July | Aug. | Sept. |
|-----------------|------|------|-------|------------------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 187 | 92 | 53 | 11 | 144 | 76 | 46 | 21 | 165 | 63 | 40 |
| 2 | 176 | 92 | 53 | 12 | 144 | 74 | 46 | 22 | 144 | 60 | 39 |
| 3 | 165 | 92 | 53 | 13 | 134 | 71 | 45 | 23 | 134 | 59 | 39 |
| 4 | 165 | 89 | 53 | 14 | 134 | 69 | 44 | 24 | 125 | 57 | 39 |
| 5 | 154 | 88 | 52 | 15 | 176 | 66 | 44 | 25 | 116 | 57 | 39 |
| 6 | 144 | 86 | 56 | 16 | 234 | 63 | 45 | 26 | 116 | 56 | 36 |
| 7 | 144 | 82 | 52 | 17 | 334 | 63 | 44 | 27 | 108 | 69 | 40 |
| 8 | 134 | 80 | 48 | 18 | 246 | 63 | 42 | 28 | 108 | 66 | 42 |
| 9 | 125 | 78 | 48 | 19 | 198 | 60 | 41 | 29 | 105 | 62 | 42 |
| 10 | 125 | 77 | 48 | 20 | 165 | 62 | 41 | 30 | 103 | 59 | 45 |
| | | | | | | | | 31 | 98 | 56 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| July..... | | | | 4,750 | 334 | 98 | 153 | 9,420 | | | |
| August..... | | | | 2,217 | 92 | 56 | 71.5 | 4,400 | | | |
| September..... | | | | 1,355 | 56 | 36 | 45.2 | 2,690 | | | |
| The period..... | | | | - | - | - | - | 16,510 | | | |

South Fork of Newaukum River near Onalaska, Wash.

Location.- Staff gage, lat. $46^{\circ}34'35''$, long. $122^{\circ}41'00''$, on line between secs. 28 and 33, T. 13 N., R. 1 E., 0.9 mile upstream from Lost Creek and $1\frac{1}{2}$ miles east of Onalaska.

Drainage area.- 40.8 square miles.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 234 second-foot

July 16 (gage height, 1.80 feet); minimum observed, 24 second-foot Oct. 26 (gage height, 0.44 foot).

Remarks.- Records good. Gage read twice daily. No diversion or regulation.

Discharge, in second-foot, 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. | | |
|-------------------|------|------|-------|------|------------------|------|---------|-------|---------|-----|------|------|-----------------|------|------------|--|
| 1 | 112 | 57 | 33 | 33 | 11 | 88 | 47 | 30 | 31 | 21 | 94 | 39 | 28 | 25 | | |
| 2 | 96 | 54 | 33 | 31 | 12 | 80 | 45 | 30 | 28 | 22 | 88 | 38 | 26 | 25 | | |
| 3 | 96 | 54 | 34 | 32 | 13 | 72 | 45 | 29 | 26 | 23 | 82 | 38 | 27 | 26 | | |
| 4 | 96 | 52 | 34 | 30 | 14 | 80 | 42 | 29 | 38 | 24 | 76 | 35 | 28 | 25 | | |
| 5 | 96 | 52 | 33 | 28 | 15 | 99 | 40 | 30 | 37 | 25 | 72 | 41 | 26 | 25 | | |
| 6 | 80 | 50 | 32 | 27 | 16 | 180 | 40 | 30 | 30 | 26 | 68 | 41 | 27 | 28 | | |
| 7 | 80 | 48 | 32 | 27 | 17 | 180 | 40 | 28 | 28 | 27 | 66 | 40 | 28 | 54 | | |
| 8 | 80 | 47 | 31 | 26 | 18 | 146 | 40 | 27 | 27 | 28 | 64 | 40 | 28 | 38 | | |
| 9 | 80 | 47 | 30 | 26 | 19 | 120 | 38 | 27 | 26 | 29 | 62 | 37 | 28 | 74 | | |
| 10 | 80 | 48 | 30 | 27 | 20 | 104 | 38 | 26 | 25 | 30 | 60 | 35 | 31 | 42 | | |
| | | | | | | | | | | 31 | 60 | 34 | - | - | | |
| Month | | | | | Second-foot-days | | Maximum | | Minimum | | Mean | | Per square mile | | Run-off | |
| | | | | | | | | | | | | | Inches | | Acres-feet | |
| July..... | | | | | 2,837 | | 180 | | 60 | | 91.5 | | 2.24 | | 2.59 | |
| August..... | | | | | 1,342 | | 57 | | 34 | | 43.3 | | 1.06 | | 1.22 | |
| September..... | | | | | 885 | | 34 | | 26 | | 29.5 | | .723 | | .81 | |
| October 1-30..... | | | | | 945 | | 74 | | 25 | | 31.5 | | .772 | | .86 | |
| The period..... | | | | | - | | - | | - | | - | | - | | - | |
| | | | | | | | | | | | | | | | 11,920 | |

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

Skookumchuck River near Centralia, Wash.

Location.- Water-stage recorder, lat. 46°47'15", long. 122°42'45", in SW 1/4 sec. 17, T. 15 N., R. 1 E., half a mile upstream from Bloody Run Creek, 4 1/2 miles upstream from Thompson Creek, and 12 miles northeast of Centralia. Datum of gage is 300.0 feet above mean sea level (river-profile survey).

Drainage area.- 60 square miles.

Records available.- April 1929 to September 1931, October 1939 to September 1942.

Extremes.- Maximum discharge during year, 3,800 second-feet Dec. 19 (gage height, 46.18 feet); minimum, 25 second-feet Sept. 25 (gage height, 39.57 feet).
1929-31, 1939-42: Maximum discharge, that of Dec. 19, 1941; minimum, 21 second-feet Sept. 23, 24, 1930, Sept. 8, 9, 23, 24, 25, 26, 1940.

Remarks.- Records excellent except those for period of no gage-height record, which are good. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet,
and discharge, in second-feet)

Oct. 1 to Dec. 18

Dec. 19 to Sept. 30

| | | | | | | | | | |
|------|-----|------|-------|------|-----|------|-------|------|-------|
| 39.8 | 53 | 41.0 | 318 | 39.6 | 27 | 40.8 | 210 | 44.0 | 2,020 |
| 40.0 | 73 | 41.3 | 444 | 39.8 | 42 | 41.1 | 320 | 45.0 | 2,770 |
| 40.2 | 101 | 41.6 | 588 | 40.0 | 61 | 41.5 | 490 | 46.0 | 3,620 |
| 40.4 | 141 | 42.0 | 817 | 40.2 | 84 | 42.0 | 740 | | |
| 40.6 | 190 | 43.0 | 1,470 | 40.5 | 132 | 43.0 | 1,340 | | |
| 40.8 | 248 | | | | | | | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|------|------|------|------|-----|------|------|------|-------|
| 1 | 73 | 65 | 169 | 186 | 463 | 111 | 207 | 245 | 172 | 103 | 59 | 33 |
| 2 | 56 | 64 | 364 | 172 | 445 | 157 | 192 | 231 | 143 | 98 | 58 | 33 |
| 3 | 90 | 136 | 548 | 164 | 396 | 177 | 164 | 198 | 127 | 94 | 57 | 33 |
| 4 | 150 | 145 | 529 | 150 | 724 | 157 | 150 | 170 | 112 | 90 | 56 | 34 |
| 5 | 117 | 229 | 519 | 141 | 822 | 170 | 139 | 145 | 104 | 87 | 54 | 32 |
| 6 | 102 | 187 | 593 | 134 | 585 | 172 | 128 | 128 | 121 | 83 | 52 | 32 |
| 7 | 143 | 152 | 481 | 134 | 436 | 157 | 121 | 118 | 108 | 60 | 51 | 30 |
| 8 | 180 | 130 | 370 | 164 | 376 | 152 | 112 | 109 | 123 | 78 | 50 | 30 |
| 9 | 172 | 113 | 307 | 207 | 380 | 353 | 111 | 106 | 195 | 76 | 49 | 30 |
| 10 | 295 | 108 | 257 | 207 | 380 | 409 | 106 | 109 | 344 | 77 | 48 | 30 |
| 11 | 326 | 174 | 229 | 192 | 372 | 324 | 104 | 103 | 348 | 83 | 47 | 30 |
| 12 | 366 | 157 | 203 | 177 | 332 | 252 | 100 | 95 | 262 | 83 | 47 | 30 |
| 13 | 271 | 616 | 192 | 170 | 280 | 270 | 98 | 90 | 201 | 72 | 46 | 29 |
| 14 | 212 | 1,470 | 203 | 157 | 245 | 243 | 125 | 97 | 150 | 74 | 45 | 28 |
| 15 | 174 | 1,270 | 352 | 147 | 217 | 217 | 108 | 80 | 405 | 92 | 43 | 28 |
| 16 | 152 | 786 | 1,500 | 141 | 198 | 198 | 101 | 84 | 499 | 159 | 42 | 29 |
| 17 | 145 | 1500 | 1,070 | 134 | 180 | 201 | 106 | 78 | 451 | 201 | 42 | 29 |
| 18 | 132 | 358 | 1,150 | 127 | 164 | 201 | 95 | 78 | 376 | 139 | 40 | 28 |
| 19 | 141 | 281 | 2,930 | 119 | 152 | 183 | 91 | 78 | 300 | 112 | 39 | 27 |
| 20 | 121 | 248 | 1,700 | 114 | 150 | 172 | 87 | 87 | 234 | 101 | 38 | 27 |
| 21 | 111 | a280 | 1,060 | 112 | 145 | 164 | 85 | 82 | 201 | 92 | 38 | 27 |
| 22 | 102 | a190 | 795 | 109 | 134 | 201 | 98 | 104 | 175 | 87 | 37 | 26 |
| 23 | 94 | a170 | 1,020 | 109 | 130 | 189 | 85 | 121 | 162 | 82 | 37 | 26 |
| 24 | 90 | 155 | 729 | 186 | 127 | 189 | 94 | 106 | 159 | 77 | 36 | 26 |
| 25 | f86 | 187 | 545 | 502 | 118 | 183 | 101 | 128 | 167 | 72 | 38 | 26 |
| 26 | f83 | 162 | 422 | 508 | 114 | 170 | 103 | 141 | 164 | 70 | 45 | 26 |
| 27 | 79 | 148 | 356 | 494 | 116 | 159 | 101 | 198 | 143 | 69 | 40 | 26 |
| 28 | 80 | 155 | 308 | 432 | 111 | 154 | 100 | 210 | 130 | 65 | 38 | 26 |
| 29 | 74 | 187 | 266 | 364 | - | 147 | 95 | 312 | 119 | 65 | 38 | 26 |
| 30 | 69 | 172 | 231 | 308 | - | 143 | 122 | 259 | 112 | 64 | 36 | 27 |
| 31 | 67 | - | 204 | 273 | - | 147 | - | 207 | - | 61 | 35 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 4,385 | 366 | 67 | 141 | 2.35 | 2.72 | 8,700 |
| November..... | 8,913 | 1,470 | 64 | 297 | 4.95 | 5.52 | 17,680 |
| December..... | 19,602 | 2,930 | 169 | 632 | 10.5 | 12.15 | 38,980 |
| Calendar year 1941..... | 65,501 | 2,930 | 25 | 179 | 2.98 | 40.60 | 129,900 |
| January..... | 6,534 | 506 | 109 | 211 | 3.52 | 4.05 | 12,960 |
| February..... | 8,292 | 822 | 111 | 296 | 4.93 | 5.14 | 16,450 |
| March..... | 6,107 | 409 | 111 | 197 | 3.28 | 3.79 | 12,110 |
| April..... | 3,419 | 207 | 65 | 114 | 1.90 | 2.12 | 6,760 |
| May..... | 4,297 | 312 | 75 | 139 | 2.32 | 2.66 | 8,580 |
| June..... | 6,367 | 499 | 104 | 212 | 3.53 | 3.95 | 12,630 |
| July..... | 2,786 | 201 | 61 | 89.9 | 1.50 | 1.73 | 5,530 |
| August..... | 1,381 | 59 | 35 | 44.5 | .742 | .66 | 2,740 |
| September..... | 864 | 34 | 26 | 28.8 | .480 | .54 | 1,710 |
| Water year 1941-42..... | 72,947 | 2,930 | 26 | 200 | 3.33 | 45.23 | 144,700 |

Peak discharge.- Nov. 14 (7 a.m.) 1,570 sec.-ft.; Dec. 16 (7:30 a.m.) 1,710 sec.-ft.; Dec. 19 (10 a.m.) 3,800 sec.-ft.

a No gage-height record; discharge computed on basis of range in stage and records for Chehalis River near Grand Mound and Satsop River near Satsop.

f Computed on basis of partly estimated gage heights.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

CHEHALIS RIVER BASIN

Lincoln Creek near Rochester, Wash.

Location.- Staff gage, lat. 46°44'10", long. 123°10'40", in SW¼ sec. 34, T. 15 N., R. 4 W., 1½ miles downstream from confluence of North and South Forks and 7 miles southwest of Rochester.

Drainage area.- 20.9 square miles.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 22 second-feet July 11 (gage height, 1.61 feet); minimum observed, 1.7 second-feet Sept. 22 (gage height, 0.55 foot).

Remarks.- Records fair. Gage read twice daily. No diversion or regulation.

Discharge, in second-feet, 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
|-----|------|------|-------|------|-----|------|------|-------|------|
| 1 | 15 | 7.4 | 2.9 | 3.0 | 16 | 16 | 4.6 | 2.4 | 3.0 |
| 2 | 14 | 7.6 | 2.9 | 3.0 | 17 | 15 | 4.6 | 2.4 | 2.6 |
| 3 | 14 | 6.9 | 3.4 | 2.9 | 18 | 14 | 4.6 | 2.4 | 2.3 |
| 4 | 14 | 7.0 | 3.4 | 2.9 | 19 | 13 | 4.3 | 1.8 | 2.3 |
| 5 | 13 | 7.0 | 3.4 | 2.3 | 20 | 12 | 3.8 | 1.8 | 2.6 |
| 6 | 13 | 6.4 | 3.2 | 2.2 | 21 | 11 | 4.0 | 1.8 | 2.6 |
| 7 | 12 | 6.1 | 3.2 | 2.3 | 22 | 11 | 4.0 | 1.8 | 2.6 |
| 8 | 12 | 6.1 | 2.8 | 2.3 | 23 | 10 | 3.4 | 1.8 | 2.9 |
| 9 | 12 | 6.1 | 2.6 | 2.0 | 24 | 9.5 | 3.4 | 1.8 | 2.6 |
| 10 | 12 | 6.1 | 2.6 | 2.2 | 25 | 9.0 | 3.7 | 1.6 | 2.3 |
| 11 | 17 | 5.9 | 2.6 | 2.4 | 26 | 8.8 | 4.3 | 1.8 | 2.6 |
| 12 | 15 | 5.4 | 2.6 | 2.6 | 27 | 8.5 | 4.5 | 2.3 | 5.3 |
| 13 | 13 | 5.4 | 2.6 | 2.3 | 28 | 6.2 | 4.2 | 2.4 | 5.1 |
| 14 | 14 | 4.8 | 2.6 | 4.2 | 29 | 7.8 | 4.2 | 2.6 | 4.5 |
| 15 | 13 | 4.6 | 2.6 | 4.0 | 30 | 7.8 | 3.4 | 2.8 | 7.7 |
| | | | | | 31 | 7.7 | 3.0 | - | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off Inches | Acres-feet |
|----------------|------------------|---------|---------|------|-----------------|-------------------|------------|
| July..... | 372.3 | 17 | 7.7 | 12.0 | 0.574 | 0.66 | 738 |
| August..... | 156.7 | 7.5 | 3.0 | 5.05 | .242 | .28 | 311 |
| September..... | 75.1 | 3.4 | 1.8 | 2.50 | .120 | .13 | 149 |
| October 1-30.. | 91.6 | 7.7 | 2.0 | 3.05 | .146 | .16 | 182 |
| The period.. | - | - | - | - | - | - | 1,380 |

Black River at Little Rock, Wash.

Location.- Staff gage, lat. 46°54'10", long. 123°01'20", in NE¼SW¼ sec. 2, T. 16 N., R. 3 W., 0.4 mile upstream from Beaver Creek at bridge crossing in Little Rock.

Drainage area.- 64 square miles.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 50 second-feet July 12 (gage height, 1.74 feet); minimum observed, 8.2 second-feet Sept. 9-18, 25, 26, 28 (gage height, 1.34 feet).

Remarks.- Records good. Gage read twice daily. No diversion or regulation.

Discharge, in second-feet, 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
|-----|------|------|-------|------|-----|------|------|-------|------|
| 1 | 30 | 15 | 9.2 | 9.7 | 16 | 46 | 10 | 8.2 | 17 |
| 2 | 28 | 15 | 9.2 | 13 | 17 | 43 | 10 | 8.2 | 14 |
| 3 | 28 | 13 | 9.2 | 11 | 18 | 38 | 11 | 8.2 | 14 |
| 4 | 26 | 13 | 9.2 | 11 | 19 | 29 | 9.7 | 8.7 | 11 |
| 5 | 24 | 13 | 9.2 | 10 | 20 | 23 | 9.7 | 8.7 | 11 |
| 6 | 23 | 12 | 9.2 | 10 | 21 | 20 | 9.7 | 10 | 11 |
| 7 | 21 | 12 | 9.2 | 10 | 22 | 18 | 9.7 | 11 | 11 |
| 8 | 20 | 12 | 9.2 | 9.7 | 23 | 19 | 9.7 | 10 | 11 |
| 9 | 20 | 12 | 8.2 | 9.2 | 24 | 18 | 9.7 | 9.2 | 11 |
| 10 | 20 | 12 | 8.2 | 9.2 | 25 | 17 | 9.7 | 8.2 | 11 |
| 11 | 37 | 12 | 8.2 | 9.2 | 26 | 18 | 10 | 8.2 | 12 |
| 12 | 45 | 12 | 8.2 | 9.2 | 27 | 17 | 10 | 8.7 | 15 |
| 13 | 30 | 12 | 8.2 | 9.2 | 28 | 15 | 10 | 8.2 | 16 |
| 14 | 29 | 11 | 8.2 | 15 | 29 | 17 | 10 | 9.2 | 16 |
| 15 | 43 | 9.7 | 8.2 | 17 | 30 | 17 | 10 | 9.2 | 17 |
| | | | | | 31 | 16 | 9.7 | - | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off Inches | Acres-feet |
|----------------|------------------|---------|---------|------|-----------------|-------------------|------------|
| July..... | 792 | 46 | 16 | 25.5 | 0.398 | 0.46 | 1,570 |
| August..... | 344.3 | 15 | 9.7 | 11.1 | .173 | .20 | 683 |
| September..... | 264.9 | 11 | 8.2 | 8.83 | .138 | .15 | 525 |
| October 1-30.. | 360.4 | 17 | 9.2 | 12.0 | .188 | .21 | 715 |
| The period... | - | - | - | - | - | - | 3,490 |

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

Rock Creek at Cedarville, Wash.

Location.- Staff gage, lat. 46°52'20", long. 123°17'55", in NE¼SW¼ sec. 15, T. 16 N., R. 5 W., half a mile above mouth and three quarters of a mile northwest of Cedarville.

Drainage area.- 26.5 square miles.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 18 second-feet July 16 and 17; minimum observed, 1.5 second-feet Sept. 14, 16, 17, 21-26.

Remarks.- Records fair. Gage read twice daily. No diversion or regulation.

Discharge, in second-feet, of Rock Creek at Cedarville, Wash., 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
|-------------------|------|------|-------|------|------------------|---------|---------|-------|-----------------|---------|-----------|------|-------|------|
| 1 | 17 | 7.9 | 3.3 | 3.3 | 11 | 12 | 3.9 | 2.1 | 2.7 | 21 | 8.8 | 3.9 | 1.5 | 2.7 |
| 2 | 16 | 7.5 | 2.4 | 2.4 | 12 | 12 | 3.9 | 1.8 | 4.6 | 22 | 7.5 | 3.6 | 1.5 | 3.0 |
| 3 | 16 | 7.1 | 2.4 | 2.1 | 13 | 13 | 4.2 | 1.8 | 5.0 | 23 | 7.1 | 3.6 | 1.5 | 3.0 |
| 4 | 16 | 6.2 | 2.1 | 2.1 | 14 | 13 | 3.9 | 1.5 | 4.5 | 24 | 6.2 | 3.3 | 1.5 | 3.3 |
| 5 | 15 | 5.0 | 2.7 | 2.1 | 15 | 15 | 3.9 | 1.8 | 4.2 | 25 | 6.2 | 3.0 | 1.5 | 3.6 |
| 6 | 14 | 3.9 | 2.4 | 1.8 | 16 | 17 | 3.9 | 1.5 | 3.6 | 26 | 5.4 | 4.6 | 1.5 | 3.9 |
| 7 | 13 | 3.9 | 2.4 | 1.8 | 17 | 18 | 4.2 | 1.5 | 3.0 | 27 | 5.4 | 5.8 | 1.8 | 4.2 |
| 8 | 13 | 3.3 | 2.4 | 1.8 | 18 | 16 | 4.2 | 1.8 | 3.0 | 28 | 4.6 | 4.2 | 2.1 | 5.0 |
| 9 | 11 | 3.6 | 2.4 | 2.4 | 19 | 13 | 4.2 | 1.8 | 3.0 | 29 | 4.2 | 5.9 | 2.4 | 6.2 |
| 10 | 11 | 3.6 | 2.1 | 2.4 | 20 | 9.9 | 3.9 | 1.8 | 2.7 | 30 | 4.2 | 3.6 | 3.0 | 7.5 |
| | | | | | | | | | | 31 | 5.9 | 3.3 | | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | | | | |
| | | | | | | | | | | Inches | Acre-feet | | | |
| July..... | | | | | 343.4 | 18 | 3.9 | 11.1 | 0.419 | 0.48 | 681 | | | |
| August..... | | | | | 156.0 | 7.9 | 3.0 | 4.35 | .164 | .19 | 268 | | | |
| September..... | | | | | 60.0 | 3.3 | 1.5 | 2.00 | .075 | .08 | 119 | | | |
| October 1-30..... | | | | | 101.0 | 7.5 | 1.8 | 3.37 | .127 | .14 | 200 | | | |
| The period..... | | | | | - | - | - | - | - | - | 1,270 | | | |

Porter Creek at Porter, Wash.

Location.- Staff gage, lat. 46°56'50", long. 123°17'40", in SW¼ sec. 22, T. 17 N., R. 5 W., 0.7 mile northeast of Porter and 1 mile upstream from mouth.

Drainage area.- 37.2 square miles.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 118 second-feet

July 11 (gage height, 2.04 feet); minimum observed, 12 second-feet Sept. 20-24; minimum gage height observed, 0.77 foot Sept. 23.

Remarks.- Records good. No diversion or regulation.

Discharge, in second-feet, 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
|-------------------|------|------|-------|------|------------------|---------|---------|-------|-----------------|---------|-----------|------|-------|------|
| 1 | 40 | 27 | 14 | 18 | 11 | 76 | 23 | 14 | 15 | 21 | 31 | 17 | 12 | 15 |
| 2 | 34 | 25 | 14 | 19 | 12 | 50 | 21 | 14 | 16 | 22 | 31 | 14 | 12 | 15 |
| 3 | 34 | 24 | 15 | 19 | 13 | 38 | 18 | 14 | 15 | 23 | 31 | 14 | 12 | 15 |
| 4 | 35 | 25 | 16 | 16 | 14 | 50 | 16 | 14 | 39 | 24 | 29 | 15 | 12 | 14 |
| 5 | 34 | 24 | 19 | 17 | 15 | 51 | 16 | 15 | 29 | 25 | 27 | 18 | 13 | 14 |
| 6 | 34 | 22 | 17 | 15 | 16 | 67 | 17 | 15 | 19 | 26 | 25 | 18 | 14 | 15 |
| 7 | 32 | 21 | 15 | 18 | 17 | 57 | 17 | 14 | 16 | 27 | 28 | 17 | 14 | 22 |
| 8 | 31 | 21 | 14 | 14 | 18 | 45 | 17 | 14 | 14 | 28 | 27 | 17 | 14 | 19 |
| 9 | 34 | 21 | 14 | 14 | 19 | 40 | 16 | 13 | 15 | 29 | 27 | 16 | 14 | 24 |
| 10 | 33 | 22 | 14 | 14 | 20 | 32 | 16 | 12 | 16 | 30 | 26 | 15 | 16 | 24 |
| | | | | | | | | | | 31 | 26 | 14 | | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | | | | |
| | | | | | | | | | | Inches | Acre-feet | | | |
| July..... | | | | | 1,157 | 76 | 26 | 37.3 | 1.00 | 1.16 | 2,290 | | | |
| August..... | | | | | 584 | 27 | 14 | 18.8 | .505 | .58 | 1,160 | | | |
| September..... | | | | | 424 | 19 | 12 | 14.1 | .379 | .42 | 841 | | | |
| October 1-30..... | | | | | 532 | 39 | 14 | 17.7 | .476 | .53 | 1,060 | | | |
| The period..... | | | | | - | - | - | - | - | - | 5,350 | | | |

Cloquallum Creek at Elma; Wash.

Location.- Staff gage, lat. 47°00'20", long. 123°23'10", in SW¼ sec. 36, T. 18 N., R. 6 W., half a mile east of Elma and 1.9 miles downstream from Wildcat Creek.

Drainage area.- 66 square miles.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 103 second-feet

July 16 (gage height, 1.44 feet); minimum observed, 20 second-feet Sept. 22-24.

Remarks.- Records good. Small diversions from tributaries; some regulation by log pond on Wildcat Creek.

Discharge, in second-feet, 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
|-------------------|------|------|-------|------|------------------|---------|---------|-------|-----------------|---------|-----------|------|-------|------|
| 1 | 56 | 39 | 22 | 26 | 11 | 62 | 32 | 21 | 22 | 21 | 45 | 26 | 21 | 24 |
| 2 | 51 | 39 | 22 | 26 | 12 | 74 | 32 | 22 | 27 | 22 | 45 | 26 | 20 | 24 |
| 3 | 47 | 36 | 22 | 30 | 13 | 55 | 30 | 21 | 27 | 23 | 45 | 26 | 20 | 22 |
| 4 | 47 | 36 | 22 | 28 | 14 | 33 | 29 | 22 | 36 | 24 | 43 | 26 | 20 | 22 |
| 5 | 45 | 34 | 23 | 24 | 15 | 71 | 28 | 22 | 39 | 25 | 41 | 24 | 21 | 22 |
| 6 | 44 | 32 | 24 | 23 | 16 | 84 | 30 | 22 | 31 | 26 | 39 | 24 | 22 | 24 |
| 7 | 43 | 33 | 22 | 22 | 17 | 85 | 28 | 22 | 28 | 27 | 39 | 24 | 22 | 28 |
| 8 | 42 | 31 | 22 | 22 | 18 | 63 | 28 | 22 | 26 | 28 | 39 | 24 | 22 | 27 |
| 9 | 43 | 32 | 22 | 22 | 19 | 58 | 27 | 21 | 24 | 29 | 39 | 24 | 22 | 30 |
| 10 | 43 | 32 | 21 | 22 | 20 | 50 | 28 | 21 | 24 | 30 | 36 | 24 | 24 | 34 |
| | | | | | | | | | | 31 | 36 | 23 | | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | | | | |
| | | | | | | | | | | Inches | Acre-feet | | | |
| July..... | | | | | 1,569 | 85 | 36 | 50.6 | 0.767 | 0.88 | 3,110 | | | |
| August..... | | | | | 907 | 39 | 23 | 29.3 | .444 | .51 | 1,800 | | | |
| September..... | | | | | 652 | 24 | 20 | 21.7 | .329 | .37 | 1,290 | | | |
| October 1-30..... | | | | | 786 | 39 | 22 | 26.2 | .397 | .44 | 1,560 | | | |
| The period..... | | | | | - | - | - | - | - | - | 7,760 | | | |

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

Satsop River near Satsop, Wash.

Location.- Water-stage recorder, lat. 47°00'05", long. 123°29'40", in sec. 36, T. 18 N., R. 7 W., 1 mile west of Satsop and 1½ miles upstream from mouth. Datum of gage is at mean sea level, datum of 1929.

Drainage area.- 315 square miles.

Records available.- March 1929 to September 1942.

Average discharge.- 13 years, 1,896 second-feet.

Extremes.- Maximum discharge during year, 13,200 second-feet Dec. 19 (elevation, 30.23 feet), from rating curve extended above 10,000 second-feet; minimum, 222 second-feet Sept. 25 (elevation, 22.93 feet).

1929-42: Maximum discharge observed, 52,500 second-feet Jan. 22, 1935 (elevation, 38.9 feet, from floodmarks), from rating curve extended above 17,000 second-feet; minimum discharge, 166 second-feet Sept. 21, 1938.

Remarks.- Records good. No diversions or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 19 | | | | Dec. 20 to Sept. 30 | | | |
|-------------------|-------|------|--------|---------------------|-------|------|-------|
| 25.6 | 426 | 26.0 | 3,570 | 25.0 | 250 | 25.0 | 2,070 |
| 24.0 | 730 | 27.0 | 5,490 | 23.2 | 345 | 26.0 | 3,650 |
| 24.5 | 1,290 | 28.0 | 7,670 | 25.5 | 525 | 27.0 | 5,550 |
| 25.0 | 1,950 | 29.0 | 10,000 | 24.0 | 910 | 28.0 | 7,680 |
| 25.5 | 2,720 | 30.0 | 12,600 | 24.5 | 1,420 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 568 | 640 | 2,250 | 1,670 | 3,830 | 1,170 | 1,140 | 2,000 | 667 | 602 | 454 | 277 |
| 2 | 504 | 608 | 9,100 | 1,530 | 3,480 | 1,400 | 1,110 | 1,800 | 553 | 574 | 448 | 272 |
| 3 | 511 | 919 | 8,130 | 1,420 | 3,220 | 1,600 | 1,040 | 1,540 | 532 | 546 | 436 | 272 |
| 4 | 504 | 1,650 | 5,700 | 1,320 | 5,960 | 1,400 | 991 | 1,360 | 512 | 532 | 436 | 272 |
| 5 | 484 | 3,840 | 4,890 | 1,260 | 6,590 | 1,420 | 937 | 1,200 | 499 | 532 | 418 | 272 |
| 6 | 477 | 2,560 | 5,700 | 1,190 | 4,950 | 1,430 | 902 | 1,100 | 560 | 512 | 406 | 272 |
| 7 | 497 | 1,880 | 4,690 | 1,130 | 4,190 | 1,310 | 859 | 1,030 | 553 | 492 | 389 | 272 |
| 8 | 518 | 1,570 | 3,570 | 1,290 | 3,550 | 1,280 | 834 | 955 | 553 | 480 | 389 | 259 |
| 9 | 1,370 | 1,340 | 2,960 | 1,860 | 5,400 | 2,210 | 809 | 910 | 850 | 492 | 372 | 250 |
| 10 | 4,280 | 1,210 | 2,480 | 2,280 | 3,220 | 2,210 | 777 | 857 | 1,740 | 492 | 372 | 246 |
| 11 | 3,140 | 1,220 | 2,180 | 2,000 | 2,900 | 1,930 | 761 | 825 | 1,480 | 581 | 372 | 250 |
| 12 | 3,140 | 1,130 | 1,890 | 1,800 | 2,580 | 1,740 | 761 | 793 | 1,110 | 928 | 362 | 246 |
| 13 | 2,320 | 3,240 | 1,750 | 1,740 | 2,280 | 1,740 | 738 | 761 | 937 | 692 | 350 | 246 |
| 14 | 1,880 | 6,550 | 1,950 | 1,600 | 2,070 | 1,600 | 825 | 730 | 688 | 648 | 340 | 242 |
| 15 | 1,600 | 4,790 | 2,800 | 1,480 | 1,960 | 1,460 | 854 | 730 | 1,400 | 850 | 330 | 246 |
| 16 | 1,580 | 3,660 | 5,090 | 1,400 | 1,740 | 1,490 | 825 | 708 | 1,540 | 1,150 | 330 | 242 |
| 17 | 1,770 | 3,390 | 4,310 | 1,340 | 1,600 | 1,670 | 809 | 670 | 2,140 | 1,340 | 330 | 238 |
| 18 | 1,580 | 2,720 | 6,050 | 1,300 | 1,490 | 1,860 | 817 | 648 | 1,740 | 1,070 | 320 | 258 |
| 19 | 1,500 | 2,250 | 12,400 | 1,240 | 1,400 | 1,670 | 793 | 685 | 1,430 | 893 | 315 | 234 |
| 20 | 1,330 | 1,880 | 8,140 | 1,180 | 1,340 | 1,490 | 761 | 730 | 1,220 | 777 | 305 | 234 |
| 21 | 1,190 | 1,700 | 5,550 | 1,140 | 1,300 | 1,410 | 730 | 670 | 1,110 | 708 | 305 | 234 |
| 22 | 1,100 | 1,530 | 5,150 | 1,100 | 1,220 | 1,540 | 738 | 632 | 1,000 | 648 | 295 | 250 |
| 23 | 1,010 | 1,390 | 7,680 | 1,090 | 1,220 | 1,540 | 708 | 602 | 910 | 625 | 290 | 226 |
| 24 | 929 | 1,330 | 5,550 | 1,460 | 1,280 | 1,480 | 884 | 588 | 859 | 581 | 286 | 226 |
| 25 | 874 | 2,020 | 4,190 | 2,360 | 1,190 | 1,460 | 1,090 | 632 | 825 | 553 | 290 | 226 |
| 26 | 830 | 1,620 | 3,400 | 2,580 | 1,130 | 1,360 | 973 | 640 | 785 | 525 | 295 | 230 |
| 27 | 770 | 1,420 | 2,900 | 2,560 | 1,100 | 1,290 | 1,020 | 632 | 745 | 512 | 290 | 230 |
| 28 | 740 | 1,410 | 2,510 | 2,510 | 1,090 | 1,240 | 1,090 | 700 | 715 | 506 | 300 | 234 |
| 29 | 694 | 2,450 | 2,210 | 2,210 | - | 1,210 | 1,040 | 648 | 670 | 499 | 300 | 234 |
| 30 | 649 | 2,450 | 2,000 | 2,000 | - | 1,160 | 1,340 | 610 | 640 | 480 | 295 | 242 |
| 31 | 640 | - | 1,800 | 2,070 | - | 1,130 | - | 588 | - | 466 | 282 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 38,989 | 4,290 | 477 | 1,258 | 3.99 | 4.60 | 77,330 |
| November..... | 64,457 | 6,550 | 608 | 2,149 | 6.82 | 7.61 | 127,800 |
| December..... | 138,960 | 12,400 | 1,750 | 4,483 | 14.2 | 16.41 | 275,600 |
| Calendar year 1941..... | 581,941 | 16,800 | 237 | 1,594 | 5.06 | 68.71 | 1,154,000 |
| January..... | 51,270 | 2,660 | 1,090 | 1,654 | 5.25 | 6.05 | 101,700 |
| February..... | 71,290 | 6,590 | 1,090 | 2,546 | 8.08 | 8.42 | 141,400 |
| March..... | 46,800 | 2,210 | 1,130 | 1,513 | 4.80 | 5.54 | 93,020 |
| April..... | 26,936 | 1,540 | 708 | 899 | 2.85 | 3.18 | 53,430 |
| May..... | 26,974 | 2,000 | 588 | 870 | 2.07 | 3.18 | 53,500 |
| June..... | 29,043 | 2,140 | 499 | 968 | 3.78 | 3.43 | 57,610 |
| July..... | 20,286 | 1,340 | 466 | 654 | 2.08 | 2.40 | 40,240 |
| August..... | 10,702 | 454 | 282 | 345 | 1.10 | 1.26 | 21,230 |
| September..... | 7,392 | 277 | 226 | 246 | .781 | .87 | 14,660 |
| Water year 1941-42..... | 553,199 | 12,400 | 226 | 1,461 | 4.64 | 62.95 | 1,058,000 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

East Fork of Satsop River near Satsop, Wash.

Location.- Staff gage, lat. 47°05'10", long. 123°29'20", in SE¼ sec. 36, T. 19 N., R. 7 W., 0.4 mile upstream from confluence with Middle Fork and 6 miles north of Satsop.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 384 second-feet July 16, 17 (gage height, 1.46 feet); minimum observed, 30 second-feet Sept. 27 (gage height, 0.33 feet).

Remarks.- Records good except those for periods of no gage-height record, which are fair. Gage read twice daily. No diversion or regulation.

Rating table, period July to October, 1942 (gage height, in feet,
and discharge, in second-feet)
(Shifting-control method used Sept. 6 to Oct. 10)

| | | | |
|-----|-----|-----|-----|
| 0.4 | 44 | 1.0 | 180 |
| .5 | 60 | 1.2 | 261 |
| .6 | 78 | 1.4 | 358 |
| .8 | 121 | | |

Discharge, in second-feet, for period July 1 to October 30, 1942

| Day | July | Aug. | Sept. | Oct. | | | | | | | |
|-------------------|------|------|-------|------|------------------|---------|---------|------|----------------------|--|--|
| 1 | a115 | 94 | 44 | 54 | | | | | | | |
| 2 | a105 | 92 | 44 | 40 | | | | | | | |
| 3 | a100 | 90 | 44 | 41 | | | | | | | |
| 4 | a96 | 84 | 44 | 38 | | | | | | | |
| 5 | a96 | 78 | 44 | 36 | | | | | | | |
| 6 | a92 | 74 | a43 | 36 | | | | | | | |
| 7 | a90 | 73 | a41 | 37 | | | | | | | |
| 8 | a88 | 71 | 41 | 37 | | | | | | | |
| 9 | a90 | 69 | 40 | 37 | | | | | | | |
| 10 | 90 | 67 | 37 | 37 | | | | | | | |
| 11 | 121 | 65 | 37 | 38 | | | | | | | |
| 12 | 177 | 64 | 37 | 38 | | | | | | | |
| 13 | 132 | 62 | 37 | 40 | | | | | | | |
| 14 | 134 | 60 | 37 | 54 | | | | | | | |
| 15 | 235 | 58 | 37 | 82 | | | | | | | |
| 16 | 348 | 57 | 37 | 57 | | | | | | | |
| 17 | 368 | 55 | 37 | 44 | | | | | | | |
| 18 | 284 | 54 | 37 | 44 | | | | | | | |
| 19 | 214 | 54 | 33 | 44 | | | | | | | |
| 20 | 180 | 52 | 33 | 41 | | | | | | | |
| 21 | 158 | 50 | 33 | 38 | | | | | | | |
| 22 | 145 | 50 | 33 | 38 | | | | | | | |
| 23 | 132 | 50 | 33 | 38 | | | | | | | |
| 24 | 121 | 49 | 33 | 38 | | | | | | | |
| 25 | 112 | 49 | 31 | 38 | | | | | | | |
| 26 | 107 | 49 | 33 | 44 | | | | | | | |
| 27 | 103 | 49 | 30 | 54 | | | | | | | |
| 28 | 98 | 47 | 31 | 57 | | | | | | | |
| 29 | 96 | 47 | 31 | 57 | | | | | | | |
| 30 | 94 | 47 | 31 | 76 | | | | | | | |
| 31 | 94 | 44 | - | - | | | | | | | |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| July..... | | | | | 4,415 | 368 | 88 | 142 | 8,760 | | |
| August..... | | | | | 1,904 | 94 | 44 | 61.4 | 3,780 | | |
| September..... | | | | | 1,103 | 44 | 30 | 36.8 | 2,190 | | |
| October 1-30..... | | | | | 1,353 | 82 | 36 | 45.1 | 2,680 | | |
| The period..... | | | | | - | - | - | - | 17,410 | | |

a No gage-height record; discharge computed on basis of records for Satsop River near Satsop and Cloquallum Creek at Klma.

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

Wynoochee River at Oxbow, near Aberdeen, Wash.

Location.- Water-stage recorder, lat. 47°19'30", long. 123°38'20", in sec. 12, T. 21 N., R. 8 W., 1 mile downstream from Oxbow and 24 miles northeast of Aberdeen. Discharge measurements made 1½ miles upstream.

Drainage area.- About 65 square miles, above discharge measuring section (uncertain because of inadequate maps).

Records available.- May 1925 to September 1942.

Average discharge.- 17 years, 760 second-feet.

Extremes.- Maximum discharge during year, 9,270 second-feet Dec. 2 (gage height, 21.90 feet), from rating curve extended above 7,500 second-feet; minimum, 105 second-feet Sept. 24, 26-30.

1925-42: Maximum discharge, 18,000 second-feet Jan. 22, 1935 (gage height, 30.3 feet, from floodmarks), from rating curve extended above 5,300 second-feet; minimum, 76 second-feet Sept. 23, 1930.

Remarks.- Records excellent except those for periods of no gage-height record, which are fair. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 1 | | | | | Dec. 2 to Sept. 30 | | | | | | |
|--|-----|------|-------|------|--------------------|-----|-----|-----|-----|-----|-------|
| 3.2 | 207 | 6.0 | 806 | 14.0 | 3,930 | 2.0 | 105 | 3.4 | 247 | 6.0 | 812 |
| 3.7 | 268 | 8.0 | 1,380 | 16.0 | 5,130 | 2.1 | 113 | 4.0 | 340 | 8.0 | 1,380 |
| 4.3 | 373 | 10.0 | 2,000 | 18.0 | 6,400 | 2.6 | 160 | 5.0 | 557 | | |
| 5.0 | 539 | 12.0 | 2,810 | 20.0 | 7,800 | | | | | | |
| Note.- Same as preceding table above 8.0 feet. | | | | | | | | | | | |

Note.- Same as preceding table above 8.0 feet.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|-------|-------|------------------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 276 | 299 | 2,300 | 569 | 1,820 | 350 | 569 | 1,140 | 305 | 320 | 235 | 136 |
| 2 | 254 | 253 | 6,820 | 533 | 1,350 | 729 | 510 | 539 | 297 | a320 | 229 | 136 |
| 3 | 276 | 748 | 3,170 | 498 | 1,320 | 606 | 454 | 707 | 289 | a300 | 223 | 131 |
| 4 | 268 | 2,330 | 2,070 | 465 | 2,000 | 487 | 421 | 618 | 282 | a290 | 218 | 131 |
| 5 | 248 | 1,560 | 1,900 | 443 | 1,860 | 594 | 410 | 557 | 282 | a280 | 212 | 131 |
| 6 | 241 | 882 | 2,290 | 410 | 1,620 | 545 | 379 | 510 | 350 | a270 | 206 | 140 |
| 7 | 248 | 871 | 1,620 | 421 | 1,460 | 487 | 359 | 498 | 351 | 254 | a200 | 136 |
| 8 | 235 | 565 | 1,320 | 421 | 1,290 | 487 | 350 | 476 | 413 | 254 | a200 | 131 |
| 9 | 2,630 | 488 | 1,140 | 704 | 1,140 | 893 | 340 | 443 | 974 | 267 | a190 | 126 |
| 10 | 3,580 | 451 | 975 | 733 | 1,120 | 707 | 340 | 421 | 1,580 | 267 | a190 | 126 |
| 11 | 2,280 | 500 | 866 | 606 | 975 | 594 | 359 | 390 | 893 | 454 | a190 | 122 |
| 12 | 1,680 | 451 | 785 | 581 | 866 | 545 | 379 | 369 | 656 | 497 | a180 | 122 |
| 13 | 1,230 | 2,870 | 812 | 557 | 789 | 510 | 350 | 350 | 545 | 359 | a180 | 122 |
| 14 | 1,140 | 3,090 | 1,060 | 510 | 681 | 465 | 465 | 340 | 594 | 379 | a180 | 118 |
| 15 | 918 | 1,700 | 2,210 | 476 | 618 | 443 | 498 | 351 | 947 | 783 | a170 | 118 |
| 16 | 1,260 | 1,520 | 2,530 | 476 | 569 | 432 | 498 | 322 | 1,200 | 812 | a170 | 118 |
| 17 | 1,120 | 1,290 | 1,700 | 454 | b22 | 661 | 510 | 322 | 1,200 | 785 | a170 | 113 |
| 18 | 946 | 1,030 | 2,940 | 476 | 498 | 594 | 498 | 314 | 893 | 581 | a170 | 113 |
| 19 | 834 | 862 | 4,410 | 443 | 465 | 510 | 465 | 359 | 733 | 467 | a160 | 113 |
| 20 | 698 | 752 | 2,250 | 410 | 443 | 465 | 454 | 400 | 631 | 432 | a160 | 109 |
| 21 | 617 | 658 | 1,680 | 400 | 421 | 476 | 465 | 390 | 569 | 379 | a160 | 109 |
| 22 | 542 | 604 | 2,010 | 390 | 390 | 569 | 432 | 400 | 522 | 350 | a150 | 109 |
| 23 | 500 | 542 | 2,300 | 421 | 390 | 522 | 400 | 369 | 476 | 351 | a150 | 109 |
| 24 | 451 | 1,160 | 1,580 | 977 | 379 | 476 | 734 | 340 | 454 | 314 | 145 | 105 |
| 25 | 416 | 1,290 | 1,290 | 1,320 | 359 | 454 | 656 | 390 | 432 | 297 | 150 | 109 |
| 26 | 394 | 862 | 1,090 | 1,200 | 340 | 432 | 557 | 369 | 390 | a290 | 150 | 105 |
| 27 | 373 | 755 | 947 | 1,500 | 351 | 410 | 569 | 410 | 369 | a280 | 145 | 105 |
| 28 | 344 | 1,070 | 839 | 1,140 | 340 | 400 | 533 | 390 | 350 | a270 | 145 | 105 |
| 29 | 325 | 1,680 | 733 | 893 | - | 400 | 498 | 350 | a350 | a260 | 140 | 105 |
| 30 | 316 | 1,830 | 681 | 733 | - | 400 | 1,140 | 351 | a340 | 247 | 140 | 142 |
| 31 | 308 | - | 618 | 1,100 | - | 432 | - | 322 | - | 241 | 136 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 25,178 | 3,560 | 241 | 812 | 49,940 | | | |
| November..... | | | | | 32,743 | 3,090 | 283 | 1,091 | 64,940 | | | |
| December..... | | | | | 56,936 | 6,820 | 618 | 1,637 | 112,900 | | | |
| Calendar year 1941..... | | | | | 272,352 | 6,820 | 104 | 746 | 540,200 | | | |
| January..... | | | | | 20,260 | 1,500 | 390 | 654 | 40,190 | | | |
| February..... | | | | | 24,326 | 2,000 | 331 | 869 | 48,250 | | | |
| March..... | | | | | 16,075 | 893 | 350 | 519 | 31,880 | | | |
| April..... | | | | | 14,592 | 1,140 | 340 | 456 | 29,940 | | | |
| May..... | | | | | 13,767 | 1,140 | 314 | 444 | 27,510 | | | |
| June..... | | | | | 17,647 | 1,580 | 282 | 568 | 35,000 | | | |
| July..... | | | | | 11,640 | 812 | 241 | 375 | 23,090 | | | |
| August..... | | | | | 5,444 | 235 | 136 | 176 | 10,800 | | | |
| September..... | | | | | 3,595 | 142 | 105 | 120 | 7,130 | | | |
| Water year 1941-42..... | | | | | 242,203 | 6,820 | 105 | 664 | 480,400 | | | |

a No gage-height record; discharge computed on basis of records for Satsop River near Satsop.
 e Faulty intake action; discharge computed on basis of records for Satsop River near Satsop.
 Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; eastern war time thereafter.
 To convert war time to standard time, subtract 1 hour.

Wynoochee River below Black Creek, near Montesano, Wash.

Location.- Wire-weight gage, lat. 47°00'35", long. 123°39'00", in NW¼ sec. 35, T. 18 N., R. 8 W., at county road bridge, 500 feet downstream from mouth of Black Creek and 2½ miles northeast of Montesano.

Records available.- July to September 1942.

Extremes.- Maximum discharge observed during period July to September, 1,340 second-feet July 17 (gage height, 70.84 feet); minimum observed, 93 second-feet Sept. 24 (gage height, 68.84 feet).

Remarks.- Records good. City of Aberdeen diverts about 56 second-feet continuously 1½ miles above station. No regulation.

| Discharge, in second-feet, 1942 | | | | | | | | | | | |
|---------------------------------|------|------|-------|------------------|-------|---------|-------|---------|------|--------|-------|
| Day | July | Aug. | Sept. | Day | July | Aug. | Sept. | Day | July | Aug. | Sept. |
| 1 | a400 | 282 | 130 | 11 | 432 | 212 | 112 | 21 | 520 | 160 | 99 |
| 2 | a400 | 270 | 130 | 12 | 770 | 202 | 110 | 22 | 490 | 151 | 101 |
| 3 | 380 | 258 | 126 | 13 | 520 | 198 | 110 | 23 | 432 | 148 | 97 |
| 4 | 406 | 258 | 125 | 14 | 460 | 184 | 108 | 24 | 405 | 151 | 93 |
| 5 | 405 | 250 | 125 | 15 | 730 | 184 | 110 | 25 | 380 | 151 | 97 |
| 6 | 355 | 238 | 130 | 16 | 1,090 | 178 | 110 | 26 | 355 | 151 | 95 |
| 7 | 332 | 226 | 160 | 17 | 1,240 | 178 | 105 | 27 | 332 | 151 | 97 |
| 8 | 332 | 226 | 142 | 18 | 1,040 | 174 | 103 | 28 | 332 | 145 | 97 |
| 9 | 332 | 220 | 120 | 19 | 730 | 170 | 101 | 29 | 310 | 145 | 95 |
| 10 | 332 | 216 | 115 | 20 | 615 | 164 | 101 | 30 | 302 | 139 | 105 |
| | | | | | | | | 31 | 298 | 133 | - |
| Month | | | | Second-foot-days | | Maximum | | Minimum | | Mean | |
| July..... | | | | 15,456 | | 1,240 | | 298 | | 499 | |
| August..... | | | | 5,913 | | 282 | | 133 | | 191 | |
| September..... | | | | 3,548 | | 160 | | 93 | | 112 | |
| The period..... | | | | - | | - | | - | | - | |
| | | | | | | | | | | 49,030 | |

a No gage-height record; discharge computed on basis of records for Wynoochee River at Oxbow.

City of Aberdeen Wynoochee River intake near Montesano, Wash.

Location.- Staff gage and modified Cipolletti weir, lat. 47°01'00", long. 123°41'15", in NW¼ sec. 28, T. 18 N., R. 8 W., a quarter of a mile downstream from Wedekind Creek and 5 miles northwest of Montesano.

Records available.- July to October 1942 (discontinued).

Extremes (regulated).- Maximum discharge observed during period July 1 to Oct. 31, 61 second-feet Oct. 31 (gage height, 0.83 foot); minimum observed, 20 second-feet Sept. 7, 8 (gage height, 0.40 foot).

Remarks.- Records excellent except those for periods of changing stage, which are good. Gage read twice daily. Flow completely regulated at headworks gage.

| Discharge, in second-feet, 1942 | | | | | | | | | | | | | | |
|---------------------------------|------|------|-------|------|------------------|------|---------|-------|---------|-----|------|------|----------------------|------|
| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
| 1 | a57 | a57 | 57 | 58 | 11 | a57 | 57 | 57 | 57 | 21 | a57 | 57 | 57 | 57 |
| 2 | a57 | a57 | 57 | 57 | 12 | a57 | 57 | 57 | 57 | 22 | a57 | 57 | 57 | 57 |
| 3 | a57 | a57 | 57 | 57 | 13 | a57 | 57 | 57 | 57 | 23 | a57 | 57 | 57 | 57 |
| 4 | a57 | a57 | 57 | 57 | 14 | a57 | 57 | 58 | 57 | 24 | a57 | 57 | 57 | 57 |
| 5 | a57 | a57 | 57 | 57 | 15 | a57 | 57 | 58 | 57 | 25 | a57 | 57 | 57 | 57 |
| 6 | a57 | 57 | 54 | 57 | 16 | a57 | 57 | 57 | 57 | 26 | a57 | 57 | 57 | 57 |
| 7 | a57 | 57 | 26 | 57 | 17 | a57 | 57 | 57 | 57 | 27 | a57 | 57 | 57 | 57 |
| 8 | a57 | 57 | 44 | 57 | 18 | a57 | 57 | 57 | 57 | 28 | a57 | 57 | 57 | 57 |
| 9 | a57 | 57 | 57 | 57 | 19 | a57 | 57 | 57 | 57 | 29 | a57 | 57 | 57 | 57 |
| 10 | a57 | 57 | 57 | 57 | 20 | a57 | 57 | 57 | 57 | 30 | a57 | 57 | 58 | 57 |
| | | | | | | | | | | 31 | a57 | 57 | - | 58 |
| Month | | | | | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | |
| July..... | | | | | 1,767 | | 57 | | 57 | | 57.0 | | 3,500 | |
| August..... | | | | | 1,767 | | 57 | | 57 | | 57.0 | | 3,500 | |
| September..... | | | | | 1,686 | | 58 | | 26 | | 55.5 | | 3,300 | |
| October..... | | | | | 1,769 | | 58 | | 57 | | 57.1 | | 3,510 | |
| The period..... | | | | | - | | - | | - | | - | | 13,810 | |

a No gage-height record; discharge computed on basis of city of Aberdeen's plant operation schedule.

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

CHEHALIS RIVER BASIN

Wishkah River near Wishkah, Wash.

Location.- Wire-weight gage, lat. 47°06'35", long. 123°47'20", in NE¼ sec. 27, T. 19 N., R. 9 W., at county road bridge, 2.9 miles northeast of Wishkah and 3.8 miles upstream from East Fork.

Records available.- July to October 1942 (discontinued).

Extremes.- 1942: Maximum discharge observed during period July 1 to Oct. 30, 249 second-feet July 17 (gage height, 68.00 feet); minimum observed, 34 second-feet Oct. 19 (gage height, 67.06 feet).

Remarks.- Records good except those for period of no gage-height record, which are fair. Gage read twice daily. No diversion or regulation.

Discharge, in second-feet, 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
|-------------------|------|------|-------|------|------------------|------|------|-------|------|----------------------|------|------|-------|------|
| 1 | a100 | 77 | 45 | 86 | 11 | a123 | 64 | 40 | 53 | 21 | a127 | 54 | 40 | 50 |
| 2 | a96 | 75 | 46 | 64 | 12 | a186 | 58 | 42 | 50 | 22 | a116 | 53 | 40 | 50 |
| 3 | a96 | 74 | 48 | 60 | 13 | a130 | 56 | 43 | 53 | 23 | a110 | 50 | 40 | 46 |
| 4 | a96 | 74 | 50 | 56 | 14 | a119 | 53 | 43 | 72 | 24 | a105 | 51 | 40 | 45 |
| 5 | a95 | 74 | 51 | 50 | 15 | a166 | 53 | 45 | 70 | 25 | a100 | 53 | 40 | 50 |
| 6 | a92 | 70 | 51 | 46 | 16 | a18 | 56 | 43 | 57 | 26 | a96 | 50 | 40 | 53 |
| 7 | a90 | 69 | 50 | 48 | 17 | a49 | 54 | 42 | 50 | 27 | 93 | 48 | 43 | 64 |
| 8 | a88 | 67 | 44 | 49 | 18 | a12 | 56 | 42 | 38 | 28 | 91 | 46 | 43 | 64 |
| 9 | a90 | 66 | 43 | 50 | 19 | a161 | 56 | 42 | 34 | 29 | a89 | 46 | 45 | 64 |
| 10 | a95 | 64 | 45 | 53 | 20 | a138 | 56 | 42 | 40 | 30 | a82 | 45 | 56 | 95 |
| | | | | | | | | | | 31 | a79 | 45 | - | - |
| Month | | | | | Second-foot-days | | | | | Maximum | | | | |
| July 1942..... | | | | | 3,728 | | | | | 249 | | | | |
| August..... | | | | | 1,813 | | | | | 77 | | | | |
| September..... | | | | | 1,324 | | | | | 56 | | | | |
| October 1-30..... | | | | | 1,680 | | | | | 95 | | | | |
| The period..... | | | | | - | | | | | - | | | | |
| | | | | | | | | | | Mean | | | | |
| | | | | | | | | | | Run-off in acre-feet | | | | |
| | | | | | | | | | | 7,390 | | | | |
| | | | | | | | | | | 3,600 | | | | |
| | | | | | | | | | | 44.1 | | | | |
| | | | | | | | | | | 56.0 | | | | |
| | | | | | | | | | | 18,950 | | | | |

a No gage-height record; discharge computed on basis of two discharge measurements and records for Humpulips River near Humpulips and Wynoochee River below Black Creek.

HOQUIAM RIVER BASIN

West Fork of Hoquiam River near Hoquiam, Wash.

Location.- Staff gage, lat. 47°03'30", long. 123°55'40", in SE¼ sec. 9, T. 18 N., R. 10 W., 250 feet upstream from Polson Creek and 5 miles northwest of Hoquiam.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 46 second-feet July 16 (gage height, 1.44 feet); minimum observed, 6.1 second-feet Oct. 25; minimum gage height, 0.96 foot Sept. 19, 20, 22-25.

Remarks.- Records good. Gage read twice daily. No regulation. City of Hoquiam diverts practically constant flow about 1½ miles above station for municipal use.

Discharge, in second-feet, 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
|-------------------|------|------|-------|------|------------------|------|------|-------|------|----------------------|------|------|-------|------|
| 1 | 20 | 12 | 7.5 | 19 | 11 | 37 | 10 | 7.2 | 7.9 | 21 | 17 | 8.9 | 7.2 | 7.5 |
| 2 | 20 | 12 | 7.2 | 15 | 12 | 23 | 10 | 7.2 | 7.5 | 22 | 17 | 8.4 | 7.2 | 6.5 |
| 3 | 22 | 12 | 7.9 | 25 | 13 | 19 | 9.5 | 7.2 | 6.4 | 23 | 15 | 7.9 | 6.5 | 7.2 |
| 4 | 20 | 12 | 7.9 | 12 | 14 | 20 | 10 | 8.4 | 21 | 24 | 15 | 7.9 | 7.2 | 6.5 |
| 5 | 19 | 12 | 8.4 | 8.9 | 15 | 26 | 8.9 | 8.4 | 15 | 25 | 14 | 8.9 | 6.5 | 6.5 |
| 6 | 18 | 12 | 9.5 | 8.4 | 16 | 39 | 8.9 | 8.9 | 10 | 26 | 15 | 8.9 | 7.5 | 12 |
| 7 | 17 | 11 | 7.9 | 7.9 | 17 | 29 | 10 | 7.9 | 7.9 | 27 | 15 | 7.9 | 7.5 | 17 |
| 8 | 17 | 11 | 11 | 10 | 18 | 21 | 10 | 7.5 | 7.2 | 28 | 14 | 8.4 | 7.5 | 13 |
| 9 | 20 | 10 | 11 | 10 | 19 | 19 | 8.9 | 7.2 | 7.9 | 29 | 13 | 7.9 | 7.2 | 21 |
| 10 | 22 | 10 | 7.2 | 8.9 | 20 | 18 | 8.9 | 7.2 | 7.5 | 30 | 13 | 7.9 | 10 | 23 |
| | | | | | | | | | | 31 | 12 | 7.5 | - | - |
| Month | | | | | Second-foot-days | | | | | Maximum | | | | |
| July 1942..... | | | | | 606.0 | | | | | 39 | | | | |
| August..... | | | | | 299.6 | | | | | 12 | | | | |
| September..... | | | | | 237.2 | | | | | 11 | | | | |
| October 1-30..... | | | | | 345.6 | | | | | 25 | | | | |
| The period..... | | | | | - | | | | | - | | | | |
| | | | | | | | | | | Mean | | | | |
| | | | | | | | | | | Run-off in acre-feet | | | | |
| | | | | | | | | | | 1,200 | | | | |
| | | | | | | | | | | 594 | | | | |
| | | | | | | | | | | 7.91 | | | | |
| | | | | | | | | | | 11.5 | | | | |
| | | | | | | | | | | 2,950 | | | | |

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

Johns River near Markham, Wash.

Location.- Staff gage, lat. 46°51'30", long. 123°55'40", in NE¼ sec. 21, T. 16 N., R. 10 W., 1 mile upstream from Crawford ditch, 4½ miles southeast of Markham, and 5.8 miles upstream from mouth.

Drainage area.- 18.9 square miles.

Records available.- July to October 1942 (discontinued).

Extremes.- Maximum discharge observed during period July 1 to Oct. 30, 65 second-feet July 16 (gage height, 1.54 feet); minimum observed, 16 second-feet Sept. 17-24 (gage height, 0.94 foot).

Remarks.- Records good except those for periods of doubtful or no gage-height record, which are fair. Gage read twice daily. No diversion or regulation.

Discharge, in second-feet, 1942

| Day | July | Aug. | Sept. | Oct. | Day | July | Aug. | Sept. | Oct. |
|-----|------|------|-------|------|-----|------|------|-------|------|
| 1 | a35 | 26 | 19 | 27 | 16 | 56 | 20 | 16 | 24 |
| 2 | a32 | 26 | 19 | 24 | 17 | 45 | 20 | 16 | 18 |
| 3 | a32 | 24 | 19 | 20 | 18 | 36 | 20 | 16 | 18 |
| 4 | a32 | 23 | 19 | 27 | 19 | 33 | 20 | 16 | 19 |
| 5 | a31 | 24 | 19 | 19 | 20 | 31 | 20 | 16 | 19 |
| 6 | a31 | 26 | 19 | 18 | 21 | 31 | 20 | 16 | 18 |
| 7 | a29 | 26 | 19 | 18 | 22 | 27 | 20 | 16 | 18 |
| 8 | a28 | 26 | 19 | 18 | 23 | 27 | 20 | 16 | 18 |
| 9 | a32 | 26 | 18 | 18 | 24 | d27 | 20 | 16 | 18 |
| 10 | a30 | 26 | 18 | 18 | 25 | 26 | 21 | 18 | 18 |
| 11 | a60 | 26 | 18 | 18 | 26 | 27 | 21 | 18 | 19 |
| 12 | a40 | 26 | 18 | 18 | 27 | 26 | 20 | 18 | 30 |
| 13 | 29 | 26 | 18 | 16 | 28 | 24 | 20 | 18 | 19 |
| 14 | 43 | 25 | 18 | 24 | 29 | 24 | 20 | 18 | 28 |
| 15 | 39 | d22 | 16 | 24 | 30 | 23 | 20 | 55 | 36 |
| | | | | | 31 | 24 | 19 | - | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------------|------------------|---------|---------|------|-----------------|---------|-----------|
| | | | | | | Inches | Acre-feet |
| July..... | 1,010 | 60 | 23 | 32.6 | 1.72 | 1.99 | 2,000 |
| August..... | 697 | 26 | 19 | 22.5 | 1.19 | 1.37 | 1,380 |
| September..... | 549 | 35 | 16 | 18.3 | .968 | 1.08 | 1,090 |
| October..... | 627 | 36 | 18 | 20.9 | 1.11 | 1.23 | 1,240 |
| The period..... | - | - | - | - | - | - | 5,710 |

a No gage-height record; discharge computed on basis of records for nearby streams.

d Doubtful gage-height record; discharge computed on basis of records for nearby streams.

HUMPTULIPS RIVER BASIN

Humtulpils River near Humtulpils, Wash.

Location.- Staff gage, lat. 47°13'45", long. 123°56'30", in NE¼ sec. 17, T. 20 N., R. 10 W., at site of old bridge (bridge washed out) 1 mile southeast of Humtulpils, 2.5 miles upstream from Stevens Creek, and ¾ miles downstream from Forks. Datum of gage 18 117.4 feet above mean sea level (river-profile survey).

Drainage area.- 125 square miles.

Records available.- May 1933 to January 1935, July to September 1942.

Extremes.- Maximum discharge observed during period July to September 1942, 1,320 second-feet July 17 (gage height, 2.86 feet); minimum observed, 127 second-feet Sept. 22-25 (gage height, 0.96 foot).

1933-35, 1942: Maximum discharge, 21,200 second-feet Jan. 22, 1935 (gage height, 12.7 feet, from floodmarks), from rating curve extended above 5,500 second-feet; minimum observed, that of Sept. 22-25, 1942.

Remarks.- Records good. No diversion or regulation.

Discharge, in second-feet, 1942

| Day | July | Aug. | Sept. | Day | July | Aug. | Sept. |
|-----|------|------|-------|-----|-------|------|-------|
| 1 | 422 | 300 | 160 | 16 | 950 | 208 | 142 |
| 2 | 395 | 300 | 160 | 17 | 1,220 | 208 | 140 |
| 3 | 395 | 280 | 158 | 18 | 908 | 190 | 140 |
| 4 | 370 | 280 | 155 | 19 | 710 | 190 | 135 |
| 5 | 370 | 260 | 155 | 20 | 608 | 190 | 135 |
| 6 | 345 | 260 | 178 | 21 | 542 | 190 | 135 |
| 7 | 345 | 242 | 175 | 22 | 510 | 187 | 129 |
| 8 | 322 | 242 | 166 | 23 | 450 | 184 | 127 |
| 9 | 345 | 242 | 155 | 24 | 422 | 184 | 127 |
| 10 | 370 | 242 | 152 | 25 | 395 | 190 | 129 |
| 11 | 675 | 225 | 150 | 26 | 395 | 190 | 131 |
| 12 | 995 | 225 | 145 | 27 | 345 | 178 | 131 |
| 13 | 608 | 208 | 145 | 28 | 345 | 178 | 131 |
| 14 | 542 | 208 | 145 | 29 | 345 | 175 | 131 |
| 15 | 785 | 208 | 148 | 30 | 322 | 166 | 150 |
| | | | | 31 | 300 | 160 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-----------------|------------------|---------|---------|------|-----------------|---------|-----------|
| | | | | | | Inches | Acre-feet |
| July..... | 16,061 | 1,220 | 300 | 513 | 4.14 | 4.78 | 31,840 |
| August..... | 6,690 | 300 | 160 | 216 | 1.73 | 1.99 | 13,270 |
| September..... | 4,361 | 178 | 127 | 145 | 1.16 | 1.30 | 8,650 |
| The period..... | - | - | - | - | - | - | 53,760 |

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

QUINULT RIVER BASIN

Quinault River at Quinault Lake, Wash.

Location.- Water-stage recorder, lat. 47°27'30", long. 123°53'30", in sec. 25, T. 23 N., R. 10 W., at outlet of Quinault Lake, 4 miles southwest of Quinault.

Drainage area.- 264 square miles.

Records available.- October 1911 to September 1942.

Average discharge.- 31 years, 2,692 second-feet.

Extremes.- Maximum discharge during year not determined (occurred during period of no gage-height record); minimum, 328 second-feet Sept. 27-30 (gage height, 2.00 feet). 1911-22, 1924-32, 1933-42: Maximum discharge, 37,000 second-feet Dec. 12, 1921 (gage height, 16.3 feet, datum then in use), from rating curve extended above 25,000 second-feet; minimum, 265 second-feet Sept. 20, 1924 (gage height, 0.74 foot, datum then in use).

Remarks.- Records excellent except those for period of no gage-height record, which are poor. No diversions. Slight natural regulation by Quinault Lake.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-------|------|--------|
| 2.1 | 377 | 3.5 | 1,430 | 7.0 | 6,700 |
| 2.5 | 497 | 4.0 | 1,960 | 8.0 | 8,700 |
| 2.6 | 611 | 4.5 | 2,530 | 9.0 | 10,800 |
| 2.7 | 750 | 5.0 | 3,210 | 10.0 | 13,100 |
| 3.0 | 986 | 6.0 | 4,800 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 1,120 | 1,200 | 6,600 | 1,900 | 3,660 | 1,040 | 1,530 | 2,790 | 1,950 | 2,170 | 986 | 481 |
| 2 | 1,120 | 1,200 | 10,000 | 1,800 | 3,620 | 1,200 | 1,730 | 2,790 | 1,840 | 2,170 | 945 | 476 |
| 3 | 1,160 | 1,600 | 14,000 | 1,700 | 3,510 | 1,430 | 1,730 | 2,530 | 1,840 | 2,170 | 912 | 470 |
| 4 | 1,200 | 3,000 | 13,000 | 1,600 | 3,980 | 1,380 | 1,630 | 2,550 | 1,840 | 2,060 | 896 | 458 |
| 5 | 1,160 | 4,700 | 10,000 | 1,600 | 4,650 | 1,430 | 1,630 | 2,170 | 1,900 | 1,950 | 872 | 455 |
| 6 | 1,120 | 5,600 | 11,000 | 1,400 | 4,460 | 1,530 | 1,630 | 2,000 | 2,170 | 1,780 | 841 | 470 |
| 7 | 1,120 | 3,400 | 6,700 | 1,430 | 4,140 | 1,480 | 1,530 | 2,000 | 2,350 | 1,660 | 833 | 476 |
| 8 | 1,120 | 2,700 | 6,700 | 1,430 | 3,740 | 1,480 | 1,480 | 2,000 | 2,410 | 1,580 | 818 | 470 |
| 9 | 2,790 | 2,300 | 5,500 | 1,630 | 3,360 | 1,840 | 1,430 | 1,950 | 2,930 | 1,530 | 788 | 453 |
| 10 | 8,910 | 2,000 | 4,800 | 1,900 | 3,210 | 2,060 | 1,430 | 1,900 | 4,300 | 1,530 | 765 | 441 |
| 11 | 8,700 | 2,300 | 4,200 | 1,900 | 3,070 | 2,000 | 1,480 | 1,780 | 4,140 | 1,630 | 750 | 430 |
| 12 | 8,700 | 2,200 | 3,500 | 1,840 | 2,790 | 1,950 | 1,580 | 1,680 | 3,580 | 1,730 | 729 | 425 |
| 13 | 6,500 | 3,500 | 3,000 | 1,840 | 2,530 | 1,840 | 1,630 | 1,580 | 3,140 | 1,630 | 707 | 414 |
| 14 | 5,160 | 6,500 | 3,300 | 1,730 | 2,290 | 1,730 | 1,730 | 1,530 | 3,070 | 1,530 | 686 | 409 |
| 15 | 4,300 | 8,000 | 5,800 | 1,680 | 2,120 | 1,630 | 1,900 | 1,530 | 3,980 | 1,730 | 665 | 404 |
| 16 | 4,630 | 6,800 | 7,500 | 1,630 | 1,950 | 1,530 | 1,950 | 1,530 | 4,460 | 2,000 | 652 | 398 |
| 17 | 5,160 | 5,400 | 6,000 | 1,580 | 1,780 | 1,530 | 1,950 | 1,530 | 4,630 | 2,410 | 638 | 393 |
| 18 | 4,300 | 4,600 | 7,000 | 1,530 | 1,680 | 1,680 | 1,950 | 1,530 | 4,140 | 2,290 | 625 | 382 |
| 19 | 3,740 | 3,700 | 8,400 | 1,480 | 1,580 | 1,530 | 1,900 | 1,580 | 3,580 | 2,060 | 618 | 377 |
| 20 | 3,140 | 3,100 | 7,000 | 1,380 | 1,480 | 1,530 | 1,840 | 1,780 | 3,140 | 1,900 | 605 | 367 |
| 21 | 2,720 | 2,700 | 6,000 | 1,340 | 1,380 | 1,490 | 1,950 | 1,950 | 2,790 | 1,730 | 598 | 362 |
| 22 | 2,410 | 2,400 | 5,400 | 1,340 | 1,340 | 1,530 | 2,060 | 2,230 | 2,600 | 1,630 | 585 | 357 |
| 23 | 2,170 | 2,200 | 6,800 | 1,340 | 1,300 | 1,530 | 1,950 | 2,410 | 2,410 | 1,530 | 579 | 352 |
| 24 | 2,000 | 2,800 | 6,000 | 1,630 | 1,260 | 1,530 | 2,120 | 2,360 | 2,410 | 1,430 | 553 | 345 |
| 25 | 1,800 | 3,900 | 5,000 | 2,290 | 1,200 | 1,480 | 2,290 | 2,410 | 2,290 | 1,340 | 547 | 338 |
| 26 | 1,700 | 3,000 | 4,000 | 2,660 | 1,160 | 1,380 | 2,230 | 2,470 | 2,170 | 1,300 | 541 | 333 |
| 27 | 1,500 | 2,300 | 3,500 | 3,280 | 1,120 | 1,340 | 2,170 | 2,470 | 2,180 | 1,200 | 529 | 328 |
| 28 | 1,400 | 3,000 | 3,000 | 3,510 | 1,060 | 1,300 | 2,000 | 2,350 | 2,060 | 1,160 | 529 | 328 |
| 29 | 1,400 | 3,700 | 2,600 | 3,210 | - | 1,300 | 1,950 | 2,170 | 2,060 | 1,120 | 517 | 328 |
| 30 | 1,300 | 4,800 | 2,400 | 2,790 | - | 1,300 | 2,170 | 2,060 | 2,120 | 1,070 | 499 | 372 |
| 31 | 1,200 | - | 2,100 | 2,660 | - | 1,300 | - | 2,000 | - | 1,010 | 493 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 94,750 | 8,910 | 1,120 | 3,056 | 11.6 | 13.55 | 187,900 |
| November..... | 104,300 | 8,000 | 1,200 | 3,477 | 13.2 | 14.69 | 206,900 |
| December..... | 192,800 | 14,000 | 2,100 | 6,219 | 23.6 | 27.16 | 382,400 |
| Calendar year 1941..... | 954,299 | 14,100 | 374 | 2,615 | 9.91 | 134.45 | 1,893,000 |
| January..... | 58,930 | 3,510 | 1,340 | 1,901 | 7.20 | 8.30 | 116,900 |
| February..... | 69,590 | 4,630 | 1,060 | 2,495 | 9.41 | 9.80 | 138,000 |
| March..... | 47,490 | 2,060 | 1,040 | 1,532 | 5.80 | 6.69 | 94,200 |
| April..... | 54,550 | 2,290 | 1,430 | 1,818 | 6.89 | 7.68 | 108,200 |
| May..... | 63,400 | 2,790 | 1,530 | 2,045 | 7.75 | 8.93 | 126,800 |
| June..... | 84,420 | 4,630 | 1,840 | 2,614 | 10.7 | 11.89 | 167,400 |
| July..... | 52,050 | 2,410 | 1,010 | 1,679 | 6.36 | 7.33 | 108,200 |
| August..... | 21,301 | 986 | 493 | 687 | 2.60 | 3.00 | 42,250 |
| September..... | 12,088 | 481 | 328 | 403 | 1.53 | 1.70 | 23,950 |
| Water year 1941-42..... | 855,669 | 14,000 | 328 | 2,344 | 8.88 | 120.52 | 1,697,000 |

Note.- No gage-height record Oct. 25 to Jan. 6; discharge computed on basis of one discharge measurement, recorded range of stage, and records for Quets River near Clearwater and Wynoochee River at Oxbow, near Aberdeen.

Time basis. Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Queets River near Clearwater, Wash.

Location.- Water-stage recorder, lat. 47°32', long. 124°19', in S½ sec. 36, T. 24 N., R. 13 W., on Quinault Indian Reservation, 2 miles downstream from Clearwater River and 4 miles southwest of Clearwater. Datum of gage is 14.5 feet above mean sea level (river-profile survey).

Drainage area.- 454 square miles.

Records available.- September 1930 to September 1942.

Average discharge.- 12 years, 4,227 second-feet.

Extremes.- Maximum discharge during year, 47,820 second-feet Dec. 2 (gage height, 18.70 feet), from rating curve extended above 30,000 second-feet; minimum, 396 second-feet Sept. 29-30.

1930-42: Maximum discharge, 100,000 second-feet Jan. 22, 1935 (gage height, 27.0 feet, present datum, from floodmarks), from rating curve extended above 31,000 second-feet; minimum, 384 second-feet Aug. 31, 1938; minimum gage height, 3.58 feet, present datum, Oct. 11, 1932.

Remarks.- Records excellent except those above 30,000 second-feet, which are fair. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Dec. 27 to Feb. 20)

Oct. 1 to Feb. 20

Feb. 21 to Sept. 30

| | | | | | | | | | |
|-----|-------|------|--------|------|--------|-----|-------|------|-------|
| 6.0 | 1,360 | 9.0 | 4,500 | 12.0 | 15,600 | 5.3 | 410 | 7.0 | 2,490 |
| 6.5 | 2,010 | 9.0 | 6,700 | 13.0 | 19,300 | 5.6 | 650 | 8.0 | 4,460 |
| 7.0 | 2,750 | 10.0 | 9,310 | 15.0 | 27,900 | 6.0 | 1,060 | 9.0 | 6,760 |
| 7.5 | 3,580 | 11.0 | 12,200 | 17.0 | 38,000 | 6.5 | 1,700 | 10.0 | 9,310 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 2,150 | 1,740 | 10,700 | 2,440 | 8,770 | 1,360 | 3,430 | 6,280 | 1,470 | 2,080 | 1,050 | 549 |
| 2 | 1,870 | 1,540 | 36,200 | 2,580 | 5,770 | 4,600 | 2,850 | 4,570 | 1,420 | 2,090 | 994 | 553 |
| 3 | 2,360 | 3,640 | 17,800 | 2,220 | 5,000 | 3,330 | 2,320 | 3,330 | 1,390 | 1,950 | 972 | 541 |
| 4 | 2,290 | 5,850 | 12,900 | 2,080 | 9,040 | 2,320 | 2,160 | 3,330 | 1,380 | 1,820 | 972 | 541 |
| 5 | 1,800 | 8,270 | 10,400 | 1,940 | 9,310 | 3,680 | 2,000 | 2,850 | 1,450 | 1,590 | 939 | 541 |
| 6 | 1,680 | 4,120 | 13,200 | 1,870 | 7,200 | 3,230 | 1,850 | 2,670 | 2,080 | 1,500 | 939 | 704 |
| 7 | 1,940 | 3,240 | 8,770 | 2,010 | 6,460 | 2,580 | 1,730 | 2,490 | 2,000 | 1,400 | 917 | 713 |
| 8 | 2,010 | 2,750 | 6,700 | 2,440 | 5,550 | 2,640 | 1,620 | 2,490 | 2,160 | 1,340 | 906 | 574 |
| 9 | 21,000 | 2,440 | 5,550 | 4,760 | 5,110 | 6,040 | 1,550 | 2,320 | 5,430 | 1,520 | 862 | 549 |
| 10 | 17,700 | 2,290 | 4,700 | 4,500 | 5,770 | 4,250 | 1,530 | 2,240 | 8,780 | 1,760 | 851 | 501 |
| 11 | 15,500 | 3,160 | 4,220 | 3,240 | 5,440 | 3,430 | 1,660 | 2,000 | 5,240 | 2,670 | 830 | 493 |
| 12 | 11,600 | 2,590 | 3,760 | 2,910 | 4,400 | 3,230 | 1,920 | 1,820 | 3,830 | 2,320 | 770 | 493 |
| 13 | 8,240 | 12,400 | 3,850 | 2,910 | 3,760 | 3,530 | 1,590 | 1,690 | 3,140 | 1,630 | 740 | 485 |
| 14 | 8,240 | 14,900 | 5,440 | 2,520 | 3,240 | 3,040 | 2,610 | 1,600 | 4,930 | 1,510 | 740 | 478 |
| 15 | 6,460 | 9,580 | 8,650 | 2,290 | 2,910 | 2,670 | 2,940 | 1,590 | 8,520 | 2,670 | 722 | 493 |
| 16 | 15,800 | 8,500 | 10,100 | 2,290 | 2,670 | 2,850 | 2,490 | 1,890 | 8,520 | 3,530 | 713 | 493 |
| 17 | 9,040 | 8,950 | 7,980 | 2,220 | 2,560 | 4,600 | 2,580 | 1,530 | 6,760 | 4,570 | 713 | 462 |
| 18 | 5,700 | 5,330 | 12,200 | 2,220 | 3,850 | 2,560 | 1,470 | 5,240 | 5,240 | 3,140 | 713 | 432 |
| 19 | 5,440 | 4,310 | 18,560 | 2,010 | 2,080 | 3,140 | 2,240 | 1,690 | 4,460 | 2,320 | 713 | 425 |
| 20 | 4,310 | 3,670 | 10,700 | 1,870 | 1,940 | 2,670 | 2,080 | 2,000 | 3,730 | 2,060 | 677 | 418 |
| 21 | 3,670 | 3,240 | 7,980 | 1,800 | 1,740 | 2,670 | 2,160 | 1,880 | 3,230 | 1,940 | 659 | 432 |
| 22 | 3,240 | 2,910 | 9,680 | 1,740 | 1,620 | 3,530 | 2,400 | 1,980 | 2,940 | 1,790 | 650 | 425 |
| 23 | 2,910 | 2,750 | 12,300 | 2,220 | 1,560 | 3,230 | 2,400 | 1,860 | 2,760 | 1,640 | 650 | 432 |
| 24 | 2,590 | 6,280 | 7,980 | 3,900 | 1,660 | 3,040 | 5,810 | 1,670 | 2,670 | 1,820 | 650 | 425 |
| 25 | 2,440 | 6,760 | 5,000 | 5,440 | 1,460 | 2,850 | 5,580 | 1,970 | 2,400 | 1,420 | 606 | 415 |
| 26 | 2,220 | 4,120 | 5,000 | 4,400 | 1,360 | 2,580 | 4,670 | 1,980 | 2,160 | 1,360 | 669 | 425 |
| 27 | 2,150 | 3,410 | 4,220 | 4,900 | 1,330 | 2,320 | 4,040 | 2,080 | 2,160 | 1,330 | 599 | 425 |
| 28 | 1,940 | 4,570 | 3,670 | 4,600 | 1,310 | 2,240 | 3,330 | 1,880 | 2,080 | 1,280 | 574 | 410 |
| 29 | 1,800 | 8,770 | 3,240 | 3,670 | - | 2,320 | 5,120 | 1,670 | 2,080 | 1,160 | 574 | 418 |
| 30 | 1,740 | 9,790 | 2,990 | 3,070 | - | 2,160 | 6,200 | 1,600 | 2,060 | 1,120 | 549 | 677 |
| 31 | 1,680 | - | 2,670 | 4,500 | - | 2,320 | - | 1,550 | - | 1,100 | 557 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-Feet |
| October..... | 172,510 | 21,000 | 1,620 | 5,565 | 12.3 | 14.15 | 342,200 |
| November..... | 159,670 | 14,900 | 1,540 | 5,322 | 11.7 | 13.08 | 316,700 |
| December..... | 278,110 | 36,200 | 2,670 | 8,971 | 19.8 | 22.75 | 551,600 |
| Calendar year 1941..... | 1,406,941 | 36,200 | 485 | 3,855 | 8.49 | 115.26 | 2,791,000 |
| January..... | 91,410 | 5,440 | 1,740 | 2,949 | 6.50 | 7.49 | 161,300 |
| February..... | 110,980 | 9,310 | 1,310 | 3,964 | 6.73 | 9.09 | 220,100 |
| March..... | 96,280 | 6,040 | 1,360 | 3,106 | 6.84 | 7.69 | 191,000 |
| April..... | 85,370 | 6,200 | 1,530 | 2,846 | 6.27 | 6.99 | 169,300 |
| May..... | 70,170 | 6,280 | 1,470 | 2,264 | 4.99 | 5.75 | 139,200 |
| June..... | 106,500 | 8,780 | 1,380 | 3,550 | 7.32 | 8.72 | 211,200 |
| July..... | 59,170 | 4,670 | 1,100 | 1,909 | 4.20 | 4.85 | 117,400 |
| August..... | 26,462 | 1,050 | 549 | 757 | 1.67 | 1.92 | 46,540 |
| September..... | 14,905 | 713 | 410 | 497 | 1.09 | 1.22 | 29,560 |
| Water year 1941-42..... | 1,268,537 | 36,200 | 410 | 3,475 | 7.65 | 103.91 | 2,516,000 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

QUEETS RIVER BASIN

Clearwater River near Clearwater, Wash.

Location.- Water-stage recorder, lat. 47°35', long. 124°18', in lot 4, sec. 18, T. 24 N., R. 12 W., 1 1/2 miles north of Clearwater and 3 miles upstream from mouth. Datum of gage is 60.0 feet above mean sea level, unadjusted.

Drainage area.- 140 square miles. Drainage area for former site a quarter of a mile upstream, is also 140 square miles (revised).

Records available.- July 1937 to September 1942. October 1931 to September 1932, at site a quarter of a mile upstream.

Extremes.- Maximum discharge during year, 16,600 second-feet Dec. 2 (gage height, 12.83 feet), from rating curve extended above 6,000 second-feet on basis of velocity-area study; minimum, 84 second-feet Sept. 25-30.

1931-32, 1937-42: Maximum discharge, 29,200 second-feet Oct. 28, 1937 (gage height, 14.90 feet), from rating curve extended above 6,000 second-feet; minimum, 60 second-feet Sept. 15-18, 1938.

Discharge known to have been greater Jan. 21 or 22, 1935 (stage and discharge not determined).

Remarks.- Records excellent except those above 8,000 second-feet, which are poor. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 1 | | | | Dec. 2 to Sept. 30 | | | |
|------------------|-------|------|-------|--------------------|-----|------|--------|
| 6.2 | 332 | 8.0 | 2,520 | 5.7 | 98 | 6.7 | 806 |
| 6.4 | 482 | 9.0 | 4,250 | 5.9 | 187 | 7.0 | 1,140 |
| 6.7 | 785 | 10.0 | 6,650 | 6.1 | 308 | 7.5 | 1,800 |
| 7.0 | 1,110 | 11.0 | 9,650 | 6.4 | 530 | 8.0 | 2,560 |
| 7.5 | 1,750 | | | | | 12.0 | 13,200 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 548 | 416 | 4,320 | 616 | 2,560 | 406 | 1,010 | 1,880 | 313 | 368 | 249 | 110 |
| 2 | 450 | 377 | 11,800 | 582 | 1,700 | 1,660 | 816 | 1,430 | 300 | 354 | 287 | 110 |
| 3 | 668 | 1,180 | 5,410 | 539 | 1,550 | 1,140 | 699 | 1,210 | 281 | 327 | 232 | 106 |
| 4 | 585 | 1,740 | 4,200 | 498 | 3,060 | 827 | 625 | 998 | 274 | 306 | 221 | 106 |
| 5 | 458 | 2,400 | 3,610 | 465 | 3,330 | 1,450 | 564 | 848 | 256 | 306 | 215 | 106 |
| 6 | 432 | 1,320 | 4,200 | 434 | 2,400 | 1,200 | 522 | 837 | 419 | 287 | 198 | 163 |
| 7 | 501 | 995 | 2,800 | 498 | 2,020 | 954 | 481 | 662 | 375 | 268 | 193 | 163 |
| 8 | 559 | 816 | 2,090 | 607 | 1,860 | 1,020 | 449 | 599 | 547 | 274 | 187 | 127 |
| 9 | 9,200 | 690 | 1,670 | 1,560 | 1,690 | 2,020 | 434 | 616 | 1,910 | 347 | 187 | 110 |
| 10 | 6,480 | 642 | 1,360 | 1,410 | 2,020 | 1,470 | 406 | 590 | 2,890 | 419 | 182 | 106 |
| 11 | 5,530 | 922 | 1,180 | 976 | 1,790 | 1,210 | 419 | 616 | 1,660 | 671 | 177 | 102 |
| 12 | 4,360 | 722 | 987 | 989 | 1,460 | 1,130 | 498 | 490 | 1,140 | 644 | 168 | 98 |
| 13 | 3,000 | 3,520 | 1,040 | 816 | 1,190 | 1,200 | 427 | 442 | 910 | 405 | 163 | 98 |
| 14 | 2,920 | 3,950 | 1,460 | 708 | 998 | 1,040 | 777 | 427 | 1,800 | 375 | 158 | 98 |
| 15 | 2,480 | 3,080 | 2,160 | 625 | 879 | 954 | 837 | 412 | 2,480 | 672 | 153 | 106 |
| 16 | 6,510 | 2,760 | 2,400 | 634 | 777 | 1,020 | 690 | 375 | 2,400 | 998 | 149 | 106 |
| 17 | 3,340 | 2,360 | 2,320 | 599 | 680 | 1,820 | 747 | 361 | 1,930 | 1,270 | 149 | 98 |
| 18 | 2,360 | 1,760 | 4,650 | 634 | 607 | 1,460 | 777 | 347 | 1,560 | 921 | 144 | 98 |
| 19 | 1,800 | 1,370 | 6,040 | 647 | 566 | 1,180 | 653 | 406 | 1,300 | 718 | 144 | 95 |
| 20 | 1,420 | 1,120 | 3,610 | 506 | 530 | 965 | 582 | 427 | 1,070 | 607 | 139 | 91 |
| 21 | 1,170 | 974 | 2,560 | 481 | 461 | 921 | 556 | 354 | 910 | 522 | 139 | 91 |
| 22 | 984 | 848 | 3,180 | 465 | 449 | 1,160 | 690 | 327 | 796 | 457 | 139 | 91 |
| 23 | 858 | 785 | 4,060 | 616 | 457 | 1,080 | 699 | 300 | 708 | 419 | 135 | 88 |
| 24 | 764 | 2,240 | 2,640 | 1,120 | 465 | 1,030 | 2,340 | 300 | 616 | 382 | 131 | 88 |
| 25 | 680 | 2,120 | 1,940 | 1,630 | 434 | 1,020 | 2,090 | 390 | 607 | 354 | 127 | 84 |
| 26 | 604 | 1,400 | 1,530 | 1,340 | 412 | 943 | 1,650 | 390 | 530 | 327 | 144 | 84 |
| 27 | 576 | 1,120 | 1,250 | 1,260 | 390 | 848 | 1,430 | 498 | 473 | 313 | 135 | 84 |
| 28 | 520 | 1,460 | 1,030 | 1,260 | 375 | 806 | 1,130 | 442 | 449 | 300 | 131 | 84 |
| 29 | 458 | 2,360 | 900 | 1,020 | - | 837 | 1,010 | 375 | 427 | 281 | 131 | 84 |
| 30 | 432 | 2,520 | 796 | 879 | - | 747 | 1,920 | 375 | 382 | 268 | 123 | 243 |
| 31 | 424 | - | 699 | 1,260 | - | 747 | - | 340 | - | 256 | 118 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-foot |
| October..... | 61,071 | 9,200 | 424 | 1,970 | 14.1 | 16.22 | 121,100 |
| November..... | 47,957 | 3,950 | 377 | 1,599 | 11.4 | 12.74 | 95,120 |
| December..... | 87,892 | 11,800 | 699 | 2,835 | 20.2 | 23.35 | 174,300 |
| Calendar year 1941..... | 431,208 | 11,800 | 97 | 1,181 | 8.44 | 114.65 | 855,200 |
| January..... | 25,474 | 1,630 | 434 | 822 | 5.87 | 6.77 | 50,530 |
| February..... | 35,120 | 3,330 | 375 | 1,254 | 8.96 | 9.33 | 69,660 |
| March..... | 34,284 | 2,020 | 405 | 1,106 | 7.90 | 9.11 | 68,000 |
| April..... | 25,927 | 2,340 | 405 | 864 | 6.17 | 6.89 | 51,430 |
| May..... | 18,063 | 1,880 | 300 | 583 | 4.16 | 4.80 | 35,830 |
| June..... | 29,713 | 2,890 | 256 | 990 | 7.07 | 7.89 | 58,930 |
| July..... | 14,416 | 1,270 | 256 | 465 | 3.52 | 3.83 | 28,690 |
| August..... | 5,098 | 249 | 118 | 164 | 1.17 | 1.56 | 10,110 |
| September..... | 3,218 | 243 | 84 | 107 | .764 | .85 | 6,380 |
| Water year 1941-42..... | 588,233 | 11,800 | 84 | 1,064 | 7.60 | 103.13 | 770,000 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Hoh River near Spruce, Wash.

Location.— Water-stage recorder, lat. 47°48'20", long. 124°06'20", in sec. 34, T. 27 N., R. 11 W., 2½ miles downstream from Spruce and 5 miles downstream from South Fork.

Drainage area.— 193 square miles.

Records available.— August 1926 to September 1942.

Average discharge.— 16 years, 1,948 second-feet.

Extremes.— Maximum discharge during year, 21,800 second-feet Dec. 2 (gauge height, 15.48 feet), from rating curve extended above 8,000 second-feet; minimum, 441 second-feet sometime during period Sept. 18-21 (gauge height, 1.42 feet, from recorded range of stage).

1926-42: Maximum discharge, 40,000 second-feet Nov. 5, 1934 (gauge height, 21.2 feet, from high-water mark in gate structure), from rating curve extended above 8,000 second-feet on basis of velocity-area studies (gauge observer noted water higher on this day than at any other time during his 43 years of residence on the stream); minimum, 247 second-feet Nov. 14, 15, 1929; minimum gauge height, 0.71 foot Nov. 10, 1935.

Remarks.— Records excellent except those for October to February, which are good, and those above 10,000 second-feet, which are fair. No diversion or artificial regulation. Large diurnal fluctuation during summer months caused by melting of glaciers at source.

Rating tables, water year 1941-42 (gauge height, in feet, and discharge, in second-feet) (Shifting-control method used Oct. 11 to Feb. 14)

Oct. 1 to Dec. 1

Dec. 2 to Sept. 30

| | | | | | | | | | |
|-----|-------|-----|-------|------|--------|-----|-------|-----|-------|
| 2.5 | 810 | 5.0 | 2,470 | 10.0 | 9,700 | 1.6 | 503 | 3.5 | 1,440 |
| 3.0 | 1,060 | 6.0 | 3,470 | 12.0 | 13,500 | 2.0 | 651 | 4.0 | 1,750 |
| 3.5 | 1,360 | 7.0 | 4,780 | 14.0 | 17,800 | 2.5 | 873 | 5.0 | 2,490 |
| 4.0 | 1,690 | 8.0 | 6,300 | | | 3.0 | 1,140 | 6.0 | 3,470 |

Note.— Same as preceding table above 6.0 feet.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 1,390 | 907 | 5,840 | 1,350 | 2,330 | 631 | 1,470 | 1,720 | 1,260 | 2,570 | 1,230 | 774 |
| 2 | 1,010 | 834 | 15,600 | 1,290 | 1,990 | 1,290 | 1,260 | 1,500 | 1,260 | 2,490 | 1,200 | 710 |
| 3 | 1,930 | 2,060 | 7,430 | 1,200 | 1,720 | 975 | 1,110 | 1,380 | 1,230 | 2,410 | 1,200 | 802 |
| 4 | 1,330 | 2,580 | 5,380 | 1,140 | 2,330 | 825 | 1,030 | 1,290 | 1,290 | 2,250 | 1,320 | 898 |
| 5 | 1,010 | 2,910 | 4,780 | 1,060 | 2,660 | 1,220 | 1,000 | 1,200 | 1,560 | 1,890 | 1,320 | 873 |
| 6 | 1,010 | 1,660 | 5,530 | 1,030 | 2,250 | 1,060 | 975 | 1,200 | 2,100 | 1,680 | 1,350 | 923 |
| 7 | 1,150 | 1,330 | 3,830 | 1,030 | 2,030 | 923 | 923 | 1,350 | 1,960 | 1,590 | 1,410 | 873 |
| 8 | 1,140 | 1,240 | 3,260 | 1,080 | 1,820 | 1,040 | 873 | 1,440 | 2,030 | 1,440 | 1,350 | 849 |
| 9 | 7,580 | 1,120 | 2,840 | 1,470 | 1,750 | 1,750 | 873 | 1,320 | 2,760 | 1,650 | 1,280 | 767 |
| 10 | 7,900 | 1,210 | 2,490 | 1,470 | 2,030 | 1,440 | 873 | 1,230 | 3,230 | 1,890 | 1,200 | 631 |
| 11 | 6,940 | 1,730 | 2,250 | 1,260 | 1,890 | 1,260 | 1,030 | 1,080 | 2,250 | 1,380 | 1,080 | 611 |
| 12 | 5,170 | 1,240 | 2,030 | 1,260 | 1,620 | 1,170 | 1,110 | 1,000 | 1,890 | 1,560 | 975 | 714 |
| 13 | 3,470 | 6,300 | 2,170 | 1,290 | 1,440 | 1,110 | 975 | 949 | 1,890 | 1,380 | 923 | 735 |
| 14 | 3,250 | 7,620 | 2,410 | 1,140 | 1,320 | 1,000 | 1,320 | 975 | 2,660 | 1,590 | 1,030 | 651 |
| 15 | 2,840 | 4,180 | 3,470 | 1,080 | 1,200 | 949 | 1,200 | 1,030 | 4,220 | 2,330 | 1,200 | 757 |
| 16 | 6,350 | 3,250 | 4,640 | 1,080 | 1,110 | 923 | 1,170 | 1,060 | 3,470 | 2,640 | 1,230 | 651 |
| 17 | 3,710 | 2,650 | 3,360 | 1,060 | 1,030 | 1,260 | 1,200 | 1,080 | 2,840 | 2,660 | 1,170 | 560 |
| 18 | 3,250 | 2,220 | 5,220 | 1,000 | 949 | 1,110 | 1,060 | 1,000 | 2,410 | 2,030 | 1,260 | a500 |
| 19 | 2,560 | 1,910 | 7,350 | 923 | 898 | 1,000 | 949 | 1,230 | 2,170 | 1,820 | 1,290 | a490 |
| 20 | 2,140 | 1,690 | 4,360 | 898 | 849 | 923 | 1,080 | 1,530 | 2,030 | 1,890 | 1,230 | a480 |
| 21 | 1,910 | 1,520 | 3,360 | 898 | 825 | 975 | 1,320 | 1,650 | 1,820 | 1,890 | 1,060 | a650 |
| 22 | 1,760 | 1,390 | 3,600 | 898 | 779 | 1,060 | 1,200 | 2,100 | 1,750 | 1,820 | 1,140 | 631 |
| 23 | 1,620 | 1,270 | 4,180 | 975 | 735 | 1,000 | 1,060 | 1,890 | 1,820 | 1,590 | 1,260 | 692 |
| 24 | 1,490 | 3,360 | 3,040 | 1,410 | 714 | 949 | 1,660 | 1,620 | 1,890 | 1,440 | 975 | 651 |
| 25 | 1,390 | 2,790 | 2,660 | 1,750 | 692 | 898 | 1,690 | 1,960 | 1,650 | 1,500 | 893 | 631 |
| 26 | 1,270 | 1,970 | 2,330 | 1,690 | 692 | 849 | 1,530 | 1,820 | 1,620 | 1,560 | 849 | 631 |
| 27 | 1,210 | 1,590 | 2,100 | 2,170 | 651 | 825 | 1,350 | 1,560 | 1,820 | 1,560 | 714 | 631 |
| 28 | 1,120 | 2,850 | 1,890 | 1,820 | 631 | 825 | 1,230 | 1,380 | 1,960 | 1,440 | 672 | 592 |
| 29 | 1,040 | 6,140 | 1,720 | 1,530 | - | 849 | 1,230 | 1,380 | 2,030 | 1,320 | 651 | 537 |
| 30 | 932 | 6,060 | 1,560 | 1,550 | - | 873 | 1,680 | 1,320 | 2,170 | 1,290 | 692 | 1,100 |
| 31 | 932 | - | 1,440 | 1,700 | - | 1,030 | - | 1,320 | - | 1,250 | 735 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | | Inches | Acre-feet |
| October..... | 79,404 | 7,800 | 932 | 2,561 | 13.3 | 15.30 | 157,500 |
| November..... | 77,471 | 7,620 | 834 | 2,582 | 13.4 | 14.93 | 153,700 |
| December..... | 122,110 | 15,600 | 1,440 | 3,939 | 20.4 | 23.53 | 242,800 |
| Calendar year 1941..... | 704,570 | 15,600 | 619 | 1,930 | 10.0 | 135.76 | 1,398,000 |
| January..... | 39,292 | 2,170 | 898 | 1,267 | 6.56 | 7.57 | 77,930 |
| February..... | 38,835 | 2,660 | 631 | 1,397 | 7.19 | 7.48 | 77,030 |
| March..... | 31,962 | 1,750 | 631 | 1,031 | 5.34 | 6.16 | 63,400 |
| April..... | 35,421 | 1,680 | 873 | 1,181 | 6.12 | 6.83 | 70,260 |
| May..... | 42,544 | 2,100 | 949 | 1,372 | 7.11 | 8.20 | 84,580 |
| June..... | 63,100 | 4,220 | 1,260 | 2,103 | 10.9 | 12.16 | 125,600 |
| July..... | 55,780 | 2,660 | 1,230 | 1,799 | 9.32 | 10.75 | 110,600 |
| August..... | 33,964 | 1,410 | 651 | 1,096 | 5.68 | 6.54 | 67,370 |
| September..... | 20,984 | 1,100 | 480 | 699 | 3.62 | 4.04 | 41,620 |
| Water year 1941-42..... | 640,867 | 15,600 | 480 | 1,756 | 9.10 | 123.49 | 1,271,000 |

Peak discharge.— Oct. 9 (8:30 p.m.) 12,900 sec.-ft.; Nov. 14 (8:00 a.m.) 8,810 sec.-ft.; Dec. 2 (7:30 a.m.) 21,800 sec.-ft.

a No gauge-height record; discharge computed on basis of records for Queets River near Clearwater and Solveduck River near Fairholm.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

QUILLAYUTE RIVER BASIN

Soleduck River near Fairholm, Wash.

Location.- Water-stage recorder, lat. 48°02'30", long. 123°57'30", in lot 4, sec. 35, T. 30 N., R. 10 W., 300 feet downstream from South Fork, 2.5 miles southwest of Fairholm, and 17 miles west of Beaver.

Drainage area.- 84 square miles (revised).

Records available.- October 1917 to September 1921, October 1933 to September 1942.

Average discharge.- 13 years, 617 second-feet.

Extremes.- Maximum discharge during year, 10,800 second-feet Dec. 2 (gage height, 9.48 feet), from rating curve extended above 5,000 second-feet; minimum, 61 second-feet Sept. 28, 29.

1917-21, 1933-42: Maximum discharge, 24,300 second-feet Dec. 21, 1933 (gage height, 14.9 feet), from rating curve extended above 5,000 second-feet; minimum, 56 second-feet Oct. 9, 1940.

Remarks.- Records excellent except those above 5,000 second-feet, which are fair. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 2 | | | | Dec. 3 to Sept. 30 | | | |
|------------------|-------|-----|-------|--|-----|-----|-------|
| 2.0 | 212 | 5.0 | 2,140 | 1.2 | 66 | 2.5 | 367 |
| 2.5 | 377 | 6.0 | 3,500 | 1.4 | 92 | 3.0 | 530 |
| 3.0 | 595 | 7.0 | 5,200 | 1.7 | 144 | 3.5 | 857 |
| 3.5 | 870 | 8.0 | 7,250 | 2.0 | 213 | 4.0 | 1,220 |
| 4.0 | 1,220 | | | Note.- Same as preceding table above 4.0 feet. | | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|------|-----|------|------|------|-------|
| 1 | 279 | 231 | 1,890 | 429 | 661 | 210 | 585 | 466 | 339 | 405 | 150 | 34 |
| 2 | 217 | 217 | 6,670 | 409 | 566 | 390 | 515 | 425 | 329 | 375 | 146 | 82 |
| 3 | 282 | 551 | 2,310 | 386 | 542 | 305 | 437 | 405 | 329 | 356 | 142 | 51 |
| 4 | 267 | 573 | 1,640 | 360 | 795 | 268 | 394 | 329 | 332 | 136 | 79 | |
| 5 | 204 | 521 | 1,720 | 342 | 590 | 470 | 390 | 371 | 339 | 299 | 136 | 79 |
| 6 | 192 | 508 | 2,240 | 329 | 732 | 394 | 367 | 375 | 468 | 277 | 133 | 85 |
| 7 | 220 | 414 | 1,460 | 329 | 625 | 350 | 346 | 417 | 417 | 265 | 133 | 84 |
| 8 | 236 | 361 | 1,140 | 339 | 561 | 360 | 322 | 454 | 426 | 261 | 127 | 79 |
| 9 | 1,630 | 327 | 958 | 386 | 533 | 605 | 312 | 397 | 598 | 254 | 123 | 77 |
| 10 | 1,950 | 313 | 826 | 406 | 625 | 502 | 319 | 375 | 795 | 262 | 120 | 76 |
| 11 | 1,810 | 381 | 737 | 367 | 571 | 429 | 378 | 336 | 542 | 277 | 118 | 74 |
| 12 | 1,390 | 346 | 656 | 413 | 510 | 398 | 409 | 312 | 462 | 248 | 115 | 73 |
| 13 | 870 | 2,120 | 677 | 437 | 466 | 356 | 353 | 306 | 449 | 226 | 111 | 72 |
| 14 | 724 | 3,390 | 720 | 382 | 421 | 325 | 449 | 306 | 639 | 229 | 108 | 72 |
| 15 | 638 | 1,460 | 1,280 | 364 | 386 | 302 | 413 | 322 | 993 | 271 | 105 | 71 |
| 16 | 1,910 | 1,040 | 1,930 | 375 | 356 | 290 | 382 | 325 | 890 | 424 | 103 | 70 |
| 17 | 1,070 | 909 | 1,300 | 367 | 329 | 342 | 394 | 319 | 826 | 542 | 102 | 70 |
| 18 | 809 | 688 | 590 | 353 | 309 | 322 | 346 | 312 | 656 | 353 | 100 | 67 |
| 19 | 665 | 590 | 3,430 | 329 | 293 | 296 | 322 | 356 | 585 | 284 | 100 | 66 |
| 20 | 557 | 530 | 1,680 | 322 | 284 | 277 | 346 | 429 | 524 | 264 | 97 | 66 |
| 21 | 490 | 499 | 1,220 | 312 | 265 | 287 | 409 | 458 | 471 | 232 | 97 | 64 |
| 22 | 435 | 456 | 1,310 | 319 | 251 | 309 | 360 | 542 | 441 | 218 | 95 | 64 |
| 23 | 393 | 418 | 1,460 | 322 | 243 | 284 | 322 | 475 | 441 | 210 | 94 | 64 |
| 24 | 365 | 1,110 | 1,100 | 409 | 235 | 268 | 494 | 405 | 437 | 198 | 91 | 64 |
| 25 | 351 | 992 | 890 | 533 | 221 | 257 | 497 | 445 | 413 | 190 | 95 | 63 |
| 26 | 309 | 680 | 765 | 538 | 216 | 248 | 458 | 433 | 397 | 183 | 103 | 63 |
| 27 | 295 | 581 | 666 | 732 | 210 | 243 | 417 | 397 | 397 | 176 | 100 | 62 |
| 28 | 276 | 799 | 600 | 585 | 208 | 246 | 401 | 375 | 397 | 170 | 95 | 62 |
| 29 | 254 | 1,300 | 547 | 497 | - | 265 | 396 | 360 | 382 | 165 | 91 | 61 |
| 30 | 239 | 1,560 | 502 | 445 | - | 290 | 445 | 360 | 386 | 161 | 86 | 53 |
| 31 | 236 | - | 449 | 468 | - | 375 | - | 360 | - | 157 | 55 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 19,513 | 1,930 | 192 | 629 | 7.49 | 8.64 | 35,700 |
| November..... | 24,063 | 3,390 | 217 | 802 | 9.55 | 10.65 | 47,730 |
| December..... | 45,364 | 6,670 | 449 | 1,463 | 17.4 | 20.08 | 89,980 |
| Calendar year 1941..... | 201,859 | 6,670 | 70 | 553 | 6.58 | 59.36 | 490,400 |
| January..... | 12,603 | 732 | 312 | 407 | 4.66 | 5.68 | 25,000 |
| February..... | 12,296 | 890 | 208 | 439 | 5.23 | 5.44 | 24,390 |
| March..... | 10,252 | 605 | 210 | 331 | 3.94 | 4.54 | 20,330 |
| April..... | 11,968 | 585 | 312 | 399 | 4.75 | 5.30 | 23,740 |
| May..... | 12,002 | 542 | 306 | 387 | 4.61 | 5.31 | 23,810 |
| June..... | 15,116 | 993 | 329 | 594 | 6.00 | 6.69 | 29,980 |
| July..... | 8,244 | 542 | 157 | 265 | 3.17 | 3.66 | 16,360 |
| August..... | 3,439 | 150 | 85 | 111 | 1.32 | 1.62 | 6,820 |
| September..... | 2,156 | 85 | 61 | 71.9 | .866 | .95 | 4,280 |
| Water year 1941-42..... | 177,016 | 6,670 | 61 | 485 | 5.77 | 78.35 | 351,100 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Elwha River at McDonald Bridge, near Port Angeles, Wash.

Location.— Water-stage recorder, lat. 48°03'20", long. 123°34'55", in NE 1/4 sec. 33, T. 30 N., R. 7 W., at site of McDonald Bridge (now removed), half a mile upstream from Little River, 7 miles upstream from mouth, and 8 miles southwest of Port Angeles. Datum of gage is 200.0 feet above mean sea level, datum of 1929.

Drainage area.— 262 square miles.

Records available.— October 1897 to December 1901, October 1918 to September 1942.

Average discharge.— 28 years, 1,443 second-feet, adjusted for storage since April 1927.

Extremes.— Maximum discharge during year, 17,100 second-feet Dec. 2 (gage height, 19.05 feet); minimum daily, 12 second-feet (regulated) Sept. 7.

1897-1901, 1918-42: Maximum discharge, 28,700 second-feet Dec. 21, 1933 (gage height, 10.5 feet, site and datum then in use, from floodmarks), computed on basis of spillway and turbine records at Glines Canyon Reservoir; minimum daily, 10 second-feet Oct. 3, 1938.

Remarks.— Records good except those for period of fragmentary gage-height record and those below 300 second-feet, which are fair. Flow affected by Glines Canyon Reservoir on Elwha River, lat. 48°00'05", long. 123°41'05", 4 miles north of Elwha, which was completed in 1927 for development of power. Usable capacity, 38,650 acre-feet at elevation 610 feet. Change in contents determined from midnight elevations based on twice-daily staff-gage readings. Flow diverted through Glines Canyon power house and returned to river above gage.

Cooperation.— Reservoir gage heights furnished by Crown-Zellerbach Corporation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 2

Dec. 2 to Sept. 30

| | | | | | | | | | |
|------|-------|------|--------|-----|-----|------|-------|------|--------|
| 8.6 | 390 | 11.6 | 3,180 | 8.0 | 115 | 9.0 | 520 | 12.9 | 4,710 |
| 8.8 | 505 | 13.4 | 5,670 | 8.2 | 170 | 9.5 | 565 | 14.7 | 7,650 |
| 9.1 | 715 | 15.3 | 8,870 | 8.4 | 235 | 10.2 | 1,460 | 16.5 | 11,200 |
| 9.6 | 1,120 | 16.5 | 11,300 | 8.7 | 355 | 11.3 | 2,630 | | |
| 10.4 | 1,950 | | | | | | | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 505 | 492 | 3,160 | 1,080 | 1,050 | 1,568 | 727 | 865 | 1,460 | 1,560 | 699 | 741 |
| 2 | 567 | 1,443 | 11,100 | 1,140 | 1,120 | 422 | 644 | 695 | 1,460 | 1,560 | 1,644 | 695 |
| 3 | 493 | 748 | 6,610 | 1,090 | 1,100 | 559 | 613 | 1,940 | 1,460 | 1,510 | 671 | 657 |
| 4 | 506 | 968 | 4,760 | 1,030 | 1,230 | 572 | 706 | 880 | 1,460 | 1,190 | 667 | 604 |
| 5 | 1,445 | 754 | 2,840 | 998 | 1,420 | 585 | 1,532 | 925 | 1,420 | 1,370 | 546 | 526 |
| 6 | 493 | 732 | 3,780 | 996 | 1,320 | 578 | 563 | 895 | 1,060 | 1,230 | 566 | 1,213 |
| 7 | 505 | 728 | 12,760 | 996 | 1,370 | 699 | 835 | 755 | 1,610 | 1,190 | 526 | 12 |
| 8 | 481 | 889 | 2,340 | 988 | 1,040 | 1,745 | 790 | 741 | 1,610 | 1,090 | 885 | 434 |
| 9 | 1,160 | 1,676 | 2,180 | 996 | 735 | 790 | 685 | 748 | 1,960 | 1,040 | 1,280 | 776 |
| 10 | 2,760 | 672 | 1,930 | 964 | 1,130 | 798 | 664 | 1,499 | 1,960 | 988 | 564 | 671 |
| 11 | 2,620 | 834 | 1,720 | 1,972 | 1,090 | 776 | 787 | 614 | 1,660 | 1,030 | 637 | 403 |
| 12 | 1,860 | 800 | 1,710 | 1,010 | 1,040 | 755 | 765 | 910 | 1,660 | 1,080 | 496 | 541 |
| 13 | 1,360 | 3,020 | 1,640 | 1,010 | 1,000 | 790 | 762 | 888 | 1,710 | 1,070 | 580 | 1,162 |
| 14 | 1,220 | 4,160 | 11,450 | 996 | 996 | 748 | 932 | 888 | 1,610 | 988 | 490 | 300 |
| 15 | 1,210 | 2,470 | 2,610 | 972 | 1,996 | 1,640 | 880 | 888 | 2,340 | 1,000 | 430 | 276 |
| 16 | 2,220 | 11,920 | 3,850 | 918 | 988 | 576 | 988 | 1,020 | 1,660 | 1,020 | 1,400 | 465 |
| 17 | 1,600 | 1,690 | 2,670 | 798 | 996 | 556 | 888 | 1,998 | 1,610 | 1,080 | 472 | 462 |
| 18 | 1,460 | 1,490 | 3,240 | 1,646 | 1,000 | 446 | 812 | 1,010 | 1,420 | 1,060 | 578 | 346 |
| 19 | 1,300 | 1,150 | 5,100 | 602 | 902 | 634 | 1,790 | 1,020 | 1,420 | 1,060 | 502 | 344 |
| 20 | 1,150 | 1,050 | 3,060 | 925 | 888 | 671 | 872 | 1,020 | 1,610 | 1,020 | 464 | 1,175 |
| 21 | 946 | 1,040 | 12,510 | 865 | 858 | 738 | 672 | 1,190 | 1,460 | 980 | 416 | 292 |
| 22 | 1,020 | 1,040 | 2,810 | 865 | 1,805 | 1,685 | 1,030 | 1,280 | 1,460 | 918 | 523 | 32 |
| 23 | 928 | 11,060 | 2,990 | 850 | 776 | 637 | 1,000 | 1,420 | 1,610 | 895 | 1,526 | 158 |
| 24 | 972 | 1,270 | 1,740 | 895 | 790 | 664 | 1,070 | 1,420 | 1,460 | 872 | 611 | 249 |
| 25 | 860 | 1,710 | 1,860 | 1,972 | 828 | 692 | 1,080 | 1,760 | 1,460 | 880 | 667 | 286 |
| 26 | 1,692 | 1,200 | 1,610 | 996 | 734 | 713 | 1,956 | 1,960 | 1,420 | 1,655 | 637 | 290 |
| 27 | 866 | 1,120 | 1,610 | 1,140 | 699 | 755 | 1,080 | 1,560 | 1,420 | 925 | 533 | 1,212 |
| 28 | 840 | 11,340 | 11,460 | 1,160 | 559 | 699 | 1,030 | 1,460 | 1,420 | 888 | 618 | 309 |
| 29 | 662 | 12,640 | 1,320 | 1,080 | - | 1,671 | 895 | 1,460 | 1,320 | 888 | 346 | 368 |
| 30 | 654 | 15,600 | 1,230 | 1,120 | - | 699 | 672 | 1,460 | 1,460 | 868 | 1,163 | 290 |
| 31 | 636 | - | 1,160 | 1,140 | - | 727 | - | 1,460 | - | 783 | 533 | - |

| Month | Observed | | | | Change in contents in Glines Canyon Reservoir (acre-feet) | Adjusted for change in reservoir contents | | | |
|--------------------|--------------------------|----------|-------|----------------------|---|---|--------------------------|-----------------|-------------------|
| | Discharge in second-foot | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-foot | | Run off in inches |
| | Maxi-mum | Mini-mum | Mean | | | | Mean | Per square mile | |
| October..... | 2,760 | 445 | 1,060 | 65,180 | -1,130 | 64,050 | 1,042 | 3.98 | 4.68 |
| November..... | 4,160 | 443 | 1,380 | 82,130 | +3,550 | 85,680 | 1,440 | 5.50 | 6.13 |
| December..... | 11,100 | 1,150 | 2,832 | 174,100 | -130 | 173,970 | 2,929 | 10.8 | 12.45 |
| Calendar year 1941 | 11,100 | 76 | 1,261 | 927,080 | +40 | 927,120 | 1,251 | 4.89 | 66.33 |
| January..... | 1,150 | 602 | 974 | 59,880 | -980 | 58,900 | 988 | 3.66 | 4.22 |
| February..... | 1,420 | 559 | 981 | 54,470 | -5,190 | 49,280 | 897 | 3.39 | 3.53 |
| March..... | 798 | 422 | 656 | 40,330 | -1,770 | 38,560 | 627 | 2.39 | 2.76 |
| April..... | 1,080 | 532 | 832 | 49,490 | +200 | 49,690 | 835 | 3.19 | 3.56 |
| May..... | 1,960 | 499 | 1,091 | 67,080 | +6,880 | 73,960 | 1,203 | 4.69 | 5.29 |
| June..... | 2,340 | 1,320 | 1,578 | 93,920 | -960 | 92,960 | 1,562 | 5.96 | 6.65 |
| July..... | 1,660 | 763 | 1,059 | 65,130 | -890 | 64,240 | 1,045 | 3.99 | 4.60 |
| August..... | 699 | 163 | 525 | 32,290 | -580 | 31,710 | 516 | 1.97 | 2.27 |
| September..... | 776 | 12 | 376 | 22,380 | -4,930 | 17,450 | 293 | 1.12 | 1.25 |
| Water year 1941-42 | 11,100 | 12 | 1,114 | 806,380 | -5,930 | 800,450 | 1,106 | 4.22 | 57.29 |

† Sunday.

‡ Fragmentary gage-height record; discharge computed on basis of available gage-heights and records for Soulduck River near Fairholm.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Dungeness River near Sequim, Wash.

Location.- Water-stage recorder, lat. 48°00'40", long. 123°07'50", in SW 1/4 sec. 12, T. 29 N., R. 4 W., three-quarters of a mile upstream from Canyon Creek, 4 1/2 miles southwest of Sequim, and 1 1/2 miles upstream from mouth.

Drainage area.- 156 square miles.

Records available.- June 1937 to September 1942. July 1897 to July 1898 at site about 2 miles downstream. June 1923 to September 1930 at site half a mile downstream.

Average discharge.- 12 years (1923-30, 1937-42), 334 second-feet.

Extremes.- Maximum discharge during year, 4,120 second-feet Dec. 2 (gauge height, 6.28 feet), from rating curve extended above 2,000 second-feet; minimum, 98 second-feet Sept. 26 (gauge height, 2.59 feet).

1897-98, 1923-30, 1937-42: Maximum discharge, 5,380 second-feet Dec. 28, 1937 (gauge height, 6.85 feet), from rating curve extended above 2,000 second-feet; minimum observed, 77 second-feet Sept. 10, 1928.

Remarks.- Records good. No diversion or regulation.

Rating tables, water year 1941-42 (gauge height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 10 to Nov. 13)

Oct. 1 to Dec. 1

Dec. 2 to Sept. 30

| | | | | | | | | | |
|-----|-----|-----|-------|-----|-----|-----|-----|-----|-------|
| 2.8 | 141 | 3.6 | 436 | 2.6 | 100 | 3.3 | 311 | 4.5 | 1,150 |
| 3.0 | 196 | 4.0 | 674 | 2.8 | 142 | 3.6 | 456 | 5.0 | 1,760 |
| 3.3 | 301 | 4.5 | 1,120 | 3.0 | 198 | 4.0 | 705 | 5.6 | 2,700 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|------|------|------|------|-----|------|------|------|-------|
| 1 | 146 | 139 | 816 | 299 | 338 | 158 | 201 | 286 | 583 | 860 | 259 | 140 |
| 2 | 141 | 134 | 2,680 | 274 | 295 | 174 | 201 | 274 | 616 | 844 | 255 | 142 |
| 3 | 134 | 194 | 1,600 | 262 | 282 | 174 | 201 | 259 | 609 | 804 | 255 | 140 |
| 4 | 144 | 205 | 1,150 | 247 | 282 | 171 | 205 | 247 | 609 | 750 | 251 | 142 |
| 5 | 132 | 301 | 844 | 247 | 266 | 186 | 229 | 240 | 720 | 635 | 251 | 142 |
| 6 | 126 | 222 | 742 | 270 | 270 | 186 | 255 | 259 | 869 | 570 | 243 | 137 |
| 7 | 128 | 195 | 656 | 240 | 251 | 177 | 255 | 320 | 820 | 546 | 247 | 135 |
| 8 | 121 | 184 | 583 | 225 | 243 | 183 | 251 | 320 | 750 | 506 | 240 | 135 |
| 9 | 181 | 179 | 529 | 229 | 243 | 192 | 262 | 394 | 728 | 494 | 232 | 135 |
| 10 | 526 | 162 | 484 | 236 | 251 | 195 | 262 | 375 | 649 | 489 | 229 | 128 |
| 11 | 393 | 184 | 440 | 229 | 236 | 192 | 311 | 334 | 635 | 462 | 218 | 124 |
| 12 | 359 | 173 | 404 | 232 | 225 | 180 | 311 | 316 | 523 | 399 | 205 | 124 |
| 13 | 263 | 902 | 430 | 229 | 218 | 180 | 299 | 303 | 535 | 394 | 192 | 126 |
| 14 | 249 | 995 | 446 | 225 | 208 | 168 | 316 | 329 | 656 | 420 | 192 | 121 |
| 15 | 235 | 570 | 816 | 225 | 201 | 163 | 286 | 361 | 772 | 446 | 195 | 126 |
| 16 | 329 | 441 | 1,140 | 229 | 195 | 160 | 274 | 380 | 642 | 456 | 195 | 119 |
| 17 | 314 | 366 | 684 | 225 | 189 | 158 | 270 | 380 | 564 | 430 | 195 | 115 |
| 18 | 267 | 314 | 688 | 218 | 183 | 155 | 247 | 375 | 540 | 385 | 195 | 113 |
| 19 | 249 | 278 | 1,170 | 212 | 180 | 152 | 243 | 435 | 546 | 361 | 195 | 110 |
| 20 | 222 | 252 | 756 | 208 | 192 | 147 | 311 | 552 | 540 | 365 | 192 | 110 |
| 21 | 202 | 242 | 616 | 218 | 180 | 150 | 446 | 705 | 517 | 394 | 183 | 108 |
| 22 | 193 | 218 | 576 | 218 | 168 | 147 | 385 | 932 | 517 | 390 | 177 | 108 |
| 23 | 182 | 212 | 622 | 232 | 168 | 145 | 324 | 852 | 546 | 352 | 177 | 108 |
| 24 | 176 | 284 | 535 | 251 | 165 | 140 | 303 | 804 | 570 | 324 | 174 | 106 |
| 25 | 167 | 398 | 472 | 290 | 163 | 140 | 274 | 878 | 609 | 311 | 165 | 104 |
| 26 | 164 | 318 | 420 | 295 | 160 | 135 | 259 | 788 | 609 | 307 | 160 | 102 |
| 27 | 159 | 290 | 385 | 356 | 160 | 135 | 243 | 677 | 663 | 299 | 160 | 100 |
| 28 | 154 | 322 | 356 | 324 | 158 | 135 | 243 | 609 | 720 | 299 | 152 | 100 |
| 29 | 149 | 926 | 338 | 286 | - | 142 | 243 | 583 | 720 | 286 | 145 | 100 |
| 30 | 144 | 1,300 | 316 | 266 | - | 147 | 205 | 570 | 758 | 286 | 145 | 108 |
| 31 | 144 | - | 290 | 282 | - | 171 | - | 570 | - | 270 | 142 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 6,473 | 626 | 121 | 209 | 1.34 | 1.54 | 12,840 |
| November..... | 10,912 | 1,300 | 134 | 364 | 2.33 | 2.60 | 21,640 |
| December..... | 22,166 | 2,860 | 290 | 715 | 4.58 | 5.28 | 43,970 |
| Calendar year 1941..... | 126,244 | 2,860 | 117 | 346 | 2.22 | 30.09 | 250,400 |
| January..... | 7,779 | 356 | 208 | 251 | 1.61 | 1.85 | 15,430 |
| February..... | 6,070 | 338 | 169 | 217 | 1.39 | 1.45 | 12,040 |
| March..... | 5,038 | 195 | 135 | 163 | 1.04 | 1.20 | 9,990 |
| April..... | 8,115 | 446 | 201 | 270 | 1.73 | 1.93 | 16,100 |
| May..... | 14,777 | 932 | 240 | 477 | 3.06 | 3.52 | 29,310 |
| June..... | 19,135 | 869 | 517 | 638 | 4.09 | 4.56 | 37,950 |
| July..... | 14,154 | 860 | 270 | 457 | 2.93 | 3.37 | 28,070 |
| August..... | 6,216 | 259 | 142 | 201 | 1.29 | 1.48 | 12,330 |
| September..... | 3,608 | 142 | 100 | 120 | .769 | .86 | 7,160 |
| Water year 1941-42..... | 124,443 | 2,860 | 100 | 341 | 2.19 | 29.64 | 246,800 |

Peak discharge.- Nov. 13 (3 p.m.) 1,530 sec.-ft.; Nov. 30 (1 a.m.) 1,980 sec.-ft.; Dec. 2 (8 a.m.) 4,120 sec.-ft.; Dec. 16 (1 a.m.) 1,430 sec.-ft.; Dec. 19 (4 to 5 a.m.) 1,350 sec.-ft.; May 22 (4 a.m.) 1,030 sec.-ft.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

DOSEWALLIPS RIVER BASIN

Dosewallips River near Brinnon, Wash.

Location.— Water-stage recorder, lat. 47°43', long. 123°00', in SW¼ sec. 24, T. 26 N., R. 5 W., half a mile upstream from Corrigenda ranger station, 5½ miles northwest of Brinnon, and 7½ miles upstream from mouth.

Drainage area.— 94 square miles.

Records available.— October 1930 to September 1942.

Average discharge.— 12 years, 458 second-feet.

Extremes.— Maximum discharge during year, 6,370 second-feet Dec. 2 (gage height, 7.64 feet), from rating curve extended above 4,500 second-feet; minimum, 98 second-feet Sept. 28, 29 (gage height, 1.84 feet).

1930-42: Maximum discharge, 10,900 second-feet Nov. 5, 1934 (gage height, 9.57 feet), from rating curve extended above 4,500 second-feet; minimum, 65 second-feet Dec. 4, 1936 (gage height, 1.71 feet).

Remarks.— Records excellent except those above 1,500 second-feet, which are good. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 1 | | | | Dec. 2 to Sept. 30 | | | |
|------------------|-----|-----|-------|--------------------|-----|-----|-------|
| 2.2 | 160 | 3.5 | 675 | 2.0 | 127 | 3.0 | 445 |
| 2.4 | 215 | 4.0 | 955 | 2.2 | 172 | 3.5 | 705 |
| 2.7 | 317 | 5.0 | 1,580 | 2.4 | 226 | 4.0 | 1,050 |
| 3.0 | 437 | | | 2.7 | 324 | 5.0 | 2,010 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|------|------|------|------|-------|-------|------|------|-------|
| 1 | 154 | 152 | 1,180 | 317 | 545 | 188 | 250 | 382 | 647 | 884 | 256 | 148 |
| 2 | 141 | 147 | 4,050 | 310 | 482 | 195 | 253 | 335 | 688 | 817 | 253 | 155 |
| 3 | 180 | 258 | 2,250 | 296 | 525 | 190 | 256 | 314 | 682 | 766 | 259 | 155 |
| 4 | 156 | 320 | 1,260 | 282 | 608 | 185 | 266 | 296 | 676 | 693 | 256 | 162 |
| 5 | 137 | 437 | 963 | 272 | 535 | 195 | 306 | 292 | 817 | 582 | 256 | 155 |
| 6 | 137 | 274 | 898 | 266 | 501 | 188 | 351 | 296 | 1,020 | 525 | 256 | 150 |
| 7 | 139 | 237 | 742 | 263 | 450 | 182 | 343 | 445 | 871 | 501 | 256 | 155 |
| 8 | 135 | 225 | 659 | 256 | 406 | 185 | 343 | 506 | 785 | 511 | 250 | 150 |
| 9 | 495 | 209 | 592 | 263 | 382 | 201 | 354 | 482 | 830 | 459 | 241 | 142 |
| 10 | 780 | 209 | 530 | 272 | 358 | 206 | 378 | 424 | 699 | 459 | 235 | 131 |
| 11 | 650 | 234 | 486 | 272 | 332 | 204 | 459 | 374 | 603 | 436 | 223 | 131 |
| 12 | 495 | 200 | 450 | 279 | 306 | 204 | 445 | 347 | 551 | 374 | 206 | 142 |
| 13 | 367 | 1,480 | 477 | 279 | 292 | 206 | 411 | 347 | 642 | 370 | 193 | 135 |
| 14 | 336 | 1,420 | 556 | 266 | 279 | 195 | 406 | 396 | 824 | 432 | 201 | 133 |
| 15 | 295 | 780 | 747 | 263 | 269 | 193 | 378 | 450 | 884 | 454 | 215 | 142 |
| 16 | 489 | 650 | 1,300 | 263 | 259 | 188 | 366 | 473 | 682 | 468 | 212 | 127 |
| 17 | 375 | 537 | 871 | 259 | 250 | 190 | 358 | 463 | 582 | 428 | 204 | 119 |
| 18 | 328 | 446 | 849 | 253 | 244 | 182 | 328 | 463 | 525 | 378 | 206 | 113 |
| 19 | 288 | 387 | 1,300 | 250 | 235 | 177 | 332 | 571 | 506 | 362 | 206 | 115 |
| 20 | 250 | 351 | 898 | 244 | 235 | 177 | 445 | 717 | 501 | 362 | 209 | 119 |
| 21 | 237 | 332 | 705 | 241 | 226 | 180 | 592 | 916 | 482 | 382 | 190 | 119 |
| 22 | 225 | 303 | 670 | 241 | 215 | 180 | 477 | 1,300 | 496 | 374 | 193 | 119 |
| 23 | 209 | 288 | 688 | 266 | 212 | 172 | 406 | 1,030 | 571 | 347 | 201 | 123 |
| 24 | 203 | 431 | 587 | 411 | 206 | 167 | 370 | 948 | 576 | 324 | 180 | 119 |
| 25 | 194 | 518 | 520 | 525 | 198 | 167 | 370 | 1,010 | 520 | 317 | 170 | 119 |
| 26 | 185 | 399 | 463 | 535 | 195 | 162 | 317 | 844 | 540 | 320 | 180 | 112 |
| 27 | 180 | 355 | 432 | 693 | 193 | 160 | 296 | 711 | 642 | 306 | 155 | 110 |
| 28 | 175 | 480 | 402 | 540 | 190 | 160 | 289 | 656 | 705 | 303 | 153 | 108 |
| 29 | 162 | 1,480 | 392 | 445 | - | 170 | 292 | 620 | 729 | 292 | 146 | 108 |
| 30 | 154 | 1,770 | 354 | 390 | - | 180 | 362 | 630 | 785 | 279 | 153 | 131 |
| 31 | 154 | - | 332 | 463 | - | 215 | - | 625 | - | 266 | 150 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 8,405 | 780 | 135 | 271 | 2.88 | 3.33 | 16,670 |
| November..... | 15,309 | 1,770 | 147 | 510 | 5.43 | 6.06 | 30,360 |
| December..... | 26,593 | 4,050 | 332 | 858 | 9.13 | 10.52 | 52,750 |
| Calendar year 1941..... | 168,953 | 4,050 | 135 | 463 | 4.93 | 66.85 | 335,100 |
| January..... | 10,175 | 693 | 241 | 328 | 3.49 | 4.03 | 20,180 |
| February..... | 9,128 | 608 | 190 | 326 | 3.47 | 3.61 | 18,110 |
| March..... | 5,744 | 215 | 160 | 185 | 1.97 | 2.27 | 11,390 |
| April..... | 10,799 | 562 | 250 | 360 | 3.83 | 4.27 | 21,420 |
| May..... | 17,475 | 1,130 | 292 | 564 | 6.00 | 6.91 | 34,660 |
| June..... | 20,071 | 1,020 | 482 | 669 | 7.12 | 7.94 | 39,810 |
| July..... | 13,781 | 884 | 266 | 445 | 4.73 | 5.45 | 27,350 |
| August..... | 6,444 | 259 | 146 | 208 | 2.21 | 2.55 | 12,780 |
| September..... | 3,947 | 162 | 108 | 132 | 1.40 | 1.56 | 7,530 |
| Water year 1941-42..... | 147,871 | 4,050 | 108 | 405 | 4.31 | 58.50 | 293,300 |

Peak discharge.— Nov. 30 (12:30 a.m.) 3,310 sec.-ft.; Dec. 2 (7:45 a.m.) 6,370 sec.-ft.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Duckabush River near Brinnon, Wash.

Location.— Water-stage recorder, lat. 47°41'00", long. 123°00'40", in SW¼ sec. 1, T. 25 N., R. 3 W., 4½ miles upstream from mouth and 5 miles west of Brinnon.

Drainage area.— 66 square miles.

Records available.— June 1938 to September 1942. August 1910 to December 1911, at practically same site but different datum, published as Duckabush River near Duckabush.

Extremes.— Maximum discharge during year, 6,080 second-feet Dec. 2 (gage height, 8.07 feet); minimum, 47 second-feet Sept. 28-30 (gage height, 1.39 feet).
1911-12, 1938-42: Maximum discharge, 6,080 second-feet Dec. 15, 1939 and Dec. 2, 1941 (gage height, 8.07 feet); minimum, 48 second-feet Oct. 8, 9, 1938.

Remarks.— Records excellent. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 1

Dec. 2 to Sept. 30

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-------|-----|-----|-----|-------|-----|-------|
| 1.7 | 89 | 2.5 | 274 | 3.7 | 880 | 1.5 | 61 | 2.8 | 395 | 4.5 | 1,580 |
| 1.9 | 123 | 2.9 | 418 | 4.5 | 1,390 | 1.7 | 92 | 3.2 | 578 | 5.0 | 2,120 |
| 2.2 | 189 | 3.3 | 610 | 5.0 | 2,120 | 2.0 | 152 | 3.6 | 915 | 6.0 | 3,300 |
| | | | | | | 2.4 | 256 | 4.0 | 1,120 | 7.0 | 4,570 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|------|------|------|-----|------|------|------|-------|
| 1 | 118 | 118 | 1,320 | 239 | 762 | 137 | 269 | 487 | 458 | 547 | 137 | 69 |
| 2 | 109 | 112 | 4,710 | 230 | 575 | 169 | 244 | 339 | 480 | 527 | 132 | 68 |
| 3 | 112 | 301 | 2,890 | 224 | 689 | 169 | 233 | 297 | 467 | 467 | 130 | 66 |
| 4 | 107 | 441 | 1,210 | 211 | 836 | 154 | 230 | 268 | 462 | 428 | 126 | 67 |
| 5 | 100 | 490 | 886 | 203 | 656 | 168 | 259 | 259 | 542 | 361 | 124 | 67 |
| 6 | 97 | 318 | 908 | 195 | 594 | 164 | 287 | 275 | 689 | 332 | 122 | 67 |
| 7 | 100 | 249 | 696 | 192 | 518 | 182 | 272 | 368 | 678 | 311 | 120 | 62 |
| 8 | 97 | 215 | 589 | 188 | 424 | 154 | 269 | 399 | 583 | 284 | 116 | 62 |
| 9 | 516 | 194 | 563 | 200 | 380 | 269 | 269 | 368 | 713 | 281 | 112 | 62 |
| 10 | 963 | 162 | 449 | 230 | 357 | 208 | 290 | 332 | 638 | 284 | 108 | 61 |
| 11 | 924 | 205 | 407 | 244 | 328 | 195 | 361 | 294 | 518 | 278 | 108 | 61 |
| 12 | 661 | 182 | 372 | 268 | 294 | 185 | 257 | 265 | 445 | 247 | 103 | 60 |
| 13 | 398 | 2,560 | 424 | 278 | 265 | 185 | 314 | 282 | 489 | 227 | 99 | 60 |
| 14 | 328 | 2,230 | 587 | 250 | 244 | 173 | 314 | 294 | 618 | 259 | 97 | 60 |
| 15 | 269 | 1,040 | 1,660 | 239 | 230 | 166 | 294 | 335 | 689 | 294 | 96 | 60 |
| 16 | 344 | 865 | 2,000 | 239 | 219 | 159 | 294 | 357 | 518 | 311 | 94 | 58 |
| 17 | 294 | 658 | 968 | 230 | 205 | 166 | 290 | 346 | 445 | 311 | 92 | 57 |
| 18 | 262 | 496 | 1,060 | 222 | 195 | 164 | 262 | 343 | 391 | 250 | 92 | 54 |
| 19 | 235 | 406 | 1,740 | 211 | 188 | 154 | 263 | 432 | 376 | 230 | 90 | 53 |
| 20 | 210 | 353 | 1,010 | 203 | 182 | 150 | 325 | 518 | 376 | 227 | 89 | 53 |
| 21 | 194 | 318 | 707 | 200 | 173 | 157 | 440 | 683 | 361 | 224 | 87 | 52 |
| 22 | 182 | 284 | 138 | 198 | 161 | 170 | 357 | 829 | 356 | 211 | 86 | 52 |
| 23 | 167 | 265 | 756 | 236 | 169 | 167 | 294 | 738 | 399 | 200 | 86 | 51 |
| 24 | 158 | 463 | 568 | 608 | 154 | 148 | 268 | 678 | 399 | 190 | 82 | 51 |
| 25 | 150 | 541 | 471 | 766 | 148 | 141 | 244 | 744 | 361 | 180 | 81 | 48 |
| 26 | 143 | 383 | 399 | 627 | 145 | 132 | 230 | 589 | 361 | 178 | 81 | 48 |
| 27 | 139 | 328 | 361 | 1,080 | 139 | 128 | 227 | 494 | 424 | 173 | 78 | 48 |
| 28 | 153 | 690 | 332 | 672 | 134 | 126 | 233 | 445 | 449 | 166 | 78 | 47 |
| 29 | 126 | 1,680 | 304 | 489 | - | 162 | 236 | 440 | 480 | 154 | 74 | 47 |
| 30 | 119 | 2,040 | 281 | 395 | - | 173 | 519 | 445 | 494 | 152 | 72 | 58 |
| 31 | 119 | - | 253 | 639 | - | 170 | - | 436 | - | 145 | 72 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 7,862 | 963 | 97 | 254 | 3.85 | 4.43 | 15,590 |
| November..... | 18,497 | 2,550 | 112 | 617 | 9.35 | 10.42 | 36,990 |
| December..... | 29,475 | 4,710 | 253 | 951 | 14.4 | 16.61 | 58,460 |
| Calendar year 1941..... | 153,649 | 4,710 | 81 | 421 | 6.38 | 86.57 | 304,800 |
| January..... | 10,396 | 1,080 | 188 | 335 | 5.08 | 5.86 | 20,620 |
| February..... | 9,346 | 836 | 134 | 334 | 5.06 | 5.27 | 18,540 |
| March..... | 5,024 | 206 | 126 | 162 | 2.45 | 2.83 | 9,950 |
| April..... | 8,604 | 440 | 227 | 287 | 4.35 | 4.86 | 17,070 |
| May..... | 13,339 | 829 | 259 | 430 | 5.62 | 7.52 | 26,460 |
| June..... | 14,566 | 713 | 361 | 486 | 7.36 | 8.21 | 28,690 |
| July..... | 8,438 | 547 | 145 | 272 | 4.12 | 4.75 | 16,740 |
| August..... | 3,064 | 137 | 72 | 98.8 | 1.50 | 1.73 | 6,080 |
| September..... | 1,728 | 68 | 47 | 57.6 | .873 | .97 | 3,430 |
| Water year 1941-42..... | 130,339 | 4,710 | 47 | 357 | 5.41 | 73.45 | 258,500 |

Peak discharge.— Nov. 13 (2:45 p.m.) 4,310 sec.-ft.; Dec. 2 (8:30 a.m.) 5,080 sec.-ft.
Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

North Fork of Skokomish River below Staircase Rapids, near Hoodsport, Wash.

Location.— Water-stage recorder, lat. 47°30'55", long. 123°19'45", in NW 1/4 sec. 4, T. 23 N., R. 5 W., three-quarters of a mile upstream from Lake Cushman, 2 miles upstream from Dry Creek, and 1 1/2 miles northwest of Hoodsport. Prior to Nov. 11, 1941, staff gage on opposite side of stream.

Drainage area.— 60 square miles.

Records available.— July 1924 to September 1942.

Average discharge.— 18 years, 461 second-feet.

Extremes.— Maximum discharge during year, 8,300 second-feet Dec. 2 (gage height, 9.18 feet; minimum, 45 second-feet Sept. 26-29 (gage height, 1.52 feet).

1924-42: Maximum discharge, 23,300 second-feet Nov. 5, 1934 (gage height, 14.4 feet, from floodmarks), from rating curve extended above 3,200 second-feet; minimum recorded, 16 second-feet Sept. 23, 1930 (gage height, 1.12 feet).

Remarks.— Records excellent except those based on staff-gage readings and those for periods of shifting control, which are good. Staff gage read once daily prior to Nov. 11. No diversions or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

(Shifting-control method used Oct. 1 to Oct. 9, Dec. 3 to Jan. 26)

Oct. 1 to Nov. 10

Nov. 11 to Sept. 30

| | | | | | | | | | |
|-----|-----|-----|-------|-----|-----|-----|-------|-----|-------|
| 2.3 | 186 | 4.0 | 1,070 | 1.6 | 54 | 2.7 | 300 | 5.0 | 1,780 |
| 2.6 | 268 | 4.5 | 1,510 | 1.8 | 82 | 3.1 | 460 | 6.0 | 2,960 |
| 3.0 | 425 | 5.0 | 2,040 | 2.1 | 137 | 3.6 | 715 | 7.0 | 4,400 |
| 3.5 | 715 | | | 2.4 | 209 | 4.3 | 1,170 | 8.0 | 6,050 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|------|------|------|-----|------|------|------|-------|
| 1 | 163 | a198 | 1,820 | 543 | 905 | 176 | 343 | 625 | 415 | 438 | 139 | 67 |
| 2 | 137 | a186 | 5,580 | 328 | 671 | 334 | 304 | 367 | 428 | 399 | 137 | 66 |
| 3 | 141 | a302 | 2,500 | 310 | 710 | 255 | 284 | 339 | 433 | 365 | 133 | 64 |
| 4 | 139 | a302 | 1,410 | 293 | 900 | 220 | 287 | 310 | 428 | 328 | 131 | 64 |
| 5 | 124 | 590 | 1,250 | 280 | 806 | 264 | 321 | 307 | 496 | 287 | 125 | 63 |
| 6 | 118 | 402 | 1,330 | 270 | 751 | 234 | 321 | 335 | 676 | 267 | 123 | 68 |
| 7 | a120 | 340 | 965 | 264 | 660 | 217 | 295 | 424 | 515 | 281 | 119 | 64 |
| 8 | a124 | 265 | 535 | 261 | 575 | 259 | 284 | 420 | 633 | 243 | 117 | 62 |
| 9 | 850 | 253 | 721 | 359 | 520 | 403 | 300 | 371 | 835 | 243 | 113 | 59 |
| 10 | 1,610 | 238 | 638 | 371 | 505 | 324 | 343 | 324 | 900 | 243 | 112 | 58 |
| 11 | 995 | 297 | 575 | 347 | 451 | 284 | 415 | 293 | 616 | 284 | 108 | 58 |
| 12 | 1,070 | 240 | 530 | 375 | 395 | 261 | 399 | 274 | 530 | 246 | 104 | 57 |
| 13 | 650 | 2,990 | 585 | 363 | 359 | 243 | 339 | 287 | 540 | 220 | 99 | 55 |
| 14 | 602 | 2,630 | 715 | 343 | 328 | 223 | 395 | 284 | 627 | 277 | 97 | 54 |
| 15 | 402 | 1,100 | 1,880 | 328 | 310 | 212 | 387 | 321 | 676 | 359 | 96 | 54 |
| 16 | 475 | 938 | 2,100 | 328 | 290 | 201 | 383 | 339 | 666 | 363 | 94 | 54 |
| 17 | 460 | 733 | 1,170 | 318 | 274 | 229 | 379 | 339 | 585 | 318 | 90 | 53 |
| 18 | 580 | 590 | 1,620 | 310 | 255 | 206 | 335 | 343 | 492 | 261 | 89 | 51 |
| 19 | 340 | 500 | 2,150 | 297 | 243 | 196 | 328 | 465 | 442 | 227 | 87 | 51 |
| 20 | 285 | 442 | 1,210 | 287 | 231 | 191 | 451 | 560 | 411 | 231 | 86 | 50 |
| 21 | a268 | 395 | 900 | 284 | 217 | 204 | 515 | 649 | 391 | 215 | 84 | 48 |
| 22 | 263 | 359 | 230 | 206 | 206 | 209 | 383 | 733 | 391 | 209 | 82 | 47 |
| 23 | 238 | 332 | 932 | 328 | 201 | 196 | 321 | 627 | 407 | 188 | 80 | 47 |
| 24 | 224 | 677 | 751 | 678 | 193 | 186 | 351 | 575 | 391 | 183 | 79 | 46 |
| 25 | 224 | 568 | 638 | 868 | 186 | 178 | 300 | 710 | 359 | 178 | 76 | 46 |
| 26 | 211 | 428 | 565 | 899 | 178 | 173 | 277 | 560 | 355 | 176 | 74 | 45 |
| 27 | 198 | 375 | 510 | 1,100 | 173 | 171 | 270 | 496 | 375 | 166 | 73 | 45 |
| 28 | 198 | 924 | 464 | 751 | 171 | 169 | 258 | 433 | 353 | 161 | 72 | 45 |
| 29 | 174 | 1,590 | 424 | 570 | - | 186 | 261 | 424 | 353 | 157 | 72 | 45 |
| 30 | 174 | 1,600 | 391 | 482 | - | 204 | 540 | 498 | 415 | 152 | 70 | 96 |
| 31 | 198 | - | 359 | 662 | - | 264 | - | 415 | - | 144 | 68 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off |
|-------------------------|------------------|---------|---------|-------|-----------------|------------------|
| | | | | | | Inches Acre-feet |
| October..... | 11,435 | 1,610 | 118 | 369 | 6.15 | 7.09 |
| November..... | 20,318 | 2,990 | 168 | 694 | 11.6 | 12.90 |
| December..... | 36,150 | 5,580 | 359 | 1,166 | 19.4 | 22.41 |
| Calendar year 1941..... | 179,773 | 5,580 | 63 | 493 | 8.22 | 111.43 |
| January..... | 13,277 | 1,100 | 261 | 428 | 7.13 | 8.23 |
| February..... | 11,668 | 900 | 171 | 413 | 6.88 | 7.17 |
| March..... | 7,072 | 403 | 169 | 228 | 3.60 | 4.33 |
| April..... | 10,367 | 540 | 288 | 346 | 5.77 | 6.43 |
| May..... | 13,268 | 733 | 267 | 428 | 7.13 | 8.22 |
| June..... | 15,194 | 900 | 355 | 505 | 8.43 | 9.42 |
| July..... | 7,797 | 438 | 144 | 262 | 4.20 | 4.83 |
| August..... | 3,028 | 139 | 68 | 97.7 | 1.63 | 1.88 |
| September..... | 1,682 | 96 | 46 | 56.1 | .935 | 1.04 |
| Water year 1941-42..... | 151,661 | 5,580 | 45 | 415 | 6.92 | 94.00 |

Peak discharge.— Nov. 13 (11:55 a.m.) 4,720 sec.-ft.; Nov. 14 (12:55 a.m.) 4,400 sec.-ft.; Dec. 2 (8:00 a.m.) 8,300 sec.-ft.; Dec. 2 (3:00 p.m.) 5,200 sec.-ft.; Dec. 16 (1:45 a.m.) 2,960 sec.-ft.; Dec. 19 (1:00 a.m.) 3,020 sec.-ft.

No gage-height record; discharge computed on basis of constructed gage-height graph and records for South Fork of Skokomish River near Union.

*Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

South Fork of Skokomish River near Union, Wash.

Location.- Water-stage recorder, lat. 47°20'30", long. 123°16'30", in NE¼ sec. 2, T. 21 N., R. 5 W., 2½ miles upstream from North Fork, 5 miles upstream from Vance Creek, and 8 miles west of Union.

Drainage area.- 81 square miles.

Records available.- August 1931 to September 1942.

Average discharge.- 11 years, 691 second-feet.

Extremes.- Maximum discharge during year, 17,600 second-feet Dec. 2 (gage height, 10.43 feet); minimum, 78 second-feet Sept. 30 (gage height, 3.52 feet).
1931-42: Maximum discharge, 21,600 second-feet Jan. 22, 1935 (gage height, 11.0 feet), from rating curve extended above 11,000 second-feet; minimum, 62 second-feet Sept. 18, 1938.

Remarks.- Records good except those for periods of shifting control, which are fair, and those for period of doubtful gage-height record, which are poor. No diversion or regulation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 10 to Dec. 1)

| | | | | | |
|-----|-----|-----|-------|-----|--------|
| 3.5 | 74 | 4.7 | 595 | 7.5 | 4,290 |
| 3.7 | 114 | 5.1 | 905 | 8.2 | 6,070 |
| 3.9 | 172 | 5.5 | 1,270 | 8.9 | 8,750 |
| 4.1 | 248 | 6.1 | 1,960 | 9.6 | 12,300 |
| 4.4 | 400 | 6.8 | 2,970 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|-------|-------|-------|-------|------|------|-----|-------|------|------|-------|
| 1 | d210 | 236 | 1,820 | 506 | 1,770 | 308 | 448 | 973 | 257 | 240 | 160 | 99 |
| 2 | d200 | 224 | 9,510 | 450 | 1,250 | 518 | 430 | 700 | 248 | 232 | 155 | 96 |
| 3 | d210 | 560 | 3,340 | 448 | 1,270 | 532 | 353 | 574 | 244 | 224 | 150 | 94 |
| 4 | d210 | 1,190 | 1,770 | 424 | 1,900 | 448 | 361 | 492 | 240 | 220 | 144 | 94 |
| 5 | d200 | 1,340 | 1,480 | 400 | 1,770 | 512 | 355 | 442 | 240 | 212 | 141 | 94 |
| 6 | d190 | 785 | 1,710 | 383 | 1,420 | 486 | 339 | 400 | 288 | 204 | 138 | 96 |
| 7 | d190 | 581 | 1,320 | 383 | 1,260 | 436 | 324 | 400 | 266 | 201 | 136 | 94 |
| 8 | d220 | 475 | 1,050 | 373 | 1,090 | 424 | 303 | 383 | 290 | 194 | 133 | 92 |
| 9 | d2,000 | 394 | 914 | 460 | 982 | 708 | 298 | 355 | 590 | 194 | 133 | 92 |
| 10 | 3,220 | 361 | 809 | 506 | 914 | 640 | 303 | 329 | 1,010 | 194 | 130 | 90 |
| 11 | 1,960 | 406 | 715 | 486 | 825 | 553 | 329 | 313 | 655 | 260 | 128 | 90 |
| 12 | 1,590 | 361 | 648 | 473 | 730 | 499 | 339 | 298 | 506 | 270 | 125 | 88 |
| 13 | 1,020 | 2,960 | 670 | 466 | 662 | 466 | 308 | 288 | 415 | 224 | 122 | 88 |
| 14 | 785 | 3,680 | 889 | 448 | 602 | 418 | 355 | 280 | 389 | 232 | 122 | 87 |
| 15 | 632 | 1,860 | 2,070 | 424 | 567 | 400 | 394 | 280 | 480 | 355 | 119 | 87 |
| 16 | 785 | 1,480 | 2,980 | 418 | 518 | 389 | 400 | 275 | 590 | 406 | 117 | 87 |
| 17 | 753 | 1,250 | 1,710 | 406 | 486 | 506 | 406 | 275 | 700 | 424 | 114 | 85 |
| 18 | 632 | 982 | 2,560 | 406 | 454 | 499 | 359 | 270 | 567 | 334 | 114 | 85 |
| 19 | 560 | 825 | 4,400 | 389 | 424 | 442 | 361 | 293 | 486 | 293 | 114 | 83 |
| 20 | 486 | 730 | 1,960 | 372 | 412 | 406 | 361 | 308 | 430 | 262 | 112 | 81 |
| 21 | 430 | 632 | 1,370 | 355 | 389 | 406 | 389 | 308 | 389 | 244 | 110 | 81 |
| 22 | 394 | 546 | 1,480 | 344 | 361 | 473 | 344 | 329 | 355 | 228 | 110 | 81 |
| 23 | 361 | 492 | 1,770 | 389 | 361 | 448 | 313 | 308 | 334 | 214 | 107 | 79 |
| 24 | 334 | 520 | 1,260 | 907 | 344 | 412 | 406 | 298 | 324 | 204 | 107 | 79 |
| 25 | 313 | 990 | 1,030 | 1,210 | 329 | 359 | 399 | 313 | 313 | 197 | 105 | 79 |
| 26 | 298 | 685 | 881 | 1,120 | 318 | 361 | 350 | 308 | 293 | 190 | 105 | 79 |
| 27 | 288 | 567 | 777 | 1,230 | 308 | 350 | 355 | 298 | 280 | 183 | 107 | 79 |
| 28 | 275 | 856 | 700 | 973 | 303 | 339 | 344 | 293 | 270 | 176 | 103 | 79 |
| 29 | 266 | 1,720 | 640 | 785 | - | 339 | 339 | 280 | 257 | 172 | 103 | 79 |
| 30 | 257 | 1,880 | 595 | 670 | - | 344 | 870 | 275 | 248 | 169 | 101 | 88 |
| 31 | 244 | - | 539 | 1,040 | - | 366 | - | 266 | - | 163 | 98 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off Inches | Run-off Acres-feet |
|-------------------------|------------------|---------|---------|-------|-----------------|-------------------|-----------------------|
| October..... | 19,513 | 3,220 | 190 | 629 | 7.77 | 8.96 | 38,700 |
| November..... | 29,886 | 3,680 | 224 | 996 | 12.3 | 13.72 | 59,280 |
| December..... | 53,367 | 9,510 | 539 | 1,722 | 21.3 | 24.50 | 105,900 |
| Calendar year 1941..... | 242,210 | 9,510 | 85 | 664 | 8.20 | 111.21 | 480,500 |
| January..... | 17,679 | 1,230 | 344 | 570 | 7.04 | 8.12 | 35,070 |
| February..... | 22,019 | 1,900 | 303 | 786 | 9.70 | 10.11 | 45,670 |
| March..... | 15,817 | 708 | 308 | 446 | 5.51 | 6.34 | 27,410 |
| April..... | 11,285 | 870 | 298 | 376 | 4.64 | 5.18 | 22,380 |
| May..... | 11,194 | 973 | 266 | 361 | 4.46 | 5.14 | 22,200 |
| June..... | 11,947 | 1,010 | 240 | 398 | 4.91 | 5.49 | 23,700 |
| July..... | 7,317 | 424 | 163 | 236 | 2.91 | 3.56 | 14,510 |
| August..... | 5,762 | 160 | 99 | 121 | 1.49 | 1.73 | 7,460 |
| September..... | 2,605 | 99 | 79 | 86.8 | 1.07 | 1.20 | 5,170 |
| Water year 1941-42..... | 204,391 | 9,510 | 79 | 560 | 6.91 | 93.85 | 405,400 |

Peak discharge.- Dec. 2 (5 a.m.) 17,600 sec.-ft.; Dec. 19 (1 a.m.) 6,390 sec.-ft.

† Doubtful gage-height record; discharge computed on basis of records for Wynoochee River at Orxow, near Aberdeen.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Nisqually River near National, Wash.

Location.- Water-stage recorder, lat. 46°45'50", long. 122°05'00", in SW 1/4 sec. 29, T. 15 N., R. 6 E., 100 feet downstream from railroad bridge, 1 mile west of National, 2 1/2 miles west of Ashford, and 3 miles upstream from Mineral Creek.

Drainage area.- 133 square miles.

Records available.- May to September 1942.

Extremes.- Maximum discharge during period May 29 to Sept. 30, 2,340 second-feet June 15 (gage height, 7.07 feet); minimum, 204 second-feet Sept. 18 (gage height, 4.14 feet).

Remarks.- Records excellent except those for period of doubtful gage-height record, which are good. No diversion or regulation.

Rating table, May to September 1942 (gage height, in feet,
and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-----|-----|-------|
| 4.1 | 190 | 4.7 | 430 | 6.0 | 1,240 |
| 4.3 | 260 | 5.0 | 585 | 6.5 | 1,670 |
| 4.5 | 340 | 5.5 | 880 | 7.0 | 2,270 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|-------|-------|------|-------|
| 1 | | | | | | | | - | 755 | 1,200 | 574 | d350 |
| 2 | | | | | | | | - | 785 | 1,200 | 552 | 426 |
| 3 | | | | | | | | - | 745 | 1,160 | 618 | 450 |
| 4 | | | | | | | | - | 749 | 1,060 | 695 | 470 |
| 5 | | | | | | | | - | 848 | 912 | 654 | 435 |
| 6 | | | | | | | | - | 1,280 | 840 | 651 | 362 |
| 7 | | | | | | | | - | 1,020 | 785 | 629 | 380 |
| 8 | | | | | | | | - | 912 | 695 | 618 | 362 |
| 9 | | | | | | | | - | 1,080 | 646 | 640 | 316 |
| 10 | | | | | | | | - | 1,160 | 612 | 666 | 286 |
| 11 | | | | | | | | - | 1,160 | 634 | 574 | 320 |
| 12 | | | | | | | | - | 1,020 | 563 | d500 | 398 |
| 13 | | | | | | | | - | 980 | 506 | d470 | 385 |
| 14 | | | | | | | | - | 1,060 | 580 | d510 | 354 |
| 15 | | | | | | | | - | 2,080 | 719 | d540 | 358 |
| 16 | | | | | | | | - | 1,620 | 960 | d560 | 276 |
| 17 | | | | | | | | - | 1,400 | 1,020 | d550 | 246 |
| 18 | | | | | | | | - | 1,240 | 785 | d550 | 239 |
| 19 | | | | | | | | - | 1,160 | 785 | d590 | 296 |
| 20 | | | | | | | | - | 1,050 | 815 | d570 | 358 |
| 21 | | | | | | | | - | 945 | 785 | d550 | 362 |
| 22 | | | | | | | | - | 912 | 815 | d580 | 380 |
| 23 | | | | | | | | - | 945 | 737 | d560 | 398 |
| 24 | | | | | | | | - | 880 | 707 | d490 | 403 |
| 25 | | | | | | | | - | 815 | 695 | d390 | 380 |
| 26 | | | | | | | | - | 815 | 690 | d350 | 376 |
| 27 | | | | | | | | - | 815 | 673 | d310 | 376 |
| 28 | | | | | | | | - | 848 | 629 | d310 | 356 |
| 29 | | | | | | | | 815 | 945 | 596 | d290 | 308 |
| 30 | | | | | | | | 785 | 1,120 | 560 | d280 | 320 |
| 31 | | | | | | | | 785 | - | 568 | d290 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|---------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | | | | | | | |
| November..... | | | | | | | |
| December..... | | | | | | | |
| Calendar year | | | | | | | |
| January..... | - | - | - | - | - | - | - |
| February..... | - | - | - | - | - | - | - |
| March..... | - | - | - | - | - | - | - |
| April..... | - | - | - | - | - | - | - |
| May 29-31..... | 2,385 | - | - | - | - | - | 4,730 |
| June..... | 31,162 | 2,080 | 743 | 1,039 | 7.81 | 8.71 | 61,810 |
| July..... | 23,999 | 1,200 | 505 | 774 | 5.82 | 6.71 | 47,600 |
| August..... | 16,093 | 695 | 280 | 519 | 3.90 | 4.50 | 31,920 |
| September..... | 10,708 | 470 | 239 | 357 | 2.68 | 2.99 | 21,240 |
| The period..... | 84,347 | - | - | - | - | - | 167,300 |

d Doubtful gage-height record; discharge computed on basis of records for station near Alder and Mineral Creek near Mineral.

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

Nisqually River near Alder, Wash.

Location.- Water-stage recorder, lat. 46°46'05", long. 122°16'05", in SW¹/₄ sec. 23, T. 15 N., R. 4 E., 2¹/₂ miles southeast of Alder and 8 miles downstream from Mineral Creek.

Date of gauge is 1,013.9 feet above mean sea level (from stadia traverse).

Drainage area.- 252 square miles.

Records available.- August 1931 to September 1942.

Average discharge.- 11 years, 1,188 second-feet.

Extremes.- Maximum discharge during year, 9,520 second-feet Dec. 19 (gauge height, 8.19 feet); minimum, 221 second-feet Sept. 18 (gauge height, 1.60 feet).
1931-42: Maximum discharge, 25,000 second-feet Dec. 22, 1933 (gauge height, 13.2 feet), from rating curve extended above 10,000 second-feet; minimum, 142 second-feet Nov. 3, 1935 (gauge height, 1.31 feet).

Remarks.- Records excellent. No diversion or regulation.

Cooperation.- Gauge-height record collected in cooperation with city of Tacoma.

Rating tables, water year 1941-42 (gauge height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 19

Dec. 20 to Sept. 30

| | | | | | | | |
|-----|-------|-----|-------|-----|-----|-----|-------|
| 2.2 | 449 | 4.5 | 2,360 | 1.6 | 221 | 3.6 | 1,395 |
| 2.5 | 593 | 5.5 | 3,790 | 1.9 | 341 | 4.3 | 2,130 |
| 2.9 | 824 | 6.5 | 5,590 | 2.2 | 475 | 5.2 | 3,330 |
| 3.3 | 1,110 | 7.5 | 7,770 | 2.6 | 680 | 6.0 | 4,640 |
| 3.8 | 1,560 | 8.0 | 9,000 | 3.1 | 985 | 7.0 | 6,640 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 578 | 444 | 890 | 825 | 1,130 | 505 | 631 | 849 | 1,020 | 1,380 | 647 | 398 |
| 2 | 548 | 426 | 3,000 | 801 | 1,060 | 595 | 862 | 837 | 1,020 | 1,380 | 625 | 448 |
| 3 | 1,110 | 714 | 3,470 | 771 | 1,090 | 615 | 825 | 807 | 952 | 1,300 | 680 | 495 |
| 4 | 1,620 | 824 | 2,750 | 718 | 1,920 | 540 | 807 | 795 | 814 | 1,210 | 765 | 510 |
| 5 | 1,150 | 1,180 | 2,420 | 650 | 2,130 | 570 | 813 | 755 | 985 | 1,060 | 713 | 500 |
| 6 | 960 | 890 | 2,750 | 652 | 1,650 | 550 | 807 | 777 | 1,580 | 985 | 702 | 398 |
| 7 | 1,030 | 761 | 2,420 | 636 | 1,880 | 515 | 807 | 883 | 1,250 | 907 | 696 | 416 |
| 8 | 1,070 | 702 | 2,000 | 674 | 1,300 | 510 | 801 | 952 | 1,130 | 831 | 669 | 408 |
| 9 | 1,150 | 646 | 1,670 | 801 | 1,580 | 1,190 | 795 | 985 | 1,430 | 771 | 686 | 367 |
| 10 | 1,860 | 620 | 1,420 | 862 | 1,580 | 1,680 | 813 | 952 | 1,790 | 735 | 708 | 312 |
| 11 | 1,840 | 674 | 1,280 | 807 | 1,300 | 1,340 | 920 | 837 | 1,840 | 759 | 658 | 345 |
| 12 | 1,940 | 625 | 1,110 | 801 | 1,170 | 1,130 | 985 | 765 | 1,580 | 724 | 565 | 434 |
| 13 | 1,620 | 1,450 | 997 | 801 | 1,060 | 1,020 | 920 | 702 | 1,580 | 642 | 535 | 426 |
| 14 | 1,320 | 3,100 | 960 | 771 | 985 | 894 | 1,060 | 680 | 1,380 | 669 | 570 | 381 |
| 15 | 1,150 | 3,170 | 1,100 | 747 | 900 | 813 | 952 | 669 | 2,700 | 888 | 600 | 398 |
| 16 | 1,030 | 2,680 | 2,490 | 753 | 831 | 759 | 874 | 666 | 2,440 | 1,130 | 615 | 328 |
| 17 | 997 | 2,080 | 2,000 | 735 | 777 | 747 | 874 | 709 | 2,190 | 1,430 | 600 | 271 |
| 18 | 857 | 1,620 | 2,440 | 702 | 730 | 755 | 723 | 674 | 1,900 | 1,130 | 600 | 255 |
| 19 | 925 | 1,370 | 8,250 | 659 | 686 | 691 | 769 | 783 | 1,740 | 1,020 | 652 | 305 |
| 20 | 792 | 1,150 | 6,420 | 642 | 674 | 652 | 825 | 985 | 1,530 | 985 | 625 | 376 |
| 21 | 732 | 997 | 4,120 | 620 | 652 | 636 | 1,020 | 1,170 | 1,340 | 952 | 605 | 381 |
| 22 | 674 | 890 | 3,110 | 605 | 615 | 674 | 952 | 1,530 | 1,250 | 920 | 630 | 405 |
| 23 | 646 | 824 | 3,040 | 600 | 590 | 647 | 831 | 1,300 | 1,250 | 862 | 618 | 416 |
| 24 | 635 | 761 | 2,370 | 658 | 575 | 615 | 807 | 1,170 | 1,210 | 819 | 545 | 416 |
| 25 | 604 | 857 | 2,010 | 1,060 | 545 | 595 | 831 | 1,340 | 1,130 | 795 | 454 | 412 |
| 26 | 568 | 761 | 1,630 | 1,130 | 525 | 570 | 855 | 1,340 | 1,130 | 795 | 412 | 394 |
| 27 | 558 | 702 | 1,430 | 1,210 | 520 | 555 | 765 | 1,300 | 1,090 | 759 | 345 | 403 |
| 28 | 538 | 761 | 1,250 | 1,170 | 505 | 540 | 730 | 1,210 | 1,090 | 724 | 359 | 367 |
| 29 | 495 | 960 | 1,130 | 1,060 | - | 535 | 724 | 1,130 | 1,130 | 696 | 341 | 328 |
| 30 | 472 | 997 | 1,020 | 952 | - | 555 | 730 | 1,060 | 1,500 | 663 | 324 | 341 |
| 31 | 458 | - | 920 | 900 | - | 625 | - | 1,060 | - | 652 | 333 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off Inches | Run-off Acres-feet |
|-------------------------|------------------|---------|---------|-------|-----------------|-------------------|-----------------------|
| October..... | 29,827 | 1,940 | 458 | 962 | 3.82 | 4.40 | 59,160 |
| November..... | 33,616 | 3,170 | 426 | 1,121 | 4.45 | 4.96 | 66,680 |
| December..... | 71,867 | 8,250 | 890 | 2,318 | 9.20 | 10.61 | 142,500 |
| Calendar year 1941..... | 322,821 | 8,250 | 275 | 884 | 3.51 | 47.64 | 640,300 |
| January..... | 24,813 | 1,210 | 600 | 800 | 3.17 | 3.66 | 49,220 |
| February..... | 28,090 | 2,130 | 505 | 1,003 | 3.98 | 4.15 | 58,720 |
| March..... | 22,598 | 1,680 | 505 | 729 | 2.89 | 3.33 | 44,820 |
| April..... | 25,368 | 1,060 | 724 | 845 | 3.35 | 3.74 | 50,300 |
| May..... | 29,706 | 1,530 | 669 | 958 | 3.80 | 4.38 | 58,920 |
| June..... | 42,671 | 2,700 | 914 | 1,422 | 5.64 | 6.30 | 84,640 |
| July..... | 28,553 | 1,430 | 642 | 921 | 3.65 | 4.22 | 56,550 |
| August..... | 17,964 | 765 | 324 | 576 | 2.29 | 2.63 | 38,410 |
| September..... | 11,620 | 510 | 255 | 397 | 1.54 | 1.71 | 23,050 |
| Water year 1941-42..... | 366,553 | 8,250 | 255 | 1,004 | 3.98 | 54.09 | 727,100 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Nisqually River near McKenna, Wash.

Location.- Water-stage recorder, lat. 46°51'15", long. 122°27'10", in SE $\frac{1}{4}$ sec. 20, T. 16 N., R. 3 E., 800 feet downstream from Elbow Creek, three-quarters of a mile upstream from Ranwax Creek, and 7.4 miles southeast of McKenna. Datum of gage is 373.6 feet above mean sea level (from stadia traverse).

Drainage area.- 445 square miles.

Records available.- August 1941 to September 1942.

Extremes.- Maximum discharge during period, 16,000 second-feet Dec. 19 (gage height, 10.60 feet); minimum, 196 second-feet Sept. 15, 1942 (gage height, 3.15 feet).

Remarks.- Records good prior to November and excellent thereafter except those for periods of no gage-height record, which are fair. Water diverted above station by Yelm Irrigation District. Major portion of flow regulated by city of Tacoma power plant at La Grande.

Discharge, in second-feet, 1941-42

| 1941 | | | | | | | | | | | |
|------|------|--------|-----|------|-------|-----|------|--------|-----|------|-------|
| Day | Aug. | Sept. | Day | Aug. | Sept. | Day | Aug. | Sept. | Day | Aug. | Sept. |
| 1 | a440 | a400 | 9 | a540 | 528 | 17 | a550 | 1,160 | 25 | a420 | 670 |
| 2 | a420 | 528 | 10 | a570 | 885 | 18 | a510 | 1,070 | 26 | 570 | 644 |
| 3 | a450 | 657 | 11 | a540 | 791 | 19 | a500 | a960 | 27 | 271 | a570 |
| 4 | a400 | 2,020 | 12 | a500 | 657 | 20 | a490 | a1,070 | 28 | a471 | a480 |
| 5 | a380 | 1,590 | 13 | a490 | a620 | 21 | 460 | a580 | 29 | 346 | 471 |
| 6 | a400 | a1,040 | 14 | a510 | a920 | 22 | 454 | a760 | 30 | a290 | 471 |
| 7 | a480 | a680 | 15 | a550 | 1,390 | 23 | a520 | 709 | 31 | a340 | - |
| 8 | a540 | a550 | 16 | a510 | 1,160 | 24 | a440 | 703 | | | |

1941-42

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 699 | 558 | 1,290 | 1,240 | 2,020 | 750 | 1,110 | 1,440 | 1,490 | 1,660 | 716 | 361 |
| 2 | 736 | 517 | 3,580 | 1,240 | 1,900 | 892 | 1,290 | 1,390 | 1,440 | 1,600 | 670 | 406 |
| 3 | 1,060 | 768 | 5,050 | 1,160 | 1,830 | 1,070 | 1,200 | 1,290 | 1,340 | 1,490 | 729 | 444 |
| 4 | 2,360 | 1,240 | 4,140 | 1,070 | 3,170 | 878 | 1,110 | 1,240 | 1,240 | 1,440 | 777 | 482 |
| 5 | 1,710 | 1,600 | 3,830 | 961 | 3,540 | 878 | 1,110 | 1,160 | 1,240 | 1,240 | 791 | 511 |
| 6 | 1,540 | 1,390 | 4,140 | 953 | 2,780 | 908 | 1,110 | 1,110 | 2,090 | 1,110 | 722 | 396 |
| 7 | 1,490 | 1,110 | 3,850 | 2,220 | 2,220 | 798 | 1,070 | 1,160 | 1,830 | 1,070 | 784 | 396 |
| 8 | 1,540 | 969 | 3,170 | 988 | 2,090 | 812 | 1,070 | 1,240 | a770 | 961 | 716 | 380 |
| 9 | 1,600 | 885 | 2,590 | 1,290 | 2,290 | 1,440 | 1,020 | 1,290 | 2,220 | 992 | 709 | 361 |
| 10 | 2,160 | 827 | 2,090 | 1,490 | 2,360 | 2,670 | 1,020 | 1,290 | 2,750 | 870 | 736 | 287 |
| 11 | 2,290 | 845 | 1,770 | 1,390 | 2,290 | 2,090 | 1,110 | 1,160 | 2,830 | 873 | 736 | 314 |
| 12 | 2,590 | 900 | 1,540 | 1,340 | 2,020 | 1,770 | 1,200 | 1,020 | 2,290 | 892 | 619 | 370 |
| 13 | 2,160 | 1,920 | 1,440 | 1,340 | 1,770 | 1,540 | 1,160 | 915 | 1,960 | 745 | 664 | 422 |
| 14 | 1,900 | 5,890 | 1,390 | 1,240 | 1,600 | 1,590 | 1,390 | 878 | 2,020 | 777 | 592 | 361 |
| 15 | 1,600 | 5,640 | 1,610 | 1,200 | 1,490 | 1,240 | 1,340 | 841 | 4,040 | 1,070 | 600 | 380 |
| 16 | 1,390 | 4,800 | 4,240 | 1,200 | 1,340 | 1,160 | 1,200 | 841 | 3,930 | 1,770 | 594 | 327 |
| 17 | 1,340 | 3,540 | 3,640 | 1,200 | 1,240 | 1,110 | 1,160 | 863 | 3,550 | 2,220 | 600 | 264 |
| 18 | 1,160 | 2,830 | 3,700 | 1,110 | 1,110 | 1,110 | 1,070 | 848 | 2,830 | 1,710 | 576 | 241 |
| 19 | 1,290 | 2,090 | 12,100 | 1,020 | 1,020 | 1,070 | 985 | 878 | 2,590 | 1,440 | 658 | 260 |
| 20 | 1,110 | 1,770 | 10,800 | 985 | 1,000 | 961 | 985 | 1,160 | 2,290 | 1,290 | 658 | 341 |
| 21 | 1,010 | 1,540 | 6,820 | 950 | 985 | 938 | 1,160 | 1,340 | 1,960 | 1,200 | 588 | 356 |
| 22 | 945 | 1,340 | 4,300 | 908 | 908 | 1,070 | 1,290 | 1,960 | 1,770 | 1,200 | 644 | 365 |
| 23 | 885 | 1,240 | 5,030 | 878 | 870 | 1,020 | 1,070 | 1,830 | 1,770 | 1,070 | 619 | 396 |
| 24 | 834 | 1,160 | 3,730 | 1,000 | 841 | 985 | 1,010 | 1,600 | 1,660 | 1,010 | 570 | 385 |
| 25 | 798 | 1,240 | 3,080 | 1,770 | 806 | 930 | 1,070 | 1,830 | 1,710 | 945 | 406 | 385 |
| 26 | 729 | 1,200 | 2,510 | 1,900 | 777 | 892 | 1,290 | 2,220 | 1,710 | 938 | 444 | 351 |
| 27 | 716 | 1,070 | 2,220 | 2,090 | 777 | 870 | 1,160 | 2,160 | 1,600 | 870 | 356 | 391 |
| 28 | 709 | 1,070 | 1,960 | 1,900 | 757 | 827 | 1,070 | 2,020 | 1,540 | 827 | 361 | 380 |
| 29 | 665 | 1,440 | 1,770 | 1,770 | - | 827 | 1,070 | 1,960 | 1,840 | 764 | 556 | 346 |
| 30 | 594 | 1,440 | 1,600 | 1,540 | - | 841 | 1,020 | 1,710 | 1,600 | 736 | 323 | 346 |
| 31 | 546 | - | 1,440 | 1,440 | - | 885 | - | 1,600 | - | 722 | 309 | - |

a No gage-height record; discharge computed on basis of records for tributaries above station.

Monthly discharge, in second-feet, 1941-42

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| August 1941..... | 14,292 | 570 | 271 | 461 | 1.04 | 1.19 | 26,360 |
| September..... | 24,834 | 2,020 | 400 | 828 | 1.86 | 2.06 | 49,260 |
| October 1941..... | 40,144 | 2,690 | 546 | 1,295 | 2.91 | 3.55 | 79,620 |
| November..... | 52,832 | 5,890 | 517 | 1,761 | 3.96 | 4.42 | 104,800 |
| December..... | 110,880 | 12,100 | 1,290 | 3,577 | 8.04 | 9.27 | 219,900 |
| Calendar year | - | - | - | - | - | - | - |
| January 1942..... | 39,470 | 2,090 | 878 | 1,273 | 2.86 | 5.50 | 78,290 |
| February..... | 45,770 | 3,540 | 757 | 1,635 | 3.87 | 3.83 | 90,780 |
| March..... | 34,622 | 2,670 | 750 | 1,117 | 2.51 | 2.69 | 68,670 |
| April..... | 35,830 | 1,390 | 985 | 1,128 | 2.53 | 2.83 | 67,100 |
| May..... | 42,244 | 2,220 | 841 | 1,563 | 3.06 | 3.53 | 85,790 |
| June..... | 62,400 | 4,040 | 1,240 | 2,080 | 4.67 | 5.21 | 123,800 |
| July..... | 35,405 | 2,220 | 722 | 1,142 | 2.57 | 2.96 | 70,290 |
| August..... | 18,463 | 791 | 309 | 595 | 1.34 | 1.54 | 36,600 |
| September..... | 11,005 | 511 | 241 | 367 | .825 | .92 | 21,930 |
| Water year 1941-42..... | 527,055 | 12,100 | 241 | 1,444 | 3.24 | 44.05 | 1,045,000 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Mineral Creek near Mineral, Wash.

Location.- Water-stage recorder, lat. 46°44'20", long. 122°08'20", in SW¼ sec. 35, T. 15 N., R. 5 E., three-eighths of a mile downstream from railroad bridge, 1 mile upstream from mouth, and 2½ miles northeast of Mineral.

Drainage area.- 75 square miles.

Records available.- June to September 1942.

Extremes.- Maximum discharge during period, 674 second-feet June 16 (gage height, 3.84 feet); minimum, 30 second-feet Sept. 25-28 (gage height, 2.08 feet).

Remarks.- Records excellent except those for periods of no gage-height record, which are fair. No diversion or regulation.

Rating table, June to September 1942 (gage height, in feet,
and discharge, in second-feet)

| | | | |
|-----|-----|-----|-----|
| 2.2 | 46 | 3.0 | 259 |
| 2.4 | 82 | 3.3 | 390 |
| 2.7 | 157 | 3.6 | 540 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | | | | | | | | | a260 | 179 | 80 | 43 |
| 2 | | | | | | | | | a230 | 169 | 80 | 41 |
| 3 | | | | | | | | | a200 | 151 | 74 | 41 |
| 4 | | | | | | | | | a160 | 140 | 64 | 39 |
| 5 | | | | | | | | | a120 | 140 | 80 | a39 |
| 6 | | | | | | | | | h286 | 126 | 76 | 38 |
| 7 | | | | | | | | | a210 | 119 | 70 | 39 |
| 8 | | | | | | | | | h188 | 112 | 64 | 38 |
| 9 | | | | | | | | | h296 | 104 | 62 | 38 |
| 10 | | | | | | | | | h573 | 104 | 61 | 38 |
| 11 | | | | | | | | | h551 | 112 | 61 | 38 |
| 12 | | | | | | | | | h450 | 124 | 58 | 38 |
| 13 | | | | | | | | | h361 | 124 | 56 | 38 |
| 14 | | | | | | | | | a280 | 100 | 54 | 37 |
| 15 | | | | | | | | | a600 | 132 | 51 | 43 |
| 16 | | | | | | | | | h662 | 195 | 46 | 38 |
| 17 | | | | | | | | | h639 | 318 | 46 | 37 |
| 18 | | | | | | | | | h656 | 255 | 48 | 35 |
| 19 | | | | | | | | | h475 | 208 | 46 | 34 |
| 20 | | | | | | | | | h435 | 179 | 46 | 32 |
| 21 | | | | | | | | | a370 | 154 | 46 | 31 |
| 22 | | | | | | | | | a320 | 143 | 46 | 31 |
| 23 | | | | | | | | | h284 | 129 | 43 | 31 |
| 24 | | | | | | | | | h275 | 122 | 43 | 31 |
| 25 | | | | | | | | | h275 | 112 | 43 | 30 |
| 26 | | | | | | | | | h284 | 104 | 51 | 30 |
| 27 | | | | | | | | | h275 | 100 | 49 | 30 |
| 28 | | | | | | | | | a240 | 95 | 49 | 30 |
| 29 | | | | | | | | | h210 | 91 | 48 | 31 |
| 30 | | | | | | | | | 188 | 86 | 46 | 31 |
| 31 | | | | | | | | | - | 80 | 43 | - |

| Month | Second-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|---------------------|-------------|---------|---------|------|-----------------|---------|-----------|
| | | | | | | Inches | Acre-feet |
| October..... | | | | | | | |
| November..... | | | | | | | |
| December..... | | | | | | | |
| Calendar year | | | | | | | |
| January..... | - | - | - | - | - | - | - |
| February..... | - | - | - | - | - | - | - |
| March..... | - | - | - | - | - | - | - |
| April..... | - | - | - | - | - | - | - |
| May..... | - | - | - | - | - | - | - |
| June..... | 10,276 | 662 | 120 | 342 | 4.56 | 5.10 | 20,380 |
| July..... | 4,507 | 318 | 80 | 139 | 1.85 | 2.14 | 8,540 |
| August..... | 1,755 | 64 | 43 | 56.6 | .755 | .87 | 3,480 |
| September..... | 1,070 | 43 | 30 | 35.7 | .476 | .53 | 2,120 |
| The period..... | - | - | - | - | - | - | 34,520 |

a No gage-height record; discharge computed on basis of records for Nisqually River near Alder and near National.

h Computed from staff-gage readings.

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

Little Nisqually River near Alder, Wash.

Location.- Water-stage recorder, lat. 46°47'20", long. 122°18'45", in NW¼ sec. 16, T. 15 N., R. 4 E., 1,500 feet upstream from mouth, 3,000 feet upstream from diversion dam of Tacoma municipal power plant on Nisqually River, and 1½ miles southwest of Alder.

Drainage area.- 27.2 square miles.

Records available.- August 1920 to September 1942.

Average discharge.- 22 years, 118 second-feet.

Extremes.- Maximum discharge during year, 1,880 second-feet Dec. 19 (gage height, 5.35 feet); minimum, 7.2 second-feet Sept. 26-30 (gage height, 0.76 foot).

1920-42: Maximum discharge, 2,430 second-feet Dec. 20, 21, 1933 (gage height, 6.8 feet), from rating curve extended above 1,500 second-feet; minimum, 0.9 second-foot July 17, 1926.

Remarks.- Records excellent except those for periods of fragmentary or no gage-height record or backwater from logs, which are good. No diversion or regulation.

Cooperation.- Gage-height record collected in cooperation with city of Tacoma.

Rating table, water year 1941-42 (gage height, in feet,
and discharge, in second-feet)
(Shifting-control method used July 28 to Sept. 30)

| | | | | | |
|-----|-----|-----|-----|-----|-------|
| 0.6 | 7.6 | 1.2 | 62 | 3.0 | 516 |
| .7 | 12 | 1.4 | 94 | 3.5 | 730 |
| .8 | 18 | 1.7 | 150 | 4.0 | 990 |
| .9 | 26 | 2.0 | 216 | 4.5 | 1,290 |
| 1.0 | 36 | 2.5 | 349 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|------|-----|------|------|------|-------|
| 1 | 34 | 24 | 104 | 77 | 226 | 46 | 108 | 84 | 57 | 50 | 22 | 14 |
| 2 | 35 | 22 | 512 | 71 | a207 | 77 | 113 | 85 | 50 | 46 | 21 | 14 |
| 3 | 43 | 74 | 479 | 66 | a216 | 77 | 97 | 50 | 46 | 42 | 20 | 13 |
| 4 | 65 | 84 | 376 | 61 | a498 | 70 | 87 | 74 | 41 | 39 | 19 | 13 |
| 5 | 57 | 111 | 349 | 55 | a498 | 76 | 80 | 64 | 38 | 36 | 18 | 13 |
| 6 | 51 | 99 | 444 | 54 | a326 | 71 | 76 | 58 | 57 | 35 | 18 | 13 |
| 7 | 64 | 77 | 349 | 54 | a250 | 66 | 70 | 53 | 46 | 35 | 18 | 13 |
| 8 | 82 | 64 | 246 | 58 | a230 | 66 | 64 | 51 | 56 | 31 | 18 | 13 |
| 9 | 94 | 54 | 193 | 70 | a233 | 238 | 59 | 48 | 118 | 29 | 18 | 12 |
| 10 | 242 | 48 | 154 | 79 | a233 | 270 | 56 | 46 | 216 | 29 | 17 | 11 |
| 11 | 218 | 50 | 130 | 85 | a207 | 193 | 62 | 42 | 202 | 31 | 18 | 10 |
| 12 | 228 | 45 | 111 | 87 | 160 | 146 | 59 | 39 | 152 | 31 | 18 | 10 |
| 13 | 167 | 381 | 100 | 85 | 144 | 122 | 55 | 36 | 115 | 27 | 18 | 10 |
| 14 | 126 | 805 | 95 | 79 | 124 | 104 | 62 | 34 | 99 | 28 | 18 | 9.4 |
| 15 | 99 | 595 | 224 | 74 | 109 | 92 | 57 | 33 | 182 | 26 | 18 | 9.9 |
| 16 | 82 | 401 | 646 | 70 | 95 | 82 | 53 | 31 | 221 | 68 | 17 | 9.9 |
| 17 | 70 | 262 | 401 | 65 | 87 | 80 | 50 | 30 | 207 | 109 | 16 | 10 |
| 18 | 61 | 191 | 598 | 62 | 79 | 76 | 46 | 30 | 169 | 90 | 16 | 9.9 |
| 19 | 57 | 146 | 1,560 | 58 | 72 | 68 | 42 | 31 | 132 | 72 | 16 | 9.9 |
| 20 | 50 | 119 | 824 | 54 | 68 | 64 | 40 | 33 | 111 | 59 | 15 | 9.9 |
| 21 | 46 | 100 | 462 | 53 | 62 | 64 | 41 | 34 | 94 | 50 | 15 | 9.9 |
| 22 | 42 | 85 | 367 | 50 | 57 | 71 | 42 | 51 | 82 | 43 | 15 | 9.0 |
| 23 | 39 | 74 | 411 | 51 | 54 | 65 | 38 | 46 | 76 | 38 | 14 | 9.0 |
| 24 | 36 | 68 | 309 | 77 | 53 | 61 | 46 | 42 | 70 | 36 | 14 | 9.0 |
| 25 | 32 | 72 | 233 | 227 | 48 | 59 | 48 | 51 | 79 | 34 | 15 | 8.5 |
| 26 | 30 | 65 | 182 | 235 | 46 | 55 | 53 | 61 | 79 | 32 | 21 | 8.5 |
| 27 | 28 | 61 | 150 | 228 | 46 | 54 | 48 | 82 | 74 | 29 | 16 | 7.2 |
| 28 | 30 | 86 | 128 | 198 | 46 | 55 | 46 | 85 | 66 | 27 | 17 | 7.2 |
| 29 | 27 | 124 | 111 | 163 | - | 57 | 46 | 80 | 62 | 26 | 15 | 7.2 |
| 30 | 26 | 115 | 99 | 136 | - | 61 | 59 | 72 | 55 | 24 | 15 | 8.5 |
| 31 | 25 | - | 87 | 128 | - | 70 | - | 64 | - | 24 | 15 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 2,286 | 242 | 25 | 73.7 | 2.71 | 3.13 | 4,530 |
| November..... | 4,500 | 806 | 22 | 150 | 5.51 | 6.15 | 8,380 |
| December..... | 10,436 | 1,560 | 87 | 337 | 12.4 | 14.27 | 20,700 |
| Calendar year 1941..... | 35,422.4 | 1,560 | 8.0 | 97.0 | 3.57 | 48.44 | 70,269 |
| January..... | 2,910 | 235 | 50 | 93.9 | 3.45 | 3.98 | 5,770 |
| February..... | 4,474 | 498 | 46 | 160 | 5.88 | 6.12 | 8,870 |
| March..... | 2,756 | 270 | 46 | 88.9 | 3.27 | 3.77 | 5,470 |
| April..... | 1,905 | 113 | 38 | 60.2 | 2.21 | 2.47 | 3,580 |
| May..... | 1,650 | 85 | 30 | 53.2 | 1.96 | 2.26 | 3,270 |
| June..... | 3,051 | 221 | 38 | 102 | 3.75 | 4.17 | 6,050 |
| July..... | 1,274 | 109 | 24 | 41.1 | 1.51 | 1.74 | 2,530 |
| August..... | 531 | 22 | 14 | 17.1 | .629 | .73 | 1,050 |
| September..... | 311.9 | 14 | 7.2 | 10.4 | .382 | .43 | 619 |
| Water year 1941-42..... | 35,984.9 | 1,560 | 7.2 | 98.6 | 3.62 | 49.22 | 71,369 |

a Fragmentary or no gage-height record; discharge computed on basis of fragmentary gage heights, recorded range in stage, and records for Nisqually River near Alder.

Note.- Backwater from logs July 28 to Sept. 30.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Mashel River near La Grande, Wash.

Location.- Water-stage recorder, lat. 46°51'27", long. 122°18'12", in NE¼ sec. 21, T. 16 N., R. 4 E., 2 miles upstream from mouth and 2 miles northeast of La Grande. Datum of gage is 619.35 feet above mean sea level, datum of 1929.

Drainage area.- 79 square miles.

Records available.- October 1940 to September 1942.

Extremes.- Maximum discharge during year, 4,040 second-feet Dec. 19 (gage height, 7.16 feet); minimum, 10 second-feet Sept. 24 (gage height, 2.63 feet).
1940-42: Maximum discharge, that of Dec. 19, 1941; minimum, that of Sept. 25, 1942.

Remarks.- Records excellent. Small diversion for city of Eatonville water supply. Slight regulation by mill pond in Eatonville.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 19 | | | | | Dec. 20 to Sept. 30 | | | | |
|-------------------|-----|-----|-------|-----|---------------------|-----|----|-----|-----|
| 3.3 | 69 | 4.3 | 350 | 6.0 | 1,530 | 2.7 | 13 | 3.5 | 109 |
| 3.5 | 103 | 4.6 | 485 | 6.4 | 2,080 | 2.9 | 25 | 3.7 | 153 |
| 3.7 | 145 | 5.0 | 700 | 6.8 | 2,980 | 3.1 | 45 | 4.0 | 237 |
| 4.0 | 235 | 5.5 | 1,060 | | | 3.3 | 73 | 4.3 | 348 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|------|-----|------|------|------|-------|
| 1 | 69 | 66 | 121 | 120 | 378 | 100 | 200 | 332 | 209 | 107 | 42 | 17 |
| 2 | 99 | 62 | 446 | 132 | 312 | 161 | 198 | 297 | 173 | 90 | 40 | 16 |
| 3 | 280 | 146 | 624 | 117 | 304 | 176 | 168 | 254 | 151 | 80 | 37 | 16 |
| 4 | 580 | 162 | 565 | 100 | 570 | 139 | 151 | 231 | 128 | 75 | 34 | 16 |
| 5 | 372 | 235 | 560 | 85 | 475 | 137 | 135 | 192 | 111 | 67 | 33 | 16 |
| 6 | 263 | 179 | 706 | 101 | 382 | 130 | 124 | 173 | 253 | 62 | 31 | 16 |
| 7 | 290 | 143 | 575 | 107 | 324 | 115 | 113 | 173 | 247 | 58 | 30 | 15 |
| 8 | 310 | 123 | 436 | 153 | 324 | 109 | 105 | 163 | 293 | 52 | 29 | 14 |
| 9 | 278 | 107 | 346 | 257 | 409 | 234 | 96 | 153 | 357 | 50 | 29 | 14 |
| 10 | 342 | 94 | 282 | 282 | 510 | 357 | 92 | 166 | 442 | 50 | 28 | 14 |
| 11 | 338 | 122 | 242 | 240 | 447 | 282 | 92 | 137 | 475 | 62 | 28 | 14 |
| 12 | 350 | 123 | 207 | 225 | 352 | 244 | 96 | 124 | 344 | 82 | 25 | 13 |
| 13 | 278 | 485 | 179 | 218 | 292 | 209 | 94 | 107 | 261 | 58 | 23 | 13 |
| 14 | 214 | 962 | 165 | 192 | 244 | 192 | 216 | 100 | 234 | 57 | 22 | 13 |
| 15 | 168 | 932 | 277 | 176 | 212 | 170 | 176 | 94 | 682 | 90 | 20 | 13 |
| 16 | 145 | 694 | 866 | 181 | 184 | 151 | 139 | 87 | 835 | 238 | 19 | 13 |
| 17 | 148 | 467 | 585 | 176 | 163 | 153 | 124 | 90 | 520 | 396 | 18 | 13 |
| 18 | 127 | 346 | 575 | 156 | 146 | 156 | 109 | 90 | 405 | 275 | 18 | 13 |
| 19 | 194 | 286 | 2,720 | 142 | 130 | 144 | 96 | 92 | 365 | 192 | 17 | 12 |
| 20 | 155 | 224 | 2,120 | 128 | 128 | 128 | 87 | 103 | 316 | 156 | 18 | 12 |
| 21 | 138 | 185 | 1,060 | 115 | 124 | 128 | 83 | 103 | 261 | 120 | 16 | 11 |
| 22 | 123 | 158 | 750 | 105 | 111 | 170 | 85 | 196 | 215 | 100 | 16 | 11 |
| 23 | 107 | 143 | 985 | 103 | 103 | 168 | 78 | 206 | 189 | 85 | 17 | 11 |
| 24 | 96 | 130 | 585 | 130 | 98 | 160 | 80 | 170 | 184 | 73 | 16 | 10 |
| 25 | 85 | 138 | 419 | 313 | 98 | 148 | 113 | 290 | 222 | 67 | 17 | 11 |
| 26 | 80 | 121 | 332 | 293 | 94 | 139 | 212 | 471 | 264 | 60 | 36 | 11 |
| 27 | 79 | 111 | 286 | 286 | 96 | 132 | 178 | 447 | 215 | 55 | 30 | 12 |
| 28 | 94 | 115 | 244 | 264 | 94 | 126 | 170 | 405 | 169 | 50 | 26 | 12 |
| 29 | 85 | 134 | 212 | 240 | - | 128 | 170 | 582 | 160 | 46 | 25 | 12 |
| 30 | 74 | 132 | 189 | 203 | - | 130 | 181 | 290 | 132 | 44 | 22 | 13 |
| 31 | 68 | - | 153 | 189 | - | 132 | - | 257 | - | 43 | 19 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 6,029 | 580 | 68 | 194 | 2.46 | 2.64 | 11,980 |
| November..... | 7,325 | 962 | 62 | 244 | 3.09 | 3.45 | 14,530 |
| December..... | 17,812 | 2,720 | 121 | 575 | 7.28 | 8.39 | 35,330 |
| Calendar year 1941..... | 61,393 | 2,720 | 13 | 168 | 2.13 | 28.91 | 121,800 |
| January..... | 5,529 | 313 | 85 | 178 | 2.25 | 2.60 | 10,970 |
| February..... | 7,094 | 570 | 94 | 253 | 3.20 | 3.34 | 14,070 |
| March..... | 5,048 | 357 | 100 | 163 | 2.06 | 2.38 | 10,010 |
| April..... | 3,963 | 216 | 78 | 132 | 1.67 | 1.87 | 7,860 |
| May..... | 6,375 | 471 | 87 | 206 | 2.61 | 3.00 | 12,640 |
| June..... | 8,832 | 835 | 111 | 294 | 3.72 | 4.16 | 17,520 |
| July..... | 3,040 | 396 | 43 | 98.1 | 1.24 | 1.43 | 6,030 |
| August..... | 785 | 42 | 16 | 25.3 | .320 | .37 | 1,560 |
| September..... | 397 | 17 | 10 | 13.2 | .167 | .19 | 787 |
| Water year 1941-42..... | 72,229 | 2,720 | 10 | 198 | 2.51 | 34.02 | 143,300 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Ohop Creek near Eatonville, Wash.

Location.- Water-stage recorder, lat. 46°52'50", long. 122°16'38", in SE $\frac{1}{4}$ sec. 10, T. 16 N., R. 4 E., 400 feet downstream from Lynch Creek, 600 feet downstream from outlet of Ohop Lake, and 1 mile northwest of Eatonville. Datum of gage is 519.8 feet above mean sea level (from stadia traverse). Prior to Mar. 18, 1942, staff gage at same site and datum. Gage used 1927-32 at same site at datum 1.8 feet higher.

Drainage area.- 35.0 square miles.

Records available.- June 1927 to October 1932. September 1941 to September 1942.

Extremes.- Maximum discharge observed during period Sept. 1, 1941 to Sept. 30, 1942, 840 second-feet Dec. 20 (gage height, 4.80 feet); minimum, 4.7 second-feet Sept. 30, 1942 (gage height, 1.99 feet).

1927-32, 1941-42: Maximum discharge observed, that of Dec. 20, 1941; minimum, 4 second-feet Aug. 28, 1930.

Remarks.- Records good except those above 200 second-feet and those for periods of no gage-height record, which are fair, and those below 20 second-feet, which are poor. Staff gage read twice daily prior to Mar. 18, 1942. No diversion or regulation.

Discharge, in second-feet, 1941-42

1941

| Day | Discharge | Day | Discharge | Day | Discharge |
|---------|-----------|----------|-----------|----------|-----------|
| Sept. 1 | a15 | Sept. 11 | 27 | Sept. 21 | 48 |
| 2 | a20 | 12 | 26 | 22 | 41 |
| 3 | a30 | 13 | 25 | 23 | 36 |
| 4 | a40 | 14 | 44 | 24 | 31 |
| 5 | a55 | 15 | 72 | 25 | 27 |
| 6 | 40 | 16 | 53 | 26 | 26 |
| 7 | 30 | 17 | 76 | 27 | 21 |
| 8 | 25 | 18 | 64 | 28 | 20 |
| 9 | 22 | 19 | 56 | 29 | 20 |
| 10 | 27 | 20 | 65 | 30 | 20 |

a No gage-height record; discharge computed on basis of records for Mashel River near La Grande.

1941-42

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 28 | 26 | 37 | 67 | 78 | 49 | 46 | 119 | 76 | 52 | 22 | 9 |
| 2 | 53 | 26 | 39 | 63 | 73 | 57 | 45 | 96 | 66 | 47 | 22 | 8 |
| 3 | 36 | 45 | 64 | 58 | 74 | 59 | 43 | 84 | 58 | 43 | 20 | 10 |
| 4 | 83 | 48 | 76 | 53 | 96 | 54 | 42 | 74 | 52 | 39 | 19 | 10 |
| 5 | a65 | 52 | 86 | 50 | 102 | 54 | 38 | 66 | 46 | 37 | 19 | 10 |
| 6 | a55 | 51 | 126 | 49 | 89 | 50 | 36 | 58 | 82 | 34 | 19 | 10 |
| 7 | a70 | 46 | 94 | 47 | 73 | 48 | 34 | a55 | 93 | 32 | 15 | 10 |
| 8 | a80 | 40 | 86 | 66 | 78 | 49 | 33 | a50 | 108 | 31 | 17 | 10 |
| 9 | a95 | 37 | 71 | 102 | 100 | 76 | 32 | a50 | 123 | 29 | 16 | 10 |
| 10 | a110 | 34 | 64 | 121 | 140 | 96 | 30 | a50 | 145 | 28 | 15 | 10 |
| 11 | a80 | 41 | 58 | 115 | 128 | 86 | 28 | a40 | 174 | 30 | 15 | 10 |
| 12 | 63 | 42 | 54 | 106 | 104 | 79 | 28 | a40 | 126 | 34 | 14 | 10 |
| 13 | 54 | 60 | 51 | 84 | 84 | 68 | 26 | a35 | 100 | 31 | 14 | 9 |
| 14 | 49 | 214 | 51 | 73 | 76 | 66 | 60 | a30 | 99 | 50 | 14 | 7 |
| 15 | 46 | 268 | 58 | 66 | 70 | 62 | 52 | a25 | 241 | 40 | 15 | 7 |
| 16 | 40 | 246 | a110 | 66 | 63 | 53 | 44 | a20 | 316 | 93 | 12 | 7 |
| 17 | 39 | 162 | a140 | 64 | 59 | 52 | 40 | a20 | 254 | 177 | 12 | 7 |
| 18 | 37 | 122 | 156 | 60 | 52 | 47 | 37 | a25 | 197 | 115 | 11 | 7 |
| 19 | 64 | 92 | 694 | 59 | 50 | 44 | 35 | 28 | 155 | 87 | 11 | 7 |
| 20 | 53 | 72 | 783 | 55 | 48 | 42 | 31 | 30 | 126 | 70 | 10 | 7 |
| 21 | 40 | 64 | 577 | 48 | 48 | 40 | 33 | 30 | 102 | 57 | 10 | 7 |
| 22 | 38 | 56 | 361 | 44 | 46 | 47 | 36 | 58 | 85 | 49 | 10 | 6 |
| 23 | 37 | 50 | 361 | 46 | 44 | 50 | 33 | 68 | 74 | 44 | 10 | 6 |
| 24 | 30 | 41 | 291 | 48 | 42 | 52 | 32 | 57 | 70 | 39 | 9 | 6 |
| 25 | 30 | 41 | 225 | 59 | 43 | 50 | 36 | 57 | 79 | 35 | 10 | 6 |
| 26 | 30 | 41 | 174 | 63 | 40 | 48 | 78 | 140 | 95 | 31 | 15 | 6 |
| 27 | 30 | 37 | 140 | 70 | 45 | 47 | 67 | 161 | 79 | 28 | 11 | 6 |
| 28 | 31 | 36 | 115 | 73 | 49 | 46 | 64 | 143 | 72 | 28 | 10 | 6 |
| 29 | 30 | 37 | 98 | 70 | - | 45 | 60 | 123 | 64 | 28 | 10 | 6 |
| 30 | 28 | 37 | 84 | 66 | - | 43 | 59 | 106 | 57 | 24 | 10 | 5 |
| 31 | 26 | - | 70 | 62 | - | 42 | - | 59 | - | 23 | 10 | - |

a No gage-height record; discharge computed on basis of records for Mashel River near La Grande.

Monthly discharge, in second-feet, 1941-42

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| September 1941..... | 1,100 | 76 | 15 | 36.7 | 1.05 | 1.17 | 2,160 |
| October 1941..... | 1,530 | 110 | 26 | 49.4 | 1.41 | 1.63 | 3,030 |
| November..... | 2,174 | 268 | 28 | 72.5 | 2.07 | 2.31 | 4,310 |
| December..... | 5,394 | 783 | 37 | 174 | 4.97 | 5.73 | 10,700 |
| January 1942..... | 2,073 | 121 | 44 | 66.9 | 1.91 | 2.20 | 4,110 |
| February..... | 1,989 | 140 | 40 | 71.0 | 2.03 | 2.11 | 3,960 |
| March..... | 1,701 | 96 | 40 | 54.9 | 1.57 | 1.81 | 3,370 |
| April..... | 1,256 | 76 | 26 | 41.9 | 1.20 | 1.65 | 2,490 |
| May..... | 2,069 | 161 | 20 | 66.4 | 1.90 | 2.19 | 4,080 |
| June..... | 3,405 | 316 | 46 | 114 | 3.26 | 3.62 | 6,760 |
| July..... | 1,468 | 177 | 23 | 47.2 | 1.35 | 1.56 | 2,800 |
| August..... | 429 | 82 | 9 | 15.3 | .394 | .46 | 849 |
| September..... | 235 | 10 | 5 | 7.8 | .223 | .25 | 466 |
| Water year 1941-42..... | 23,707 | 783 | 5 | 65.0 | 1.66 | 25.18 | 47,000 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

PUYALLUP RIVER BASIN

Puyallup River near Orting, Wash.

Location.- Water-stage recorder, lat. $47^{\circ}02'30''$, long. $122^{\circ}12'20''$, in SW $\frac{1}{4}$ sec. 17, T. 18 N., R. 5 E., 4 miles south of Orting and $\frac{7}{8}$ miles upstream from Carbon River. Auxiliary recorder 400 feet downstream and on opposite bank used after May 1.

Drainage area.- 170 square miles.

Records available.- September 1931 to September 1942.

Average discharge.- 11 years, 693 second-feet.

Extremes.- 1941-42: Maximum discharge during water year, 6,700 second-foot Dec. 19 (gage height, 8.22 feet); minimum, 155 second-foot (regulated) Sept. 18; minimum daily, 214 second-foot (regulated) Sept. 18.

1931-42: Maximum discharge not determined (occurred Dec. 9 or 10, 1933, when water-stage recorder was not operating); minimum, 53 second-foot (regulated) Mar. 16, 1941; minimum daily, 123 second-foot (regulated) Dec. 4, 1936.

Remarks.- Records good, except those for periods of shifting control, which are fair.

Water diverted for Electron plant of Puget Sound Power & Light Co. and returned to river above gage. Slight regulation due to pondage in connection with operation of Electron power plant.

Revisions.- Revised figures of discharge, in second-feet, for days in water year 1934, superseding those published in Water-Supply Paper 767, are given herein:

Dec. 9..... 6,600
22..... 4,790

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|----------------------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| December..... | 12,000 | 420 | 3,015 | 17.7 | 20.45 | 185,400 |
| Water year 1933-34.. | 12,000 | 188 | 985 | 5.79 | 78.05 | 713,200 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 470 | 322 | 283 | 414 | 532 | 265 | 470 | 572 | 897 | 1,240 | 620 | 380 |
| 2 | 414 | 322 | 1,170 | 414 | 500 | 342 | 470 | 536 | 842 | 1,320 | 620 | 488 |
| 3 | 1,200 | 470 | 1,210 | 414 | 500 | 342 | 440 | 502 | 790 | 1,320 | 723 | 551 |
| 4 | 1,270 | 500 | 870 | 388 | 602 | 301 | 414 | 502 | 790 | 1,320 | 639 | 596 |
| 5 | 772 | 772 | 725 | 342 | 632 | 322 | 414 | 470 | 842 | 1,090 | 779 | 551 |
| 6 | 602 | 640 | 1,270 | 342 | 602 | 301 | 388 | 470 | 1,160 | 1,020 | 839 | 482 |
| 7 | 602 | 602 | 1,090 | 365 | 565 | 265 | 388 | 532 | 1,020 | 842 | 839 | 450 |
| 8 | 565 | 565 | 920 | 470 | 532 | 265 | 365 | 572 | 1,020 | 790 | 839 | 469 |
| 9 | 602 | 532 | 772 | 532 | 565 | 440 | 365 | 572 | 1,160 | 741 | 903 | 432 |
| 10 | 975 | 532 | 640 | 640 | 640 | 682 | 388 | 536 | 1,240 | 741 | 639 | 293 |
| 11 | 975 | 640 | 565 | 602 | 602 | 565 | 414 | 502 | 1,240 | 790 | 723 | 349 |
| 12 | 975 | 602 | 500 | 565 | 532 | 500 | 470 | 470 | 1,020 | 695 | 620 | 450 |
| 13 | 820 | 1,560 | 470 | 565 | 500 | 440 | 440 | 440 | 897 | 652 | 573 | 469 |
| 14 | 725 | 4,070 | 440 | 532 | 440 | 414 | 565 | 440 | 1,110 | 799 | 670 | 480 |
| 15 | 640 | 2,690 | 500 | 500 | 414 | 365 | 500 | 412 | 3,210 | 956 | 723 | 450 |
| 16 | 602 | 1,840 | 1,620 | 470 | 388 | 365 | 470 | 412 | 2,490 | 1,540 | 779 | 320 |
| 17 | 602 | 1,210 | 1,210 | 470 | 365 | 342 | 470 | 412 | 1,700 | 1,590 | 723 | 245 |
| 18 | 532 | 870 | 1,670 | 440 | 342 | 342 | 414 | 440 | 1,320 | 971 | 779 | 214 |
| 19 | 565 | 682 | 4,740 | 414 | 322 | 322 | 388 | 470 | 1,160 | 839 | 839 | 280 |
| 20 | 470 | 565 | 3,060 | 414 | 322 | 301 | 440 | 611 | 1,020 | 903 | 839 | 580 |
| 21 | 440 | 500 | 2,000 | 388 | 322 | 301 | 532 | 741 | 897 | 903 | 839 | 364 |
| 22 | 414 | 1,500 | 1,540 | 365 | 283 | 342 | 500 | 1,320 | 790 | 971 | 839 | 432 |
| 23 | 414 | 1,414 | 1,540 | 365 | 283 | 322 | 440 | 1,160 | 790 | 839 | 839 | 432 |
| 24 | 414 | 414 | 1,270 | 365 | 283 | 322 | 414 | 1,020 | 842 | 779 | 645 | 432 |
| 25 | 388 | 565 | 1,090 | 470 | 265 | 322 | 440 | 1,160 | 790 | 779 | 508 | 450 |
| 26 | 388 | 470 | 810 | 470 | 265 | 301 | 640 | 1,240 | 842 | 779 | 414 | 397 |
| 27 | 365 | 388 | 820 | 565 | 301 | 532 | 1,160 | 842 | 779 | 779 | 334 | 414 |
| 28 | 388 | 365 | 870 | 500 | 283 | 301 | 500 | 1,090 | 897 | 723 | 380 | 397 |
| 29 | 342 | 414 | 820 | 470 | - | 301 | 470 | 1,020 | 956 | 670 | 293 | 320 |
| 30 | 322 | 470 | 532 | 440 | - | 301 | 470 | 956 | 1,020 | 670 | 280 | 397 |
| 31 | 322 | - | 500 | 414 | - | 342 | - | 956 | - | 620 | 306 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | | Inches | Acre-feet |
| October..... | 18,575 | 1,270 | 322 | 599 | 3.52 | 4.06 | 36,840 |
| November..... | 24,486 | 4,070 | 322 | 816 | 4.80 | 5.36 | 48,570 |
| December..... | 35,267 | 4,740 | 283 | 1,138 | 6.69 | 7.72 | 69,950 |
| Calendar year 1941..... | 199,529 | 4,740 | 207 | 547 | 3.22 | 43.66 | 395,800 |
| January..... | 14,105 | 640 | 342 | 455 | 2.68 | 3.09 | 27,980 |
| February..... | 12,196 | 682 | 265 | 436 | 2.56 | 2.67 | 24,150 |
| March..... | 10,937 | 682 | 265 | 353 | 2.08 | 2.39 | 21,690 |
| April..... | 13,611 | 640 | 365 | 454 | 2.67 | 2.98 | 27,000 |
| May..... | 21,700 | 1,320 | 412 | 700 | 4.12 | 4.75 | 43,040 |
| June..... | 33,594 | 3,210 | 790 | 1,120 | 6.59 | 7.35 | 66,630 |
| July..... | 28,671 | 1,590 | 620 | 925 | 5.44 | 6.27 | 56,870 |
| August..... | 20,785 | 903 | 280 | 670 | 3.94 | 4.55 | 41,250 |
| September..... | 12,284 | 596 | 214 | 409 | 2.41 | 2.69 | 24,360 |
| Water year 1941-42..... | 246,211 | 4,740 | 214 | 675 | 3.97 | 53.88 | 488,400 |

Peak discharge.- Nov. 14 (12 a.m.) 4,510 sec.-ft.; Dec. 19 (7:20 a.m.) 6,700 sec.-ft.; June 15 (11:30 a.m.) 3,640 sec.-ft.

a No gage-height record; discharge computed on basis of records for White River near Buckley.

f Discharge computed on basis of partly estimated gage-height record.

note.- Shifting-control method used Oct. 1 to Dec. 28, May 22 to June 14.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Puyallup River at Puyallup, Wash.

Location.— Water-stage recorder, lat. 47°12'20", long. 122°19'30", in NE¼ sec. 20, T. 20 N., R. 4 E., 1 mile northwest of Puyallup and 7 miles upstream from mouth. Datum of gage is at mean sea level, datum of 1929.

Drainage area.— 948 square miles.

Records available.— May 1914 to September 1942.

Average discharge.— 28 years, 3,203 second-feet (adjusted for storage since October 1934).

Extremes.— Maximum discharge during year, 22,500 second-feet Dec. 19 (gage height, 20.48 feet); minimum, 882 second-feet (regulated) Sept. 18, 19.

1914-42: Maximum discharge, 57,000 second-feet Dec. 10, 1933 (gage height, 31.0 feet, present datum); minimum, probably less than 350 second-feet (regulated) Nov. 24, 26, Dec. 1, 3-5, 1929.

Remarks.— Records good except those for period of no gage-height record, which are poor.

All diverted water returned to river above gage. Large part of flow of White River diverted into Lake Tapps returned via Stuck River above this station. Records of daily discharge not adjusted for change in contents of Lake Tapps. Lake Tapps, lat. 47°14'20", long. 122°11'30", in sec. 8, T. 20 N., R. 5 E., completed in 1912, has usable capacity of 50,400 acre-feet between elevations 505 and 541 feet. Some pondage on upper Puyallup River and some tributaries.

Cooperation.— Records of storage regulation in Lake Tapps furnished by Puget Sound Power & Light Co.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 2,030 | 1,170 | 2,230 | 2,195 | 2,150 | 2,120 | 1,950 | 3,040 | 4,440 | 5,140 | 2,230 | 1,530 |
| 2 | 2,130 | 2,500 | 3,780 | 2,185 | 2,710 | 1,630 | 2,320 | 2,920 | 3,820 | 5,510 | 2,190 | 1,500 |
| 3 | 2,590 | 1,580 | 6,290 | 2,900 | 2,780 | 1,800 | 2,320 | 2,320 | 3,820 | 5,510 | 2,320 | 1,600 |
| 4 | 5,510 | 1,880 | 4,960 | 2,650 | 3,120 | 1,770 | 2,230 | 2,630 | 3,970 | 5,510 | 2,500 | 1,740 |
| 5 | 2,680 | 2,830 | 4,880 | 2,650 | 3,540 | 1,660 | 2,170 | 2,520 | 3,680 | 5,510 | 2,500 | 1,880 |
| 6 | 2,920 | 2,810 | 6,090 | 2,700 | 3,160 | 1,600 | 2,170 | 2,440 | 4,610 | 3,970 | 2,700 | 2,350 |
| 7 | 2,680 | 2,220 | 4,780 | 2,920 | 2,920 | 1,330 | 2,060 | 2,640 | 5,700 | 3,270 | 2,310 | 1,260 |
| 8 | 2,680 | 1,970 | 3,680 | 2,180 | 2,500 | 2,130 | 2,060 | 2,690 | 2,990 | 2,940 | 2,700 | 1,470 |
| 9 | 2,640 | 2,600 | 3,140 | 2,820 | 3,280 | 1,920 | 1,950 | 2,600 | 6,290 | 2,980 | 2,500 | 1,530 |
| 10 | 3,120 | 1,660 | 4,090 | 3,280 | 3,320 | 3,410 | 2,080 | 2,600 | 6,290 | 2,680 | 2,500 | 1,440 |
| 11 | 3,160 | 1,940 | 2,740 | 2,810 | 3,820 | 2,610 | 2,350 | 2,610 | 5,890 | 2,880 | 2,500 | 1,350 |
| 12 | 2,920 | 2,230 | 2,580 | 2,700 | 3,440 | 3,210 | 2,500 | 2,430 | 6,490 | 2,700 | 2,410 | 1,320 |
| 13 | 2,920 | 2,660 | 2,690 | 2,610 | 3,160 | 2,850 | 2,640 | 2,430 | 5,140 | 2,620 | 2,030 | 2,320 |
| 14 | 2,660 | 6,290 | 2,150 | 2,810 | 3,160 | 3,050 | 3,050 | 2,300 | 2,440 | 2,540 | 2,030 | 1,560 |
| 15 | 2,580 | 5,890 | 2,720 | 2,600 | 2,140 | 2,030 | 2,920 | 2,200 | 2,990 | 3,440 | 2,150 | 1,530 |
| 16 | 2,520 | 2,520 | 4,960 | 2,670 | 2,590 | 2,320 | 2,320 | 2,030 | 9,790 | 4,450 | 2,070 | 1,470 |
| 17 | 2,410 | 4,440 | 4,960 | 2,410 | 2,270 | 2,230 | 3,540 | 2,190 | 8,190 | 6,900 | 2,230 | 1,140 |
| 18 | 2,330 | 3,410 | 4,210 | 2,180 | 2,070 | 2,150 | 2,920 | 2,360 | 6,490 | 5,700 | 2,410 | 1,040 |
| 19 | 2,070 | 3,160 | 16,600 | 1,990 | 2,030 | 1,990 | 2,160 | 2,460 | 5,510 | 2,680 | 2,230 | 1,170 |
| 20 | 2,030 | 2,610 | 16,800 | 1,950 | 1,950 | 1,880 | 2,280 | 3,220 | 4,960 | 3,540 | 2,600 | 2,140 |
| 21 | 1,880 | 2,500 | 2,790 | 2,150 | 1,910 | 1,740 | 2,500 | 4,610 | 2,440 | 3,410 | 2,500 | 1,170 |
| 22 | 1,630 | 2,230 | 6,900 | 2,210 | 2,140 | 2,170 | 2,560 | 5,210 | 4,280 | 3,680 | 2,500 | 1,170 |
| 23 | 1,560 | 2,190 | 5,890 | 2,310 | 1,840 | 2,030 | 2,610 | 5,140 | 3,820 | 3,410 | 2,190 | 1,200 |
| 24 | 1,470 | 2,150 | 4,610 | 2,000 | 1,890 | 1,800 | 2,470 | 2,440 | 3,620 | 3,410 | 2,320 | 1,260 |
| 25 | 1,320 | 2,630 | 3,680 | 2,180 | 1,770 | 1,800 | 2,740 | 5,510 | 3,820 | 3,040 | 1,990 | 1,290 |
| 26 | 2,660 | 2,500 | 2,300 | 2,430 | 1,530 | 1,660 | 2,600 | 6,490 | 3,970 | 2,700 | 1,900 | 1,260 |
| 27 | 1,560 | 2,050 | 2,000 | 2,600 | 1,530 | 1,560 | 2,920 | 6,490 | 3,970 | 2,600 | 1,710 | 2,140 |
| 28 | 1,320 | 2,360 | 2,400 | 2,910 | 1,530 | 1,630 | 2,810 | 5,700 | 3,820 | 2,810 | 1,560 | 1,410 |
| 29 | 1,260 | 2,500 | 2,300 | 2,920 | - | 2,140 | 2,580 | 5,320 | 4,120 | 2,500 | 1,360 | 1,410 |
| 30 | 1,200 | 2,270 | 2,150 | 2,820 | - | 1,560 | 2,790 | 4,610 | 4,440 | 2,500 | 2,030 | 1,260 |
| 31 | 1,200 | - | 2,000 | 2,700 | - | 1,630 | - | 2,780 | - | 2,410 | 1,480 | - |

| Month | Observed | | | | Change in contents in Lake Tapps (acre-feet) | Adjusted for change in reservoir contents | | | |
|--------------------|--------------------------|--------------|-------|----------------------|--|---|--------------------------|-----------------|-------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run-off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | Mean | Per square mile | |
| October..... | 5,510 | 1,200 | 2,313 | 142,200 | +90 | 142,300 | 2,314 | 2.44 | 2.81 |
| November..... | 6,290 | 1,170 | 2,670 | 153,900 | -1,480 | 157,400 | 2,645 | 2.79 | 3.11 |
| December..... | 16,800 | 2,000 | 4,850 | 296,200 | +1,130 | 299,300 | 4,868 | 5.14 | 5.92 |
| Calendar year 1941 | 16,800 | 1,100 | 2,384 | 1,726,000 | +1,040 | 1,727,000 | 2,385 | 2.52 | 34.17 |
| January..... | 3,280 | 1,650 | 2,325 | 142,900 | -1,280 | 141,600 | 2,303 | 2.43 | 2.80 |
| February..... | 3,820 | 1,410 | 2,483 | 137,900 | -1,410 | 136,500 | 2,458 | 2.59 | 2.70 |
| March..... | 3,410 | 1,290 | 1,942 | 119,400 | -970 | 119,300 | 1,940 | 2.05 | 2.36 |
| April..... | 3,540 | 1,660 | 2,487 | 148,000 | -900 | 149,000 | 2,504 | 2.64 | 2.95 |
| May..... | 6,490 | 1,910 | 3,505 | 215,500 | +2,560 | 218,000 | 3,545 | 3.74 | 4.31 |
| June..... | 9,790 | 3,680 | 5,167 | 307,400 | +270 | 307,700 | 5,171 | 5.45 | 6.09 |
| July..... | 6,900 | 2,410 | 3,682 | 226,400 | -860 | 225,500 | 3,667 | 3.87 | 4.46 |
| August..... | 2,810 | 1,060 | 2,183 | 134,200 | -110 | 134,100 | 2,181 | 2.30 | 2.65 |
| September..... | 1,880 | 1,040 | 1,360 | 80,950 | +400 | 81,350 | 1,367 | 1.44 | 1.61 |
| Water year 1941-42 | 16,800 | 1,040 | 2,917 | 2,112,000 | +180 | 2,112,000 | 2,917 | 3.08 | 41.77 |

† Sunday.

a No gage-height record; discharge computed on basis of records for station near Orting.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Kapowsin Creek near Kapowsin, Wash.

Location.- Water-stage recorder, lat. 46°59'44", long. 122°11'44", in NE¼ sec. 5, T. 17 N., R. 5 E., half a mile downstream from Kapowsin Lake and 1½ miles east of Kapowsin. Datum of gage is 561 feet above mean sea level (from stadia traverse). Prior to Apr. 6, 1942, staff gage at same site and datum.

Drainage area.- 23 square miles.

Records available.- June 1927 to October 1932, October 1941 to September 1942.

Extremes.- Maximum discharge during year, 546 second-feet Dec. 19 (gage height, 5.09 feet); minimum, 1.9 second-feet Sept. 30 (gage height, 1.78 feet).

1927-32, 1941-42: Maximum discharge, that of Dec. 19, 1941; minimum, 1.4 second-feet Sept. 2, 1930 (gage height, 0.84 foot, datum then in use).

Remarks.- Records good except those based on staff-gage readings or those for periods of doubtful or no gage-height record, which are fair. Natural regulation in Kapowsin Lake. No diversion. Staff gage read once daily prior to Apr. 6.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Dec. 22 to Mar. 24)

| Oct. 1 to Feb. 23 | | | | Feb. 24 to Sept. 30 | | | |
|-------------------|-----|-----|-----|---------------------|-----|-----|-----|
| 2.0 | 12 | 4.5 | 177 | 1.8 | 2.2 | 2.7 | 53 |
| 2.3 | 28 | 4.0 | 277 | 2.0 | 6.8 | 3.0 | 87 |
| 2.6 | 54 | 4.6 | 393 | 2.2 | 16 | 3.6 | 158 |
| 3.0 | 100 | 5.0 | 620 | 2.4 | 27 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 9.5 | 22 | 30 | 64 | 54 | d40 | a41 | 70 | 47 | 34 | 13 | a3.5 |
| 2 | 14 | 23 | 38 | 59 | 56 | d48 | a40 | 66 | 43 | 49 | 12 | a4.0 |
| 3 | 15 | 30 | 52 | 55 | 67 | d50 | a38 | 56 | 39 | 40 | 12 | a4.0 |
| 4 | 25 | 45 | 47 | 40 | 75 | d45 | a37 | 51 | 34 | 34 | 11 | a4.0 |
| 6 | 25 | 50 | 66 | 51 | 51 | d40 | a33 | 46 | 31 | 29 | 11 | a4.0 |
| 6 | 25 | 51 | 81 | 48 | 94 | 34 | 31 | 40 | 48 | 24 | 10 | a4.0 |
| 7 | 28 | 50 | 94 | 48 | 87 | 31 | 28 | 37 | 51 | 23 | 9.2 | a4.0 |
| 8 | 35 | 38 | 87 | 66 | 75 | 31 | 27 | 33 | 54 | 23 | 7.5 | a4.0 |
| 9 | 40 | 28 | 75 | d70 | 51 | 47 | 25 | 31 | 72 | 20 | 6.0 | a4.0 |
| 10 | 52 | 23 | 73 | d95 | 51 | 57 | 23 | 32 | 65 | 16 | 5.5 | a4.0 |
| 11 | 53 | 30 | 62 | d100 | 94 | 70 | 21 | 31 | 82 | 13 | 5.8 | a4.0 |
| 12 | 51 | 47 | 52 | d95 | 81 | 73 | 18 | 32 | 71 | 12 | 5.0 | a4.0 |
| 13 | 52 | 38 | 47 | d90 | 67 | 70 | 17 | 29 | 58 | 12 | a6.0 | a3.2 |
| 14 | 37 | g177 | 45 | d80 | 61 | 50 | 28 | 27 | 57 | 12 | a5.5 | a3.2 |
| 15 | 30 | 255 | 38 | d75 | 50 | 52 | 34 | 25 | 124 | 12 | a5.5 | a3.2 |
| 16 | 28 | 244 | g107 | d70 | 56 | 49 | 32 | 21 | 160 | 13 | a5.5 | a3.2 |
| 17 | 24 | 186 | 136 | d65 | 50 | 39 | 31 | 18 | 154 | 15 | a5.0 | a3.2 |
| 18 | 22 | 152 | 152 | d65 | 45 | 37 | 27 | 17 | 128 | d50 | a5.0 | a3.2 |
| 19 | 26 | 107 | g345 | d60 | d43 | 36 | 23 | 19 | 107 | d40 | a5.0 | a3.2 |
| 20 | 30 | 94 | g418 | d60 | d43 | 38 | 21 | 23 | 87 | d30 | a6.0 | a3.2 |
| 21 | 27 | 73 | 418 | 51 | d40 | 36 | 20 | 24 | 73 | d25 | a4.5 | a3.2 |
| 22 | 25 | 67 | 359 | 47 | d38 | 45 | 20 | 34 | 62 | 22 | a4.5 | a2.7 |
| 23 | 23 | 63 | 299 | 42 | d37 | 47 | 20 | 39 | 56 | 21 | a4.5 | a2.7 |
| 24 | 22 | 52 | 234 | 34 | d36 | 51 | 22 | 34 | 54 | 19 | 4.2 | a2.7 |
| 25 | 22 | 49 | 186 | 30 | d36 | 46 | 25 | 45 | 58 | 17 | 4.2 | a2.7 |
| 26 | 21 | 47 | 168 | 36 | d35 | 45 | 62 | 60 | 67 | 17 | a6.0 | a2.7 |
| 27 | 20 | 38 | 144 | 47 | d37 | 46 | 68 | 73 | 56 | 16 | a4.6 | a2.7 |
| 28 | 19 | 47 | 87 | 56 | d40 | 44 | 60 | 72 | 47 | 15 | a4.0 | a2.7 |
| 29 | 18 | 46 | 81 | 51 | - | 36 | 51 | 74 | 42 | 14 | a4.0 | a2.7 |
| 30 | 19 | 37 | 74 | 47 | - | 36 | 50 | 66 | 36 | 14 | a4.0 | a2.7 |
| 31 | 19 | - | 72 | 42 | - | 34 | - | 54 | - | 12 | a4.0 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 857.5 | 53 | 9.5 | 27.7 | 1.20 | 1.59 | 1,700 |
| November..... | 2,208 | 255 | 22 | 73.6 | 3.20 | 3.57 | 4,360 |
| December..... | 4,176 | 415 | 30 | 135 | 5.87 | 6.75 | 8,280 |
| Calendar year | - | - | - | - | - | - | - |
| January..... | 1,829 | 100 | 30 | 59.0 | 2.57 | 2.96 | 3,630 |
| February..... | 1,640 | 94 | 35 | 58.6 | 2.55 | 2.65 | 3,250 |
| March..... | 1,405 | 73 | 31 | 45.3 | 1.97 | 2.27 | 2,790 |
| April..... | 1,975 | 68 | 17 | 32.4 | 1.41 | 1.57 | 1,930 |
| May..... | 1,279 | 74 | 17 | 41.3 | 1.80 | 2.07 | 2,540 |
| June..... | 2,063 | 160 | 31 | 69.4 | 3.02 | 3.37 | 4,130 |
| July..... | 696 | 50 | 12 | 22.5 | .976 | 1.13 | 1,380 |
| August..... | 199.9 | 13 | 4.0 | 6.45 | .280 | .32 | 396 |
| September..... | 100.2 | 4.0 | 2.3 | 3.34 | .145 | .16 | 199 |
| Water year 1941-42..... | 17,446.6 | 415 | 2.3 | 47.8 | 2.08 | 28.21 | 34,600 |

a No gage-height record; discharge computed on basis of records for Onop Creek near Eatonville.

d Doubtful gage-height record; discharge computed on basis of records for Onop Creek near Eatonville.

g Computed from graph based on gage readings and records for Onop Creek near Eatonville and Mashal River near La Grande.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Carbon River near Fairfax, Wash.

Location.- Water-stage recorder, lat. 47°01'30", long. 122°02'00", in SW $\frac{1}{4}$ sec. 22, T. 18 N., R. 6 E., 1 $\frac{1}{2}$ miles northwest of Fairfax and 12 miles upstream from Voights Creek.

Drainage area.- 81 square miles.

Records available.- March 1929 to September 1942. November 1910 to July 1912 at site 1 $\frac{1}{2}$ miles upstream, published as Carbon River at Fairfax.

Average discharge.- 13 years (1929-42), 398 second-feet.

Extremes.- Maximum discharge during year, 2,580 second-feet Dec. 19 (gage height, 4.75 feet); minimum not determined, probably occurred during period Sept. 7-30. 1910-12, 1929-42: Maximum discharge, 8,030 second-feet Dec. 9, 1933 (gage height, 10.2 feet), from rating curve extended above 500 second-feet; minimum, 40 second-feet (estimated) Jan. 20, 1930 (stage-discharge relation affected by ice).

Remarks.- Records good except those for periods of no gage-height record, which are poor. Some water diverted for use by lumber industry but returned to river above gage.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|
| 1 | 345 | 147 | 298 | 199 | 242 | 127 | 277 | 420 | 620 | 1,000 | 330 | 181 |
| 2 | 306 | 142 | 778 | 199 | 219 | 154 | 283 | 390 | 599 | 1,100 | 330 | 202 |
| 3 | 920 | 226 | 806 | 189 | 219 | 140 | 257 | 360 | 550 | 1,100 | 450 | 210 |
| 4 | 1,180 | 230 | 581 | 181 | 297 | 129 | 246 | 360 | 531 | 1,100 | 600 | 230 |
| 5 | 653 | 556 | 527 | 178 | 294 | 140 | 254 | 340 | 579 | 800 | - | 227 |
| 6 | 488 | 366 | 775 | 173 | 257 | 131 | 245 | 340 | 798 | 650 | 600 | 181 |
| 7 | 478 | 298 | 600 | 176 | 236 | 125 | 242 | 380 | 798 | 484 | 600 | 190 |
| 8 | 458 | 250 | 487 | 251 | 239 | 129 | 230 | 430 | 768 | 458 | 600 | 200 |
| 9 | 447 | 400 | 390 | 245 | 294 | 233 | 430 | 829 | 430 | 650 | 180 | 190 |
| 10 | 762 | 202 | 349 | 536 | 322 | 366 | 257 | 400 | 893 | 422 | 550 | 140 |
| 11 | 653 | 273 | 317 | 442 | 297 | 314 | 336 | 370 | 860 | 442 | 460 | 170 |
| 12 | 606 | 243 | 284 | 397 | 264 | 270 | 397 | 340 | 667 | 385 | 380 | 200 |
| 13 | 467 | 406 | 263 | 366 | 239 | 216 | 351 | 320 | 604 | 332 | 300 | 210 |
| 14 | 397 | 1,100 | 246 | 325 | 224 | 221 | 409 | 320 | 772 | 362 | 400 | 200 |
| 15 | 337 | 980 | 278 | 304 | 210 | 202 | 340 | 300 | 1,940 | 464 | 460 | 200 |
| 16 | 325 | 752 | 581 | 294 | 196 | 194 | 311 | 300 | 1,470 | 911 | 500 | 170 |
| 17 | 349 | 533 | 423 | 274 | 183 | 189 | 304 | 300 | 996 | 1,070 | 480 | 140 |
| 18 | 310 | 414 | 616 | 251 | 173 | 176 | 267 | 330 | 798 | 717 | 540 | 100 |
| 19 | 349 | 345 | 2,100 | 233 | 163 | 163 | 264 | 360 | 739 | 579 | 600 | 140 |
| 20 | 298 | 298 | 1,530 | 221 | 159 | 154 | 308 | 460 | 710 | 531 | 600 | 170 |
| 21 | 263 | 263 | 829 | 216 | 149 | 156 | 405 | 600 | 680 | 499 | 600 | 170 |
| 22 | 237 | 237 | 656 | 213 | 142 | 168 | 362 | 1,050 | 660 | 506 | 600 | 190 |
| 23 | 221 | 224 | 662 | 207 | 149 | 156 | 311 | 798 | 660 | 464 | 600 | 190 |
| 24 | 205 | 218 | 541 | 207 | 136 | 149 | 297 | 728 | 700 | 417 | 460 | 190 |
| 25 | 196 | 387 | 442 | 230 | 129 | 140 | 297 | 629 | 660 | 397 | 300 | 210 |
| 26 | 187 | 345 | 374 | 236 | 125 | 136 | 300 | 893 | 700 | 405 | 200 | 190 |
| 27 | 182 | 284 | 329 | 242 | 127 | 134 | 440 | 893 | 700 | 409 | 163 | 200 |
| 28 | 179 | 263 | 297 | 246 | 123 | 131 | 360 | 766 | 750 | 401 | 191 | 190 |
| 29 | 170 | 280 | 270 | 227 | - | 131 | 330 | 711 | 800 | 370 | 156 | 160 |
| 30 | 155 | 353 | 216 | 210 | - | 138 | 330 | 656 | 850 | 370 | 154 | 180 |
| 31 | 147 | - | 213 | 205 | - | 171 | - | 678 | - | 330 | 166 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 12,260 | 1,180 | 147 | 395 | 4.88 | 5.63 | 24,320 |
| November..... | 10,839 | 1,100 | 142 | 361 | 4.46 | 4.98 | 21,500 |
| December..... | 16,848 | 2,100 | 213 | 543 | 6.70 | 7.74 | 33,480 |
| Calendar year 1941..... | 111,255 | 2,100 | 100 | 305 | 3.77 | 51.10 | 220,700 |
| January..... | 8,022 | 536 | 173 | 259 | 3.20 | 3.68 | 15,910 |
| February..... | 5,749 | 322 | 123 | 205 | 2.55 | 2.64 | 11,400 |
| March..... | 5,444 | 366 | 125 | 176 | 2.17 | 2.50 | 10,800 |
| April..... | 9,245 | 440 | 230 | 308 | 3.80 | 4.24 | 18,340 |
| May..... | 15,654 | 1,050 | 300 | 511 | 6.31 | 7.28 | 31,450 |
| June..... | 23,681 | 1,940 | 531 | 789 | 9.74 | 10.37 | 46,970 |
| July..... | 17,867 | 1,100 | 330 | 576 | 7.11 | 8.20 | 35,440 |
| August..... | 13,510 | 620 | 154 | 436 | 5.38 | 6.20 | 26,800 |
| September..... | 5,511 | 230 | 100 | 184 | 2.27 | 2.53 | 10,930 |
| Water year 1941-42..... | 144,830 | 2,100 | 100 | 397 | 4.90 | 66.49 | 287,300 |

Peak discharge.- Dec. 19 (8:20 a.m.) 2,580 sec.-ft.; June 15 (6 to 7 a.m.) 2,160 sec.-ft.

Notes.- No gage-height record Apr. 27 to May 22, June 20 to July 6, July 29 to Aug. 26, Sept. 7-30; discharge computed on basis of records for Puyallup River near Orting and White River at Greenwater.

Time basis. Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

White River at Greenwater, Wash.

Location.— Water-stage recorder, lat. 47°08'50", long. 121°59'50", in SE¼ sec. 10, T. 19 N., R. 9 E., three-quarters of a mile southeast of Greenwater, three-quarters of a mile upstream from Greenwater River, and 25 miles upstream from Buckley.

Drainage area.— 216 square miles.

Records available.— March 1929 to September 1942. September 1911 to May 1912 (fragmentary) at site 2 miles upstream, published as White River near Enumclaw.

Average discharge.— 13 years (1929-42), 787 second-feet.

Extremes.— Maximum discharge during year, 2,500 second-feet Dec. 2 (gage height, 4.69 feet); minimum, 263 second-feet Mar. 28-29.

1911-12, 1928-42: Maximum discharge, 12,100 second-feet Dec. 21, 1933 (gage height, 9.38 feet); minimum, 120 second-feet Nov. 2, 1935 (gage height, 1.69 feet).

Remarks.— Records good except those for periods of ice effect or no gage-height record, which are fair. No diversion or regulation.

Revisions.— Revised figures of discharge, in second-feet, for days in the water year 1934, superseding those published in Water-Supply Paper 787, are given herein:

Dec. 9.....6,620
Jan. 27.....1,650

| Month | Maximum | Minimum | Mean | Per square mile | Run-off | |
|--------------------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | Inches | Acre-feet |
| December..... | 9,220 | 498 | 3,253 | 15.1 | 17.36 | 200,000 |
| January..... | 4,250 | 1,050 | 1,688 | 7.81 | 9.01 | 103,800 |
| Water year 1933-34 | 9,220 | 229 | 1,188 | 5.60 | 74.64 | 859,700 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|------|------|------|-------|-------|-------|------|-------|
| 1 | 399 | 317 | 657 | b510 | 492 | a315 | 514 | 583 | 1,170 | 1,700 | 760 | 457 |
| 2 | 372 | 304 | 1,870 | b510 | 457 | a340 | 501 | 562 | 1,220 | 1,750 | 792 | 514 |
| 3 | 657 | 422 | 1,860 | b510 | 498 | a340 | 485 | 542 | 1,220 | 1,700 | 840 | 533 |
| 4 | 848 | 433 | 1,450 | b470 | 642 | 304 | 488 | 528 | 1,220 | 1,650 | 920 | 605 |
| 5 | 634 | 760 | 1,220 | b440 | 657 | 317 | 514 | 514 | 1,320 | 1,500 | 832 | 535 |
| 6 | 542 | 562 | 1,270 | b420 | 612 | 299 | 535 | 542 | 1,800 | 1,320 | 888 | 457 |
| 7 | 521 | 476 | 1,140 | b420 | 562 | 295 | 555 | 642 | 1,800 | 1,220 | 888 | 470 |
| 8 | 482 | 445 | 1,020 | *b440 | 549 | 299 | 569 | 736 | 1,700 | 1,130 | 904 | 482 |
| 9 | 470 | 416 | 936 | 451 | 542 | 494 | 591 | 849 | 1,700 | 1,080 | 868 | 445 |
| 10 | 657 | 399 | 856 | 457 | 598 | 576 | 612 | 808 | 1,650 | 1,050 | 904 | 405 |
| 11 | 605 | 457 | 776 | 457 | 583 | 508 | 752 | 712 | 1,650 | 1,010 | 776 | 410 |
| 12 | 605 | 416 | 712 | 476 | 542 | 457 | 824 | 687 | 1,500 | 912 | 680 | 451 |
| 13 | 535 | 778 | 672 | 476 | 508 | 427 | 784 | 612 | 1,500 | 880 | 620 | 445 |
| 14 | 501 | 1,360 | 850 | 470 | 476 | 394 | 848 | 612 | 1,550 | 944 | 696 | 457 |
| 15 | 476 | 1,170 | 728 | 451 | 451 | 377 | 768 | 612 | 1,920 | 1,060 | 720 | 463 |
| 16 | 463 | 1,030 | 1,100 | 445 | 427 | 372 | 696 | 627 | 1,700 | 1,270 | 752 | 351 |
| 17 | 488 | 888 | 936 | 433 | 410 | 367 | 672 | 634 | 1,500 | 1,180 | 720 | 336 |
| 18 | 457 | 948 | 984 | 416 | 394 | 351 | 620 | 672 | 1,400 | 1,000 | 736 | 326 |
| 19 | 528 | 665 | 2,080 | 405 | 377 | 331 | 620 | 792 | 1,320 | 1,010 | 776 | 351 |
| 20 | 463 | 598 | 1,800 | 394 | a375 | 326 | 712 | 968 | 1,220 | 1,040 | 768 | 372 |
| 21 | 427 | 555 | 1,450 | 394 | a360 | 326 | 920 | 1,320 | 1,180 | 1,080 | 776 | 367 |
| 22 | 416 | 501 | 1,220 | 394 | a345 | 322 | 904 | 1,800 | 1,170 | 1,080 | 768 | 368 |
| 23 | 410 | 470 | 1,150 | 355 | a330 | 317 | 808 | 1,750 | 1,320 | 992 | 784 | 388 |
| 24 | 399 | 463 | 1,040 | 422 | a320 | 304 | 752 | 1,650 | 1,320 | 936 | 665 | 410 |
| 25 | 388 | 542 | 944 | 470 | a315 | 295 | 680 | 1,700 | 1,270 | 920 | 535 | 394 |
| 26 | 372 | 495 | 848 | 514 | a305 | 287 | 634 | 1,600 | 1,270 | 920 | 476 | 388 |
| 27 | 367 | 457 | 776 | 549 | a305 | 287 | 605 | 1,450 | 1,360 | 928 | 433 | 388 |
| 28 | 361 | 476 | 744 | 528 | a305 | 287 | 576 | 1,320 | 1,450 | 896 | 427 | 361 |
| 29 | 341 | 634 | 688 | 495 | - | 291 | 555 | 1,270 | 1,450 | 848 | 416 | 356 |
| 30 | 326 | 760 | 650 | 470 | - | 313 | 562 | 1,220 | 1,600 | 800 | 433 | 377 |
| 31 | 322 | - | 598 | 463 | - | 393 | - | 1,180 | - | 784 | 451 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | | Inches | Acre-feet |
| October..... | 14,832 | 846 | 322 | 478 | 2.21 | 2.55 | 29,420 |
| November..... | 18,097 | 1,360 | 304 | 603 | 2.79 | 3.12 | 35,890 |
| December..... | 32,555 | 2,080 | 598 | 1,060 | 4.91 | 5.66 | 65,170 |
| Calendar year 1941..... | 228,213 | 2,080 | 291 | 625 | 2.89 | 39.30 | 452,600 |
| January..... | 14,138 | 549 | 388 | 456 | 2.11 | 2.43 | 28,040 |
| February..... | 12,717 | 657 | 305 | 454 | 2.10 | 2.19 | 25,220 |
| March..... | 10,901 | 576 | 287 | 352 | 1.63 | 1.88 | 21,620 |
| April..... | 19,659 | 920 | 498 | 655 | 3.03 | 3.38 | 38,990 |
| May..... | 29,458 | 1,800 | 514 | 950 | 4.40 | 5.07 | 58,440 |
| June..... | 43,450 | 1,920 | 1,170 | 1,448 | 6.70 | 7.48 | 86,180 |
| July..... | 34,590 | 1,750 | 784 | 1,116 | 5.17 | 5.96 | 68,610 |
| August..... | 28,024 | 920 | 416 | 710 | 3.29 | 3.79 | 43,680 |
| September..... | 12,732 | 605 | 326 | 424 | 1.96 | 2.19 | 25,250 |
| Water year 1941-42..... | 265,458 | 2,080 | 287 | 727 | 3.37 | 45.70 | 526,500 |

Peak discharge.— Dec. 2 (3 p.m.) 2,500 sec.-ft.; Dec. 19 (7:30 a.m.) 2,260 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for station near Buckley.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

White River near Buckley, Wash.

Location.- Water-stage recorder, lat. 47°09'05", long. 121°57'00", in SW 1/4 sec. 8, T. 19 N., R. 7 E., 3 miles east of Buckley and 8 miles downstream from Clearwater River. Datum of gage is at mean sea level, datum of 1929.

Drainage area.- 403 square miles.

Records available.- October 1933 to September 1942. October 1928 to November 1933 at site 3 miles upstream.

Extremes.- Maximum discharge during year, 7,550 second-feet Dec. 19 (elevation, 805.94 feet); minimum, 419 second-feet Sept. 18, 19 (elevation, 799.87 feet).
1928-33, 1938-42: Maximum discharge, 17,000 second-feet Feb. 28, 1932 (gage height, 17.5 feet, site and datum then in use), from rating curve extended above 4,000 second-feet; minimum, 213 second-feet Nov. 21, 1929 (gage height, 1.78 feet, site and datum then in use), but may have been less sometime during period Jan. 15-30, 1930, when stage-discharge relation was affected by ice.
Maximum stage known, 23.4 feet, from floodmarks, in December 1933 at site of former gaging station (discharge, 28,000 second-feet, from rating curve extended above 3,000 second-feet).

Remarks.- Records good. No diversions. Some regulation from construction operations at Mud Mountain Dam.

Cooperation.- Water-stage recorder inspected by employees of Corps of Engineers, U. S. Army.

Rating tables, water year 1941-42 (elevation, in feet, and discharge, in second-feet)

Oct. 1-3

Oct. 4 to Sept. 30

| | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 801.0 | 840 | 800.0 | 470 | 801.5 | 1,390 | 803.0 | 3,030 |
| 801.5 | 1,240 | 800.5 | 705 | 802.0 | 1,860 | 804.0 | 4,440 |
| 802.0 | 1,770 | 801.0 | 1,010 | 802.5 | 2,410 | 805.0 | 6,010 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 840 | 589 | 1,040 | 911 | 976 | 613 | 1,080 | 1,230 | 2,070 | 2,290 | 943 | 613 |
| 2 | 945 | 575 | 2,530 | 943 | 879 | 1,120 | 1,190 | 2,020 | 2,350 | 976 | 853 | |
| 3 | 1,280 | 760 | 2,840 | 911 | 943 | 679 | 1,040 | 1,150 | 2,240 | 1,010 | 705 | |
| 4 | 2,590 | 818 | 2,280 | 848 | 1,270 | 818 | 1,010 | 1,120 | 1,860 | 2,180 | 1,080 | 732 |
| 5 | 1,810 | 1,390 | 2,070 | 789 | 1,350 | 623 | 1,040 | 1,080 | 1,960 | 1,910 | 1,010 | 679 |
| 6 | 1,440 | 1,120 | 2,350 | 760 | 1,230 | 608 | 1,040 | 1,080 | 2,710 | 1,660 | 1,040 | 565 |
| 7 | 1,270 | 943 | 2,070 | 760 | 1,120 | 584 | 1,080 | 1,190 | 2,960 | 1,570 | 1,080 | 594 |
| 8 | 1,150 | 879 | 1,810 | 818 | 1,080 | 599 | 1,080 | 1,270 | 2,710 | 1,440 | 1,080 | 623 |
| 9 | 1,080 | 818 | 1,660 | 943 | 1,080 | 1,070 | 1,080 | 1,440 | 2,900 | 1,390 | 1,080 | 594 |
| 10 | 1,510 | 760 | 1,620 | 1,080 | 1,310 | 1,520 | 1,120 | 1,390 | 3,160 | 1,390 | 1,080 | 534 |
| 11 | 1,270 | 848 | 1,440 | 1,010 | 1,310 | 1,270 | 1,270 | 1,270 | 4,440 | 1,390 | 976 | 521 |
| 12 | 1,350 | 789 | 1,350 | 1,040 | 1,190 | 1,120 | 1,440 | 1,190 | 3,290 | 1,270 | 848 | 570 |
| 13 | 1,190 | 1,100 | 1,230 | 1,040 | 1,080 | 1,010 | 1,350 | 1,120 | 2,770 | 1,150 | 789 | 560 |
| 14 | 1,080 | 2,410 | 1,190 | 1,010 | 976 | 911 | 1,480 | 1,120 | 2,650 | 1,190 | 879 | 561 |
| 15 | 976 | 2,240 | 1,270 | 976 | 943 | 848 | 1,350 | 1,120 | 3,570 | 1,440 | 879 | 633 |
| 16 | 911 | 2,070 | 1,860 | 943 | 879 | 818 | 1,270 | 1,120 | 3,710 | 1,610 | 911 | 499 |
| 17 | 843 | 1,710 | 1,620 | 911 | 818 | 789 | 1,230 | 1,120 | 3,290 | 2,020 | 911 | 454 |
| 18 | 879 | 1,440 | 1,850 | 879 | 789 | 760 | 1,150 | 1,150 | 2,770 | 1,620 | 879 | 442 |
| 19 | 1,010 | 1,270 | 6,510 | 848 | 732 | 705 | 1,120 | 1,230 | 2,530 | 1,520 | 911 | 442 |
| 20 | 911 | 1,150 | 5,210 | 818 | 732 | 653 | 1,230 | 1,480 | 2,350 | 1,480 | 911 | 483 |
| 21 | 848 | 1,080 | 3,290 | 789 | 705 | 653 | 1,480 | 1,860 | 2,070 | 1,440 | 879 | 478 |
| 22 | 789 | 976 | 2,530 | 789 | 679 | 705 | 1,480 | 2,530 | 1,960 | 1,440 | 879 | 495 |
| 23 | 760 | 911 | 2,410 | 760 | 643 | 679 | 1,350 | 2,590 | 2,070 | 1,310 | 879 | 512 |
| 24 | 732 | 879 | 1,960 | 760 | 628 | 648 | 1,270 | 2,410 | 1,960 | 1,190 | 818 | 525 |
| 25 | 705 | 1,040 | 1,710 | 848 | 618 | 628 | 1,230 | 2,530 | 1,960 | 1,190 | 705 | 512 |
| 26 | 705 | 976 | 1,520 | 879 | 598 | 603 | 1,230 | 2,590 | 1,910 | 1,150 | 679 | 508 |
| 27 | 679 | 911 | 1,350 | 943 | 598 | 594 | 1,190 | 2,650 | 1,960 | 1,150 | 613 | 499 |
| 28 | 653 | 879 | 1,270 | 1,010 | 594 | 589 | 1,150 | 2,530 | 2,070 | 1,120 | 623 | 499 |
| 29 | 628 | 1,010 | 1,190 | 976 | - | 594 | 1,080 | 2,410 | 2,120 | 1,040 | 575 | 491 |
| 30 | 603 | 1,150 | 1,120 | 911 | - | 628 | 1,120 | 2,290 | 2,180 | 1,040 | 584 | 474 |
| 31 | 584 | - | 1,010 | 879 | - | 732 | - | 2,240 | - | 976 | 594 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Inches | Run-off Acre-feet |
|-------------------------|------------------|---------|---------|-------|-----------------|--------|----------------------|
| October..... | 31,921 | 2,590 | 584 | 1,030 | 2.56 | 2.95 | 63,510 |
| November..... | 33,491 | 2,410 | 575 | 1,116 | 2.77 | 3.09 | 66,430 |
| December..... | 63,070 | 6,510 | 1,010 | 2,035 | 5.05 | 5.82 | 125,100 |
| Calendar year 1941..... | 372,225 | 6,510 | 500 | 1,020 | 2.53 | 34.36 | 738,300 |
| January..... | 27,762 | 1,080 | 760 | 896 | 2.22 | 2.56 | 55,100 |
| February..... | 25,814 | 1,350 | 594 | 922 | 2.29 | 2.38 | 51,800 |
| March..... | 23,520 | 1,520 | 584 | 759 | 1.88 | 2.17 | 46,650 |
| April..... | 36,160 | 1,480 | 1,010 | 1,205 | 2.99 | 3.34 | 71,720 |
| May..... | 50,690 | 2,650 | 1,080 | 1,635 | 4.06 | 4.68 | 100,500 |
| June..... | 75,890 | 4,440 | 1,860 | 2,530 | 6.28 | 7.00 | 180,500 |
| July..... | 46,316 | 2,350 | 976 | 1,494 | 3.71 | 4.27 | 91,670 |
| August..... | 27,101 | 1,080 | 575 | 874 | 2.17 | 2.50 | 53,750 |
| September..... | 16,470 | 732 | 442 | 549 | 1.36 | 1.52 | 32,670 |
| Water year 1941-42..... | 458,225 | 6,510 | 442 | 1,255 | 3.11 | 42.28 | 908,800 |

Peak discharge.- Dec. 19 (7 to 8 a.m.) 7,550 sec.-ft.; June 11 (3 and 4 a.m.) 4,990 sec.-ft.
Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Greenwater River at Greenwater, Wash.

Location.- Water-stage recorder, lat. 47°09'15", long. 121°38'00", in NW¼ Sec. 11, T. 19 N., R. 9 E., 1 mile upstream from mouth, 1 mile east of Greenwater, and 17 miles east of Buckley.

Drainage area.- 74 square miles.

Records available.- September 1911 to August 1912 (fragmentary) published as Greenwater River near Enumclaw; May 1929 to September, 1942.

Average discharge.- 13 years (1929-42), 189 second-feet.

Extremes.- Maximum discharge during year, 924 second-feet June 11 (gage height, 4.61 feet); minimum, 37 second-feet Sept. 26-30 (gage height, 2.20 feet).
1911-12, 1929-42: Maximum discharge, 4,140 second-feet Dec. 9, 1933 (gage height, 9.24 feet, site and datum then in use), from rating curve extended above 1,000 second-feet; minimum, 23 second-feet Oct. 7, 1934 (gage height, 2.06 feet).

Remarks.- Records excellent. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 18 | | Dec. 19 to Sept. 30 | | | |
|-------------------|-----|---------------------|-----|-----|-----|
| 2.6 | 86 | 2.2 | 37 | 3.2 | 236 |
| 2.8 | 122 | 2.4 | 59 | 3.5 | 340 |
| 3.0 | 167 | 2.6 | 91 | 3.8 | 469 |
| 3.2 | 224 | 2.8 | 131 | 4.1 | 624 |
| 3.5 | 332 | 3.0 | 179 | 4.4 | 798 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 109 | 83 | 141 | 149 | 114 | 77 | 192 | 221 | 397 | 246 | 96 | 52 |
| 2 | 189 | 92 | 191 | 149 | 114 | 81 | 203 | 218 | 372 | 233 | 93 | 49 |
| 3 | 165 | 100 | 275 | 142 | 118 | 81 | 195 | 215 | 348 | 227 | 91 | 43 |
| 4 | 332 | 114 | 297 | 131 | 159 | 77 | 192 | 212 | 333 | 215 | 89 | 46 |
| 5 | 264 | 205 | 304 | 125 | 137 | 79 | 203 | 203 | 322 | 203 | 88 | 47 |
| 6 | 202 | 172 | 340 | 123 | 179 | 79 | 206 | 209 | 380 | 198 | 84 | 47 |
| 7 | 172 | 155 | 336 | 118 | 164 | 76 | 215 | 224 | 414 | 187 | 82 | 47 |
| 8 | 152 | 141 | 304 | 113 | 154 | 79 | 209 | 242 | 419 | 176 | 81 | 48 |
| 9 | 141 | 130 | 282 | 118 | 154 | 127 | 212 | 252 | 441 | 169 | 77 | 47 |
| 10 | 152 | 120 | 254 | 125 | 182 | 206 | 218 | 265 | 510 | 169 | 76 | 47 |
| 11 | 148 | 120 | 227 | 125 | 201 | 184 | 258 | 249 | 860 | 166 | 76 | 47 |
| 12 | 148 | 112 | 208 | 127 | 190 | 166 | 286 | 239 | 732 | 158 | 74 | 46 |
| 13 | 139 | 128 | 197 | 131 | 172 | 149 | 286 | 227 | 592 | 147 | 72 | 45 |
| 14 | 128 | 288 | 183 | 129 | 154 | 136 | 296 | 221 | 518 | 140 | 71 | 44 |
| 15 | 122 | 320 | 183 | 125 | 145 | 125 | 286 | 221 | 518 | 152 | 71 | 44 |
| 16 | 118 | 320 | 257 | 123 | 136 | 115 | 275 | 221 | 513 | 169 | 68 | 44 |
| 17 | 124 | 282 | 240 | 119 | 123 | 110 | 272 | 218 | 499 | 176 | 66 | 46 |
| 18 | 116 | 243 | 274 | 114 | 112 | 106 | 255 | 218 | 460 | 156 | 65 | 44 |
| 19 | 124 | 214 | 798 | 110 | 104 | 99 | 246 | 230 | 423 | 147 | 64 | 43 |
| 20 | 128 | 191 | 703 | 106 | 102 | 95 | 252 | 252 | 399 | 140 | 62 | 42 |
| 21 | 124 | 172 | 498 | 104 | 95 | 95 | 307 | 314 | 360 | 136 | 62 | 40 |
| 22 | 118 | 164 | 389 | 104 | 91 | 95 | 310 | 410 | 336 | 131 | 60 | 40 |
| 23 | 112 | 155 | 348 | 102 | 86 | 91 | 292 | 437 | 322 | 125 | 59 | 39 |
| 24 | 107 | 146 | 303 | 100 | 82 | 89 | 275 | 428 | 303 | 120 | 53 | 39 |
| 25 | 105 | 152 | 265 | 104 | 81 | 88 | 258 | 460 | 300 | 116 | 58 | 38 |
| 26 | 100 | 146 | 233 | 110 | 77 | 84 | 249 | 498 | 300 | 112 | 59 | 36 |
| 27 | 94 | 139 | 212 | 114 | 77 | 82 | 239 | 508 | 286 | 110 | 57 | 37 |
| 28 | 93 | 137 | 198 | 118 | 76 | 81 | 227 | 508 | 278 | 105 | 58 | 37 |
| 29 | 89 | 137 | 182 | 120 | - | 82 | 215 | 503 | 265 | 102 | 57 | 37 |
| 30 | 86 | 143 | 174 | 114 | - | 93 | 215 | 469 | 258 | 100 | 54 | 37 |
| 31 | 83 | - | 162 | 112 | - | 131 | - | 428 | - | 99 | 52 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 4,245 | 332 | 83 | 137 | 1.85 | 2.13 | 8,420 |
| November..... | 4,991 | 320 | 82 | 166 | 2.24 | 2.51 | 9,900 |
| December..... | 8,958 | 798 | 141 | 289 | 3.91 | 4.60 | 17,770 |
| Calendar year 1941..... | 44,125 | 798 | 35 | 121 | 1.64 | 22.16 | 87,530 |
| January..... | 3,708 | 149 | 100 | 120 | 1.62 | 1.66 | 7,350 |
| February..... | 3,629 | 201 | 76 | 130 | 1.76 | 1.82 | 7,200 |
| March..... | 3,259 | 206 | 76 | 105 | 1.42 | 1.64 | 6,460 |
| April..... | 7,354 | 310 | 192 | 245 | 3.31 | 3.70 | 14,590 |
| May..... | 9,530 | 508 | 203 | 307 | 4.15 | 4.79 | 18,900 |
| June..... | 12,438 | 860 | 258 | 415 | 5.61 | 6.25 | 24,670 |
| July..... | 4,829 | 246 | 99 | 156 | 2.11 | 2.43 | 9,580 |
| August..... | 2,179 | 95 | 52 | 70.3 | .960 | 1.10 | 4,320 |
| September..... | 1,307 | 52 | 37 | 43.6 | .559 | .66 | 2,590 |
| Water year 1941-42..... | 66,427 | 860 | 37 | 182 | 2.45 | 33.39 | 131,800 |

Peak discharge.- Dec. 19 (7 a.m.) 860 sec.-ft.; June 11 (6 to 9 a.m.) 924 sec.-ft.
Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Green River near Palmer, Wash.

Location.- Water-stage recorder, lat. 47°17'40", long. 121°49'20", in SW¼ sec. 20, T. 21 N., R. 8 E., 1½ miles upstream from diversion dam and intake of Tacoma water-supply system, 2½ miles downstream from North Fork, and 4 miles southeast of Palmer.

Drainage area.- 231 square miles.

Records available.- October 1931 to September 1942.

Average discharge.- 11 years, 1,029 second-feet.

Extremes.- Maximum discharge during year, 7,900 second-feet Dec. 19 (gage height, 12.92 feet); minimum, 103 second-feet Sept. 27 (gage height, 4.33 feet).

1931-42: Maximum discharge, 33,600 second-feet Dec. 9, 1933 (gage height, 19.4 feet, computed on basis of flow over diversion dam); minimum, 81 second-feet Sept. 4, 5, 1934; minimum gage height, 4.00 feet Sept. 4, 1933.

Remarks.- Records excellent. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Mar. 9 | | | | | Mar. 10 to Sept. 30 | | | | | | |
|------------------|-----|------|-------|------|---------------------|-----|-----|-----|-------|------|-------|
| 4.7 | 270 | 7.0 | 1,530 | 11.0 | 5,070 | 4.3 | 100 | 5.3 | 520 | 9.0 | 2,840 |
| 5.0 | 410 | 8.0 | 2,170 | 12.0 | 6,450 | 4.4 | 130 | 6.1 | 935 | 10.0 | 3,860 |
| 5.4 | 610 | 9.0 | 2,890 | | | 4.5 | 164 | 7.0 | 1,450 | 11.0 | 5,060 |
| 5.8 | 830 | 10.0 | 3,870 | | | 4.8 | 285 | 8.0 | 2,070 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|---------|---------|-------|-------|-------|------|-------|
| 1 | 775 | 390 | 802 | 720 | 802 | 465 | al, 630 | 990 | 1,070 | 665 | 287 | 164 |
| 2 | 850 | 375 | 1,530 | 704 | 775 | 560 | 1,570 | 1,100 | 990 | 625 | 283 | 161 |
| 3 | 1,330 | 550 | 1,840 | 665 | 830 | 585 | 1,390 | 1,070 | 908 | 585 | 275 | 161 |
| 4 | 2,240 | 775 | 1,910 | 621 | 1,410 | 545 | 1,300 | 1,040 | 882 | 560 | 275 | 157 |
| 5 | 1,650 | 1,320 | 2,100 | 575 | 1,720 | 590 | 1,330 | 962 | 798 | 525 | 266 | 157 |
| 6 | 1,320 | 1,140 | 2,580 | 550 | 1,380 | 590 | 1,500 | 935 | 990 | 495 | 254 | 154 |
| 7 | 1,200 | 968 | 2,380 | 530 | 1,140 | 570 | 1,330 | 990 | 1,020 | 470 | 245 | 150 |
| 8 | 1,110 | 830 | 1,910 | 535 | 1,110 | 575 | 1,240 | 1,100 | 990 | 445 | 241 | 147 |
| 9 | 1,170 | 720 | 1,590 | 545 | 1,140 | 575 | 1,160 | 1,160 | 1,160 | 430 | 237 | 147 |
| 10 | 1,500 | 648 | 1,380 | 565 | 1,440 | 2,430 | 1,210 | 1,160 | 1,940 | 425 | 233 | 154 |
| 11 | 1,530 | 638 | 1,200 | 545 | 1,720 | 1,810 | 1,450 | 1,020 | 4,680 | 460 | 229 | 150 |
| 12 | 1,530 | 580 | 1,080 | 560 | 1,470 | 1,510 | 1,570 | 908 | 3,120 | 430 | 221 | 144 |
| 13 | 1,380 | 971 | 968 | 585 | 1,200 | 1,270 | 1,480 | 825 | 2,210 | 392 | 213 | 140 |
| 14 | 1,200 | 2,040 | 885 | 565 | 1,050 | 1,100 | 1,480 | 770 | 1,870 | 395 | 205 | 137 |
| 15 | 1,050 | 2,040 | 912 | 545 | 940 | 982 | 1,330 | 770 | 2,140 | 445 | 201 | 137 |
| 16 | | 968 | 1,910 | 1,170 | 540 | 830 | 852 | 1,240 | 2,350 | 565 | 197 | 140 |
| 17 | | 912 | 1,590 | 1,080 | 545 | 748 | 798 | 1,210 | 2,280 | 695 | 197 | 140 |
| 18 | | 850 | 1,350 | 1,730 | 515 | 692 | 745 | 1,130 | 2,140 | 645 | 190 | 133 |
| 19 | | 850 | 1,140 | 6,300 | 495 | 643 | 695 | 1,040 | 825 | 2,000 | 565 | 190 |
| 20 | | 748 | 995 | 4,340 | 475 | 610 | 640 | 1,130 | 935 | 1,810 | 500 | 186 |
| 21 | 714 | 885 | 2,970 | 465 | 575 | 680 | 1,360 | 1,160 | 1,630 | 510 | 190 | 124 |
| 22 | 670 | 802 | 2,390 | 455 | 580 | 640 | 1,330 | 1,420 | 1,420 | 430 | 182 | 121 |
| 23 | 621 | 748 | 2,100 | 445 | 525 | 615 | 1,160 | 1,330 | 1,300 | 408 | 179 | 118 |
| 24 | 575 | 720 | 1,780 | 455 | 500 | 590 | 1,100 | 1,160 | 1,150 | 378 | 175 | 115 |
| 25 | 535 | 968 | 1,500 | 560 | 480 | 565 | 1,100 | 1,210 | 1,040 | 368 | 175 | 115 |
| 26 | 510 | 885 | 1,290 | 600 | 455 | 595 | 1,040 | 1,300 | 990 | 359 | 186 | 112 |
| 27 | 480 | 858 | 1,170 | 660 | 450 | 585 | 962 | 1,390 | 880 | 336 | 182 | 109 |
| 28 | 460 | 830 | 1,050 | 775 | 445 | 535 | 935 | 1,420 | 825 | 325 | 205 | 112 |
| 29 | 435 | 858 | 940 | 775 | - | as70 | 680 | 1,560 | 770 | 314 | 197 | 115 |
| 30 | 410 | 802 | 885 | 698 | - | as70 | 682 | 1,240 | 720 | 314 | 179 | 121 |
| 31 | 400 | - | 802 | 654 | - | al, 040 | - | 1,180 | - | 305 | 168 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 29,813 | 2,240 | 400 | 962 | 4.16 | 4.60 | 59,130 |
| November..... | 29,326 | 2,040 | 375 | 978 | 4.23 | 4.72 | 58,170 |
| December..... | 54,554 | 6,300 | 802 | 1,760 | 7.62 | 8.78 | 108,200 |
| Calendar year 1941..... | 238,262 | 6,300 | 122 | 653 | 2.83 | 38.34 | 472,600 |
| January..... | 17,922 | 775 | 445 | 578 | 2.50 | 2.69 | 35,550 |
| February..... | 25,630 | 1,720 | 445 | 915 | 3.96 | 4.13 | 50,940 |
| March..... | 25,847 | 2,430 | 465 | 834 | 3.61 | 4.16 | 51,270 |
| April..... | 37,239 | 1,630 | 852 | 1,241 | 5.37 | 6.00 | 73,860 |
| May..... | 35,040 | 1,420 | 770 | 1,066 | 4.61 | 5.32 | 65,530 |
| June..... | 46,028 | 4,600 | 720 | 1,534 | 6.64 | 7.41 | 91,290 |
| July..... | 14,361 | 695 | 305 | 463 | 2.00 | 2.31 | 28,450 |
| August..... | 6,643 | 287 | 168 | 214 | .928 | 1.07 | 13,180 |
| September..... | 4,092 | 164 | 109 | 136 | .569 | .66 | 8,180 |
| Water year 1941-42..... | 324,490 | 6,300 | 109 | 889 | 3.85 | 52.25 | 643,600 |

Peak discharge.- Dec. 19 (7:20 a.m.) 7,900 sec.-ft.; June 11 (5 a.m.) 5,450 sec.-ft.

No gage-height record; discharge computed on basis of records for station near Auburn and recorded range in stage.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

DUWAMISH RIVER BASIN

Green River near Black Diamond, Wash.

Location.- Staff gage, lat. 47°17'00", long. 122°03'30", in NW¼ sec. 28, T. 21 N., R. 6 E., at highway bridge, three-quarters of a mile upstream from Newaukum Creek and 3 miles southwest of Black Diamond. Datum of gage is 158.5 feet above mean sea level (river-profile survey).

Drainage area.- 286 square miles.

Records available.- October 1939 to September 1942.

Extremes.- Maximum discharge observed during year, 8,360 second-feet Dec. 19 (gage height, 6.46 feet); minimum observed, 91 second-feet Sept. 24-29 (gage height, 1.60 feet). 1939-42: Maximum discharge, 8,680 second-feet Nov. 29, 1940 (gage height, 6.55 feet, from graph based on gage readings); minimum observed, 56 second-feet Sept. 25, 26, 1940 (gage height, 1.39 feet).

Remarks.- Records good. Gage read twice daily. City of Tacoma diverts about 85 second-feet from river near Palmer, several miles above station, for municipal use. No regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 19 | | | | Dec. 20 to Sept. 30 | | | |
|-------------------|-------|-----|-------|---------------------|-----|-----|-------|
| 2.2 | 400 | 4.0 | 2,400 | 1.6 | 91 | 2.4 | 552 |
| 2.4 | 530 | 4.5 | 3,250 | 1.8 | 177 | 2.7 | 795 |
| 2.7 | 760 | 5.0 | 4,230 | 2.0 | 286 | 3.0 | 1,080 |
| 3.0 | 1,050 | 6.0 | 6,820 | 2.2 | 412 | 3.5 | 1,690 |
| 3.5 | 1,660 | | | | | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 431 | 400 | 804 | 885 | 795 | 516 | 1,500 | 1,030 | 1,140 | 709 | 329 | 149 |
| 2 | 760 | 382 | 943 | 795 | 840 | 516 | 1,620 | 1,080 | 1,030 | 668 | 316 | 145 |
| 3 | 804 | 462 | 1,660 | 752 | 885 | 552 | 1,560 | 1,140 | 980 | 668 | 304 | 140 |
| 4 | 2,240 | 719 | 1,730 | 752 | 1,370 | 590 | 1,370 | 1,140 | 885 | 628 | 280 | 136 |
| 5 | 1,660 | 1,280 | 2,240 | 709 | 1,630 | 628 | 1,370 | 1,190 | 932 | 628 | 269 | 131 |
| 6 | | 1,220 | 2,560 | 628 | 1,620 | 628 | 1,370 | 1,140 | 1,030 | 590 | 263 | 123 |
| 7 | | 1,160 | 2,400 | 628 | 1,370 | 668 | 1,370 | 1,140 | 1,080 | 552 | 256 | 123 |
| 8 | | 1,050 | 1,940 | 628 | 1,310 | 668 | 1,310 | 1,140 | 1,140 | 552 | 246 | 115 |
| 9 | | 1,050 | 719 | 1,800 | 628 | 1,370 | 1,030 | 1,310 | 1,080 | 1,250 | 516 | 240 |
| 10 | | 1,340 | 640 | 1,400 | 628 | 1,430 | 2,730 | 1,250 | 1,080 | 1,560 | 516 | 235 |
| 11 | | 1,400 | 640 | 1,280 | 628 | 1,430 | 2,730 | 1,310 | 1,030 | 4,920 | 516 | 229 |
| 12 | | 1,530 | 840 | 1,100 | 628 | 1,370 | 2,570 | 1,430 | 1,030 | 3,250 | 516 | 224 |
| 13 | | 1,340 | 719 | 943 | 628 | 1,370 | 2,410 | 1,560 | 980 | 2,410 | 480 | 213 |
| 14 | | 1,160 | 1,940 | 896 | 590 | 1,310 | 2,110 | 1,370 | 932 | 1,830 | 516 | 208 |
| 15 | | 994 | 2,090 | 896 | 628 | 1,190 | 1,560 | 1,310 | 932 | 2,110 | 516 | 208 |
| 16 | | 943 | 1,940 | 1,160 | 590 | 1,030 | 1,250 | 840 | 2,570 | 590 | 198 | 115 |
| 17 | | 896 | 1,600 | 1,160 | 590 | 885 | 980 | 1,190 | 840 | 2,410 | 795 | 198 |
| 18 | | 848 | 1,340 | 1,340 | 552 | 795 | 932 | 1,190 | 885 | 2,260 | 752 | 193 |
| 19 | | 804 | 1,160 | 5,430 | 552 | 752 | 885 | 1,140 | 932 | 2,260 | 668 | 162 |
| 20 | | 719 | 1,050 | 4,920 | 552 | 709 | 840 | 1,250 | 980 | 2,110 | 590 | 177 |
| 21 | | 678 | 896 | 3,430 | 516 | 668 | 795 | 1,370 | 1,140 | 1,830 | 590 | 177 |
| 22 | | 640 | 804 | 2,570 | 516 | 628 | 752 | 1,310 | 1,310 | 1,560 | 552 | 172 |
| 23 | | 602 | 760 | 2,260 | 516 | 590 | 752 | 1,250 | 1,370 | 1,430 | 516 | 159 |
| 24 | | 566 | 719 | 2,110 | 552 | 552 | 752 | 1,190 | 1,310 | 1,310 | 480 | 159 |
| 25 | | 530 | 896 | 1,830 | 668 | 552 | 752 | 1,140 | 1,250 | 1,140 | 446 | 168 |
| 26 | | 530 | 896 | 1,560 | 709 | 552 | 709 | 1,140 | 1,370 | 1,030 | 412 | 168 |
| 27 | | 496 | 804 | 1,190 | 752 | 516 | 752 | 1,030 | 1,430 | 885 | 392 | 172 |
| 28 | | 468 | 804 | 1,140 | 795 | 516 | 752 | 980 | 1,500 | 795 | 380 | 187 |
| 29 | | 431 | 848 | 1,080 | 840 | - | 752 | 980 | 1,430 | 752 | 366 | 177 |
| 30 | | 400 | 804 | 980 | 795 | - | 752 | 1,050 | 1,370 | 709 | 354 | 168 |
| 31 | | 400 | - | 932 | 752 | - | 885 | - | 1,310 | - | 341 | 159 |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 28,084 | 2,240 | 400 | 908 | 55,700 |
| November..... | 28,910 | 2,090 | 382 | 964 | 57,340 |
| December..... | 56,684 | 5,430 | 804 | 1,796 | 110,400 |
| Calendar year 1941..... | 232,096 | 5,430 | 94 | 636 | 460,300 |
| January..... | 20,382 | 885 | 516 | 657 | 40,430 |
| February..... | 28,235 | 1,630 | 516 | 1,008 | 56,000 |
| March..... | 33,028 | 2,730 | 516 | 1,065 | 65,510 |
| April..... | 38,450 | 1,620 | 980 | 1,262 | 76,260 |
| May..... | 35,331 | 1,500 | 840 | 1,140 | 70,080 |
| June..... | 48,698 | 4,920 | 709 | 1,620 | 96,390 |
| July..... | 16,795 | 795 | 341 | 542 | 33,310 |
| August..... | 6,642 | 329 | 159 | 214 | 13,170 |
| September..... | 3,388 | 149 | 91 | 113 | 6,720 |
| Water year 1941-42..... | 343,527 | 5,430 | 91 | 941 | 681,300 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Green River near Auburn, Wash.

Location.- Water-stage recorder, lat. 47°18'15", long. 122°02'10", in lot 3, sec. 17, T. 21 N., R. 5 E., 1½ miles east of Auburn and 2 miles downstream from Big Soos Creek. Datum of gage is at mean sea level, datum of 1929.

Drainage area.- 366 square miles.

Records available.- August 1936 to September 1942.

Extremes.- Maximum discharge during year, 9,310 second-feet Dec. 19 (elevation, 62.43 feet); minimum, 162 second-feet Sept. 25 (elevation, 54.49 feet).
1936-42: Maximum discharge, 14,400 second-feet Apr. 18, 1938 (elevation, 65.88 feet); minimum, 113 second-feet Sept. 25, 1940; minimum elevation, that of Sept. 25, 1942.

Remarks.- Records excellent. City of Tacoma diverts about 85 second-feet from river near Palmer, several miles upstream from station, for municipal supply. No regulation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|-------|-------|-------|------------------|---------|---------|-------|------|----------------------|-------|
| 1 | 512 | 471 | 1,020 | 1,250 | 1,250 | 726 | 1,540 | 1,250 | 1,340 | 919 | 402 | 234 |
| 2 | 850 | 456 | 1,440 | 1,160 | 1,300 | 785 | 1,530 | 1,300 | 1,250 | 976 | 391 | 230 |
| 3 | 972 | 540 | 2,130 | 1,130 | 1,300 | 902 | 1,680 | 1,340 | 1,140 | 825 | 375 | 226 |
| 4 | 2,220 | 845 | 2,080 | 1,060 | 1,680 | 825 | 1,540 | 1,300 | 1,060 | 783 | 370 | 226 |
| 5 | 1,930 | 1,200 | 2,330 | 998 | 2,340 | 808 | 1,540 | 1,200 | 980 | 751 | 365 | 226 |
| 6 | 1,480 | 1,390 | 2,730 | 945 | 1,980 | 834 | 1,540 | 1,140 | 1,090 | 710 | 345 | 226 |
| 7 | 1,390 | 1,150 | 2,730 | 928 | 1,730 | 805 | 1,540 | 1,050 | 1,160 | 679 | 345 | 217 |
| 8 | 1,200 | 1,020 | 2,330 | 936 | 1,580 | 792 | 1,490 | 1,250 | 1,250 | 647 | 336 | 213 |
| 9 | 1,240 | 908 | 1,980 | 998 | 1,680 | 1,230 | 1,440 | 1,340 | 1,340 | 625 | 330 | 205 |
| 10 | 1,440 | 828 | 1,730 | 1,020 | 1,880 | 3,000 | 1,440 | 1,390 | 1,580 | 588 | 326 | 209 |
| 11 | 1,630 | 856 | 1,530 | 963 | 2,180 | 2,450 | 1,580 | 1,300 | 4,700 | 617 | 317 | 213 |
| 12 | 1,730 | 783 | 1,440 | 963 | 2,030 | 2,030 | 1,730 | 1,160 | 3,840 | 617 | 312 | 205 |
| 13 | 1,580 | 872 | 1,290 | 989 | 1,730 | 1,680 | 1,730 | 1,070 | 2,890 | 559 | 303 | 201 |
| 14 | 1,390 | 2,130 | 1,200 | 963 | 1,540 | 1,490 | 1,730 | 998 | 2,180 | 545 | 298 | 201 |
| 15 | 1,200 | 2,380 | 1,200 | 925 | 1,390 | 1,340 | 1,630 | 954 | 2,560 | 617 | 285 | 193 |
| 16 | 1,080 | 2,230 | 1,730 | 902 | 1,300 | 1,250 | 1,490 | 936 | 2,890 | 710 | 280 | 197 |
| 17 | 1,080 | 1,830 | 1,680 | 910 | 1,200 | 1,160 | 1,440 | 936 | 2,780 | 919 | 276 | 201 |
| 18 | 963 | 1,630 | 1,830 | 859 | 1,100 | 1,120 | 1,390 | 945 | 2,620 | 876 | 271 | 197 |
| 19 | 963 | 1,440 | 7,260 | 854 | 1,020 | 1,110 | 1,300 | 962 | 2,450 | 775 | 268 | 189 |
| 20 | 938 | 1,290 | 6,760 | 800 | 998 | 1,060 | 1,250 | 1,050 | 2,230 | 688 | 259 | 186 |
| 21 | 854 | 1,140 | 4,720 | 775 | 963 | 963 | 1,440 | 1,200 | 2,030 | 625 | 259 | 178 |
| 22 | 801 | 1,040 | 3,600 | 751 | 910 | 989 | 1,540 | 1,540 | 1,830 | 588 | 255 | 174 |
| 23 | 748 | 954 | 3,240 | 734 | 868 | 989 | 1,440 | 1,580 | 1,630 | 559 | 250 | 174 |
| 24 | 705 | 899 | 2,720 | 775 | 825 | 945 | 1,300 | 1,390 | 1,490 | 332 | 242 | 170 |
| 25 | 654 | 1,090 | 2,400 | 893 | 792 | 593 | 1,300 | 1,390 | 1,390 | 504 | 242 | 166 |
| 26 | 620 | 1,090 | 2,080 | 989 | 767 | 859 | 1,300 | 1,490 | 1,340 | 485 | 250 | 166 |
| 27 | 598 | 1,040 | 1,880 | 1,060 | 751 | 825 | 1,200 | 1,580 | 1,250 | 460 | 255 | 166 |
| 28 | 556 | 1,010 | 1,680 | 1,250 | 726 | 808 | 1,160 | 1,630 | 1,140 | 441 | 259 | 166 |
| 29 | 532 | 1,080 | 1,540 | 1,340 | - | 800 | 1,100 | 1,630 | 1,060 | 435 | 280 | 166 |
| 30 | 509 | 1,010 | 1,440 | 1,200 | - | 816 | 1,090 | 1,490 | 989 | 430 | 255 | 170 |
| 31 | 486 | - | 1,340 | 1,120 | - | 971 | - | 1,440 | - | 419 | 238 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October..... | | | | | | 32,721 | 2,220 | 496 | 1,056 | | 64,900 | |
| November..... | | | | | | 34,682 | 2,380 | 456 | 1,156 | | 68,790 | |
| December..... | | | | | | 73,110 | 7,260 | 1,020 | 2,358 | | 145,000 | |
| Calendar year 1941..... | | | | | | 305,750 | 7,260 | 145 | 838 | | 606,400 | |
| January..... | | | | | | 30,420 | 1,340 | 734 | 981 | | 60,340 | |
| February..... | | | | | | 37,810 | 2,340 | 726 | 1,350 | | 75,000 | |
| March..... | | | | | | 35,256 | 3,000 | 726 | 1,137 | | 69,930 | |
| April..... | | | | | | 43,720 | 1,830 | 1,090 | 1,457 | | 86,720 | |
| May..... | | | | | | 39,231 | 1,630 | 936 | 1,266 | | 77,810 | |
| June..... | | | | | | 55,479 | 4,700 | 980 | 1,849 | | 110,000 | |
| July..... | | | | | | 19,804 | 919 | 419 | 639 | | 39,280 | |
| August..... | | | | | | 9,238 | 402 | 238 | 298 | | 18,320 | |
| September..... | | | | | | 5,891 | 234 | 166 | 196 | | 11,680 | |
| Water year 1941-42..... | | | | | | 417,362 | 7,260 | 166 | 1,143 | | 827,800 | |

Note.- Shifting-control method used Dec. 21 to Mar. 1.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Cedar River at Cedar Falls, Wash.

Location.- Water-stage recorder, lat. 47°25'10", long. 121°47'20", in sec. 4, T. 22 N., R. 8 E., three-quarters of a mile downstream from Seattle municipal power plant at Cedar Falls and 3 miles downstream from Cedar Lake.

Drainage area.- 86 square miles.

Records available.- April 1914 to September 1942.

Average discharge.- 28 years, 285 second-feet.

Extremes (regulated).- Maximum discharge during year, 822 second-feet June 15 (gage height, 8.85 feet); minimum, 31 second-feet Sept. 26 (gage height, 4.93 feet); minimum daily, 34 second-feet Sept. 2.

1914-42: Maximum discharge, 6,290 second-feet Dec. 19, 1917; maximum gage height, 11.5 feet Dec. 22, 1933; no flow Nov. 25, 1917, Aug. 18, 1923; minimum daily, 2 second-feet Sept. 20, 1922.

Remarks.- Records excellent. All diverted water returned to river above gage. Flow partly regulated by Cedar Lake Reservoir for power.

Cooperation.- Gage-height record collected in cooperation with city of Seattle.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | |
|-----|-----|-----|-----|
| 5.0 | 40 | 5.8 | 224 |
| 5.2 | 71 | 6.0 | 306 |
| 5.4 | 109 | 6.3 | 460 |
| 5.6 | 169 | 6.6 | 646 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1 | 149 | 95 | 186 | 435 | †176 | †216 | 110 | 258 | 313 | 191 | 381 | 42 |
| 2 | 154 | †136 | 140 | 480 | 211 | 189 | 268 | 186 | 327 | 206 | †490 | 34 |
| 3 | 214 | 293 | 170 | 451 | 387 | 142 | 336 | †78 | 310 | 165 | †150 | 38 |
| 4 | 212 | 298 | 189 | †467 | 454 | 151 | 441 | 325 | 280 | 151 | †120 | 79 |
| 5 | †149 | 130 | 246 | 500 | 385 | 167 | †362 | 260 | 277 | †114 | 108 | 90 |
| 6 | 124 | 127 | 242 | 506 | 322 | 162 | 380 | 263 | 108 | 180 | 108 | †86 |
| 7 | 126 | 166 | †103 | 490 | 359 | 128 | 429 | 384 | †80 | 160 | 93 | 120 |
| 8 | 118 | 109 | 179 | 465 | †481 | †77 | 321 | 478 | 387 | 158 | 174 | 126 |
| 9 | 150 | †152 | 245 | 405 | 449 | 307 | 439 | 552 | 407 | 200 | †160 | 80 |
| 10 | 179 | 345 | 244 | 362 | 430 | 380 | 370 | †559 | 410 | 238 | 86 | 80 |
| 11 | 98 | 62 | 200 | †269 | 393 | 369 | 339 | 399 | 392 | 235 | 88 | 67 |
| 12 | †75 | 188 | 271 | 508 | 450 | 441 | †346 | 345 | 336 | †195 | 98 | 43 |
| 13 | 118 | 104 | 298 | 489 | 388 | 498 | 460 | 314 | 139 | 314 | 91 | †94 |
| 14 | 230 | 95 | †165 | 518 | 348 | 398 | 477 | 390 | †88 | 351 | 128 | 54 |
| 15 | 120 | 77 | 489 | 574 | †562 | †307 | 481 | 264 | 381 | 452 | 65 | 60 |
| 16 | 120 | †91 | 301 | 603 | 430 | 430 | 434 | 222 | 430 | 553 | †65 | 53 |
| 17 | 160 | 145 | 278 | 557 | 292 | 431 | 469 | †237 | 327 | 549 | 88 | 79 |
| 18 | 204 | 106 | 252 | †630 | 173 | 262 | 520 | 266 | 330 | 551 | 144 | 64 |
| 19 | †57 | 122 | 312 | 568 | 198 | 161 | †500 | 315 | 329 | †469 | 90 | 53 |
| 20 | 284 | 93 | 266 | 579 | 251 | 305 | 492 | 265 | 193 | 379 | 139 | †54 |
| 21 | 374 | 103 | †290 | 454 | 66 | 100 | 500 | 269 | †113 | 275 | 77 | 53 |
| 22 | 401 | 146 | 278 | 465 | †65 | †108 | 485 | 320 | 345 | 306 | 72 | 54 |
| 23 | 282 | †68 | 261 | 367 | 164 | 262 | 512 | 153 | 327 | 332 | †92 | 53 |
| 24 | 404 | 204 | 173 | 424 | 158 | 503 | 507 | †116 | 334 | 293 | 76 | 75 |
| 25 | 172 | 123 | 117 | †247 | 194 | 64 | 467 | 322 | 447 | 160 | 68 | 55 |
| 26 | †128 | 104 | 212 | 405 | 143 | 87 | †250 | 320 | 220 | †152 | 79 | 60 |
| 27 | 398 | 211 | 143 | 245 | 192 | 107 | 452 | 224 | 115 | 312 | 159 | †43 |
| 28 | 387 | 130 | †259 | 284 | 103 | 181 | 365 | 278 | †116 | 426 | 81 | 53 |
| 29 | 171 | 83 | 147 | 227 | - | †63 | 261 | 273 | 231 | 493 | 72 | 64 |
| 30 | 197 | †423 | 285 | 274 | - | 200 | 341 | 75 | 330 | 420 | †68 | 70 |
| 31 | 217 | - | 430 | 194 | - | 65 | - | †74 | - | 400 | 70 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 6,182 | 404 | 67 | 199 | 12,260 |
| November..... | 4,539 | 423 | 62 | 151 | 9,000 |
| December..... | 7,391 | 489 | 103 | 238 | 14,660 |
| Calendar year 1941..... | 42,950 | 489 | 52 | 118 | 85,190 |
| January..... | 13,564 | 630 | 194 | 438 | 26,900 |
| February..... | 8,014 | 491 | 65 | 286 | 15,800 |
| March..... | 7,081 | 498 | 63 | 228 | 14,040 |
| April..... | 12,114 | 520 | 110 | 404 | 24,030 |
| May..... | 8,802 | 559 | 74 | 284 | 17,460 |
| June..... | 8,422 | 447 | 80 | 281 | 16,700 |
| July..... | 9,340 | 553 | 114 | 301 | 18,530 |
| August..... | 3,800 | 490 | 65 | 123 | 7,540 |
| September..... | 1,972 | 126 | 34 | 65.7 | 3,910 |
| Water year 1941-42..... | 91,221 | 630 | 34 | 250 | 180,900 |

† Sunday.

a No gage-height record; discharge computed on basis of records for station near Landsberg.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Cedar River near Landsberg, Wash.

Location.- Water-stage recorder, lat. 47°23'35", long. 121°56'50", in sec. 17, T. 22 N., R. 7 E., 1½ miles upstream from Landsberg and intake of Seattle water-supply system, 7 miles upstream from Maple Valley, and 12 miles downstream from Cedar Lake.

Drainage area.- 138 square miles (including that of Rock Creek).

Records available.- October 1898 to April 1901, April 1914 to September 1942. July 1895 to September 1898 (at site 2 miles downstream, published as Cedar River at Clifford Bridge, near Ravensdale), and March 1901 to April 1912 (at site of Seattle water-supply intake, published as Cedar River near Ravensdale); records equivalent.

Average discharge.- 44 years (1895-1911, 1914-42), 688 second-feet (adjusted for Rock Creek diversion since October 1932).

Extremes.- Maximum discharge during year, 1,830 second-feet (regulated) Dec. 19 (gage height, 3.42 feet); minimum, 234 second-feet (regulated) Sept. 27 (gage height, 0.98 feet).

1895-98, 1901-12, 1914-42: Maximum discharge observed, 13,600 second-feet Nov. 19, 1911 (gage height, 9.7 feet, site and datum then in use); minimum observed, 83 second-feet Sept. 19, 1898.

Remarks.- Records excellent. All diversions except Rock Creek returned to river above station. Rock Creek which entered naturally just above gage has been diverted to a point downstream from Seattle municipal water-supply intake to lessen danger of pollution. Monthly discharge adjusted for diversion estimated on basis of ten discharge measurements, and relation of flow of Rock Creek to difference in discharge between records of Cedar River at Cedar Falls and near Landsberg. Flow of river partly regulated by Cedar Lake.

Cooperation.- Gage-height record collected in cooperation with city of Seattle.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------|-----------------------------|--------------|--------|----------------------------|----------------------------|--|-----------------------------|-----------------------|-------------------------|------|------|-------|
| 1 | 374 | 318 | 446 | 810 | †622 | †546 | 436 | 577 | 555 | 537 | 577 | 300 |
| 2 | 372 | †311 | 528 | 844 | 633 | 555 | 536 | a530 | 574 | 534 | †609 | 288 |
| 3 | 446 | 497 | 564 | 854 | 736 | 504 | 612 | †a400 | 560 | 495 | 462 | 286 |
| 4 | 516 | 528 | 599 | †860 | 936 | 468 | 699 | a620 | 564 | 458 | 428 | 299 |
| 5 | †482 | 396 | 640 | 853 | 866 | 531 | †660 | 544 | 531 | †434 | 412 | 346 |
| 6 | 368 | 358 | 674 | 894 | 843 | 515 | 668 | 532 | 397 | 492 | †398 | †324 |
| 7 | 365 | 388 | †629 | 864 | 752 | 460 | 692 | 606 | †369 | 465 | 389 | 350 |
| 8 | 368 | 356 | 567 | 542 | †902 | †420 | 664 | 710 | 526 | 476 | 450 | 376 |
| 9 | 388 | †370 | 606 | 794 | 914 | 777 | 662 | 774 | 696 | 512 | †444 | 345 |
| 10 | 462 | 497 | 570 | 752 | 940 | 878 | 672 | †638 | 736 | 529 | 396 | 300 |
| 11 | 394 | 318 | 548 | †679 | 867 | 810 | 622 | 719 | 862 | 553 | 374 | 312 |
| 12 | †389 | 400 | 585 | 949 | 926 | 786 | †606 | 592 | 738 | †512 | 373 | 276 |
| 13 | 392 | 376 | 548 | 884 | 872 | 876 | 716 | 678 | 529 | 596 | 376 | †318 |
| 14 | 482 | 423 | †516 | 913 | 766 | 804 | 763 | 573 | †356 | 660 | 386 | 280 |
| 15 | 370 | 386 | 782 | 918 | †806 | †686 | 747 | 566 | 890 | 704 | 360 | 284 |
| 16 | 368 | †399 | 737 | 950 | 824 | 782 | 704 | 462 | 908 | 832 | †356 | 278 |
| 17 | 410 | 410 | 652 | 896 | 724 | 780 | 739 | †516 | 768 | 908 | 336 | 285 |
| 18 | 442 | 386 | 780 | †986 | 618 | 660 | 768 | 506 | 762 | 800 | 421 | 293 |
| 19 | †322 | 376 | 1,570 | 936 | 594 | 537 | †746 | 557 | 742 | †836 | 386 | 270 |
| 20 | a530 | 348 | 1,170 | 937 | 646 | 609 | 738 | 510 | 618 | 734 | 412 | †270 |
| 21 | a610 | 340 | †1,000 | 538 | 473 | 498 | 740 | 510 | †520 | 597 | 343 | 268 |
| 22 | 622 | 360 | 916 | 621 | †448 | †450 | 737 | 577 | 702 | 596 | 348 | 265 |
| 23 | 492 | †320 | 890 | 731 | 527 | 578 | 754 | 420 | 681 | 657 | †368 | 264 |
| 24 | 604 | 438 | 746 | 760 | 518 | 624 | 775 | †368 | 694 | 592 | 339 | 279 |
| 25 | 399 | 462 | 646 | †672 | 562 | 447 | 719 | 570 | 765 | 514 | 329 | 265 |
| 26 | †352 | 397 | 708 | 765 | 510 | 386 | †571 | 584 | 628 | †466 | 352 | 269 |
| 27 | 560 | 462 | 626 | 644 | 541 | 428 | 688 | 496 | 488 | 592 | 418 | †248 |
| 28 | 578 | 410 | †744 | 692 | 470 | 500 | 664 | 562 | †478 | 677 | 386 | 256 |
| 29 | 454 | 362 | 602 | 651 | - | †398 | 534 | 548 | 579 | 764 | 337 | 265 |
| 30 | 404 | †660 | 690 | 632 | - | 476 | 600 | 372 | 668 | 704 | †314 | 276 |
| 31 | 413 | - | 814 | 642 | - | 410 | - | †350 | - | 702 | 366 | - |
| Month | Observed | | | | | Rock Creek diversion (acre-feet) | Adjusted for diversion | | | | | |
| | Discharge in second-feet | | | Run-off in acre-feet | Run-off in acre-feet | | Discharge in second-feet | | Run-off in inches | | | |
| | Maxi- mum | Mini- mum | Mean | | | | Mean | Per square mile | | | | |
| October..... | 622 | 322 | 440 | 27,050 | 1,230 | 28,280 | 460 | | | | | |
| November..... | 660 | 311 | 400 | 23,810 | 1,190 | 25,000 | 420 | | | | | |
| December..... | 1,570 | 446 | 709 | 43,600 | 3,070 | 46,670 | 759 | | | | | |
| Calendar year 1941 | 1,570 | 260 | 388 | 280,900 | 14,700 | 295,600 | 408 | | | | | |
| January..... | 986 | 632 | 815 | 50,110 | 1,840 | 51,950 | 845 | | | | | |
| February..... | 940 | 448 | 708 | 39,350 | 2,220 | 41,570 | 748 | | | | | |
| March..... | 878 | 386 | 587 | 36,080 | 1,840 | 37,920 | 617 | | | | | |
| April..... | 775 | 436 | 674 | 40,130 | 1,490 | 41,620 | 599 | | | | | |
| May..... | 658 | 350 | 551 | 33,860 | 922 | 34,770 | 565 | | | | | |
| June..... | 908 | 369 | 636 | 37,790 | 1,790 | 39,580 | 665 | | | | | |
| July..... | 908 | 434 | 610 | 37,640 | 922 | 38,460 | 625 | | | | | |
| August..... | 809 | 314 | 402 | 24,740 | 307 | 25,050 | 407 | | | | | |
| September..... | 376 | 248 | 290 | 17,280 | 179 | 17,460 | 293 | | | | | |
| Water year 1941-42 | 1,570 | 248 | 568 | 411,300 | 17,000 | 428,300 | 592 | | | | | |

† Sunday.

a No gage-height record; discharge computed on basis of records for station at Cedar Falls.
Time bias: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

LAKE WASHINGTON BASIN

Sammanish Lake near Redmond, Wash.

Location.- Staff gage, lat. 47°38'40", long. 122°06'10", in NE¼ sec. 24, T. 25 N., R. 5 E., on left shore, 0.6 mile upstream from outlet and 1.8 miles south of Redmond. Datum of gage is 32.13 feet above mean lower low water (Corps of Engineers, U. S. Army, bench mark). Prior to June 22, 1942, staff gage 1,000 feet down lake at same datum.

Drainage area.- 91 square miles.

Records available.- January 1939 to September 1942.

Extremes.- Maximum gage height observed during year, 6.85 feet Dec. 24, 25; minimum observed, 1.29 feet Sept. 30.
1939-42: Maximum gage height observed, that of Dec. 24, 25, 1941; minimum observed, 0.25 foot Sept. 27, 30, Oct. 1, 1939.
A stage of 9.83 feet was observed by R. L. Tolman on Dec. 22, 1933, from information by Corps of Engineers, U. S. Army.

Remarks.- Gage read once daily. No known diversion or regulation.

Gage height, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1 | 1.58 | 2.27 | 3.58 | 6.24 | 4.66 | 4.20 | 3.55 | 2.53 | 2.17 | 2.24 | 2.16 | 1.72 |
| 2 | 1.69 | 2.25 | 3.82 | 5.13 | 4.67 | 4.21 | 3.49 | 2.54 | 2.16 | 2.82 | 2.13 | 1.68 |
| 3 | 1.61 | 2.24 | 4.01 | 6.04 | 4.69 | 4.21 | 3.45 | 2.52 | 2.15 | 2.79 | 2.12 | 1.68 |
| 4 | 1.68 | 2.26 | 4.19 | 5.93 | 4.73 | - | 3.41 | 2.52 | 2.14 | 2.78 | 2.10 | 1.66 |
| 5 | 1.70 | 2.29 | 4.38 | 5.81 | 4.89 | 4.12 | 3.35 | 2.48 | 2.13 | 2.73 | 2.08 | 1.64 |
| 6 | 1.73 | 2.29 | 4.49 | 5.71 | 4.98 | 4.11 | 3.29 | 2.46 | 2.18 | 2.69 | 2.06 | 1.62 |
| 7 | 1.77 | 2.28 | 4.59 | 5.63 | 5.03 | 4.08 | 3.23 | 2.42 | 2.18 | 2.65 | 2.04 | 1.62 |
| 8 | 1.79 | 2.26 | - | 5.55 | 5.06 | 4.02 | 3.19 | 2.40 | 2.20 | 2.62 | 2.02 | 1.61 |
| 9 | 1.80 | 2.24 | - | 5.49 | 5.07 | 4.11 | 3.15 | 2.37 | 2.24 | 2.59 | 2.01 | 1.60 |
| 10 | 1.90 | 2.22 | - | 5.47 | 5.11 | 4.18 | 3.11 | 2.38 | 2.28 | 2.55 | 2.00 | 1.59 |
| 11 | 1.96 | 2.28 | - | 5.37 | 5.16 | 4.22 | 3.08 | 2.37 | 2.32 | 2.54 | 1.98 | 1.57 |
| 12 | 2.08 | 2.30 | - | 5.29 | 5.14 | 4.22 | 3.05 | 2.35 | 2.34 | 2.50 | 1.95 | 1.55 |
| 13 | 2.12 | 2.34 | 4.63 | 5.24 | 5.12 | 4.24 | 3.01 | 2.33 | 2.36 | 2.46 | 1.93 | 1.53 |
| 14 | 2.16 | 2.63 | 4.57 | 5.19 | 5.10 | 4.22 | 2.98 | 2.31 | - | 2.45 | 1.91 | 1.52 |
| 15 | 2.19 | 2.77 | 4.59 | 5.11 | 5.06 | 4.20 | 3.00 | 2.29 | - | 2.46 | 1.90 | 1.51 |
| 16 | 2.21 | 2.88 | 4.80 | 5.03 | 5.02 | - | 3.02 | 2.27 | - | 2.46 | 1.89 | 1.49 |
| 17 | 2.23 | 2.96 | 4.92 | 5.01 | 4.98 | 4.18 | 2.92 | 2.25 | - | 2.45 | 1.87 | 1.46 |
| 18 | 2.24 | 3.02 | 5.10 | 4.92 | 4.89 | 4.16 | 2.84 | 2.23 | - | 2.44 | 1.86 | 1.45 |
| 19 | 2.29 | 3.05 | 5.53 | 4.85 | 4.83 | 4.12 | 2.76 | 2.21 | 2.72 | 2.42 | 1.84 | 1.44 |
| 20 | 2.32 | 3.08 | 6.09 | 4.78 | 4.81 | 4.08 | 2.72 | 2.19 | 2.76 | 2.40 | 1.83 | 1.43 |
| 21 | 2.34 | 3.08 | 6.49 | 4.71 | 4.74 | 4.02 | 2.68 | 2.18 | - | 2.38 | 1.81 | 1.42 |
| 22 | 2.36 | 3.07 | 6.61 | 4.59 | 4.68 | 4.01 | 2.64 | 2.18 | 2.78 | 2.37 | 1.79 | 1.40 |
| 23 | 2.34 | 3.05 | 6.80 | 4.47 | 4.61 | 3.95 | 2.60 | 2.19 | 2.80 | 2.35 | 1.77 | 1.38 |
| 24 | 2.34 | 3.07 | 6.85 | 4.48 | 4.57 | 3.95 | 2.60 | 2.19 | 2.82 | 2.34 | 1.74 | 1.36 |
| 25 | 2.34 | 3.25 | 6.85 | 4.54 | 4.48 | 3.89 | 2.60 | 2.22 | 2.86 | 2.31 | 1.74 | 1.34 |
| 26 | 2.33 | 3.38 | 6.81 | 4.55 | 4.38 | 3.85 | 2.60 | 2.23 | 2.87 | 2.38 | 1.78 | 1.33 |
| 27 | 2.31 | 3.43 | - | 4.60 | 4.32 | 3.83 | 2.56 | 2.22 | 2.89 | 2.27 | 1.77 | 1.32 |
| 28 | 2.30 | 3.47 | 6.63 | 4.63 | 4.26 | 3.86 | 2.52 | 2.22 | 2.88 | 2.25 | 1.74 | 1.31 |
| 29 | 2.29 | 3.49 | 6.55 | 4.65 | - | 3.89 | 2.49 | 2.21 | 2.87 | 2.22 | 1.74 | 1.30 |
| 30 | 2.29 | 3.53 | 6.47 | 4.64 | - | 3.65 | 2.50 | 2.20 | 2.86 | 2.19 | 1.74 | 1.29 |
| 31 | 2.28 | - | 6.37 | 4.63 | - | 3.60 | - | 2.18 | - | 2.18 | 1.73 | - |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Sammamish River near Redmond, Wash.

Location.- Staff gage, lat. 47°38'40", long. 122°06'10", in NE¼ sec. 24, T. 25 N., R. 5 E., on left shore of Sammamish Lake, 0.6 mile upstream from outlet and 1.8 miles south of Redmond. Datum of gage is 32.13 feet above mean lower low water (Corps of Engineers, U. S. Army, bench mark). Prior to June 22, 1942, staff gage 1,000 feet down lake at same datum. Discharge measurements made at highway bridge 500 feet downstream from Bear Creek.

Drainage area.- 140 square miles, including that of Bear Creek.

Records available.- January 1939 to September 1942 (including flow of Bear Creek).

Extremes.- Maximum discharge observed during year, 672 second-feet Dec. 23-25; minimum observed, 80 second-feet Sept. 25-30.

1939-42: Maximum discharge observed, 689 second-feet Mar. 9, 10, 1940; minimum observed, 51 second-feet Sept. 27, 30, Oct. 1, 1939 (gage height, 0.25 foot).

Remarks.- Records fair. Gage read once daily. No known diversion or regulation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 97 | 150 | 272 | 593 | 406 | 371 | 316 | 206 | 161 | 201 | 96 | 92 |
| 2 | 97 | 150 | 299 | 580 | 406 | 382 | 305 | 206 | 161 | 196 | 93 | 89 |
| 3 | 97 | 150 | 321 | 567 | 418 | 382 | 305 | 206 | 161 | 191 | 91 | 90 |
| 4 | 104 | 150 | 332 | 554 | 418 | a376 | 294 | 206 | 156 | 191 | 89 | 89 |
| 5 | 104 | 155 | 354 | 541 | 442 | 371 | 294 | 201 | 156 | 181 | 89 | 88 |
| 6 | 104 | 150 | 366 | 528 | 454 | 371 | 283 | 196 | 161 | 176 | 89 | 87 |
| 7 | 108 | 150 | 378 | 515 | 464 | 371 | 278 | 196 | 161 | 171 | 89 | 86 |
| 8 | 108 | 150 | a378 | 502 | 466 | 360 | 272 | 191 | 161 | 166 | 89 | 86 |
| 9 | 108 | 145 | a378 | 502 | 466 | 371 | 272 | 186 | 166 | 161 | 90 | 88 |
| 10 | 116 | 146 | a378 | 502 | 478 | 382 | 266 | 191 | 171 | 156 | 91 | 88 |
| 11 | 120 | 150 | a378 | 490 | 478 | 382 | 261 | 186 | 161 | 151 | 91 | 87 |
| 12 | 128 | 150 | a378 | 478 | 478 | 382 | 261 | 186 | 176 | 146 | 90 | 87 |
| 13 | 132 | 155 | 378 | 466 | 478 | 382 | 256 | 181 | 176 | 141 | 90 | 86 |
| 14 | 137 | 180 | 366 | 466 | 478 | 382 | 250 | 181 | a182 | 141 | 90 | 86 |
| 15 | 137 | 195 | 378 | 454 | 466 | 382 | 256 | 176 | a188 | 141 | 91 | 86 |
| 16 | 142 | 205 | 402 | 442 | 466 | a382 | 256 | 176 | a194 | 141 | 92 | 85 |
| 17 | 142 | 215 | 414 | 442 | 466 | 382 | 244 | 176 | a200 | 136 | 92 | 83 |
| 18 | 146 | 220 | 438 | 430 | 434 | 382 | 239 | 171 | a206 | 136 | 92 | 83 |
| 19 | 150 | 220 | 500 | 430 | 442 | 371 | 228 | 171 | 212 | 131 | 91 | 83 |
| 20 | 150 | 225 | 578 | 418 | 442 | 371 | 222 | 166 | 217 | 131 | 91 | 83 |
| 21 | 155 | 225 | 630 | 406 | 430 | 360 | 222 | 166 | a214 | 126 | 90 | 83 |
| 22 | 155 | 220 | 644 | 394 | 430 | 360 | 217 | 166 | 212 | 126 | 89 | 83 |
| 23 | 155 | 220 | 672 | 382 | 418 | 360 | 212 | 166 | 212 | 122 | 88 | 82 |
| 24 | 155 | 220 | 672 | 382 | 418 | 360 | 212 | 166 | 212 | 120 | 87 | 81 |
| 25 | 155 | 240 | 672 | 394 | 406 | 349 | 212 | 166 | 217 | 116 | 87 | 80 |
| 26 | 155 | 250 | 662 | 394 | 394 | 349 | 212 | 171 | 217 | 112 | 92 | 80 |
| 27 | 156 | 255 | a655 | 394 | 382 | 338 | 206 | 166 | 217 | 111 | 92 | 80 |
| 28 | 150 | 260 | 648 | 406 | 382 | 349 | 206 | 166 | 212 | 108 | 90 | 80 |
| 29 | 150 | 260 | 634 | 406 | - | 327 | 201 | 166 | 206 | 104 | 91 | 80 |
| 30 | 150 | 266 | 620 | 406 | - | 327 | 201 | 166 | 206 | 101 | 92 | 80 |
| 31 | 150 | - | 606 | 406 | - | 316 | - | 161 | - | 99 | 92 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 4,112 | 155 | 97 | 133 | 0.950 | 1.09 | 8,160 |
| November..... | 5,828 | 266 | 146 | 194 | 1.39 | 1.55 | 11,560 |
| December..... | 14,781 | 672 | 272 | 477 | 3.41 | 3.93 | 29,320 |
| Calendar year 1941..... | 71,490 | 672 | 56 | 196 | 1.40 | 19.00 | 141,800 |
| January..... | 14,270 | 593 | 382 | 460 | 3.29 | 3.79 | 28,300 |
| February..... | 12,316 | 478 | 382 | 440 | 3.14 | 3.27 | 24,450 |
| March..... | 11,330 | 362 | 316 | 355 | 2.61 | 3.01 | 22,470 |
| April..... | 7,459 | 316 | 201 | 249 | 1.79 | 1.98 | 14,790 |
| May..... | 5,621 | 206 | 161 | 180 | 1.29 | 1.48 | 11,070 |
| June..... | 5,672 | 217 | 156 | 189 | 1.35 | 1.51 | 11,260 |
| July..... | 4,430 | 201 | 99 | 143 | 1.02 | 1.18 | 8,790 |
| August..... | 2,808 | 96 | 87 | 90.5 | .646 | .75 | 5,570 |
| September..... | 2,545 | 92 | 80 | 84.8 | .606 | .68 | 5,080 |
| Water year 1941-42..... | 91,130 | 672 | 80 | 250 | 1.79 | 24.22 | 180,800 |

a. No gage-height record; discharge interpolated.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

LAKE WASHINGTON BASIN

Sammamish River at Bothell, Wash.

Location.- Water-stage recorder, lat. 47°45'00", long. 122°11'30", in NW 1/4 sec. 8, T. 28 N., R. 5 E., in Bothell, a quarter of a mile downstream from North Creek and 4 1/2 miles upstream from mouth. Datum of gage is mean lower low water at Seattle (Corps of Engineers, U. S. Army, bench mark).

Drainage area.- 199 square miles.

Records available.- October 1939 to September 1942.

Extremes.- Maximum discharge during year, 1,030 second-feet Dec. 23 (elevation, 31.07 feet); minimum, 96 second-feet Aug. 23 (elevation, 24.61 feet).
1939-42: Maximum discharge, that of Dec. 23, 1941; minimum, 66 second-feet Aug. 21, 1941 (elevation, 24.42 feet).

Remarks.- Records good except those for periods of shifting control or no gage-height record, which are fair. No known diversion or regulation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|------|-----|------|------|------|-------|
| 1 | 136 | 176 | 364 | 685 | 573 | 420 | 363 | 420 | 208 | 214 | 130 | 103 |
| 2 | 136 | 176 | 556 | 669 | 573 | 480 | 356 | 377 | 197 | 208 | 130 | 102 |
| 3 | 161 | 191 | 665 | 653 | 589 | 480 | 349 | 321 | 197 | 202 | 124 | 102 |
| 4 | 186 | 196 | 614 | 621 | 685 | 450 | 335 | 295 | 192 | 197 | a120 | 102 |
| 5 | 166 | 196 | 566 | 589 | 686 | 465 | 328 | 282 | 180 | 192 | a115 | 102 |
| 6 | 161 | 191 | 556 | 557 | 653 | 450 | 321 | 262 | 214 | 186 | a110 | 101 |
| 7 | 191 | 186 | 507 | 557 | 637 | 435 | 314 | 256 | 220 | 180 | a110 | 100 |
| 8 | 176 | 181 | 493 | 541 | 637 | 420 | 308 | 244 | 214 | 176 | a110 | 99 |
| 9 | 166 | 181 | 479 | 573 | 637 | 460 | 302 | 232 | 256 | 175 | a110 | 100 |
| 10 | 181 | 181 | 466 | 606 | 653 | 495 | 295 | 377 | 262 | 170 | a110 | 101 |
| 11 | 181 | 216 | 462 | 573 | 653 | 480 | 288 | 377 | 262 | 170 | a110 | 102 |
| 12 | 191 | 206 | 439 | 557 | 621 | 480 | 282 | 314 | 244 | 164 | a106 | 100 |
| 13 | 181 | 240 | 439 | 573 | 589 | 465 | 276 | 282 | 226 | 169 | a105 | 101 |
| 14 | 176 | 462 | 479 | 541 | 573 | 465 | 295 | 262 | 226 | 170 | a106 | 102 |
| 15 | 176 | 376 | 493 | 525 | 557 | 460 | 282 | 244 | 269 | 175 | a105 | 101 |
| 16 | 196 | 352 | 766 | 510 | 541 | 450 | 288 | 226 | 276 | 170 | a100 | 101 |
| 17 | 211 | 319 | 737 | 510 | 525 | 465 | 269 | 220 | 262 | 170 | a100 | 101 |
| 18 | 201 | 319 | 701 | 496 | 510 | 480 | 262 | 214 | 244 | 164 | a100 | 99 |
| 19 | 242 | 308 | 813 | 490 | 495 | 450 | 256 | 214 | 288 | 159 | 99 | 97 |
| 20 | 216 | 297 | 913 | 480 | 510 | 435 | 250 | 208 | 269 | 154 | 99 | 97 |
| 21 | 201 | 286 | 954 | 465 | 495 | 435 | 244 | 197 | 256 | 154 | 101 | 99 |
| 22 | 196 | 275 | 954 | 465 | 480 | 420 | 240 | 208 | 244 | 154 | 97 | 98 |
| 23 | 191 | 270 | 1,010 | 450 | 480 | 420 | 244 | 220 | 232 | 149 | 97 | 97 |
| 24 | 191 | 286 | 1,010 | 510 | 480 | 450 | 266 | 208 | 238 | 149 | 97 | 97 |
| 25 | 186 | 376 | 978 | 557 | 465 | 435 | 262 | 256 | 262 | 144 | 102 | 98 |
| 26 | 186 | 352 | 924 | 557 | 450 | 420 | 269 | 262 | 276 | 144 | 116 | 99 |
| 27 | 181 | 341 | 888 | 589 | 450 | 405 | 256 | 232 | 256 | 144 | 112 | 100 |
| 28 | 161 | 341 | 837 | 606 | 435 | 391 | 244 | 226 | 238 | 139 | 119 | 102 |
| 29 | 161 | 352 | 803 | 573 | - | 377 | 238 | 220 | 232 | 134 | 113 | 101 |
| 30 | 176 | 341 | 769 | 541 | - | 363 | 250 | 208 | 220 | 134 | 107 | 101 |
| 31 | 176 | - | 718 | 541 | - | 363 | - | 214 | - | 134 | 104 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 5,667 | 242 | 136 | 183 | 0.920 | 1.06 | 11,240 |
| November..... | 8,160 | 452 | 176 | 272 | 1.37 | 1.52 | 16,190 |
| December..... | 21,292 | 1,010 | 364 | 687 | 3.45 | 3.98 | 42,230 |
| Calendar year 1941..... | 95,622 | 1,010 | 67 | 262 | 1.32 | 17.66 | 189,700 |
| January..... | 17,147 | 685 | 450 | 553 | 2.78 | 3.20 | 34,010 |
| February..... | 15,631 | 665 | 436 | 568 | 2.80 | 2.92 | 31,000 |
| March..... | 13,674 | 495 | 363 | 441 | 2.22 | 2.56 | 27,120 |
| April..... | 8,552 | 363 | 238 | 285 | 1.43 | 1.60 | 16,960 |
| May..... | 8,078 | 420 | 197 | 261 | 1.31 | 1.51 | 16,020 |
| June..... | 7,160 | 288 | 180 | 239 | 1.20 | 1.34 | 14,200 |
| July..... | 5,135 | 214 | 134 | 166 | .834 | .96 | 10,180 |
| August..... | 3,362 | 130 | 97 | 108 | .543 | .68 | 6,670 |
| September..... | 3,005 | 103 | 97 | 100 | .503 | .56 | 5,960 |
| Water year 1941-42..... | 116,861 | 1,010 | 97 | 320 | 1.61 | 21.84 | 231,800 |

a No gage-height record; discharge computed on basis of records for station near Redmond.

Note.- Shifting-control method used Dec. 3-22, May 2 to June 22.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

South Fork of Skykomish River near Index, Wash.

Location.- Water-stage recorder, lat. 47°48'20", long. 121°32'40", in NE 1/4 sec. 29, T. 27 N., R. 10 E., 600 feet upstream from Sunset Falls, 2 miles upstream from North Fork, and 2 miles southeast of Index. Datum of gage is 574.78 feet above mean sea level, datum of 1929. Discharge measurements made about 2 miles upstream from gage.

Drainage area.- 355 square miles.

Records available.- October 1902 to September 1905, April 1911 to September 1942.

Average discharge.- 34 years, 2,307 second-feet.

Extremes.- Maximum discharge during year, 12,600 second-feet Dec. 2 (gage height, 12.00 feet); minimum, 304 second-feet Sept. 30 (gage height, 2.31 feet).
1902-05, 1911-42: Maximum discharge observed, 57,000 second-feet Dec. 18, 1917 (gage height, 22.6 feet, site then in use); minimum observed, 214 second-feet Oct. 15-21, 23, 1925.

Remarks.- Records excellent. No diversion or regulation.

Rating tables, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

| Oct. 1-9 | | | Oct. 10 to Sept. 30 | | |
|----------|-------|-----|---------------------|------|-------|
| 5.0 | 2,240 | 2.3 | 300 | 3.5 | 955 |
| 6.0 | 3,190 | 2.5 | 374 | 4.0 | 1,850 |
| 7.0 | 4,310 | 2.8 | 512 | 5.0 | 2,280 |
| 8.0 | 5,700 | 3.0 | 620 | 6.0 | 3,350 |
| | | | | 7.0 | 4,530 |
| | | | | 8.0 | 5,960 |
| | | | | 9.0 | 7,320 |
| | | | | 10.0 | 8,930 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 2,990 | 871 | 2,640 | 992 | 955 | 565 | 2,910 | 2,230 | 3,130 | 2,910 | 738 | 440 |
| 2 | 2,420 | 889 | 8,450 | b620 | 955 | 708 | 2,690 | 2,230 | 3,460 | 2,800 | 719 | 435 |
| 3 | 4,310 | 992 | 6,980 | b670 | 920 | 899 | 2,230 | 2,080 | 3,350 | 2,880 | 686 | 435 |
| 4 | 4,470 | 1,890 | 4,920 | b820 | 1,270 | 719 | 2,180 | 1,940 | 3,130 | 2,380 | 680 | 431 |
| 5 | 2,990 | 3,380 | 4,170 | b775 | 1,940 | 836 | 2,430 | 1,890 | 3,570 | 2,130 | 656 | 422 |
| 6 | 2,420 | 2,130 | 6,140 | b750 | 1,580 | 920 | 2,430 | 2,080 | 4,790 | 1,800 | 644 | 408 |
| 7 | 4,060 | 1,660 | 4,790 | b740 | 1,310 | 864 | 2,530 | 2,800 | 4,660 | 1,620 | 632 | 391 |
| 8 | 4,510 | 1,440 | 3,570 | b740 | 1,270 | 864 | 2,280 | 3,130 | 3,920 | 1,480 | 632 | 391 |
| 9 | 4,980 | 1,270 | 2,910 | 745 | 1,260 | 3,010 | 2,280 | 3,350 | 4,290 | 1,350 | 614 | 387 |
| 10 | 6,110 | 1,150 | 2,480 | 773 | 1,350 | 3,240 | 2,690 | 3,020 | 6,280 | 1,310 | 692 | 375 |
| 11 | 6,270 | 1,270 | 2,130 | 808 | 1,620 | 2,230 | 3,570 | 2,480 | 5,720 | 1,440 | 582 | 370 |
| 12 | 6,420 | 1,270 | 1,890 | 836 | 1,440 | 1,840 | 4,050 | 2,130 | 4,290 | 1,530 | 565 | 362 |
| 13 | 4,790 | 2,600 | 1,710 | 855 | 1,230 | 1,580 | 3,350 | 1,940 | 3,930 | 1,230 | 553 | 366 |
| 14 | 3,690 | 7,630 | 1,620 | 829 | 1,110 | 1,350 | 3,350 | 1,890 | 4,170 | 1,190 | 517 | 362 |
| 15 | 3,130 | 5,310 | 1,710 | 787 | 992 | 1,190 | 3,130 | 2,180 | 6,870 | 1,440 | 517 | 366 |
| 16 | 3,350 | 3,690 | 3,240 | 773 | 955 | 1,110 | 2,910 | 2,230 | 6,420 | 1,890 | 507 | 354 |
| 17 | 3,460 | 2,910 | 2,690 | 780 | 871 | 1,150 | 3,240 | 2,280 | 5,440 | 2,800 | 502 | 347 |
| 18 | 2,690 | 2,380 | 2,950 | 745 | 808 | 1,230 | 2,740 | 2,580 | 4,530 | 2,380 | 507 | 335 |
| 19 | 2,480 | 2,030 | 7,170 | 712 | 759 | 1,150 | 2,640 | 2,910 | 4,290 | 1,800 | 497 | 328 |
| 20 | 2,180 | 1,760 | 4,790 | 686 | 732 | 1,070 | 3,570 | 3,930 | 3,570 | 1,530 | 497 | 324 |
| 21 | 1,890 | 1,580 | 3,460 | 680 | 700 | 1,030 | 4,790 | 5,720 | 3,130 | 1,350 | 497 | 321 |
| 22 | 1,710 | 1,400 | 2,800 | 662 | 680 | 1,110 | 4,050 | 6,710 | 3,020 | 1,270 | 488 | 321 |
| 23 | 1,530 | 1,270 | 2,680 | 656 | 650 | 1,070 | 3,130 | 5,440 | 3,020 | 1,150 | 473 | 321 |
| 24 | 1,400 | 1,510 | 2,180 | 662 | 690 | 992 | 2,800 | 4,790 | 2,910 | 1,070 | 463 | 321 |
| 25 | 1,270 | 3,820 | 1,890 | 885 | 609 | 920 | 2,910 | 6,140 | 2,740 | 955 | 454 | 318 |
| 26 | 1,190 | 2,530 | 1,660 | 1,030 | 576 | 885 | 2,640 | 5,720 | 2,580 | 920 | 507 | 318 |
| 27 | 1,110 | 2,080 | 1,440 | 1,070 | 565 | 857 | 2,280 | 4,920 | 2,480 | 920 | 463 | 314 |
| 28 | 1,070 | 1,840 | 1,350 | 1,030 | 554 | 856 | 2,080 | 4,170 | 2,480 | 867 | 598 | 314 |
| 29 | 992 | 2,080 | 1,230 | 992 | - | 867 | 1,940 | 3,570 | 2,690 | 822 | 576 | 310 |
| 30 | 920 | 2,580 | 1,150 | 920 | - | 1,030 | 1,940 | 3,240 | 2,800 | 794 | 488 | 310 |
| 31 | 878 | - | 1,070 | 850 | - | 1,440 | - | 3,130 | - | 759 | 458 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 94,080 | 8,110 | 878 | 3,035 | 8.55 | 9.86 | 186,600 |
| November..... | 87,152 | 7,630 | 829 | 2,238 | 6.30 | 7.03 | 135,200 |
| December..... | 97,790 | 8,450 | 1,070 | 3,155 | 8.99 | 10.24 | 194,000 |
| Calendar year 1941..... | 608,942 | 8,480 | 345 | 1,668 | 4.70 | 63.75 | 1,208,000 |
| January..... | 25,403 | 1,070 | 556 | 819 | 2.31 | 2.66 | 50,390 |
| February..... | 28,281 | 1,940 | 684 | 1,010 | 2.85 | 2.96 | 56,090 |
| March..... | 37,480 | 3,240 | 565 | 1,208 | 3.41 | 3.83 | 74,540 |
| April..... | 65,760 | 4,790 | 1,940 | 2,659 | 8.06 | 8.98 | 170,100 |
| May..... | 102,250 | 6,720 | 1,890 | 3,298 | 9.29 | 10.71 | 202,800 |
| June..... | 117,670 | 8,670 | 2,450 | 3,922 | 11.0 | 12.33 | 233,400 |
| July..... | 48,457 | 2,910 | 759 | 1,563 | 4.40 | 5.06 | 96,110 |
| August..... | 17,282 | 738 | 454 | 557 | 1.57 | 1.81 | 34,280 |
| September..... | 10,600 | 440 | 310 | 360 | 1.01 | 1.13 | 21,420 |
| Water year 1941-42..... | 732,405 | 8,480 | 310 | 2,007 | 5.65 | 76.72 | 1,455,000 |

b Stage-discharge relation affected by ice.

Time Basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Skykomish River near Gold Bar, Wash.

Location.-- Water-stage recorder, lat. 47°50'15", long. 121°40'00", in SW 1/4 sec. 9, T. 27 N., R. 9 E., 2 miles southeast of Gold Bar and 5 miles upstream from Wallace River and Startup. Datum of gage is 210.01 feet above mean sea level, unadjusted.

Drainage area.-- 535 square miles.

Records available.-- September 1928 to September 1942.

Average discharge.-- 14 years, 3,575 second-feet.

Extremes.-- Maximum discharge during year, 21,100 second-feet Dec. 2 (gage height, 11.30 feet); minimum not determined, occurred during period of no gage-height record.
1928-42: Maximum discharge, 79,000 second-feet Dec. 21, 1933 (gage height, 21.3 feet); minimum, 382 second-feet Oct. 9, 1938 (gage height, 2.78 feet).

Remarks.-- Records excellent except those for period of no gage-height record, which are good. No diversion or regulation.

Rating table, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-------|-----|-------|-----|--------|
| 2.9 | 475 | 4.6 | 2,180 | 7.5 | 7,330 |
| 3.3 | 790 | 5.5 | 3,450 | 8.5 | 10,100 |
| 3.9 | 1,360 | 6.5 | 5,200 | 9.5 | 13,700 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|---------|-------|-------|-------|--------|--------|-------|-------|-------|
| 1 | 5,800 | 1,470 | 4,110 | 1,680 | 1,690 | 943 | 4,640 | 3,530 | 4,620 | 4,560 | 1,210 | 770 |
| 2 | 4,280 | 1,420 | 14,400 | bl, 400 | 1,690 | 1,240 | 4,280 | 3,450 | 5,010 | 4,370 | 1,190 | 740 |
| 3 | 7,190 | 1,640 | 10,200 | bl, 540 | 1,640 | 1,430 | 3,530 | 3,220 | 5,010 | 3,940 | 1,150 | 720 |
| 4 | 6,920 | 2,790 | 7,090 | bl, 310 | 2,240 | 1,240 | 3,450 | 3,080 | 4,620 | 3,690 | 1,120 | 720 |
| 5 | 4,640 | 4,820 | 6,370 | 1,290 | 3,060 | 1,440 | 3,690 | 3,000 | 5,400 | 3,300 | 1,100 | 710 |
| 6 | 3,940 | 3,180 | 9,370 | 1,260 | 2,580 | 1,560 | 3,690 | 3,390 | 7,090 | 2,860 | 1,060 | 690 |
| 7 | 6,210 | 2,510 | 7,090 | 1,260 | 2,180 | 1,470 | 4,460 | 4,460 | 6,860 | 2,880 | 1,050 | 680 |
| 8 | 6,640 | 2,240 | 5,400 | bl, 250 | 2,180 | 1,470 | 3,450 | 5,010 | 5,800 | 2,310 | 1,030 | 670 |
| 9 | 8,100 | 1,960 | 4,460 | 1,250 | 2,180 | 4,740 | 3,450 | 5,200 | 6,420 | 2,180 | 997 | 650 |
| 10 | 13,900 | 1,870 | 3,770 | 1,530 | 2,240 | 4,940 | 4,020 | 4,650 | 9,500 | 2,050 | 970 | 640 |
| 11 | 11,100 | 2,120 | 3,300 | 1,390 | 2,650 | 3,530 | 5,200 | 3,770 | 8,370 | 2,310 | 952 | 630 |
| 12 | 10,500 | 2,120 | 2,930 | 1,460 | 2,440 | 3,000 | 5,800 | 3,300 | 6,210 | 2,440 | 916 | 630 |
| 13 | 7,090 | 4,040 | 2,650 | 1,580 | 2,050 | 2,510 | 4,820 | 3,000 | 5,600 | 1,980 | 871 | 620 |
| 14 | 5,600 | 11,800 | 2,510 | 1,440 | 1,870 | 2,240 | 5,010 | 3,000 | 6,210 | 1,930 | 844 | 620 |
| 15 | 4,820 | 7,640 | 2,580 | 1,360 | 1,690 | 1,960 | 4,550 | 3,450 | 11,500 | 2,310 | 826 | 610 |
| 16 | 5,200 | 5,400 | 4,640 | 1,540 | 1,580 | 1,870 | 4,370 | 3,530 | 10,100 | 3,150 | 808 | 590 |
| 17 | 5,400 | 4,370 | 4,020 | 1,550 | 1,460 | 1,930 | 4,820 | 3,530 | 8,370 | 4,640 | 800 | 590 |
| 18 | 4,200 | 3,610 | 4,430 | 1,290 | 1,340 | 2,050 | 4,110 | 3,690 | 6,860 | 3,860 | 800 | 580 |
| 19 | 3,860 | 3,080 | 10,600 | 1,240 | 1,260 | 1,670 | 3,940 | 4,460 | 6,210 | 2,930 | 800 | 570 |
| 20 | 3,860 | 2,790 | 7,090 | 1,190 | 1,220 | 1,750 | 5,400 | 5,800 | 5,200 | 2,440 | 800 | 560 |
| 21 | 3,000 | 2,510 | 5,200 | 1,170 | 1,160 | 1,690 | 6,860 | 7,640 | 4,640 | 2,240 | 790 | 560 |
| 22 | 2,650 | 2,310 | 4,280 | 1,150 | 1,120 | 1,810 | 5,800 | 10,500 | 4,560 | 2,050 | 790 | 550 |
| 23 | 2,440 | 2,120 | 4,020 | 1,130 | 1,070 | 1,690 | 4,550 | 8,100 | 4,640 | 1,870 | 780 | 540 |
| 24 | 2,310 | 2,640 | 3,450 | 1,150 | 1,030 | 1,640 | 4,280 | 6,860 | 4,370 | 1,750 | 760 | 530 |
| 25 | 2,120 | 5,420 | 3,000 | 1,680 | 1,020 | 1,520 | 4,280 | 8,650 | 4,110 | 1,640 | 750 | 530 |
| 26 | 1,980 | 3,770 | 2,580 | 1,810 | 970 | 1,450 | 4,020 | 6,370 | 3,940 | 1,580 | 820 | 530 |
| 27 | 1,870 | 3,220 | 2,310 | 1,670 | 943 | 1,390 | 3,530 | 7,090 | 3,770 | 1,520 | 800 | 530 |
| 28 | 1,750 | 2,950 | 2,120 | 1,610 | 925 | 1,360 | 3,220 | 6,000 | 3,860 | 1,430 | 1,000 | 530 |
| 29 | 1,690 | 3,360 | 1,980 | 1,690 | - | 1,390 | 3,000 | 5,200 | 4,110 | 1,360 | 970 | 530 |
| 30 | 1,580 | 4,020 | 1,870 | 1,580 | - | 1,690 | 3,000 | 4,820 | 4,370 | 1,310 | 890 | 530 |
| 31 | 1,520 | - | 1,750 | 1,470 | - | 2,380 | - | 4,640 | - | 1,260 | 810 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 151,680 | 13,900 | 1,520 | 4,893 | 9.15 | 10.54 | 300,900 |
| November..... | 103,180 | 11,800 | 1,420 | 3,439 | 6.43 | 7.17 | 204,700 |
| December..... | 151,770 | 14,400 | 1,750 | 4,696 | 9.15 | 10.55 | 301,000 |
| Calendar year 1941..... | 964,731 | 14,400 | 532 | 2,643 | 4.94 | 67.04 | 1,913,000 |
| January..... | 43,250 | 1,870 | 1,130 | 1,395 | 2.61 | 3.01 | 85,790 |
| February..... | 47,496 | 3,060 | 925 | 1,696 | 3.17 | 3.30 | 94,210 |
| March..... | 61,233 | 4,940 | 943 | 1,975 | 3.69 | 4.26 | 121,500 |
| April..... | 128,530 | 6,860 | 3,000 | 4,264 | 8.01 | 8.93 | 254,900 |
| May..... | 164,480 | 10,500 | 3,000 | 4,963 | 9.31 | 10.74 | 306,400 |
| June..... | 177,920 | 11,600 | 3,770 | 5,951 | 11.1 | 12.37 | 352,900 |
| July..... | 77,830 | 4,640 | 1,260 | 2,511 | 4.69 | 5.41 | 154,400 |
| August..... | 28,464 | 1,210 | 750 | 918 | 1.72 | 1.98 | 56,440 |
| September..... | 18,560 | 770 | 530 | 612 | 1.14 | 1.28 | 36,400 |
| Water year 1941-42..... | 1,144,175 | 14,400 | 530 | 3,135 | 5.86 | 79.54 | 2,270,000 |

Peak discharge.-- Oct. 10 (1:30 p.m.) 16,100 sec.-ft.; Dec. 2 (12:30 p.m.) 21,100 sec.-ft.

B Stage-discharge relation affected by ice.

Note.-- No gage-height record Aug. 17 to Sept. 30; discharge computed on basis of records for South Fork of Skykomish River near Index.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Snohomish River at Snohomish, Wash.

Location.- Water-stage recorder, lat. 47°54'32", long. 122°06'00", in SE¼ sec. 13, T. 29 N., R. 5 E., on downstream end of drawrest of bridge No. 205 on State Highway 1A in Snohomish. Auxiliary water-stage recorder at county road trestle over railroad tracks, 2 miles west of Snohomish and 2½ miles downstream from base gage. Datum of each gage is 10.00 feet below mean sea level, datum of 1929.

Drainage area.- 1,700 square miles.

Records available.- February 1941 to September 1942 (flood discharges only). The Northern Pacific Railroad Co. has record of gage heights at their bridge a quarter of a mile upstream since 1906. High-water elevations prior to 1932 and high-water profiles on flood peaks since that time are available at the Seattle office of Corps of Engineers, U. S. Army.

Extremes.- Maximum discharge during year, 33,400 second-feet Dec. 19 (gage height, 22.80 feet, affected by backwater from tide).

1941-42: Maximum discharge, that of Dec. 19, 1941.

Maximum stage known, 35 feet at base gage and 31 feet at auxiliary gage in 1906, from flood profile furnished by Corps of Engineers, U. S. Army.

Remarks.- Records good. Large diurnal fluctuation because of tides. Discharge computed by using fall as determined by auxiliary water-stage recorder as factor. No appreciable regulation or diversion at stages for which discharges are published.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|------|--------|--------|--------|--------|--------|--------|------|-------|
| 1 | 11,600 | - | 9,560 | | - | - | - | - | 12,000 | 10,200 | | |
| 2 | 12,400 | - | 19,900 | | - | - | 14,000 | 11,500 | 12,200 | 10,600 | | |
| 3 | 12,600 | - | 30,300 | | - | - | 10,700 | 11,000 | 11,600 | - | | |
| 4 | 21,600 | - | 24,100 | | - | - | - | - | 11,200 | - | | |
| 5 | 15,400 | - | 19,700 | | 12,200 | - | - | - | 11,600 | - | | |
| 6 | 11,400 | - | 22,500 | | 12,500 | - | - | - | 14,000 | - | | |
| 7 | 16,000 | - | 23,500 | | - | - | - | 10,100 | 17,200 | - | | |
| 8 | 17,600 | - | 16,900 | | - | - | - | 11,600 | 15,000 | - | | |
| 9 | 20,300 | - | 13,600 | | - | 11,100 | - | 12,000 | 14,800 | - | | |
| 10 | 25,200 | - | 11,900 | | - | 18,500 | - | 11,900 | 19,900 | - | | |
| 11 | 26,700 | - | - | | - | 12,700 | 10,100 | - | 27,400 | - | | |
| 12 | 26,000 | - | - | | - | - | 12,500 | - | 22,000 | - | | |
| 13 | 20,800 | 6,620 | - | | - | - | 12,300 | - | 17,000 | - | | |
| 14 | 15,400 | 23,000 | - | | - | - | 11,300 | - | 14,600 | - | | |
| 15 | 12,500 | 23,800 | - | | - | - | 11,700 | - | 24,900 | - | | |
| 16 | 10,900 | 17,900 | 13,400 | | - | - | 10,900 | - | 32,700 | - | | |
| 17 | 14,600 | 14,200 | 14,800 | | - | - | 12,200 | - | 29,100 | 11,200 | | |
| 18 | 11,300 | 11,900 | 13,300 | | - | - | 11,500 | - | 21,900 | 11,900 | | |
| 19 | - | 9,980 | 26,400 | | - | - | - | 8,980 | 19,900 | - | | |
| 20 | - | - | 31,100 | | - | - | 10,200 | 10,800 | 18,600 | - | | |
| 21 | - | - | 25,400 | | - | - | 12,900 | 14,200 | 15,400 | - | | |
| 22 | - | - | 20,100 | | - | - | 13,600 | 19,200 | 13,000 | - | | |
| 23 | - | - | 19,500 | | - | - | 10,900 | 20,300 | 12,400 | - | | |
| 24 | - | - | 16,800 | | - | - | - | 15,700 | 11,800 | - | | |
| 25 | - | 14,900 | 13,000 | | - | - | - | 16,200 | 11,200 | - | | |
| 26 | - | 13,700 | - | | - | - | - | 21,200 | 11,100 | - | | |
| 27 | - | 10,800 | - | | - | - | - | 19,600 | 10,700 | - | | |
| 28 | - | - | - | | - | - | - | 16,300 | 10,100 | - | | |
| 29 | - | - | - | | - | - | - | 14,600 | 10,100 | - | | |
| 30 | - | - | - | | - | - | - | 13,100 | 10,100 | - | | |
| 31 | - | - | - | | - | - | - | 12,200 | - | - | | |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Sultan River near Startup, Wash.

Location.- Water-stage recorder, lat. 47°58'30", long. 121°46'30", in NE¼ sec. 28, T. 29 N., R. 8 E., 1½ miles upstream from intake of Everett water-supply system and 7½ miles north of Startup.

Drainage area.- 75 square miles.

Records available.- May 1934 to September 1942.

Extremes.- Maximum discharge during year, 6,360 second-feet June 15 (gage height, 11.03 feet), from rating curve extended above 3,000 second-feet; minimum, 48 second-feet Sept. 25, 27, 29, 30 (gage height, 3.42 feet).
1934-42: Maximum discharge, 15,600 second-feet Oct. 24, 1934 (gage height, 16.05 feet), from rating curve extended above 3,000 second-feet; minimum, that of Sept. 25, 27, 29, 30, 1942; minimum gage height, 3.32 feet Sept. 22, 23, 24, 1938.

Remarks.- Records excellent except those for periods of fragmentary gage-height record and those above 3,000 second-feet, which are fair. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to July 15 | | | | | July 17 to Sept. 30 | | | | | | |
|-------------------|-----|-----|-------|------|---------------------|-----|-----|-----|-----|-----|-------|
| 4.2 | 170 | 5.6 | 555 | 7.5 | 1,770 | 3.5 | 55 | 4.4 | 190 | 6.0 | 750 |
| 4.4 | 210 | 6.0 | 770 | 8.0 | 2,250 | 3.7 | 76 | 4.7 | 261 | 6.5 | 1,020 |
| 4.7 | 285 | 6.5 | 1,050 | 9.0 | 3,400 | 3.9 | 101 | 5.0 | 346 | 7.0 | 1,370 |
| 5.0 | 375 | 7.0 | 1,380 | 10.0 | 4,800 | 4.1 | 132 | 5.5 | 515 | 7.5 | 1,770 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|-------|-------|-------|-------|-------|--------|------|-------|
| 1 | 2,950 | 210 | 831 | 248 | 580 | 1,192 | 2,290 | 930 | 845 | 615 | 155 | 80 |
| 2 | 1,360 | 190 | 2,780 | 285 | 498 | 569 | 1,280 | 545 | 795 | 595 | 148 | 75 |
| 3 | 2,530 | 250 | 1,070 | 222 | 442 | 515 | 870 | 680 | 748 | 535 | 143 | 70 |
| 4 | 1,500 | 427 | 1,200 | 202 | 832 | 368 | 770 | 615 | 702 | 450 | 136 | 68 |
| 5 | 870 | 1,280 | 1,110 | 166 | 1,240 | 492 | 770 | 575 | 620 | 414 | 130 | 66 |
| 6 | 1,210 | 575 | 2,740 | 164 | 770 | 515 | 702 | 658 | 1,110 | 351 | 126 | 68 |
| 7 | 1,900 | 417 | 1,560 | 180 | 595 | 424 | 680 | 870 | 1,080 | 309 | 121 | 65 |
| 8 | 1,050 | 336 | 990 | 178 | 635 | 406 | 595 | 820 | 960 | 280 | 115 | 63 |
| 9 | 2,520 | 297 | 748 | 272 | 558 | 2,750 | 615 | 770 | 1,280 | 265 | 112 | 64 |
| 10 | 3,620 | 268 | 615 | 369 | 836 | 1,430 | 770 | 748 | 3,170 | 262 | 108 | 64 |
| 11 | 2,600 | 487 | 535 | 375 | 930 | 900 | 960 | 615 | 1,920 | 1342 | 107 | 63 |
| 12 | 2,200 | 442 | 462 | 410 | 635 | 702 | 930 | 515 | 1,200 | 1382 | 101 | 61 |
| 13 | 1,510 | 1,790 | 403 | 424 | 498 | 555 | 748 | 452 | 990 | 285 | 97 | 59 |
| 14 | 930 | 3,120 | 375 | 363 | 417 | 462 | 990 | 462 | 1,400 | 270 | 93 | 57 |
| 15 | 725 | 1,480 | 438 | 356 | 366 | 410 | 820 | 575 | 5,050 | 1480 | 88 | 59 |
| 16 | 1,340 | 1,020 | 1,240 | 345 | 333 | 389 | 820 | 575 | 3,270 | 1980 | 86 | 57 |
| 17 | 1,080 | 770 | 748 | 375 | 500 | 462 | 930 | 555 | 2,000 | 12,150 | 83 | 57 |
| 18 | 725 | 615 | 1,580 | 321 | 270 | 434 | 702 | 555 | 1,380 | 1,060 | 81 | 56 |
| 19 | 680 | 496 | 4,000 | 291 | 250 | 372 | 680 | 702 | 1,240 | 600 | 81 | 55 |
| 20 | 575 | 434 | 1,700 | 270 | 240 | 330 | 1,020 | 930 | 960 | 460 | 78 | 54 |
| 21 | 480 | 378 | 1,110 | 258 | 225 | 321 | 1,080 | 1,200 | 770 | 390 | 77 | 53 |
| 22 | 424 | 336 | 1,030 | 248 | 208 | 392 | 820 | 1,790 | 725 | 337 | 76 | 52 |
| 23 | 369 | 303 | 1,280 | 238 | 194 | 356 | 658 | 1,280 | 702 | 299 | 74 | 50 |
| 24 | 330 | 1,250 | 620 | 266 | 188 | 303 | 940 | 590 | 635 | 256 | 72 | 49 |
| 25 | 300 | 1,620 | 615 | 700 | 178 | 275 | 1,050 | 1,420 | 595 | 241 | 84 | 48 |
| 26 | 282 | 820 | 515 | 720 | 170 | 262 | 870 | 2,000 | 575 | 226 | 108 | 49 |
| 27 | 258 | 635 | 438 | 702 | 166 | 260 | 680 | 1,610 | 555 | 208 | 94 | 48 |
| 28 | 235 | 535 | 366 | 595 | 172 | 275 | 635 | 1,140 | 535 | 197 | 134 | 49 |
| 29 | 218 | 770 | 346 | 498 | - | 315 | 595 | 900 | 575 | 184 | 112 | 48 |
| 30 | 200 | 770 | 315 | 414 | - | 442 | 615 | 845 | 635 | 173 | 96 | 55 |
| 31 | 196 | - | 275 | 360 | - | 624 | - | 870 | - | 165 | 87 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 35,767 | 3,620 | 196 | 1,154 | 15.4 | 17.74 | 70,940 |
| November..... | 22,303 | 3,120 | 190 | 743 | 9.91 | 11.06 | 44,240 |
| December..... | 33,054 | 4,000 | 275 | 1,066 | 14.2 | 16.39 | 65,560 |
| Calendar year 1941..... | 209,623 | 4,000 | 51 | 574 | 7.65 | 103.95 | 415,800 |
| January..... | 10,604 | 720 | 178 | 349 | 4.65 | 5.36 | 21,430 |
| February..... | 12,832 | 1,240 | 166 | 458 | 6.11 | 6.36 | 25,450 |
| March..... | 16,680 | 2,750 | 192 | 538 | 7.17 | 8.27 | 33,080 |
| April..... | 25,885 | 2,290 | 595 | 863 | 11.5 | 12.84 | 51,340 |
| May..... | 27,502 | 2,000 | 462 | 887 | 11.8 | 13.64 | 54,550 |
| June..... | 37,222 | 5,050 | 555 | 1,241 | 16.5 | 18.46 | 73,830 |
| July..... | 13,751 | 2,150 | 165 | 446 | 6.93 | 6.83 | 27,330 |
| August..... | 3,205 | 156 | 72 | 103 | 1.37 | 1.59 | 6,360 |
| September..... | 1,762 | 80 | 48 | 58.7 | .783 | .87 | 3,490 |
| Water year 1941-42..... | 240,797 | 5,050 | 48 | 660 | 8.80 | 119.41 | 477,600 |

Peak discharge.- Dec. 19 (12:10 a.m.) 6,040 sec.-ft.; June 15 (9:30 a.m.) 6,360 sec.-ft.

† Fragmentary gage-height record; discharge computed from partly estimated gage heights.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Snoqualmie River near Tolt, Wash.

Location.- Water-stage recorder, lat. 47°39'55", long. 121°55'30", in sec. 9, T. 25 N., R. 7 E., 100 feet downstream from highway bridge, 1 mile northwest of Tolt, and 2 miles downstream from Tolt River. Auxiliary water-stage recorder at Tolt, three-quarters of a mile downstream from Tolt River and 1½ miles upstream from base gage. Datum of each gage is at mean sea level, unadjusted.

Drainage area.- 605 square miles.

Records available.- October 1928 to September 1942.

Average discharge.- 14 years, 3,504 second-feet.

Extremes.- Maximum discharge during year, 19,700 second-feet Dec. 19 (elevation, 52.71 feet); minimum, 291 second-feet (regulated) Sept. 24; minimum daily, 467 second-feet (regulated) Sept. 21, 24.

1929-42: Maximum discharge, 51,000 second-feet Feb. 26, 1932; maximum elevation recorded, 59.9 feet, present datum, Nov. 13, 1932; minimum discharge, that of Sept. 24, 1942; minimum elevation, 43.30 feet, present datum, Sept. 11, 1930; minimum daily discharge, 396 second-feet (regulated) Sept. 24, 1938.

Remarks.- Records good. Low flow diverted for operation of power plant at Snoqualmie Falls but returned to river above gage. Some pondage at Snoqualmie Falls and some diurnal fluctuation caused by power plant.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 18

| | | | |
|------|-------|------|--------|
| 45.0 | 1,160 | 47.0 | 3,550 |
| 45.5 | 1,710 | 48.0 | 5,610 |
| 46.0 | 2,540 | 49.0 | 7,700 |
| 46.5 | 3,050 | 50.0 | 10,100 |

Dec. 19 to Sept. 30

| | | | | | |
|------|-------|------|-------|------|--------|
| 44.0 | 390 | 45.6 | 1,840 | 48.0 | 6,260 |
| 44.4 | 646 | 46.0 | 2,400 | 49.0 | 5,780 |
| 44.8 | 972 | 46.5 | 3,200 | 50.0 | 11,400 |
| 45.2 | 1,370 | 47.0 | 4,110 | 52.0 | 17,400 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|-------|-------|-------|-------|-------|--------|-------|-------|-------|
| 1 | 2,980 | 1,480 | 3,850 | 2,250 | 2,790 | 1,390 | 4,780 | 3,280 | 4,210 | 3,640 | 1,180 | 847 |
| 2 | 3,850 | 1,460 | 8,260 | 2,180 | 3,050 | 1,800 | 4,720 | 3,920 | 4,020 | 3,370 | 1,110 | 750 |
| 3 | 5,250 | 1,540 | 11,200 | 2,110 | 2,710 | 2,480 | 3,550 | 3,820 | 3,730 | 3,120 | 1,100 | 719 |
| 4 | 9,860 | 2,740 | 7,480 | 1,970 | 3,770 | 1,970 | 3,280 | 3,370 | 3,550 | 2,790 | 1,080 | 697 |
| 5 | 5,810 | 4,600 | 6,830 | 1,780 | 5,800 | 1,970 | 3,370 | 3,030 | 3,640 | 2,550 | 1,010 | 675 |
| 6 | 4,330 | 3,510 | 8,620 | 1,650 | 4,410 | 2,320 | 3,370 | 3,030 | 4,800 | 2,250 | 1,000 | 667 |
| 7 | 6,210 | 2,550 | 7,040 | 1,710 | 3,550 | 2,110 | 3,280 | 3,640 | 6,730 | 2,110 | 963 | 660 |
| 8 | 6,620 | 2,140 | 5,230 | 1,650 | 3,280 | 1,970 | 3,030 | 3,920 | 5,140 | 1,900 | 963 | 617 |
| 9 | 7,260 | 1,950 | 4,500 | 1,970 | 3,460 | 5,180 | 2,870 | 3,920 | 5,800 | 1,840 | 924 | 617 |
| 10 | 8,150 | 1,710 | 3,910 | 2,480 | 3,880 | 7,950 | 3,200 | 4,020 | 9,340 | 1,650 | 915 | 624 |
| 11 | 8,150 | 1,770 | 3,430 | 2,650 | 4,210 | 5,040 | 4,020 | 3,620 | 11,400 | 1,780 | 872 | 610 |
| 12 | 8,150 | 1,890 | 3,120 | 2,480 | 3,640 | 4,310 | 4,510 | 3,280 | 7,700 | 1,970 | 872 | 617 |
| 13 | 6,410 | 2,700 | 2,780 | 2,790 | 3,050 | 4,020 | 2,870 | 5,800 | 1,780 | 1,780 | 822 | 645 |
| 14 | 5,040 | 8,620 | 2,620 | 2,480 | 2,710 | 3,120 | 4,210 | 2,710 | 5,250 | 1,650 | 797 | 523 |
| 15 | 4,160 | 7,260 | 2,620 | 2,250 | 2,480 | 2,790 | 4,210 | 2,790 | 11,000 | 1,840 | 814 | 556 |
| 16 | 3,910 | 5,610 | 5,470 | 2,110 | 2,250 | 2,550 | 3,730 | 2,950 | 10,300 | 2,630 | 774 | 523 |
| 17 | 4,860 | 4,500 | 5,040 | 2,400 | 2,110 | 2,480 | 4,110 | 2,950 | 9,240 | 4,510 | 774 | 516 |
| 18 | 3,750 | 3,830 | 5,110 | 2,180 | 1,900 | 2,630 | 3,550 | 3,030 | 7,210 | 4,720 | 758 | 510 |
| 19 | 3,590 | 3,280 | 17,200 | 2,040 | 1,780 | 2,400 | 3,200 | 3,200 | 8,780 | 3,200 | 712 | 510 |
| 20 | 3,280 | 2,900 | 14,900 | 1,900 | 1,780 | 2,180 | 3,620 | 4,020 | 7,700 | 2,480 | 712 | 510 |
| 21 | 2,900 | 2,620 | 9,500 | 1,780 | 1,650 | 2,110 | 5,140 | 5,470 | 6,030 | 2,110 | 712 | 467 |
| 22 | 2,620 | 2,340 | 7,450 | 1,710 | 1,590 | 2,180 | 4,510 | 7,210 | 5,040 | 1,900 | 719 | 504 |
| 23 | 2,340 | 2,140 | 7,210 | 1,650 | 1,470 | 2,180 | 3,550 | 6,260 | 4,620 | 1,780 | 689 | 504 |
| 24 | 2,140 | 2,180 | 6,030 | 1,710 | 1,480 | 2,040 | 3,280 | 4,930 | 5,040 | 1,590 | 667 | 467 |
| 25 | 2,020 | 7,040 | 4,930 | 2,320 | 1,380 | 1,970 | 4,020 | 6,030 | 4,720 | 1,480 | 697 | 504 |
| 26 | 1,890 | 5,230 | 4,210 | 2,870 | 1,410 | 1,640 | 3,730 | 6,490 | 4,620 | 1,420 | 924 | 491 |
| 27 | 1,850 | 4,080 | 3,640 | 3,200 | 1,350 | 1,710 | 3,200 | 5,580 | 4,210 | 1,340 | 847 | 498 |
| 28 | 1,650 | 3,430 | 3,280 | 3,030 | 1,300 | 1,710 | 2,790 | 5,040 | 3,920 | 1,250 | 1,070 | 479 |
| 29 | 1,590 | 3,510 | 3,030 | 2,870 | 1,710 | 2,630 | 4,620 | 3,920 | 3,920 | 1,220 | 1,400 | 491 |
| 30 | 1,540 | 3,510 | 2,790 | 2,480 | - | 1,840 | 2,630 | 4,210 | 3,640 | 1,240 | 1,070 | 498 |
| 31 | 1,450 | - | 2,550 | 2,250 | - | 2,550 | - | 4,210 | - | 1,180 | 924 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 133,570 | 9,860 | 1,450 | 4,309 | 7.12 | 8.21 | 264,900 |
| November..... | 102,020 | 8,620 | 1,460 | 3,401 | 5.62 | 6.27 | 202,400 |
| December..... | 163,790 | 17,200 | 2,550 | 5,929 | 9.80 | 11.30 | 364,500 |
| Calendar year 1941..... | 993,290 | 17,200 | 446 | 2,721 | 4.50 | 61.04 | 1,970,000 |
| January..... | 68,680 | 3,200 | 1,550 | 2,222 | 3.67 | 4.23 | 136,600 |
| February..... | 74,140 | 5,800 | 1,300 | 2,848 | 4.38 | 4.55 | 147,100 |
| March..... | 82,050 | 7,950 | 1,390 | 2,646 | 4.37 | 5.04 | 162,700 |
| April..... | 110,310 | 5,140 | 2,630 | 3,677 | 6.08 | 6.78 | 218,800 |
| May..... | 127,680 | 7,210 | 2,710 | 4,117 | 6.80 | 7.84 | 253,100 |
| June..... | 181,040 | 11,400 | 3,550 | 6,035 | 9.98 | 11.13 | 359,100 |
| July..... | 68,390 | 4,720 | 1,160 | 2,206 | 3.65 | 4.20 | 135,600 |
| August..... | 27,871 | 1,400 | 667 | 899 | 1.49 | 1.71 | 55,280 |
| September..... | 17,276 | 847 | 467 | 576 | .952 | 1.06 | 34,270 |
| Water year 1941-42..... | 1,176,937 | 17,200 | 467 | 3,224 | 5.33 | 72.33 | 2,334,000 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

SNOHOMISH RIVER BASIN

North Fork of Snoqualmie River near Snoqualmie Falls, Wash.

Location.- Water-stage recorder, lat. 47°37'10", long. 121°42'35", in SW¼ sec. 30, T. 25 N., R. 9 E., 1 mile upstream from Calligan Creek, 3 miles northeast of Snoqualmie Falls, 9 miles northeast of Snoqualmie, and 9½ miles upstream from mouth.

Drainage area.- 65 square miles.

Records available.- August 1929 to September 1942.

Average discharge.- 13 years, 477 second-feet.

Extremes.- Maximum discharge during year, 3,710 second-feet Dec. 19 (gage height, 10.40 feet); from rating curve extended above 2,200 second-feet; minimum, 43 second-feet Sept. 27-30 (gage height, 2.06 feet).
1929-42: Maximum discharge, 8,020 second-feet Feb. 26, 1932 (gage height, 17.5 feet), from rating curve extended above 1,500 second-feet; minimum, 30 second-feet Sept. 17-19, 1929.

Remarks.- Records excellent. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 18

Dec. 19 to Sept. 30

| | | | | | | | | | |
|-----|-----|-----|-------|-----|-----|-----|-----|------|-------|
| 3.3 | 197 | 5.0 | 700 | 2.1 | 45 | 3.4 | 206 | 6.0 | 1,120 |
| 3.6 | 259 | 6.0 | 1,120 | 2.3 | 58 | 3.7 | 270 | 8.0 | 2,170 |
| 4.0 | 361 | 8.0 | 2,170 | 2.5 | 75 | 4.0 | 351 | 10.0 | 3,430 |
| 4.5 | 516 | | | 2.8 | 108 | 4.5 | 511 | | |
| | | | | 3.1 | 152 | 5.0 | 696 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|-------|-------|-------|-------|------|------|-------|
| 1 | 516 | 164 | 642 | 196 | 339 | 146 | 1,020 | 511 | 600 | 460 | 113 | 87 |
| 2 | 461 | 152 | 1,980 | 195 | 328 | 260 | 639 | 592 | 564 | 423 | 108 | 51 |
| 3 | 1,550 | 203 | 1,200 | 185 | 295 | 278 | 494 | 511 | 523 | 563 | 103 | 77 |
| 4 | 1,150 | 442 | 840 | 169 | 355 | 216 | 477 | 460 | 494 | 319 | 100 | 74 |
| 5 | 661 | 725 | 790 | 155 | 638 | 249 | 494 | 409 | 600 | 270 | 95 | 71 |
| 6 | | | | | | | | | | | | |
| 7 | 550 | 347 | 1,550 | 147 | 460 | 252 | 477 | 450 | 945 | 236 | 93 | 70 |
| 8 | 1,170 | 257 | 880 | 147 | 363 | 216 | 444 | 600 | 855 | 214 | 90 | 69 |
| 9 | 1,170 | 214 | 604 | 150 | 363 | 218 | 409 | 600 | 716 | 193 | 87 | 66 |
| 10 | 1,240 | 190 | 516 | 202 | 378 | 1,440 | 444 | 546 | 990 | 182 | 84 | 64 |
| 11 | 1,800 | 172 | 436 | 351 | 511 | 962 | 528 | 546 | 2,160 | 182 | 82 | 62 |
| 12 | | | | | | | | | | | | |
| 13 | 1,470 | 206 | 376 | 345 | 494 | 592 | 657 | 460 | 1,440 | 202 | 80 | 60 |
| 14 | 1,280 | 218 | 323 | 334 | 375 | 494 | 716 | 412 | 878 | 234 | 77 | 57 |
| 15 | 840 | 968 | 287 | 387 | 308 | 384 | 511 | 360 | 716 | 169 | 75 | 56 |
| 16 | 604 | 1,620 | 273 | 295 | 270 | 319 | 657 | 369 | 832 | 176 | 72 | 55 |
| 17 | 483 | 922 | 321 | 263 | 245 | 278 | 619 | 428 | 2,060 | 275 | 70 | 55 |
| 18 | | | | | | | | | | | | |
| 19 | 697 | 642 | 1,170 | 266 | 225 | 256 | 564 | 423 | 1,520 | 794 | 67 | 55 |
| 20 | 700 | 516 | 604 | 311 | 205 | 268 | 638 | 444 | 1,800 | 855 | 65 | 55 |
| 21 | 467 | 405 | 699 | 266 | 139 | 255 | 460 | 460 | 922 | 632 | 64 | 51 |
| 22 | 451 | 347 | 2,540 | 230 | 176 | 239 | 460 | 511 | 1,240 | 397 | 63 | 50 |
| 23 | 390 | 297 | 1,270 | 216 | 169 | 220 | 696 | 716 | 835 | 288 | 60 | 49 |
| 24 | | | | | | | | | | | | |
| 25 | 333 | 264 | 855 | 204 | 160 | 220 | 755 | 922 | 657 | 241 | 60 | 49 |
| 26 | 292 | 239 | 716 | 198 | 152 | 246 | 582 | 1,240 | 582 | 212 | 59 | 47 |
| 27 | 261 | 218 | 815 | 189 | 144 | 226 | 428 | 855 | 582 | 189 | 57 | 46 |
| 28 | 239 | 467 | 592 | 200 | 138 | 210 | 477 | 696 | 619 | 171 | 56 | 46 |
| 29 | 220 | 1,640 | 477 | 411 | 134 | 193 | 546 | 1,010 | 564 | 159 | 70 | 44 |
| 30 | | | | | | | | | | | | |
| 31 | 206 | 661 | 381 | 444 | 127 | 185 | 460 | 815 | 546 | 147 | 88 | 44 |
| | 193 | 467 | 331 | 428 | 122 | 180 | 384 | 735 | 494 | 139 | 88 | 43 |
| | 181 | 390 | 292 | 375 | 125 | 180 | 348 | 696 | 460 | 132 | 229 | 43 |
| | 170 | 467 | 263 | 303 | - | 198 | 339 | 619 | 460 | 126 | 146 | 43 |
| | 160 | 631 | 243 | 258 | - | 275 | 354 | 546 | 477 | 122 | 116 | 46 |
| | 154 | - | 222 | 230 | - | 495 | - | 619 | - | 116 | 100 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 20,079 | 1,800 | 154 | 648 | 9.97 | 11.49 | 39,830 |
| November..... | 14,351 | 1,620 | 152 | 478 | 7.35 | 8.21 | 28,460 |
| December..... | 22,668 | 2,540 | 222 | 731 | 11.2 | 12.97 | 44,960 |
| Calendar year 1941..... | 138,045 | 2,540 | 41 | 378 | 5.82 | 78.99 | 275,800 |
| January..... | 8,041 | 444 | 147 | 259 | 3.98 | 4.60 | 15,950 |
| February..... | 8,021 | 638 | 122 | 266 | 4.40 | 4.69 | 15,910 |
| March..... | 10,149 | 1,440 | 146 | 327 | 5.03 | 5.81 | 20,130 |
| April..... | 16,076 | 1,020 | 339 | 536 | 8.25 | 9.20 | 31,890 |
| May..... | 18,594 | 1,240 | 360 | 599 | 9.22 | 10.63 | 36,860 |
| June..... | 25,556 | 2,160 | 460 | 852 | 13.1 | 14.62 | 50,690 |
| July..... | 8,635 | 855 | 118 | 279 | 4.29 | 4.94 | 17,130 |
| August..... | 2,717 | 229 | 56 | 87.6 | 1.55 | 1.55 | 5,390 |
| September..... | 1,713 | 87 | 43 | 57.1 | .378 | .98 | 3,400 |
| Water year 1941-42..... | 156,590 | 2,540 | 43 | 429 | 6.60 | 89.69 | 310,600 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Tolt River near Tolt, Wash.

Location.- Water-stage recorder, lat. 47°41'45", long. 121°49'20", in S&NE1 sec. 31, T. 28 N., R. 8 E., 500 feet downstream from the Forks and 6 miles northeast of Tolt.
Datum of gage is approximately 348 feet above mean sea level (river-profile survey).

Drainage area.- 80 square miles.

Records available.- August 1928 to January 1932, September 1937 to September 1942.

Extremes.- Maximum discharge during year, 5,190 second-feet Dec. 19 (gage height, 9.50 feet); minimum, 79 second-feet Sept. 29, 30 (gage height, 4.24 feet).
1928-32, 1937-42: Maximum discharge, 9,750 second-feet Apr. 18, 1938 (gage height, 11.51 feet), from rating curve extended above 4,500 second-feet; minimum, 63 second-feet Sept. 25, 26, 1940; minimum gage height, 4.07 feet Sept. 23, 1938.

Remarks.- Records excellent except those for period of no gage-height record, which are fair. No diversion or regulation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-------|-----|-------|
| 4.2 | 74 | 5.8 | 532 | 8.0 | 2,600 |
| 4.4 | 102 | 6.2 | 761 | 8.5 | 3,340 |
| 4.7 | 158 | 6.6 | 1,060 | 9.0 | 4,200 |
| 5.0 | 230 | 7.0 | 1,440 | | |
| 5.4 | 358 | 7.5 | 1,980 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|-------|--------|-------|-------|-------|------|------|-------|
| 1 | 808 | 259 | 605 | 354 | 614 | 278 | 1,100 | 716 | 616 | 593 | 171 | 125 |
| 2 | 1,240 | 242 | 1,690 | 344 | 527 | 538 | 710 | 635 | 517 | 362 | 187 | 117 |
| 3 | 1,620 | 274 | 1,290 | 350 | 480 | 568 | 697 | 613 | 537 | 337 | 160 | 112 |
| 4 | 1,140 | 323 | 977 | 313 | 820 | 568 | 532 | 610 | 475 | 320 | 156 | 110 |
| 5 | 742 | 562 | 977 | 297 | 1,020 | a450 | 537 | 552 | 489 | 297 | 154 | 107 |
| 6 | 717 | 354 | 1,920 | 287 | 697 | a500 | 513 | 583 | 754 | 278 | 150 | 107 |
| 7 | 1,240 | 290 | 1,020 | 274 | 563 | a450 | 462 | 656 | 901 | 262 | 146 | 104 |
| 8 | 1,190 | 262 | 735 | 281 | 594 | a400 | 410 | 610 | 742 | 250 | 142 | 100 |
| 9 | 1,240 | 236 | 622 | 372 | 627 | a1,400 | 422 | 663 | 839 | 236 | 138 | 99 |
| 10 | 1,980 | a220 | 537 | 552 | 901 | a1,000 | 513 | 632 | 2,450 | 236 | 136 | 98 |
| 11 | 1,540 | a320 | 489 | 470 | 815 | a800 | 583 | 583 | 1,440 | 256 | 134 | 98 |
| 12 | 1,440 | a300 | 455 | 466 | 632 | a700 | 552 | 513 | 939 | 265 | 130 | 96 |
| 13 | 939 | a900 | 401 | 484 | 532 | a600 | 466 | 480 | 748 | 227 | 125 | 94 |
| 14 | 710 | 1,340 | 385 | 401 | 475 | a550 | 673 | 484 | 898 | 222 | 123 | 93 |
| 15 | 632 | 939 | 414 | 374 | 431 | a500 | 616 | 489 | 2,400 | 287 | 121 | 92 |
| 16 | 968 | 735 | 959 | 410 | 397 | a450 | 568 | 475 | 1,440 | 606 | 119 | 92 |
| 17 | 865 | 627 | 656 | 503 | 366 | a470 | 605 | 448 | 1,290 | 755 | 119 | 92 |
| 18 | 618 | 632 | 1,300 | 393 | 344 | a450 | 462 | 457 | 1,020 | 673 | 116 | 92 |
| 19 | 605 | 462 | 3,410 | 354 | 326 | 414 | 444 | 489 | 1,240 | 381 | 114 | 88 |
| 20 | 522 | 405 | 1,660 | 334 | 323 | 389 | 578 | 632 | 901 | 313 | 112 | 87 |
| 21 | 462 | 374 | 1,190 | 323 | 303 | 397 | 616 | 716 | 742 | 278 | 110 | 88 |
| 22 | 418 | 340 | 1,060 | 310 | 287 | 410 | 532 | 1,060 | 644 | 253 | 109 | 86 |
| 23 | 381 | 323 | 1,240 | 297 | 274 | 378 | 439 | 768 | 578 | 233 | 107 | 85 |
| 24 | 351 | 719 | 851 | 313 | 265 | 366 | 617 | 610 | 542 | 220 | 104 | 83 |
| 25 | 334 | 1,670 | 703 | 521 | 256 | 340 | 781 | 802 | 527 | 207 | 131 | 82 |
| 26 | 320 | 761 | 605 | 573 | 244 | 326 | 656 | 755 | 618 | 199 | 173 | 82 |
| 27 | 303 | 568 | 537 | 573 | 236 | 323 | 532 | 691 | 466 | 194 | 138 | 80 |
| 28 | 287 | 484 | 489 | 547 | 242 | 326 | 480 | 632 | 435 | 185 | 369 | 80 |
| 29 | 271 | 527 | 448 | 480 | - | 344 | 457 | 588 | 418 | 180 | 217 | 79 |
| 30 | 259 | 508 | 414 | 418 | - | 410 | 470 | 542 | 410 | 178 | 162 | 83 |
| 31 | 250 | - | 381 | 381 | - | 635 | - | 632 | - | 176 | 140 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 24,390 | 1,980 | 250 | 787 | 9.84 | 11.34 | 48,380 |
| November..... | 15,856 | 1,670 | 220 | 529 | 6.61 | 7.37 | 31,450 |
| December..... | 28,390 | 3,410 | 381 | 916 | 11.4 | 13.20 | 56,610 |
| Calendar year 1941..... | 161,448 | 3,410 | 77 | 442 | 5.52 | 75.05 | 320,800 |
| January..... | 12,329 | 573 | 274 | 398 | 4.98 | 5.73 | 24,450 |
| February..... | 13,591 | 1,020 | 236 | 485 | 6.06 | 6.32 | 26,960 |
| March..... | 15,391 | 1,400 | 278 | 496 | 6.20 | 7.15 | 30,530 |
| April..... | 16,884 | 1,100 | 410 | 563 | 7.04 | 7.85 | 33,490 |
| May..... | 19,331 | 1,060 | 448 | 624 | 7.60 | 8.99 | 35,340 |
| June..... | 26,022 | 2,450 | 410 | 867 | 10.6 | 12.10 | 51,610 |
| July..... | 9,159 | 755 | 176 | 295 | 3.69 | 4.26 | 18,170 |
| August..... | 4,493 | 369 | 104 | 145 | 1.81 | 2.09 | 8,910 |
| September..... | 2,827 | 125 | 79 | 94.2 | 1.18 | 1.31 | 5,610 |
| Water year 1941-42..... | 188,663 | 3,410 | 79 | 517 | 6.46 | 87.71 | 374,800 |

Peak discharge.- Dec. 19 (5 a.m.) 5,190 sec.-ft.; June 10 (1 p.m.) 3,840 sec.-ft.; June 15 (4:15 a.m.) 3,670 sec.-ft.

a. No gage-height record; discharge computed on basis of records for Sultan River near Sultan and North Fork of Snoqualmie River near Snoqualmie Falls.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

STILLAGUAMISH RIVER BASIN

South Fork of Stillaguamish River near Granite Falls, Wash.

Location.- Water-stage recorder, lat. 48°06'10", long. 121°56'40", in SW 1/4 sec. 8, T. 30 N., R. 7 E., 1 1/2 miles upstream from Canyon Creek and 2 miles northeast of Granite Falls.

Drainage area.- 119 square miles.

Records available.- July 1928 to September 1942.

Average discharge.- 14 years, 987 second-feet.

Extremes.- Maximum discharge during year, 5,340 second-feet Dec. 19 (gage height, 10.30 feet), from rating curve extended above 6,200 second-feet; minimum, 78 second-feet Sept. 25-27 (gage height, 3.01 feet).

1928-42: Maximum discharge, 26,700 second-feet Feb. 26, 1932 (gage height, 19.7 feet, from graph based on gage readings), from rating curve extended above 6,200 second-feet; minimum, 55 second-feet Sept. 23, 24, 1936; minimum gage height, 2.99 feet Aug. 19-21, 1941.

Remarks.- Records excellent. No diversion or regulation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 18 | | | | Dec. 19 to Sept. 30 | | | |
|-------------------|-------|-----|-------|---------------------|-----|-----|-------|
| 3.7 | 232 | 6.0 | 1,730 | 3.2 | 109 | 5.5 | 1,280 |
| 4.0 | 334 | 7.0 | 2,920 | 3.5 | 179 | 6.0 | 1,740 |
| 4.5 | 565 | 8.0 | 4,400 | 4.0 | 348 | 7.0 | 2,920 |
| 5.0 | 890 | 9.0 | 6,070 | 4.5 | 580 | 8.0 | 4,400 |
| 5.5 | 1,270 | | | 5.0 | 900 | 9.0 | 6,070 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 3,060 | 254 | 1,500 | 352 | 900 | 303 | 2,920 | 1,120 | 893 | 610 | 211 | 115 |
| 2 | 1,560 | 235 | 4,650 | 348 | 752 | 1,270 | 1,580 | 970 | 851 | 592 | 199 | 107 |
| 3 | 3,140 | 407 | 2,980 | 321 | 616 | 903 | 1,040 | 784 | 837 | 530 | 191 | 104 |
| 4 | 1,840 | 925 | 1,730 | 281 | 1,380 | 555 | 886 | 752 | 778 | 500 | 182 | 102 |
| 5 | 1,030 | 2,600 | 1,660 | 281 | 1,960 | 815 | 900 | 676 | 844 | 448 | 174 | 102 |
| 6 | 1,570 | 1,040 | 3,700 | 296 | 1,120 | 851 | 858 | 726 | 1,210 | 390 | 171 | 99 |
| 7 | 2,000 | 673 | 1,620 | 292 | 537 | 634 | 804 | 355 | 1,280 | 344 | 166 | 96 |
| 8 | 2,210 | 505 | 1,190 | 274 | 900 | 593 | 706 | 935 | 1,160 | 314 | 158 | 93 |
| 9 | 3,050 | 424 | 960 | 453 | 1,000 | 3,370 | 700 | 900 | 1,690 | 296 | 153 | 102 |
| 10 | 4,690 | 386 | 792 | 713 | 1,360 | 1,790 | 872 | 935 | 4,190 | 299 | 148 | 102 |
| 11 | 2,640 | 860 | 667 | 525 | 1,280 | 1,120 | 1,080 | 758 | 2,300 | 356 | 148 | 98 |
| 12 | 2,790 | 762 | 565 | 545 | 900 | 935 | 1,080 | 840 | 1,420 | 605 | 146 | 95 |
| 13 | 1,720 | 2,860 | 516 | 628 | 682 | 720 | 872 | 547 | 1,080 | 372 | 137 | 95 |
| 14 | 1,110 | 5,920 | 510 | 480 | 564 | 592 | 1,240 | 536 | 1,370 | 337 | 132 | 91 |
| 15 | 862 | 2,400 | 624 | 434 | 490 | 520 | 1,040 | 622 | 5,900 | 679 | 126 | 90 |
| 16 | 1,620 | 1,540 | 2,260 | 457 | 439 | 500 | 970 | 628 | 3,700 | 1,120 | 122 | 93 |
| 17 | 1,440 | 1,150 | 1,190 | 525 | 409 | 640 | 1,240 | 646 | 2,160 | 3,820 | 120 | 93 |
| 18 | 890 | 890 | 2,060 | 426 | 372 | 628 | 865 | 706 | 1,500 | 1,620 | 117 | 93 |
| 19 | 869 | 704 | 5,440 | 388 | 348 | 500 | 778 | 810 | 1,370 | 837 | 115 | 90 |
| 20 | 692 | 595 | 2,240 | 356 | 344 | 434 | 935 | 1,000 | 1,040 | 616 | 115 | 86 |
| 21 | 577 | 505 | 1,600 | 348 | 325 | 426 | 1,200 | 1,200 | 858 | 495 | 113 | 85 |
| 22 | 490 | 451 | 1,580 | 340 | 299 | 547 | 970 | 1,810 | 791 | 430 | 109 | 84 |
| 23 | 433 | 402 | 2,350 | 337 | 285 | 470 | 879 | 1,370 | 772 | 392 | 107 | 80 |
| 24 | 390 | 1,600 | 1,240 | 463 | 281 | 430 | 1,420 | 1,000 | 732 | 348 | 105 | 79 |
| 25 | 354 | 2,100 | 900 | 1,460 | 264 | 392 | 1,500 | 1,430 | 688 | 318 | 111 | 78 |
| 26 | 338 | 1,030 | 739 | 1,000 | 247 | 376 | 1,200 | 3,330 | 628 | 296 | 144 | 78 |
| 27 | 309 | 765 | 616 | 1,000 | 240 | 368 | 900 | 2,020 | 582 | 274 | 142 | 79 |
| 28 | 284 | 699 | 536 | 830 | 254 | 380 | 791 | 1,280 | 564 | 260 | 211 | 79 |
| 29 | 264 | 1,070 | 475 | 668 | - | 380 | 746 | 1,040 | 580 | 247 | 179 | 79 |
| 30 | 245 | 1,190 | 434 | 552 | - | 536 | 739 | 970 | 616 | 234 | 142 | 88 |
| 31 | 235 | - | 372 | 495 | - | 851 | - | 935 | - | 221 | 124 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-foot |
| October..... | 42,892 | 4,690 | 235 | 1,394 | 11.6 | 13.40 | 85,080 |
| November..... | 34,652 | 5,820 | 255 | 1,162 | 9.76 | 10.89 | 69,130 |
| December..... | 47,606 | 5,440 | 372 | 1,536 | 12.9 | 14.88 | 94,430 |
| Calendar year 1941..... | 279,206 | 5,820 | 74 | 765 | 6.43 | 87.26 | 553,800 |
| January..... | 15,918 | 1,460 | 274 | 513 | 4.31 | 4.97 | 31,570 |
| February..... | 18,848 | 1,960 | 240 | 673 | 5.66 | 5.89 | 37,530 |
| March..... | 22,837 | 3,370 | 303 | 737 | 6.19 | 7.14 | 45,300 |
| April..... | 31,711 | 2,920 | 700 | 1,057 | 8.88 | 9.91 | 62,900 |
| May..... | 32,011 | 3,330 | 536 | 1,033 | 8.68 | 10.00 | 62,490 |
| June..... | 42,394 | 5,900 | 580 | 1,413 | 11.9 | 13.25 | 84,090 |
| July..... | 18,090 | 3,820 | 221 | 584 | 4.91 | 5.65 | 35,880 |
| August..... | 4,616 | 211 | 105 | 146 | 1.23 | 1.41 | 8,960 |
| September..... | 2,752 | 115 | 78 | 91.7 | .771 | .86 | 5,460 |
| Water year 1941-42..... | 314,427 | 5,900 | 78 | 861 | 7.24 | 98.25 | 623,700 |

Peak discharge.- Nov. 14 (6:30 a.m.) 7,800 sec.-ft.; Dec. 19 (1:15 a.m.) 8,540 sec.-ft.; June 15 (11:45 a.m.) 7,090 sec.-ft.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

South Fork of Stillaguamish River above Jim Creek, near Arlington, Wash.

Location.- Water-stage recorder, lat. 48°09'55", long. 122°03'55", in $\frac{3}{4}$ sec. 17, T. 31 N., R. 6 E., 1½ miles upstream from Jim Creek and 3 miles southeast of Arlington. Datum of gage is 80 feet above mean sea level, datum of 1929.

Drainage area.- 199 square miles.

Records available.- October 1936 to September 1942.

Extremes.- Maximum discharge during year, 11,100 second-feet Dec. 19 (gage height, 18.07 feet); minimum, 118 second-feet Sept. 27 (gage height, 10.75 feet).
1936-42: Maximum discharge, 25,200 second-feet Apr. 17, 1938 (gage height, 23.27 feet), from rating curve extended above 10,000 second-feet; minimum, 114 second-feet Sept. 26, 1940, Aug. 20, 21, 1941.

Remarks.- Records good. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet) (Shifting-control method used Dec. 19 to Mar. 8)

| Oct. 1 to June 15 | | | | June 16 to Sept. 30 | | | |
|-------------------|-------|------|--------|---------------------|-----|------|-------|
| 11.5 | 541 | 14.0 | 2,760 | 10.8 | 130 | 12.5 | 1,000 |
| 11.6 | 485 | 14.5 | 3,570 | 11.0 | 195 | 13.0 | 1,440 |
| 12.0 | 725 | 15.0 | 4,500 | 11.3 | 320 | 13.5 | 2,000 |
| 12.5 | 1,100 | 16.0 | 6,450 | 11.6 | 460 | 14.0 | 2,680 |
| 13.0 | 1,550 | 17.0 | 8,600 | 12.0 | 670 | 14.5 | 3,480 |
| 13.5 | 2,100 | 18.0 | 10,800 | | | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 3,720 | 405 | 1,850 | 616 | 1,450 | 496 | 4,500 | 1,860 | 1,360 | 674 | 338 | 174 |
| 2 | 2,200 | 377 | 5,700 | 556 | 1,270 | 1,740 | 2,540 | 1,700 | 1,270 | 832 | 329 | 164 |
| 3 | 4,240 | 527 | 4,240 | 517 | 1,020 | 1,450 | 1,650 | 1,360 | 1,270 | 780 | 311 | 157 |
| 4 | 2,680 | 1,270 | 2,550 | 490 | 2,010 | 957 | 1,410 | 1,230 | 1,180 | 712 | 298 | 151 |
| 5 | 1,600 | 3,300 | 2,480 | 507 | 2,910 | 1,190 | 1,410 | 1,100 | 1,250 | 652 | 288 | 151 |
| 6 | 2,080 | 1,450 | 5,450 | 507 | 1,800 | 1,320 | 1,560 | 1,180 | 1,600 | 560 | 280 | 148 |
| 7 | 2,780 | 964 | 2,860 | 480 | 1,360 | 1,020 | 1,270 | 1,450 | 1,800 | 510 | 267 | 145 |
| 8 | 2,670 | 739 | 1,920 | 465 | 1,450 | 957 | 1,200 | 1,410 | 1,700 | 470 | 259 | 145 |
| 9 | 4,220 | 616 | 1,550 | 659 | 1,700 | 4,400 | 1,100 | 1,360 | 2,550 | 450 | 251 | 164 |
| 10 | 5,850 | 551 | 1,320 | 1,320 | 2,200 | 2,760 | 1,320 | 1,410 | 5,950 | 430 | 245 | 167 |
| 11 | 3,440 | 1,150 | 1,140 | 964 | 2,100 | 1,650 | 1,600 | 1,230 | 3,570 | 520 | 239 | 166 |
| 12 | 3,400 | 1,220 | 996 | 954 | 1,450 | 1,450 | 1,550 | 1,030 | 2,220 | 853 | 227 | 151 |
| 13 | 2,220 | 3,220 | 888 | 1,180 | 1,140 | 1,180 | 1,270 | 918 | 1,750 | 568 | 207 | 148 |
| 14 | 1,550 | 7,500 | 911 | 904 | 972 | 988 | 1,810 | 874 | 1,750 | 490 | 195 | 142 |
| 15 | 1,270 | 3,410 | 980 | 808 | 852 | 866 | 1,700 | 949 | 5,830 | 952 | 184 | 145 |
| 16 | 2,010 | 2,280 | 3,520 | 823 | 766 | 844 | 1,410 | 957 | 5,700 | 1,300 | 170 | 142 |
| 17 | 1,880 | 1,800 | 1,920 | 950 | 699 | 1,000 | 1,750 | 957 | 3,540 | 4,710 | 167 | 142 |
| 18 | 1,270 | 1,450 | 2,190 | 794 | 654 | 1,060 | 1,320 | 1,080 | 2,330 | 2,520 | 160 | 142 |
| 19 | 1,270 | 1,180 | 8,010 | 692 | 585 | 881 | 1,180 | 1,180 | 2,060 | 1,200 | 160 | 139 |
| 20 | 1,060 | 1,000 | 3,570 | 640 | 574 | 773 | 1,360 | 1,410 | 1,600 | 902 | 160 | 135 |
| 21 | 881 | 874 | 2,420 | 628 | 545 | 760 | 1,700 | 1,600 | 1,300 | 730 | 164 | 130 |
| 22 | 766 | 773 | 2,500 | 609 | 501 | 911 | 1,410 | 2,280 | 1,160 | 640 | 164 | 128 |
| 23 | 679 | 705 | 3,720 | 580 | 480 | 801 | 1,320 | 1,860 | 1,120 | 580 | 157 | 125 |
| 24 | 603 | 2,120 | 1,980 | 753 | 475 | 732 | 1,990 | 1,410 | 1,080 | 520 | 154 | 122 |
| 25 | 545 | 3,200 | 1,600 | 2,130 | 449 | 666 | 2,280 | 1,860 | 1,000 | 470 | 164 | 120 |
| 26 | 517 | 1,650 | 1,230 | 1,700 | 424 | 647 | 2,040 | 4,610 | 930 | 445 | 215 | 120 |
| 27 | 485 | 1,270 | 1,060 | 1,600 | 415 | 616 | 1,600 | 2,990 | 867 | 420 | 215 | 118 |
| 28 | 444 | 1,100 | 911 | 1,360 | 420 | 628 | 1,320 | 1,980 | 825 | 406 | 302 | 120 |
| 29 | 415 | 1,700 | 808 | 1,180 | - | 712 | 1,230 | 1,600 | 853 | 388 | 293 | 122 |
| 30 | 386 | 1,750 | 732 | 964 | - | 911 | 1,230 | 1,500 | 881 | 374 | 219 | 130 |
| 31 | 368 | - | 647 | 823 | - | 1,360 | - | 1,410 | - | 360 | 195 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 57,499 | 5,850 | 368 | 1,555 | 9.32 | 10.75 | 114,000 |
| November..... | 49,551 | 7,500 | 377 | 1,652 | 8.30 | 9.26 | 98,280 |
| December..... | 71,153 | 8,010 | 647 | 2,295 | 11.5 | 13.30 | 141,100 |
| Calendar year 1941..... | 406,482 | 8,010 | 114 | 1,114 | 5.60 | 75.96 | 806,200 |
| January..... | 27,163 | 2,130 | 465 | 876 | 4.40 | 5.05 | 53,880 |
| February..... | 30,551 | 2,910 | 415 | 1,095 | 5.50 | 5.73 | 60,800 |
| March..... | 35,726 | 4,400 | 496 | 1,152 | 5.79 | 6.68 | 70,860 |
| April..... | 48,430 | 4,300 | 1,100 | 1,614 | 8.11 | 9.05 | 96,060 |
| May..... | 47,715 | 4,610 | 874 | 1,539 | 7.73 | 8.92 | 94,640 |
| June..... | 63,276 | 8,830 | 825 | 2,109 | 10.6 | 11.83 | 125,500 |
| July..... | 25,395 | 4,710 | 360 | 819 | 4.12 | 4.75 | 50,370 |
| August..... | 6,975 | 358 | 154 | 225 | 1.13 | 1.30 | 13,820 |
| September..... | 4,245 | 174 | 118 | 142 | 0.714 | 0.79 | 8,420 |
| Water year 1941-42..... | 467,779 | 8,830 | 118 | 1,282 | 6.44 | 87.44 | 927,700 |

Peak discharge.- Nov. 14 (7 a.m.) 9,700 sec.-ft.; Dec. 19 (3 a.m.) 11,100 sec.-ft.; June 15 (1:30 p.m.) 10,400 sec.-ft.

Time basis. Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

STILLAGUAMISH RIVER BASIN

Jim Creek near Arlington, Wash.

Location.- Water-stage recorder, lat. 48°10'30", long. 122°03'55", in SE 1/4 sec. 17, T. 31 N., R. 6 E., 1 mile upstream from mouth and 3 miles southeast of Arlington.

Drainage area.- 48.9 square miles.

Records available.- October 1937 to September 1942.

Extremes.- Maximum discharge during year, 2,100 second-feet June 15 (gage height, 5.80 feet), from rating curve extended above 800 second-feet; minimum, 10 second-feet Sept. 22-24 (gage height, 0.78 foot).
1937-42: Maximum discharge, 5,320 second-feet Dec. 28, 1937 (gage height, 8.32 feet), from rating curve extended above 800 second-feet; minimum, 6.2 second-feet July 30, Sept. 3, 5, 1938; minimum gage height, 0.67 foot July 19, 1940.

Remarks.- Records good except those above 1,500 second-feet, which are fair. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Nov. 13 | | | | Nov. 14 to Sept. 30 | | | | | |
|-------------------|-----|-----|-----|---------------------|----|-----|-----|-----|-------|
| 1.6 | 62 | 2.6 | 244 | 0.8 | 11 | 2.1 | 140 | 4.5 | 1,100 |
| 1.8 | 85 | 3.0 | 357 | 1.0 | 20 | 2.5 | 231 | 5.0 | 1,440 |
| 2.0 | 118 | 3.5 | 545 | 1.2 | 31 | 3.0 | 377 | 5.5 | 1,830 |
| 2.3 | 178 | 4.0 | 610 | 1.5 | 53 | 3.5 | 572 | | |
| | | | | 1.8 | 87 | 4.0 | 615 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|-------|------|------|-------|
| 1 | 241 | 59 | 265 | 104 | 268 | 93 | 383 | 357 | 150 | 60 | 31 | 16 |
| 2 | 185 | 53 | 424 | 100 | 239 | 334 | 234 | 351 | 130 | 57 | 30 | 16 |
| 3 | 296 | 396 | 550 | 92 | 214 | 302 | 178 | 270 | 199 | 52 | 27 | 14 |
| 4 | 204 | 206 | 453 | 87 | 353 | 216 | 153 | 218 | 174 | 46 | 25 | 15 |
| 5 | 142 | 277 | 508 | 86 | 572 | 234 | 146 | 192 | 140 | 44 | 23 | 16 |
| 6 | 151 | 160 | 867 | 87 | 430 | 224 | 136 | 179 | 146 | 42 | 20 | 15 |
| 7 | 185 | 124 | 472 | 84 | 319 | 192 | 116 | 172 | 159 | 41 | 22 | 14 |
| 8 | 162 | 102 | 335 | 86 | 313 | 188 | 104 | 146 | 192 | 38 | 22 | 13 |
| 9 | 252 | 85 | 273 | 118 | 388 | 396 | 102 | 130 | 368 | 36 | 24 | 16 |
| 10 | 298 | 85 | 226 | 201 | 497 | 276 | 109 | 179 | 637 | 36 | 24 | 15 |
| 11 | 231 | 229 | 197 | 157 | 426 | 204 | 115 | 161 | 500 | 53 | 24 | 14 |
| 12 | 216 | 210 | 172 | 172 | 307 | 192 | 100 | 144 | 361 | 68 | 24 | 13 |
| 13 | 162 | 667 | 159 | 234 | 247 | 170 | 86 | 138 | 252 | 46 | 22 | 13 |
| 14 | 134 | 834 | 176 | 183 | 206 | 150 | 177 | 124 | 241 | 44 | 22 | 13 |
| 15 | 113 | 442 | 201 | 163 | 179 | 136 | 206 | 111 | 1,470 | 72 | 22 | 13 |
| 16 | 165 | 360 | 640 | 165 | 157 | 140 | 161 | 96 | 928 | 90 | 20 | 13 |
| 17 | 168 | 341 | 419 | 161 | 142 | 168 | 194 | 92 | 528 | 260 | 20 | 13 |
| 18 | 132 | 278 | 425 | 159 | 122 | 181 | 132 | 92 | 360 | 167 | 19 | 12 |
| 19 | 164 | 226 | 983 | 133 | 176 | 115 | 96 | 276 | 99 | 99 | 18 | 12 |
| 20 | 139 | 192 | 641 | 128 | 115 | 157 | 118 | 100 | 221 | 74 | 17 | 12 |
| 21 | 120 | 168 | 542 | 124 | 111 | 161 | 115 | 99 | 185 | 61 | 17 | 11 |
| 22 | 107 | 148 | 572 | 116 | 96 | 155 | 113 | 109 | 155 | 52 | 15 | 11 |
| 23 | 96 | 130 | 865 | 111 | 92 | 150 | 159 | 99 | 134 | 48 | 15 | 11 |
| 24 | 85 | 347 | 472 | 161 | 93 | 144 | 286 | 84 | 116 | 51 | 14 | 10 |
| 25 | 79 | 396 | 356 | 470 | 88 | 153 | 431 | 137 | 113 | 41 | 15 | 11 |
| 26 | 74 | 241 | 262 | 357 | 82 | 120 | 412 | 437 | 102 | 39 | 21 | 11 |
| 27 | 70 | 197 | 214 | 298 | 78 | 111 | 290 | 412 | 93 | 38 | 20 | 12 |
| 28 | 66 | 184 | 183 | 293 | 78 | 106 | 301 | 281 | 83 | 36 | 26 | 12 |
| 29 | 62 | 219 | 155 | 265 | - | 107 | 221 | 218 | 74 | 35 | 25 | 12 |
| 30 | 58 | 199 | 138 | 216 | - | 118 | 208 | 197 | 68 | 33 | 20 | 14 |
| 31 | 54 | - | 113 | 192 | - | 161 | - | 176 | - | 32 | 18 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 4,611 | 298 | 54 | 149 | 3.05 | 3.51 | 9,160 |
| November..... | 7,559 | 834 | 53 | 252 | 5.15 | 5.75 | 14,990 |
| December..... | 12,240 | 983 | 113 | 396 | 8.08 | 9.31 | 24,280 |
| Calendar year 1941..... | 51,114 | 983 | 9 | 140 | 2.86 | 38.98 | 101,400 |
| January..... | 5,328 | 470 | 84 | 172 | 3.52 | 4.05 | 10,570 |
| February..... | 6,305 | 572 | 78 | 225 | 4.80 | 4.80 | 12,510 |
| March..... | 5,615 | 396 | 93 | 181 | 3.70 | 4.27 | 11,140 |
| April..... | 5,599 | 431 | 86 | 187 | 3.82 | 4.26 | 11,110 |
| May..... | 5,597 | 437 | 84 | 181 | 3.70 | 4.26 | 11,100 |
| June..... | 8,545 | 1,470 | 68 | 285 | 5.83 | 6.50 | 16,950 |
| July..... | 1,891 | 260 | 32 | 61.0 | 1.25 | 1.44 | 3,750 |
| August..... | 662 | 31 | 14 | 21.4 | .438 | .50 | 1,310 |
| September..... | 390 | 16 | 10 | 13.0 | .266 | .30 | 774 |
| Water year 1941-42..... | 63,432 | 1,470 | 10 | 174 | 3.56 | 48.95 | 127,600 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

North Fork of Stillaguamish River near Arlington, Wash.

Location.- Water-stags recorder, lat. 48°15'45", long. 122°02'45", in SE 1/4 sec. 16, T. 32 N., R. 6 E., 6 miles northeast of Arlington, 7 miles upstream from mouth, and 8 miles downstream from Deer Creek. Datum of gage is 89.34 feet above mean sea level, datum of 1929.

Drainage area.- 269 square miles.

Records available.- July 1928 to September 1942.

Average discharge.- 14 years, 1,640 second-feet.

Extremes.- Maximum discharge during year, 14,200 second-feet Dec. 19 (gage height, 9.55 feet); minimum, 171 second-feet Sept. 23 (gage height, 1.08 feet).
1928-42: Maximum discharge, 27,700 second-feet Feb. 26, 1932 (gage height, 12.7 feet); minimum, 88 second-feet Sept. 23, 1938 (gage height, 1.14 feet).

Remarks.- Records good. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used June 19 to July 16)

| Oct. 1 to Dec. 18 | | | | Dec. 19 to Sept. 30 | | | | | |
|-------------------|-----|-----|-------|---------------------|-----|-----|-------|-----|--------|
| 1.3 | 210 | 4.0 | 1,490 | 1.1 | 176 | 3.0 | 892 | 6.4 | 4,240 |
| 1.5 | 270 | 5.0 | 2,210 | 1.3 | 231 | 3.6 | 1,240 | 7.2 | 6,200 |
| 2.0 | 440 | 6.0 | 3,490 | 1.6 | 321 | 4.3 | 1,720 | 8.0 | 8,550 |
| 2.5 | 640 | 7.0 | 5,720 | 2.0 | 455 | 5.0 | 2,280 | 9.0 | 11,900 |
| 3.0 | 880 | 8.0 | 8,500 | 2.5 | 654 | 5.7 | 3,050 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------------------------|------------------|--------|---------|---------|-------|-----------------|---------|------------|-------|------|-------|
| 1 | 2,450 | 535 | 2,730 | 892 | 1,480 | 699 | 3,020 | 1,620 | 1,400 | 1,000 | 438 | 260 |
| 2 | 1,980 | 500 | 7,070 | 892 | 1,400 | 2,150 | 2,360 | 1,580 | 1,340 | 945 | 420 | 251 |
| 3 | 3,960 | 1,010 | 5,980 | 841 | 1,270 | 1,980 | 1,680 | 1,340 | 1,480 | 892 | 413 | 243 |
| 4 | 2,860 | 1,360 | 3,670 | 745 | 2,160 | 1,300 | 1,480 | 1,180 | 1,340 | 866 | 410 | 240 |
| 5 | 1,770 | 3,920 | 3,440 | 676 | 3,360 | 1,760 | 1,480 | 1,090 | 1,300 | 792 | 386 | 237 |
| 6 | | | | | | | | | | | | |
| 7 | 1,890 | 2,010 | 6,520 | 676 | 2,260 | 1,790 | 1,400 | 1,120 | 1,510 | 722 | 379 | 228 |
| 8 | 2,240 | 1,350 | 4,060 | 699 | 1,790 | 1,370 | 1,340 | 1,300 | 1,680 | 676 | 376 | 220 |
| 9 | 2,370 | 1,080 | 2,870 | 699 | 1,860 | 1,240 | 1,180 | 1,300 | 1,790 | 654 | 366 | 223 |
| 10 | 4,720 | 908 | 2,210 | 864 | 2,100 | 3,670 | 1,150 | 1,270 | 2,930 | 632 | 353 | 223 |
| 11 | 6,520 | 828 | 1,910 | 1,300 | 2,360 | 2,800 | 1,340 | 1,300 | 5,300 | 611 | 350 | 225 |
| 12 | | | | | | | | | | | | |
| 13 | 4,060 | 1,800 | 1,660 | 1,090 | 2,390 | 1,940 | 1,580 | 1,180 | 4,240 | 866 | 347 | 211 |
| 14 | 3,670 | 1,600 | 1,420 | 1,150 | 1,790 | 1,650 | 1,580 | 1,060 | 2,800 | 972 | 334 | 206 |
| 15 | 2,620 | 3,880 | 1,290 | 1,540 | 1,440 | 1,400 | 1,300 | 972 | 2,100 | 689 | 318 | 206 |
| 16 | 1,980 | 9,450 | 1,320 | 1,180 | 1,240 | 1,210 | 1,790 | 945 | 2,280 | 676 | 316 | 203 |
| 17 | 1,660 | 4,990 | 1,420 | 1,060 | 1,180 | 1,090 | 1,860 | 972 | 8,560 | 1,030 | 306 | 214 |
| 18 | | | | | | | | | | | | |
| 19 | 2,180 | 3,010 | 4,570 | 1,060 | 1,000 | 1,060 | 1,580 | 945 | 5,920 | 1,320 | 293 | 220 |
| 20 | 2,110 | 2,510 | 2,870 | 1,150 | 918 | 1,150 | 1,790 | 1,000 | 4,450 | 2,920 | 290 | 203 |
| 21 | 1,630 | 1,980 | 3,290 | 1,030 | 866 | 1,210 | 1,400 | 1,030 | 2,920 | 1,610 | 287 | 195 |
| 22 | 1,600 | 1,630 | 10,400 | 918 | 792 | 1,090 | 1,240 | 1,120 | 2,280 | 1,120 | 281 | 181 |
| 23 | 1,350 | 1,380 | 5,140 | 866 | 816 | 972 | 1,440 | 1,480 | 1,860 | 892 | 275 | 179 |
| 24 | | | | | | | | | | | | |
| 25 | 1,170 | 1,230 | 3,670 | 841 | 768 | 945 | 1,650 | 1,560 | 1,620 | 792 | 275 | 173 |
| 26 | 1,020 | 1,110 | 3,360 | 841 | 699 | 1,060 | 1,610 | 2,020 | 1,450 | 699 | 275 | 173 |
| 27 | 908 | 990 | 5,460 | 816 | 676 | 1,000 | 1,370 | 1,790 | 1,370 | 654 | 269 | 173 |
| 28 | 828 | 2,740 | 3,050 | 972 | 654 | 945 | 1,650 | 1,440 | 1,300 | 590 | 257 | 181 |
| 29 | 754 | 3,630 | 2,280 | 2,620 | 632 | 892 | 2,360 | 1,860 | 1,240 | 550 | 257 | 179 |
| 30 | | | | | | | | | | | | |
| 31 | 702 | 1,980 | 1,860 | 2,100 | 590 | 841 | 2,100 | 3,850 | 1,180 | 530 | 324 | 179 |
| 27 | 662 | 1,600 | 1,620 | 2,020 | 590 | 841 | 1,580 | 5,140 | 1,090 | 530 | 287 | 176 |
| 28 | 618 | 1,420 | 1,440 | 1,790 | 611 | 841 | 1,370 | 2,100 | 1,030 | 492 | 369 | 176 |
| 29 | 576 | 2,210 | 1,270 | 1,540 | - | 841 | 1,340 | 1,720 | 1,000 | 474 | 363 | 176 |
| 30 | 535 | 2,530 | 1,150 | 1,270 | - | 972 | 1,270 | 1,680 | 1,000 | 455 | 293 | 200 |
| 31 | 511 | - | 972 | 1,150 | - | 1,300 | - | 1,620 | - | 452 | 272 | - |
| | | | | | | | | | | | | |
| | Month | Second-foot-days | | Maximum | Minimum | Mean | Per square mile | Run-off | | | | |
| | | | | | | | | Inches | Acres-feet | | | |
| | October..... | 61,904 | | 6,520 | 511 | 1,997 | 7.42 | 6.56 | 122,800 | | | |
| | November..... | 55,051 | | 9,430 | 972 | 2,168 | 6.06 | 8.99 | 129,000 | | | |
| | December..... | 59,972 | | 10,400 | 972 | 3,225 | 12.0 | 13.52 | 195,300 | | | |
| | Calendar year 1941..... | 497,150 | | 10,400 | 191 | 1,362 | 5.06 | 68.73 | 986,100 | | | |
| | January..... | 35,318 | | 2,620 | 676 | 1,139 | 4.23 | 4.88 | 70,050 | | | |
| | February..... | 37,612 | | 3,360 | 590 | 1,343 | 4.99 | 5.20 | 74,600 | | | |
| | March..... | 42,009 | | 3,670 | 699 | 1,355 | 5.04 | 5.81 | 83,320 | | | |
| | April..... | 48,210 | | 3,020 | 1,150 | 1,607 | 5.97 | 6.67 | 95,620 | | | |
| | May..... | 48,604 | | 3,850 | 945 | 1,665 | 5.83 | 6.72 | 96,400 | | | |
| | June..... | 69,790 | | 8,550 | 1,000 | 2,326 | 9.65 | 9.65 | 138,400 | | | |
| | July..... | 26,313 | | 2,920 | 452 | 849 | 3.16 | 3.64 | 52,190 | | | |
| | August..... | 10,198 | | 438 | 257 | 329 | 1.22 | 1.41 | 20,230 | | | |
| | September..... | 6,154 | | 260 | 173 | 205 | .762 | .85 | 12,210 | | | |
| | Water year 1941-42..... | 551,135 | | 10,400 | 173 | 1,610 | 5.61 | 76.20 | 1,093,000 | | | |

Peak discharge.- Nov. 14 (10 a.m.) 12,300 sec.-ft.; Dec. 2 (2 p.m.) 8,500 sec.-ft.; Dec. 19 (5 a.m.) 14,200 sec.-ft.; June 15 (1 p.m.) 10,800 sec.-ft.)

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Skagit River near Hope, British Columbia

(International gaging station)

Location.- Water-stage recorder, lat. 49°03', long. 121°05', just downstream from Galena Creek, 4 miles upstream from the international boundary, and 40 miles southeast of Hope, British Columbia.

Drainage area.- 370 square miles.

Records available.- October 1934 to September 1942 in water-supply papers of Geological Survey. March 1915 to September 1922 in bulletins of Dominion Water & Power Bureau, Canada.

Extremes.- Maximum discharge during year, 4,440 second-feet May 26 (gage height, 7.49 feet); minimum, 137 second-feet Sept. 29, 30 (gage height, 2.34 feet).
1915-22, 1934-42: Maximum discharge, 7,560 second-feet June 17, 1916; minimum recorded, 81 second-feet Feb. 9, 1937.

Remarks.- Records good. No diversion or regulation.

Cooperation.- This station is maintained with the cooperation of the city of Seattle and is one of the international gaging stations maintained by Canada under agreement with the United States.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-------|-----|-------|
| 2.4 | 151 | 3.5 | 569 | 5.5 | 1,840 |
| 2.6 | 203 | 4.0 | 818 | 6.0 | 2,330 |
| 2.8 | 268 | 4.5 | 1,100 | 6.5 | 2,960 |
| 3.0 | 345 | 5.0 | 1,440 | 7.0 | 3,700 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 448 | 636 | 964 | 444 | 283 | 203 | 358 | 866 | 1,850 | 1,280 | 484 | 212 |
| 2 | 462 | 603 | 1,770 | 480 | 275 | 209 | 442 | 829 | 1,900 | 1,290 | 484 | 206 |
| 3 | 636 | 627 | 2,930 | 475 | 272 | 212 | 457 | 792 | 2,400 | 1,230 | 462 | 206 |
| 4 | 807 | 730 | 2,280 | 452 | 275 | 209 | 484 | 770 | 2,200 | 1,180 | 444 | 203 |
| 5 | 750 | 818 | 1,760 | 439 | 272 | 218 | 536 | 758 | 2,260 | 1,110 | 448 | 206 |
| 6 | | | | | | | | | | | | |
| 7 | 705 | 770 | 1,580 | 430 | 268 | 218 | 603 | 802 | 2,720 | 1,020 | 457 | 192 |
| 8 | 720 | 715 | 1,430 | 417 | 264 | 212 | 646 | 920 | 3,120 | 958 | 426 | 192 |
| 9 | 690 | 685 | 1,310 | 413 | 261 | 215 | 661 | 1,020 | 2,690 | 998 | 408 | 190 |
| 10 | 685 | 670 | 1,200 | 404 | 258 | 231 | 675 | 1,140 | 2,280 | 876 | 400 | 187 |
| 11 | 1,090 | 660 | 1,110 | 396 | 258 | 251 | 755 | 1,180 | 1,990 | 813 | 391 | 181 |
| 12 | | | | | | | | | | | | |
| 13 | 1,230 | 797 | 1,040 | 391 | 261 | 254 | 936 | 1,120 | 1,770 | 797 | 374 | 176 |
| 14 | 1,240 | 820 | 969 | 383 | 254 | 251 | 1,060 | 1,060 | 1,680 | 760 | 358 | 174 |
| 15 | 1,110 | 730 | 920 | 379 | 251 | 248 | 1,050 | 1,100 | 1,530 | 720 | 341 | 174 |
| 16 | 1,150 | 1,480 | 887 | 366 | 248 | 244 | 1,050 | 1,180 | 1,660 | 705 | 333 | 171 |
| 17 | 1,200 | 1,490 | 876 | 362 | 244 | 237 | 1,020 | 1,190 | 1,990 | 710 | 333 | 184 |
| 18 | | | | | | | | | | | | |
| 19 | 1,640 | 1,280 | 909 | 349 | 241 | 231 | 986 | 1,170 | 1,870 | 725 | 325 | 179 |
| 20 | 2,150 | 1,120 | 882 | 341 | 237 | 231 | 1,030 | 1,140 | 1,610 | 770 | 317 | 181 |
| 21 | 1,740 | 1,010 | 859 | 333 | 234 | 234 | 1,010 | 1,170 | 1,470 | 725 | 309 | 168 |
| 22 | 1,510 | 930 | 876 | 329 | 231 | 225 | 966 | 1,240 | 1,400 | 685 | 301 | 164 |
| 23 | 1,340 | 860 | 850 | 325 | 228 | 222 | 1,080 | 1,360 | 1,330 | 660 | 298 | 164 |
| 24 | | | | | | | | | | | | |
| 25 | 1,200 | 807 | 802 | 313 | 228 | 222 | 1,420 | 1,820 | 1,250 | 646 | 286 | 151 |
| 26 | 1,130 | 750 | 781 | 313 | 222 | 228 | 1,450 | 2,900 | 1,210 | 631 | 268 | 154 |
| 27 | 1,050 | 720 | 776 | 309 | 218 | 225 | 1,300 | 3,320 | 1,280 | 612 | 264 | 154 |
| 28 | 974 | 781 | 725 | 301 | 222 | 222 | 1,180 | 3,280 | 1,310 | 574 | 261 | 149 |
| 29 | 898 | 893 | 695 | 305 | 215 | 212 | 1,080 | 3,660 | 1,260 | 560 | 244 | 146 |
| 30 | | | | | | | | | | | | |
| 31 | 839 | 815 | 627 | 301 | 212 | 212 | 1,000 | 4,150 | 1,240 | 579 | 248 | 144 |
| 1 | 792 | 781 | 574 | 298 | 209 | 209 | 947 | 3,200 | 1,200 | 546 | 241 | 142 |
| 2 | 755 | 745 | 555 | 294 | 206 | 209 | 896 | 2,450 | 1,200 | 588 | 261 | 140 |
| 3 | 725 | 755 | 536 | 294 | - | 212 | 860 | 2,070 | 1,240 | 555 | 244 | 137 |
| 4 | 675 | 920 | 508 | 286 | - | 222 | 849 | 2,060 | 1,240 | 527 | 228 | 142 |
| 5 | 651 | - | 484 | 283 | - | 254 | - | 1,990 | - | 508 | 218 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 30,992 | 2,150 | 448 | 1,000 | 2.70 | 3.11 | 61,470 |
| November..... | 25,441 | 1,490 | 603 | 848 | 2.29 | 2.56 | 50,460 |
| December..... | 32,385 | 2,930 | 484 | 1,040 | 2.81 | 3.24 | 64,240 |
| Calendar year 1941..... | 237,022 | 2,930 | 171 | 649 | 1.75 | 23.82 | 470,100 |
| January..... | 11,205 | 480 | 283 | 561 | .98 | 1.12 | 22,220 |
| February..... | 6,847 | 283 | 206 | 248 | .66 | .69 | 13,580 |
| March..... | 6,982 | 254 | 203 | 225 | .61 | .70 | 13,850 |
| April..... | 26,799 | 1,450 | 358 | 893 | 2.41 | 2.69 | 53,160 |
| May..... | 51,704 | 4,150 | 755 | 1,870 | 4.51 | 5.20 | 102,600 |
| June..... | 52,060 | 3,120 | 1,200 | 1,740 | 4.70 | 5.24 | 103,200 |
| July..... | 24,238 | 1,290 | 598 | 781 | 2.11 | 2.43 | 48,080 |
| August..... | 10,486 | 484 | 218 | 587 | .91 | 1.06 | 20,740 |
| September..... | 5,165 | 212 | 137 | 172 | .48 | .51 | 10,240 |
| Water year 1941-42..... | 284,264 | 4,150 | 137 | 779 | 2.11 | 28.55 | 563,800 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Skagit River above Devils Creek, near Newhalem, Wash.

Location.- Water-stage recorder, lat. 48°51', long. 121°02', in NW¼ sec. 30, T. 39 N., R. 14 E., 2 miles upstream from Devils Creek, 10½ miles upstream from Ross Dam, and 15 miles northeast of Newhalem.

Drainage area.- 636 square miles.

Records available.- March 1940 to September 1942.

Extremes.- Maximum discharge during year, 6,570 second-feet Dec. 3 (gage height, 6.20 feet); minimum, 347 second-feet Sept. 29 (gage height, 0.68 foot).

1940-42: Maximum discharge, that of Dec. 3, 1941; minimum, that of Sept. 29, 1942.

Remarks.- Records good except those for periods of doubtful or no gage-height record, which are fair. No diversion or regulation.

Cooperation.- Gage-height record collected and many discharge measurements made by city of Seattle.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-------|-----|-------|
| 0.8 | 390 | 2.0 | 1,080 | 4.5 | 4,060 |
| 1.0 | 469 | 2.5 | 1,540 | 5.0 | 4,770 |
| 1.2 | 560 | 3.0 | 2,080 | 6.0 | 6,270 |
| 1.4 | 664 | 3.5 | 2,620 | | |
| 1.7 | 851 | 4.0 | 3,360 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|
| 1 | a820 | 1,120 | 2,280 | 1,000 | 585 | 457 | 670 | 1,640 | 3,640 | 2,950 | 1,080 | 556 |
| 2 | a820 | 1,080 | 4,910 | 1,000 | 580 | 473 | 851 | 1,590 | 3,640 | 3,020 | 1,080 | 522 |
| 3 | a1,780 | 1,120 | 6,120 | 992 | 575 | 482 | 916 | 1,540 | 4,200 | 2,880 | 1,080 | 518 |
| 4 | a1,880 | 1,250 | 4,920 | 969 | 586 | 473 | 969 | 1,490 | 4,200 | 2,780 | 1,040 | 513 |
| 5 | a1,800 | 1,490 | 4,060 | 946 | 575 | 491 | 1,080 | 1,490 | 4,340 | 2,620 | 1,040 | 522 |
| 6 | a1,440 | 1,440 | 3,640 | 923 | 570 | 509 | 1,200 | 1,540 | 4,770 | 2,280 | 1,080 | 509 |
| 7 | a1,360 | 1,340 | 3,290 | 901 | 560 | 500 | 1,300 | 1,740 | 5,220 | 2,080 | 1,040 | 487 |
| 8 | a1,560 | 1,300 | 2,880 | 887 | 555 | 504 | 1,340 | 2,080 | 4,770 | 1,900 | 1,000 | 478 |
| 9 | a2,000 | 1,250 | 2,820 | 858 | 555 | 532 | 1,390 | 2,320 | 4,340 | 1,740 | 1,000 | 487 |
| 10 | 2,080 | 1,250 | 2,380 | 844 | 551 | 570 | 1,490 | 2,440 | 3,920 | 1,690 | 992 | 469 |
| 11 | 2,380 | 1,590 | 2,200 | 831 | 555 | 580 | 1,850 | 2,320 | 3,430 | 1,690 | 946 | 453 |
| 12 | 2,440 | 1,690 | 2,020 | 818 | 555 | 590 | 2,200 | 2,140 | 3,080 | 1,540 | 894 | 436 |
| 13 | 2,080 | 1,850 | 1,900 | 804 | 551 | 590 | 2,200 | 2,140 | 3,080 | 1,440 | 838 | 444 |
| 14 | 2,080 | 3,150 | 1,800 | 791 | 546 | 580 | 2,140 | 2,320 | 3,430 | 1,440 | 818 | 456 |
| 15 | 2,200 | 3,290 | 1,740 | 772 | 541 | 570 | 2,080 | 2,440 | 4,200 | 1,640 | 824 | 453 |
| 16 | 2,780 | 2,780 | 1,850 | 759 | 556 | 555 | 1,960 | 2,380 | 3,780 | 1,690 | 818 | 436 |
| 17 | 3,430 | 2,380 | 1,800 | 728 | 532 | 546 | 2,020 | 2,320 | 3,290 | 1,640 | 811 | 413 |
| 18 | 3,020 | 2,080 | 1,740 | 705 | 522 | 541 | 1,980 | 2,320 | 2,880 | 1,540 | 797 | 401 |
| 19 | 2,690 | 1,850 | 1,900 | 676 | 518 | 527 | 1,900 | 2,500 | 2,690 | 1,440 | 804 | 386 |
| 20 | 2,380 | 1,740 | 1,850 | 664 | 509 | 518 | 2,020 | 2,820 | 2,500 | 1,440 | 838 | 386 |
| 21 | 2,140 | 1,590 | 1,740 | 648 | 504 | 513 | 2,780 | 3,780 | 2,380 | 1,390 | 784 | 383 |
| 22 | 1,960 | 1,490 | 1,690 | 637 | 495 | 527 | 2,950 | 5,070 | 2,380 | 1,390 | 753 | 386 |
| 23 | 1,850 | 1,390 | 1,690 | 626 | 487 | 518 | 2,620 | 5,520 | 2,500 | 1,340 | 753 | 390 |
| 24 | 1,740 | 1,440 | 1,590 | 621 | 482 | 513 | 2,380 | 5,520 | 2,560 | 1,300 | 734 | 386 |
| 25 | 1,590 | 1,640 | 1,490 | 621 | 478 | 504 | 2,200 | 5,970 | 2,500 | 1,250 | 676 | 379 |
| 26 | 1,540 | 1,690 | 1,390 | 621 | 473 | 495 | 2,020 | 6,270 | 2,500 | 1,250 | 642 | 372 |
| 27 | 1,440 | 1,540 | 1,300 | 610 | 465 | 482 | 1,850 | 5,520 | 2,500 | 1,200 | 621 | 372 |
| 28 | 1,340 | 1,490 | 1,200 | 610 | 461 | 482 | 1,740 | 4,620 | 2,560 | 1,200 | 610 | 368 |
| 29 | 1,300 | 1,590 | 1,180 | 605 | - | 478 | 1,690 | 4,060 | 2,780 | 1,200 | 600 | 358 |
| 30 | 1,200 | 2,080 | 1,080 | 600 | - | 495 | 1,640 | 3,920 | 2,760 | 1,160 | 580 | 358 |
| 31 | 1,160 | - | 1,040 | 590 | - | 532 | - | 3,920 | - | 1,120 | 560 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 58,060 | 3,430 | 820 | 1,873 | 2.94 | 3.38 | 115,200 |
| November..... | 50,880 | 3,290 | 1,080 | 1,695 | 2.66 | 2.96 | 100,900 |
| December..... | 71,250 | 6,120 | 1,040 | 2,298 | 3.60 | 4.15 | 141,300 |
| Calendar year 1941..... | 517,690 | 6,120 | 478 | 1,419 | 2.22 | 30.16 | 1,027,000 |
| January..... | 23,657 | 1,000 | 590 | 763 | 1.20 | 1.36 | 46,920 |
| February..... | 14,901 | 585 | 461 | 532 | .834 | .87 | 29,560 |
| March..... | 16,132 | 590 | 457 | 520 | .815 | .94 | 32,000 |
| April..... | 53,386 | 2,960 | 670 | 1,780 | 2.79 | 3.11 | 105,900 |
| May..... | 95,740 | 6,270 | 1,490 | 3,088 | 4.84 | 5.58 | 189,900 |
| June..... | 100,900 | 5,220 | 2,350 | 3,560 | 5.27 | 5.88 | 199,900 |
| July..... | 53,100 | 3,020 | 1,120 | 1,713 | 2.66 | 3.10 | 105,300 |
| August..... | 26,133 | 1,080 | 560 | 843 | 1.32 | 1.52 | 51,830 |
| September..... | 13,047 | 536 | 358 | 435 | .682 | .76 | 26,880 |
| Water year 1941-42..... | 577,066 | 6,270 | 358 | 1,581 | 2.48 | 33.63 | 1,145,000 |

Peak discharge.- Dec. 3 (2 to 3 a.m.) 6,570 sec.-ft.; May 26 (2 a.m.) 6,420 sec.-ft.; June 7 (9 to 10 a.m.) 5,220 sec.-ft.; June 15 (1 to 3 p.m.) 4,480 sec.-ft.

a No gage-height record; discharge computed on basis of records for Ruby Creek at Newhalem.

Note.- Doubtful gage-height record Aug. 28 to Sept. 16; discharge computed on basis of recorded

gage heights and records for Ruby Creek near Newhalem.

Time basis.- Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

SKAGIT RIVER BASIN

Skagit River at Newhalem, Wash.

Location.- Water-stage recorder, lat. $48^{\circ}40'$, long. $121^{\circ}15'$, in SE $\frac{1}{4}$ sec. 21, T. 37 N., R. 12 E., at power plant of city of Seattle at Newhalem, a quarter of a mile upstream from Newhalem Creek, 11 miles upstream from Bacon Creek, and 16 miles upstream from Marble-mount. Datum of gage is 400 feet above mean sea level, subject to correction to datum of 1929.

Drainage area.- 1,160 square miles, of which 390 square miles is in Canada.

Records available.- December 1908 to May 1914 and October 1920 to September 1942 in reports of Geological Survey. October 1913 to September 1920 (monthly discharge only) in State Water-Supply Bulletin 5.

Average discharge.- 34 years, 4,298 second-feet (adjusted for storage in Diablo Reservoir since October 1929 and Ruby Reservoir since March 1940).

Extremes.- Maximum discharge during year, 17,400 second-feet (regulated) May 26 (gage height, 88.14 feet); minimum, 216 second-feet (regulated) Mar. 22 (gage height, 78.96 feet); minimum daily, 836 second-feet (regulated) Mar. 22.

1908-14, 1920-42: Maximum discharge, 60,000 second-feet Dec. 12, 1921 (gage height, 94.2 feet); minimum, 74 second-feet (regulated) Nov. 10, 1936 (gage height, 78.39 feet); minimum daily, 136 second-feet (regulated) Aug. 24, 1930.

Remarks.- Records excellent. Water is diverted 3 miles upstream (may be entire low flow) and is returned to river at Seattle power plant just upstream from station. Flow partly regulated by Diablo and Ruby Reservoirs (see p. 77), having a combined capacity of 179,100 acre-feet.

Cooperation.- Gage-height record collected in cooperation with and many discharge measurements furnished by city of Seattle.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|------|-------|------|-------|------|--------|
| 80.0 | 640 | 82.0 | 2,320 | 85.0 | 7,310 |
| 80.5 | 950 | 82.5 | 2,890 | 86.0 | 9,950 |
| 81.0 | 1,320 | 83.0 | 3,560 | 87.0 | 13,000 |
| 81.5 | 1,790 | 84.0 | 5,180 | 88.0 | 16,800 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| 1 | 2,840 | 2,760 | 6,020 | 1,880 | 12,030 | 11,250 | 1,740 | 3,680 | 8,600 | 8,560 | 4,080 | 1,660 |
| 2 | 2,750 | 12,530 | 11,500 | 2,290 | 2,250 | 1,990 | 1,470 | 3,580 | 9,050 | 8,570 | 12,700 | 1,580 |
| 3 | 3,520 | 2,700 | 14,100 | 2,180 | 2,410 | 2,030 | 1,430 | 13,170 | 8,490 | 8,440 | 2,840 | 1,670 |
| 4 | 2,450 | 2,620 | 10,700 | 1,940 | 2,400 | 1,990 | 1,490 | 3,670 | 8,910 | 7,340 | 2,800 | 1,670 |
| 5 | 12,310 | 2,750 | 5,340 | 2,250 | 2,490 | 1,960 | 1,350 | 3,670 | 9,460 | 17,200 | 2,950 | 1,610 |
| 6 | 2,590 | 2,550 | 8,560 | 2,320 | 2,450 | 1,980 | 1,860 | 3,850 | 10,200 | 5,940 | 2,920 | 1,690 |
| 7 | 2,610 | 2,530 | 16,610 | 2,370 | 2,390 | 1,080 | 2,010 | 2,560 | 11,600 | 5,350 | 3,020 | 1,610 |
| 8 | 2,600 | 2,440 | 5,410 | 2,310 | 11,520 | 1980 | 2,470 | 2,080 | 10,100 | 5,020 | 3,000 | 1,940 |
| 9 | 2,900 | 12,280 | 4,750 | 2,330 | 2,100 | 1,500 | 2,580 | 2,250 | 9,370 | 4,640 | 13,100 | 2,080 |
| 10 | 3,580 | 2,660 | 4,470 | 1,810 | 2,270 | 1,320 | 2,860 | 12,020 | 6,230 | 7,770 | 3,040 | 2,050 |
| 11 | 4,500 | 2,720 | 3,980 | 1,510 | 2,510 | 1,390 | 3,200 | 3,780 | 7,050 | 5,400 | 3,120 | 2,010 |
| 12 | 16,520 | 2,750 | 3,540 | 2,410 | 2,380 | 1,300 | 12,910 | 4,070 | 5,770 | 14,680 | 2,990 | 2,060 |
| 13 | 5,710 | 3,500 | 3,240 | 2,270 | 2,410 | 1,320 | 3,420 | 4,150 | 6,400 | 4,300 | 2,920 | 1,740 |
| 14 | 5,560 | 7,660 | 13,290 | 2,450 | 2,400 | 1,080 | 3,750 | 4,120 | 17,640 | 4,100 | 2,870 | 1,810 |
| 15 | 5,790 | 6,510 | 2,580 | 2,320 | 12,050 | 1,420 | 3,590 | 4,280 | 10,600 | 4,010 | 2,500 | 1,770 |
| 16 | 6,740 | 15,540 | 3,770 | 2,530 | 2,380 | 1,240 | 3,730 | 4,120 | 9,690 | 3,650 | 12,690 | 1,780 |
| 17 | 7,470 | 4,670 | 3,980 | 2,360 | 2,310 | 1,250 | 3,720 | 12,960 | 6,780 | 3,820 | 2,890 | 1,760 |
| 18 | 5,880 | 4,170 | 3,730 | 2,310 | 2,220 | 1,380 | 3,270 | 4,060 | 5,480 | 3,590 | 2,850 | 1,720 |
| 19 | 15,590 | 3,470 | 4,000 | 2,400 | 2,200 | 1,700 | 12,390 | 4,270 | 5,620 | 12,150 | 2,610 | 1,590 |
| 20 | 4,960 | 5,540 | 3,770 | 2,490 | 2,170 | 1,440 | 3,480 | 4,480 | 5,100 | 3,180 | 2,570 | 1,180 |
| 21 | 4,540 | 3,100 | 13,710 | 2,550 | 1,490 | 1,380 | 3,870 | 4,720 | 14,590 | 3,620 | 2,860 | 1,460 |
| 22 | 2,770 | 2,770 | 3,620 | 2,650 | 1,839 | 1,836 | 3,670 | 4,830 | 4,960 | 3,580 | 2,900 | 1,560 |
| 23 | 3,230 | 12,480 | 2,820 | 2,670 | 1,800 | 1,360 | 3,550 | 4,530 | 5,710 | 3,570 | 12,350 | 1,390 |
| 24 | 2,860 | 3,970 | 2,530 | 2,630 | 2,140 | 1,470 | 3,660 | 13,450 | 5,660 | 3,800 | 2,410 | 1,520 |
| 25 | 3,660 | 3,550 | 1,950 | 12,310 | 1,860 | 1,670 | 3,270 | 10,900 | 5,160 | 3,580 | 2,420 | 1,390 |
| 26 | 12,730 | 3,290 | 2,360 | 2,590 | 1,840 | 1,600 | 12,610 | 14,700 | 5,060 | 13,330 | 2,470 | 1,320 |
| 27 | 3,810 | 2,750 | 3,840 | 2,610 | 1,900 | 1,450 | 3,350 | 11,300 | 5,780 | 4,320 | 2,300 | 1,020 |
| 28 | 2,770 | 2,670 | 11,890 | 2,600 | 1,400 | 1,220 | 3,700 | 9,040 | 16,160 | 3,870 | 2,140 | 1,460 |
| 29 | 2,760 | 3,760 | 2,880 | 2,730 | - | 1906 | 3,740 | 8,360 | 7,460 | 3,640 | 1,940 | 1,540 |
| 30 | 3,010 | 13,920 | 2,480 | 2,240 | - | 1,510 | 3,760 | 7,870 | 7,250 | 3,770 | 11,560 | 1,520 |
| 31 | 2,720 | - | 2,280 | 2,150 | - | 1,770 | - | 16,060 | - | 3,760 | 1,670 | - |

| Month | Observed | | | Change in contents in Ruby and Diablo Reservoirs (acre-feet) | | Adjusted for change in reservoir contents | | |
|--------------------|--------------------------|---------|-------|--|---------|---|--------------------------|-----------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | |
| | Maximum | Minimum | Mean | | | | Mean | Per square mile |
| October..... | 7,470 | 2,310 | 3,692 | 239,300 | +15,840 | 255,100 | 4,149 | 3.58 |
| November..... | 7,660 | 2,280 | 3,428 | 204,000 | +6,330 | 210,300 | 3,534 | 3.05 |
| December..... | 14,100 | 1,890 | 4,732 | 291,000 | -9,940 | 281,100 | 4,572 | 3.94 |
| Calendar year 1941 | 14,100 | 1,180 | 3,358 | 2,431,000 | -7,060 | 2,424,000 | 3,348 | 2.89 |
| January..... | 2,730 | 1,510 | 2,538 | 143,700 | -55,220 | 88,480 | 1,459 | 1.24 |
| February..... | 2,510 | 939 | 2,086 | 116,000 | -60,550 | 55,450 | 1,177 | 1.01 |
| March..... | 2,030 | 836 | 1,440 | 88,570 | -18,080 | 70,490 | 1,147 | 0.99 |
| April..... | 3,870 | 1,350 | 2,930 | 174,400 | +44,520 | 218,900 | 3,679 | 3.17 |
| May..... | 14,700 | 2,020 | 5,122 | 314,900 | +86,640 | 401,500 | 6,530 | 5.63 |
| June..... | 11,600 | 4,590 | 7,385 | 439,400 | -820 | 438,600 | 7,371 | 6.35 |
| July..... | 8,570 | 2,150 | 4,789 | 294,400 | +2,890 | 297,300 | 4,835 | 4.17 |
| August..... | 4,080 | 1,560 | 2,693 | 165,600 | -4,680 | 160,900 | 2,617 | 2.26 |
| September..... | 2,090 | 1,020 | 1,626 | 96,730 | -12,850 | 83,880 | 1,410 | 1.22 |
| Water year 1941-42 | 14,700 | 836 | 3,547 | 2,568,000 | +4,030 | 2,572,000 | 3,553 | 3.06 |

† Sunday.

Note.- Change in contents based on midnight elevations. Gage-height record for Ruby Reservoir faulty May 31; reservoir contents computed on basis of elevation furnished by city of Seattle.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Skagit River near Concrete, Wash.

Location.— Water-stage recorder, lat. 48°32', long. 121°46', in sec. 16, T. 35 N., R. 8 E., at dikes 2 miles downstream from Baker River and 2½ miles southwest of Concrete. Datum of gage is 130.0 feet above mean sea level, datum of 1929.

Drainage area.— 2,700 square miles, of which 390 square miles is in Canada.

Records available.— September 1924 to September 1942.

Average discharge.— 18 years, 14,020 second-feet (adjusted for storage in Lake Shannon Reservoir since October 1925, Diablo Reservoir since October 1929, and Ruby Reservoir since March 1940).

Extremes.— Maximum discharge during year, 76,300 second-feet Dec. 2 (gage height, 30.17 feet); minimum, 3,130 second-feet (regulated) Sept. 27 (gage height, 13.19 feet); minimum daily, 3,940 second-feet (regulated) Sept. 28.

1924-42: Maximum discharge, 147,000 second-feet Feb. 27, 1932 (gage height, 40.0 feet, present datum); minimum, probably less than 2,160 second-feet during period Oct. 1-24, 1925, when recorder was not operating and gates in Baker River Dam were first closed; minimum daily recorded, 2,610 second-feet (regulated) Nov. 14, 1936.

Maximum stage known, 69.3 feet, present datum, from floodmarks (discharge, about 500,000 second-feet), occurred about 1815. Records of other floods prior to establishment of station are given in Water-Supply Paper 612.

Remarks.— Records good except those for period of no gage-height record, which are fair. All diversions returned to river above gage. Flow partly regulated by power plants on Baker and upper Skagit Rivers, and by Ruby, Diablo and Lake Shannon Reservoirs (see p. 77). Records of daily discharge not adjusted for change in contents of reservoirs.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|---------|---------|---------|--------|--------|--------|---------|---------|---------|---------|--------|--------|
| 1 | 14,000 | 7,140 | 19,400 | 7,310 | 16,960 | 14,550 | 6,590 | 12,000 | 20,100 | 28,100 | 9,860 | 5,500 |
| 2 | 13,400 | 16,760 | 56,100 | 7,540 | 7,360 | 5,660 | 9,040 | 11,600 | 20,700 | 29,000 | 19,080 | 5,410 |
| 3 | 24,200 | 7,870 | 51,600 | 7,400 | 7,340 | 6,460 | 8,260 | 110,600 | 23,700 | 27,700 | 9,000 | 5,570 |
| 4 | 21,200 | 10,500 | 31,600 | 16,280 | 7,870 | 5,900 | 7,540 | 10,300 | 22,300 | 26,900 | 9,320 | 5,720 |
| 5 | 14,700 | 14,800 | 24,100 | 16,600 | 8,610 | 6,290 | 17,480 | 10,800 | 23,600 | 24,300 | 8,920 | 5,590 |
| 6 | 11,900 | 11,400 | 27,800 | 16,400 | 8,420 | 6,900 | 8,460 | 11,200 | 28,600 | 21,000 | 9,020 | 14,840 |
| 7 | 13,400 | 9,710 | 122,600 | 16,250 | 8,060 | 5,580 | 8,680 | 12,300 | 131,600 | 18,200 | 9,180 | 4,650 |
| 8 | 12,700 | 8,900 | 19,400 | 16,450 | 17,360 | 15,060 | 9,180 | 11,900 | 27,600 | 16,900 | 9,240 | 5,160 |
| 9 | 18,900 | 18,040 | 16,300 | 17,300 | 7,520 | 7,760 | 9,460 | 12,600 | 26,600 | 15,100 | 19,240 | 5,700 |
| 10 | 35,200 | 7,710 | 14,900 | 6,820 | 7,840 | 9,460 | 10,600 | 11,600 | 26,600 | 17,100 | 9,220 | 5,720 |
| 11 | 29,200 | 11,400 | 13,400 | 16,120 | 8,440 | 7,760 | 12,100 | 11,700 | 24,300 | 17,600 | 9,030 | 5,100 |
| 12 | 129,700 | 10,900 | 12,200 | 6,550 | 7,960 | 7,000 | 13,000 | 12,300 | 19,900 | 115,000 | 8,560 | 5,320 |
| 13 | 23,200 | 16,600 | 11,900 | 7,740 | 7,980 | 6,660 | 12,400 | 12,100 | 19,400 | 12,900 | 7,850 | 16,210 |
| 14 | 21,800 | 34,600 | 111,300 | 7,140 | 7,990 | 6,440 | 13,000 | 12,200 | 123,300 | 13,000 | 7,630 | 5,190 |
| 15 | 20,600 | 27,900 | 10,600 | 7,000 | 16,740 | 15,820 | 12,500 | 12,900 | 45,500 | 17,300 | 7,600 | 5,810 |
| 16 | 25,200 | 120,600 | 15,000 | 7,060 | 7,120 | 6,370 | 12,200 | 12,700 | 38,900 | 16,700 | 17,500 | 5,280 |
| 17 | 25,200 | 16,400 | 14,200 | 6,960 | 7,120 | 6,560 | 12,600 | 11,700 | 29,500 | 20,200 | 7,900 | 4,820 |
| 18 | 19,500 | 13,700 | 13,700 | 16,120 | 6,490 | 6,800 | 11,900 | 12,200 | 23,600 | 17,000 | 7,680 | 4,600 |
| 19 | 117,400 | 12,100 | 22,600 | 6,820 | 6,500 | 6,770 | 11,100 | 13,600 | 21,300 | 113,800 | 7,750 | 4,250 |
| 20 | 16,500 | 11,100 | 19,000 | 6,520 | 6,500 | 6,920 | 12,000 | 16,000 | 19,400 | 13,200 | 7,960 | 14,110 |
| 21 | 13,600 | 10,300 | 116,400 | 6,520 | 6,130 | 5,930 | 16,100 | 19,700 | 117,400 | 13,600 | 8,200 | 4,070 |
| 22 | 11,800 | 9,600 | 15,400 | 6,680 | 15,200 | 15,540 | 15,200 | 25,900 | 17,600 | 13,600 | 7,930 | 4,440 |
| 23 | 10,600 | 18,530 | 15,600 | 6,700 | 5,060 | 6,190 | 13,400 | 23,900 | 18,600 | 13,100 | 17,060 | 4,380 |
| 24 | 10,600 | 10,300 | 13,300 | 7,020 | 6,210 | 6,640 | 13,100 | 121,300 | 19,800 | 12,500 | 7,640 | 4,320 |
| 25 | 10,600 | 14,800 | 11,600 | 16,980 | 5,760 | 6,580 | 13,000 | 30,600 | 18,500 | 11,800 | 7,140 | 4,280 |
| 26 | 19,180 | 11,500 | 11,000 | 5,010 | 5,360 | 6,400 | 110,600 | 37,200 | 17,200 | 110,300 | 6,910 | 4,160 |
| 27 | 8,510 | 10,900 | 11,600 | 8,670 | 5,420 | 5,740 | 10,600 | 30,200 | 18,200 | 11,700 | 6,380 | 13,980 |
| 28 | 8,150 | 10,100 | 110,100 | 8,360 | 5,260 | 5,340 | 11,500 | 24,200 | 118,500 | 11,300 | 6,880 | 3,940 |
| 29 | 7,730 | 15,900 | 9,280 | 8,180 | - | 14,960 | 11,500 | 20,900 | 22,200 | 10,600 | 6,160 | 4,190 |
| 30 | 7,820 | 119,100 | 9,120 | 7,930 | - | 5,400 | 11,500 | 21,000 | 23,500 | 10,400 | 16,150 | 4,240 |
| 31 | 7,350 | - | 8,320 | 7,220 | - | 6,040 | - | 120,900 | - | 10,200 | 5,380 | - |
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† Sunday

a No gage-height record; discharge computed on basis of records for station near Mount Vernon.
Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Skagit River near Mount Vernon, Wash.

Location.- Water-stage recorder, lat. 48°25'40", long. 122°20'00", in SE $\frac{1}{4}$ sec. 7, T. 34 N., R. 3 E., on drawrest of, and 150 feet downstream from bridge on U. S. Highway 99 and 1 mile north of Mount Vernon. Datum of gage is at mean sea level, datum of 1929.

Drainage area.- 3,060 square miles.

Records available.- November 1940 to September 1942.

Extremes.- Maximum discharge during year, 65,300 second-feet Dec. 3 (elevation, 25.99 feet); minimum, 3,890 second-feet (regulated) Sept. 28 (elevation, 7.93 feet).

1940-42: Maximum discharge, that of Dec. 3, 1941; minimum, that of Sept. 28, 1942. Maximum stage known, 37 feet in 1906, from Great Northern Railway high-water profile.

Remarks.- Records good. Flow partly regulated by power plants on Baker and upper Skagit Rivers, and by Ruby, Diablo and Lake Shannon Reservoirs.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1-17)

| | | | | | |
|------|-------|------|--------|------|--------|
| 8.0 | 3,770 | 12.0 | 11,700 | 20.0 | 35,000 |
| 8.5 | 4,620 | 14.0 | 16,700 | 22.0 | 43,500 |
| 9.0 | 5,520 | 16.0 | 22,200 | 24.0 | 53,700 |
| 10.0 | 7,390 | 18.0 | 28,100 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|-------|
| 1 | 13,400 | 7,390 | 18,000 | 8,580 | 8,180 | 4,980 | 8,590 | 12,100 | 22,400 | 26,900 | 10,500 | 5,520 |
| 2 | 15,900 | 7,200 | 35,400 | 7,580 | 7,980 | 5,880 | 10,500 | 12,100 | 21,600 | 28,800 | 10,500 | 5,520 |
| 3 | 17,800 | 7,390 | 59,900 | 7,780 | 8,180 | 7,780 | 9,220 | 11,200 | 24,500 | 27,800 | 9,220 | 5,700 |
| 4 | 26,300 | 9,870 | 39,900 | 7,590 | 8,800 | 6,820 | 8,580 | 10,100 | 24,800 | 26,900 | 9,650 | 5,700 |
| 5 | 17,200 | 14,400 | 29,100 | 6,820 | 10,300 | 6,820 | 7,980 | 10,800 | 24,200 | 25,100 | 9,430 | 5,880 |
| 6 | 13,400 | 13,900 | 30,400 | 7,200 | 9,870 | 7,580 | 8,180 | 11,000 | 28,100 | 22,200 | 9,430 | 5,520 |
| 7 | 14,400 | 10,500 | 29,100 | 7,010 | 9,220 | 7,010 | 9,010 | 12,100 | 33,100 | 19,400 | 9,430 | 4,800 |
| 8 | 14,100 | 9,430 | 23,900 | 6,820 | 8,800 | 5,700 | 9,010 | 11,700 | 30,400 | 17,800 | 9,650 | 5,160 |
| 9 | 17,200 | 8,590 | 20,500 | 7,010 | 8,180 | 7,200 | 9,430 | 12,400 | 29,400 | 16,200 | 9,650 | 5,520 |
| 10 | 31,100 | 7,780 | 18,000 | 7,580 | 8,800 | 11,200 | 10,100 | 12,400 | 30,100 | 16,700 | 9,650 | 5,880 |
| 11 | 32,100 | 10,300 | 15,900 | 6,820 | 9,430 | 9,220 | 11,700 | 11,200 | 29,400 | 18,800 | 9,220 | 5,880 |
| 12 | 32,100 | 13,100 | 14,400 | 6,630 | 9,220 | 8,380 | 12,900 | 12,100 | 24,200 | 16,700 | 9,220 | 5,340 |
| 13 | 26,300 | 13,600 | 13,600 | 8,180 | 8,590 | 7,390 | 12,600 | 11,900 | 21,600 | 14,400 | 8,590 | 5,520 |
| 14 | 22,700 | 32,400 | 12,900 | 7,780 | 8,590 | 7,200 | 13,100 | 11,900 | 23,600 | 13,400 | 8,180 | 5,160 |
| 15 | 21,600 | 34,200 | 12,900 | 7,580 | 8,180 | 6,440 | 13,600 | 12,400 | 37,800 | 16,400 | 8,180 | 5,520 |
| 16 | 22,400 | 24,200 | 17,600 | 7,390 | 7,200 | 6,440 | 12,600 | 12,900 | 45,400 | 16,700 | 7,780 | 5,880 |
| 17 | 28,800 | 19,100 | 17,600 | 7,590 | 7,390 | 6,630 | 13,100 | 12,400 | 35,800 | 21,000 | 7,980 | 5,160 |
| 18 | 21,600 | 15,900 | 16,400 | 7,010 | 7,200 | 7,010 | 12,900 | 11,400 | 23,100 | 19,900 | 6,180 | 4,800 |
| 19 | 19,100 | 14,100 | 25,300 | 6,630 | 6,630 | 7,010 | 11,700 | 13,100 | 24,500 | 16,200 | 6,180 | 4,620 |
| 20 | 16,700 | 12,400 | 25,700 | 6,820 | 6,630 | 7,010 | 11,200 | 15,100 | 22,200 | 14,100 | 7,980 | 4,450 |
| 21 | 15,100 | 11,700 | 20,600 | 6,820 | 6,630 | 6,820 | 15,100 | 18,600 | 19,600 | 14,400 | 8,180 | 4,110 |
| 22 | 13,400 | 10,800 | 18,300 | 7,010 | 5,880 | 6,250 | 16,400 | 23,600 | 18,800 | 14,600 | 8,380 | 4,450 |
| 23 | 11,400 | 9,650 | 20,800 | 7,010 | 5,160 | 6,060 | 14,100 | 25,400 | 19,100 | 14,100 | 7,980 | 4,620 |
| 24 | 11,200 | 10,100 | 17,200 | 7,200 | 5,880 | 6,820 | 13,100 | 22,400 | 30,500 | 13,400 | 7,580 | 4,450 |
| 25 | 10,800 | 17,200 | 14,600 | 8,380 | 6,060 | 6,820 | 13,900 | 25,100 | 20,200 | 12,900 | 7,390 | 4,450 |
| 26 | 10,300 | 13,900 | 12,600 | 8,800 | 5,520 | 6,820 | 12,100 | 37,400 | 18,600 | 12,100 | 7,580 | 4,450 |
| 27 | 8,800 | 12,400 | 12,400 | 9,870 | 5,520 | 6,250 | 10,500 | 33,500 | 18,600 | 12,100 | 6,820 | 4,280 |
| 28 | 8,590 | 11,200 | 11,900 | 9,650 | 5,520 | 5,880 | 11,700 | 27,800 | 19,600 | 12,100 | 6,820 | 3,860 |
| 29 | 8,180 | 14,600 | 10,100 | 9,220 | - | 5,520 | 11,400 | 23,300 | 21,900 | 11,700 | 6,820 | 4,200 |
| 30 | 7,780 | 18,600 | 10,100 | 8,800 | - | 5,340 | 11,400 | 22,700 | 23,900 | 11,200 | 6,060 | 4,280 |
| 31 | 7,580 | - | 9,220 | 7,980 | - | 6,250 | - | 23,000 | - | 11,000 | 5,340 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|--------|----------------------|
| October..... | 537,330 | 32,100 | 7,580 | 17,330 | 1,066,000 |
| November..... | 415,900 | 34,200 | 7,200 | 13,860 | 824,900 |
| December..... | 635,320 | 59,900 | 9,220 | 20,490 | 1,260,000 |
| Calendar year 1941..... | 4,534,850 | 59,900 | 5,220 | 12,420 | 8,995,000 |
| January..... | 236,730 | 9,870 | 6,630 | 7,636 | 469,500 |
| February..... | 213,540 | 10,300 | 5,160 | 7,826 | 423,600 |
| March..... | 212,530 | 11,200 | 4,980 | 6,866 | 421,500 |
| April..... | 345,200 | 16,400 | 7,980 | 11,510 | 684,700 |
| May..... | 523,100 | 37,400 | 10,100 | 16,870 | 1,038,000 |
| June..... | 762,000 | 45,400 | 18,600 | 25,400 | 1,511,000 |
| July..... | 534,000 | 28,800 | 11,000 | 17,230 | 1,059,000 |
| August..... | 250,550 | 10,500 | 5,340 | 8,373 | 514,800 |
| September..... | 150,680 | 5,880 | 3,860 | 5,023 | 298,900 |
| Water year 1941-42..... | 4,825,880 | 59,900 | 3,860 | 13,220 | 9,572,000 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Reservoirs in Skagit River Basin, Wash.

Ruby Reservoir.— Water-stage recorder, lat. 48°44', long. 121°04', in SE $\frac{1}{4}$ sec. 35, T. 38 N., R. 13 E., at Ross Dam on Skagit River, 9 miles northeast of Newhalem. Datum of gage is at mean sea level (city of Seattle bench mark). Records available, March 1940 to September 1942. Maximum contents during year, 112,800 acre-feet July 23 (elevation, 1,394.7 feet); minimum, 1,560 acre-feet Mar. 3 (elevation, 1,255.9 feet). Maximum contents during period 1940-42, that of July 23, 1942.

Reservoir is formed by concrete dam completed to elevation 1,365 feet in 1940; additional storage provided by timber crib to elevation 1,380 feet; storage began Mar. 11, 1940. Capacity, 102,300 acre-feet between elevation 1,250 feet (lowest outlet) and 1,380 feet (overflow). Dead storage negligible. Water used to supplement low flow of Skagit River through city of Seattle's Diablo and Newhalem power plants. Gage-height record collected in cooperation with city of Seattle. Figures given herein represent total contents.

Diablo Reservoir.— Water-stage recorder, lat. 48°43', long. 121°06', in Diablo Dam on Skagit River, sec. 6, T. 37 N., R. 13 E. (unsurveyed), 1 mile downstream from Thunder Creek and 6 miles northeast of Newhalem. Datum of gage is at mean sea level, subject to correction to datum of 1929. Records available, October 1929 to September 1942; October 1929 to September 1938, change in reservoir contents published with tables of monthly discharge for Skagit River at Newhalem. Maximum contents during year, 92,430 acre-feet July 13 (elevation, 1,206.2 feet); minimum observed, 63,520 acre-feet Mar. 31 (elevation, 1,169.2 feet). Maximum contents during period 1929-42, 92,720 acre-feet July 14, 1933 (elevation, 1,206.5 feet).

Reservoir is formed by concrete dam, completed in 1930. Capacity, 76,800 acre-feet between elevations 1,040 feet (bottom of outlet pipes) and 1,205 feet (top of taintor gates). Dead storage, 14,500 acre-feet. Crest of spillway is at elevation 1,187 feet. Water is used by city of Seattle for power development at Diablo and Newhalem power plants. Gage-height record collected in cooperation with city of Seattle. Figures given herein represent total contents.

Lake Shannon.— Staff gage, lat. 48°33', long. 121°44', in sec. 2, T. 35 N., R. 8 E., on Baker River, half a mile north of Concrete and 1 mile upstream from mouth of Baker River. Datum of gage is at mean sea level, subject to correction to datum of 1929. Records available, October 1938 to September 1942.

Reservoir is formed by concrete dam, completed in June 1927. Capacity, 132,500 acre-feet between elevations 380 feet (lowest elevation for capacity operation) and 435 feet (spillway crest). Dead storage unknown. Water is used by Puget Sound Power & Light Co. for power development. Gage-height record furnished by Puget Sound Power & Light Co. Figures given herein represent contents above elevation 340 feet (center line of outlet tunnel).

Monthly elevation and contents, water year October 1941 to September 1942

| Date | Ruby Reservoir | | | Diablo Reservoir | | | Lake Shannon | | |
|--------------------|-------------------|-----------------------|---|-------------------|-----------------------|---|-------------------|-----------------------|---|
| | Elevation (feet)† | Contents (acre-feet)† | Change in contents during month (acre-feet) | Elevation (feet)† | Contents (acre-feet)† | Change in contents during month (acre-feet) | Elevation (feet)† | Contents (acre-feet)† | Change in contents during month (acre-feet) |
| Sept. 30..... | 1,375.82 | 91,770 | - | 1,196.58 | 85,410 | - | 435.87 | 153,700 | - |
| Oct. 31..... | 1,379.70 | 102,920 | +11,150 | 1,203.72 | 90,100 | +4,690 | 434.00 | 153,990 | +290 |
| Nov. 30..... | 1,381.88 | 107,190 | +4,270 | 1,205.92 | 92,160 | +2,060 | 434.99 | 156,220 | +2,230 |
| Dec. 31..... | 1,378.19 | 99,990 | -7,200 | 1,203.00 | 89,420 | -2,740 | 432.76 | 151,220 | -5,000 |
| Calendar year 1941 | - | - | -5,550 | - | - | -5,510 | - | - | -620 |
| Jan. 31..... | 1,341.98 | 45,440 | -56,650 | 1,204.42 | 90,760 | +1,350 | 432.37 | 150,350 | -870 |
| Feb. 28..... | 1,256.49 | 1,600 | -41,840 | 1,194.45 | 81,940 | -8,810 | 428.12 | 141,030 | -9,320 |
| Mar. 31..... | 1,261.83 | 1,990 | +390 | 1,169.20 | 65,520 | -18,420 | 421.58 | 127,170 | -13,860 |
| Apr. 30..... | 1,321.18 | 22,810 | +20,820 | 1,200.66 | 87,220 | +23,700 | 426.88 | 138,560 | +11,390 |
| May 31..... | 1,381.80 | 107,040 | +84,230 | 1,203.22 | 89,630 | +2,410 | 434.49 | 156,090 | +16,730 |
| June 30..... | 1,382.32 | 108,060 | +1,020 | 1,201.27 | 87,790 | -1,840 | 435.60 | 167,600 | +2,510 |
| July 31..... | 1,363.54 | 110,480 | +2,420 | 1,201.77 | 88,260 | +470 | 434.26 | 154,580 | -3,020 |
| Aug. 31..... | 1,380.62 | 106,110 | -6,370 | 1,202.50 | 88,960 | +690 | 435.07 | 151,610 | -2,670 |
| Sept. 30..... | 1,374.29 | 92,840 | -12,470 | 1,202.10 | 88,570 | -380 | 435.20 | 156,200 | +290 |
| Water year 1941-42 | - | - | +870 | - | - | +3,160 | - | - | -1,500 |

† Elevation and contents at midnight.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

SKAGIT RIVER BASIN

Beaver Creek near Newhalem, Wash.

Location.- Water-stage recorder, lat. $48^{\circ}47'$, long. $121^{\circ}05'$, in sec. 14, T. 38 N., R. 13 E., three-quarters of a mile upstream from Ruby Reservoir, $3\frac{1}{2}$ miles north of Ross Dam on Skagit River, and $10\frac{1}{2}$ miles northeast of Newhalem.

Drainage area.- 63 square miles.

Records available.- March 1940 to September 1942.

Extremes.- Maximum discharge during year, 3,300 second-feet Dec. 2, from rating curve extended above 1,100 second-feet (gage height, 7.76 feet); minimum, 80 second-feet Feb. 28, Mar. 1; minimum gage height, 1.15 feet, Mar. 1.
1940-42: Maximum discharge that of Dec. 2, 1941; minimum, that of Feb. 28, Mar. 1, 1942.

Remarks.- Records good except those for period of no gage-height record, which are poor.
No diversion or regulation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 15 to Dec. 25, Jan. 15 to Apr. 21)

| | | | | | | | |
|-----|-----|-----|-----|-----|-------|-----|-------|
| 1.2 | 88 | 2.0 | 190 | 3.1 | 501 | 5.0 | 1,350 |
| 1.4 | 105 | 2.2 | 234 | 3.5 | 647 | 5.7 | 1,760 |
| 1.6 | 126 | 2.5 | 312 | 4.0 | 852 | 6.5 | 2,300 |
| 1.8 | 154 | 2.8 | 402 | 4.5 | 1,080 | 7.5 | 3,060 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|------|-------|-------|------|------|-------|
| 1 | 315 | 175 | 706 | a180 | 95 | 80 | 144 | 251 | 535 | 609 | 301 | 136 |
| 2 | 244 | 164 | 2,340 | a160 | 93 | 91 | 175 | 266 | 590 | 530 | 306 | 145 |
| 3 | 594 | 192 | 1,910 | a155 | 92 | 93 | 180 | 248 | 666 | 809 | 324 | 154 |
| 4 | 453 | 253 | 1,080 | a150 | 99 | 90 | 198 | 241 | 628 | 809 | 318 | 171 |
| 5 | 304 | 383 | 788 | a145 | 97 | 100 | 229 | 236 | 726 | 706 | 318 | 186 |
| 6 | 268 | 292 | 746 | a140 | 96 | 100 | 266 | 261 | 896 | 590 | 316 | 151 |
| 7 | 248 | 251 | 609 | a135 | 94 | 97 | 290 | 356 | 852 | 536 | 316 | 134 |
| 8 | 232 | 232 | 518 | a130 | 94 | 98 | 290 | 450 | 726 | 484 | 335 | 144 |
| 9 | 369 | 229 | 450 | a125 | 93 | 119 | 292 | 467 | 726 | 450 | 341 | 148 |
| 10 | 1,040 | 254 | 396 | a120 | 94 | 131 | 315 | 418 | 572 | 434 | 335 | 124 |
| 11 | 830 | 608 | 356 | a115 | 93 | 132 | 450 | 377 | 467 | 536 | 306 | 117 |
| 12 | 909 | 402 | 309 | a110 | 90 | 134 | 554 | 338 | 418 | 399 | 268 | 136 |
| 13 | 590 | 544 | 281 | 104 | 87 | 129 | 484 | 332 | 535 | 347 | 236 | 150 |
| 14 | 590 | 1,040 | 266 | 103 | 86 | 127 | 450 | 374 | 706 | 460 | 246 | 134 |
| 15 | 609 | 788 | 271 | 101 | 87 | 122 | 402 | 386 | 1,160 | 726 | 261 | 168 |
| 16 | 1,060 | 609 | 350 | 100 | 86 | 117 | 377 | 374 | 726 | 609 | 263 | 119 |
| 17 | 726 | 484 | 329 | 98 | 86 | 116 | 386 | 371 | 536 | 609 | 274 | 103 |
| 18 | 564 | 418 | 301 | 96 | 86 | 114 | 362 | 380 | 467 | 450 | 281 | 95 |
| 19 | 518 | 359 | 329 | 95 | 85 | 111 | 353 | 434 | 418 | 450 | 287 | 94 |
| 20 | 434 | 315 | 301 | 94 | 85 | 108 | 416 | 590 | 374 | 450 | 301 | 103 |
| 21 | 380 | 281 | 274 | 92 | 84 | 106 | 647 | 852 | 365 | 467 | 261 | 103 |
| 22 | 353 | 255 | 261 | 91 | 83 | 112 | 572 | 1,060 | 402 | 484 | 239 | 113 |
| 23 | 329 | 229 | 248 | 91 | 83 | 107 | 572 | 997 | 484 | 434 | 256 | 118 |
| 24 | 315 | 279 | 220 | 91 | 82 | 103 | 418 | 941 | 450 | 383 | 259 | 119 |
| 25 | 290 | 321 | 200 | 94 | 82 | 100 | 371 | 1,060 | 434 | 396 | 190 | 115 |
| 26 | 266 | 268 | a195 | 98 | 82 | 99 | 338 | 918 | 434 | 434 | 169 | 114 |
| 27 | 244 | 248 | a190 | 99 | 82 | 96 | 306 | 726 | 467 | 393 | 146 | 112 |
| 28 | 227 | 244 | a180 | 99 | 80 | 96 | 281 | 590 | 572 | 399 | 169 | 107 |
| 29 | 209 | 450 | a175 | 97 | - | 96 | 274 | 536 | 647 | 362 | 144 | 100 |
| 30 | 194 | 833 | a165 | 95 | - | 100 | 268 | 554 | 666 | 326 | 144 | 127 |
| 31 | 184 | - | a160 | 94 | - | 109 | - | 572 | - | 321 | 136 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 13,748 | 1,050 | 184 | 443 | 7.03 | 8.12 | 27,270 |
| November..... | 11,378 | 1,040 | 164 | 379 | 6.02 | 6.72 | 22,570 |
| December..... | 14,904 | 2,340 | 160 | 481 | 7.63 | 8.80 | 29,660 |
| Calendar year 1941..... | 131,965 | 2,340 | 120 | 362 | 5.75 | 77.90 | 261,800 |
| January..... | 3,477 | 160 | 91 | 112 | 1.78 | 2.05 | 6,900 |
| February..... | 2,476 | 99 | 80 | 88.4 | 1.40 | 1.46 | 4,910 |
| March..... | 3,333 | 134 | 80 | 108 | 1.71 | 1.97 | 6,610 |
| April..... | 10,662 | 647 | 144 | 355 | 5.63 | 6.29 | 21,150 |
| May..... | 15,996 | 1,080 | 236 | 516 | 8.19 | 9.44 | 31,730 |
| June..... | 17,667 | 1,160 | 266 | 599 | 9.35 | 10.45 | 35,040 |
| July..... | 15,292 | 830 | 321 | 513 | 8.14 | 9.38 | 31,520 |
| August..... | 8,030 | 341 | 136 | 259 | 4.11 | 4.74 | 15,930 |
| September..... | 3,840 | 186 | 94 | 128 | 2.03 | 2.27 | 7,620 |
| Water year 1941-42..... | 121,403 | 2,340 | 80 | 333 | 5.29 | 71.67 | 240,800 |

a No gage-height record; discharge computed on basis of records for Ruby Creek near Newhalem and Skagit River above Devil's Creek, near Newhalem.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Ruby Creek near Newhalem, Wash.

Location.- Water-stage recorder lat. 43°43', long. 121°00', in SE $\frac{1}{4}$ sec. 5, T. 37 N., R. 14 E., 2 miles upstream from mouth and 12 miles northeast of Newhalem.

Drainage area.- 203 square miles.

Records available.- June 1919 to March 1920, April 1930 to September 1942.

Average discharge.- 12 years (1930-42), 625 second-feet.

Extremes.- Maximum discharge during year, 4,650 second-feet May 25 (gage height, 7.69 feet); minimum, 92 second-feet Sept. 27, 28 (gage height, 3.04 feet).
1919-20, 1930-42: Maximum discharge, 6,730 second-feet Feb. 27, 1932 (gage height, 14.15 feet, site and datum then in use); minimum, 40 second-feet Feb. 22, 1937.

Remarks.- Records excellent except those for periods of shifting control, which are good, and those for period of ice effect, which are poor. No diversion or regulation.

Cooperation.- Gage-height record collected in cooperation with city of Seattle, which furnished many discharge measurements.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 309 | 318 | 518 | b250 | 150 | 125 | 278 | 565 | 1,470 | 1,589 | 305 | 144 |
| 2 | 303 | 300 | 1,180 | b250 | 149 | 129 | 284 | 522 | 1,580 | 1,520 | 325 | 140 |
| 3 | 646 | 327 | 1,320 | b250 | 149 | 123 | 278 | 504 | 1,750 | 1,370 | 314 | 140 |
| 4 | 690 | 344 | 999 | b240 | 149 | 125 | 306 | 495 | 1,690 | 1,320 | 308 | 138 |
| 5 | 538 | 417 | 830 | b240 | 147 | 134 | 358 | 495 | 1,940 | 1,180 | 314 | 142 |
| 6 | 472 | 368 | 774 | b230 | 145 | 128 | 402 | 575 | 2,430 | 960 | 321 | 140 |
| 7 | 437 | 337 | 689 | b230 | 140 | 128 | 421 | 747 | 2,210 | 866 | 338 | 132 |
| 8 | 405 | 351 | 624 | b220 | 142 | 131 | 433 | 908 | 1,810 | 761 | 314 | 129 |
| 9 | 437 | 324 | 575 | b215 | 135 | 156 | 462 | 1,040 | 1,690 | 698 | 311 | 127 |
| 10 | 604 | 321 | 526 | *210 | 139 | 166 | 580 | 960 | 1,420 | 651 | 301 | 123 |
| 11 | 748 | 368 | 495 | 203 | 137 | 156 | 747 | 837 | 1,220 | 651 | 264 | 118 |
| 12 | 690 | 361 | 452 | 203 | 132 | 149 | 788 | 781 | 1,100 | 536 | 239 | 116 |
| 13 | 602 | 422 | 436 | 194 | 131 | 145 | 747 | 858 | 1,220 | 506 | 220 | 116 |
| 14 | 591 | 783 | 417 | 190 | 132 | 145 | 721 | 938 | 1,520 | 531 | 223 | 113 |
| 15 | 619 | 684 | 414 | 185 | 131 | 142 | 653 | 945 | 1,810 | 555 | 228 | 118 |
| 16 | 905 | 564 | 425 | 185 | 128 | 139 | 647 | 893 | 1,420 | 555 | 226 | 111 |
| 17 | 981 | 495 | *392 | 183 | 128 | 140 | 695 | 879 | 1,180 | 531 | 220 | 106 |
| 18 | 755 | 446 | 385 | 179 | 126 | 137 | 653 | 908 | 1,040 | 474 | 226 | 100 |
| 19 | 748 | 413 | 406 | 175 | 126 | 135 | 671 | 983 | 960 | 468 | 228 | 100 |
| 20 | 690 | 382 | 388 | 175 | 129 | 137 | 837 | 1,280 | 880 | 493 | 223 | 102 |
| 21 | 630 | 368 | 358 | 171 | 126 | 139 | 1,250 | 2,050 | 838 | 502 | 210 | 100 |
| 22 | 585 | 351 | 345 | 167 | 125 | 140 | 1,140 | 3,180 | 896 | 516 | 206 | 102 |
| 23 | 548 | 331 | 359 | 167 | 125 | 137 | 938 | 2,840 | 1,020 | 474 | 210 | 103 |
| 24 | 514 | 393 | 318 | 167 | 125 | 134 | 830 | 2,750 | 968 | 418 | 203 | 102 |
| 25 | 485 | 433 | 303 | 169 | 125 | 132 | 728 | 3,500 | 984 | 418 | 196 | 100 |
| 26 | 446 | 382 | 281 | 169 | 122 | 135 | 666 | 3,140 | 976 | 444 | 171 | 99 |
| 27 | 421 | 361 | b275 | 167 | 123 | 134 | 608 | 2,140 | 1,040 | 410 | 160 | 97 |
| 28 | 389 | 349 | b270 | 161 | 123 | 137 | 570 | 1,690 | 1,270 | 375 | 156 | 96 |
| 29 | 361 | 392 | b265 | 169 | - | 143 | 551 | 1,520 | 1,370 | 338 | 154 | 97 |
| 30 | 340 | 531 | b260 | 156 | - | 167 | 551 | 1,470 | 1,420 | 351 | 152 | 100 |
| 31 | 327 | - | b255 | 152 | - | 207 | - | 1,520 | - | 328 | 145 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 17,316 | 905 | 303 | 559 | 2.75 | 3.17 | 34,350 |
| November..... | 12,176 | 763 | 300 | 406 | 2.00 | 2.25 | 24,150 |
| December..... | 15,514 | 1,320 | 255 | 500 | 2.46 | 2.84 | 30,770 |
| Calendar year 1941..... | 165,832 | 1,420 | 155 | 454 | 2.24 | 30.38 | 328,900 |
| January..... | 6,012 | 250 | 152 | 194 | .956 | 1.10 | 11,920 |
| February..... | 3,739 | 150 | 122 | 134 | .660 | .68 | 7,420 |
| March..... | 4,365 | 207 | 123 | 141 | .695 | .80 | 6,660 |
| April..... | 18,792 | 1,250 | 278 | 626 | 3.08 | 3.44 | 37,270 |
| May..... | 42,213 | 3,500 | 495 | 1,352 | 6.71 | 7.73 | 85,730 |
| June..... | 41,122 | 2,430 | 338 | 1,371 | 6.75 | 7.53 | 81,560 |
| July..... | 20,770 | 1,580 | 328 | 670 | 3.30 | 3.81 | 41,200 |
| August..... | 7,406 | 338 | 146 | 239 | 1.18 | 1.36 | 14,690 |
| September..... | 3,449 | 144 | 96 | 115 | .567 | .63 | 6,640 |
| Water year 1941-42..... | 192,874 | 3,800 | 96 | 528 | 2.30 | 35.32 | 382,800 |

Peak discharge.- May 22 (5:20 a.m.) 3,360 sec.-ft; May 25 (5:30 a.m.) 4,650 sec.-ft; June 6 (9 p.m.) 2,670 sec.-ft; June 15 (9 a.m.) 2,000 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.- Shifting-control method used Oct. 28 to Nov. 27, Jan. 11 to Apr. 5.

Time basis. Pacific standard time prior to 2 a.m., Feb 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

SKAGIT RIVER BASIN

Thunder Creek near Newhalem, Wash.

Location.- Water-stage recorder, lat. 48°40', long. 121°04', in SE $\frac{1}{4}$ sec. 23, T. 37 N., R. 13 E. (unsurveyed), half a mile upstream from backwater from Diablo Reservoir, 8 miles east of Newhalem, and 20 miles northeast of Marblemount.

Drainage area.- 98 square miles.

Records available.- October 1930 to September 1942.

Average discharge.- 12 years, 620 second-feet.

Extremes.- Maximum discharge during year, 3,080 second-feet Oct. 3 (gage height, 8.15 feet); minimum, 84 second-feet Feb. 26 (gage height, 2.20 feet).

1930-42: Maximum discharge, 8,780 second-feet Feb. 26, 1932 (gage height, 11.3 feet), from rating curve extended above 2,000 second-feet; minimum not determined (occurred during period of ice effect).

Remarks.- Records excellent except those for period of doubtful gage-height record, which are fair. No diversion or regulation.

Cooperation.- Gage-height record collected in cooperation with city of Seattle, which furnished many discharge measurements.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-----|-----|-------|
| 2.2 | 84 | 3.5 | 388 | 5.5 | 1,260 |
| 2.4 | 113 | 4.0 | 566 | 6.0 | 1,580 |
| 2.7 | 169 | 4.5 | 745 | 7.0 | 2,230 |
| 3.0 | 241 | 5.0 | 980 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|------|-------|------|------|------|------|-------|-------|-------|-------|-------|
| 1 | 576 | 231 | 548 | 4164 | 112 | 85 | 165 | 293 | 790 | 1,960 | 955 | 480 |
| 2 | 414 | 213 | 1,710 | 4159 | 112 | 91 | 176 | 271 | 920 | 2,100 | 1,090 | 602 |
| 3 | 1,660 | 244 | 1,160 | 4155 | 110 | 91 | 169 | 267 | 1,020 | 1,970 | 1,180 | 679 |
| 4 | 738 | 279 | 784 | 4160 | 112 | 88 | 160 | 260 | 960 | 2,120 | 1,170 | 803 |
| 5 | 496 | 443 | 614 | 4146 | 113 | 98 | 210 | 265 | 1,200 | 1,750 | 1,180 | 781 |
| 6 | | | | | | | | | | | | |
| 7 | 456 | 311 | 629 | 4142 | 112 | 95 | 251 | 326 | 1,480 | 1,480 | 1,190 | 576 |
| 8 | 404 | 268 | 548 | 4135 | 110 | 94 | 244 | 450 | 1,360 | 1,330 | 1,360 | 567 |
| 9 | 366 | 254 | 483 | 154 | 112 | 94 | 249 | 548 | 1,140 | 1,160 | 1,360 | 624 |
| 10 | 521 | 254 | 427 | 132 | 110 | 123 | 268 | 594 | 1,030 | 1,090 | 1,420 | 586 |
| 11 | 1,030 | 282 | 368 | 152 | 112 | 125 | 326 | 617 | 835 | 1,130 | 1,360 | 453 |
| 12 | | | | | | | | | | | | |
| 13 | 717 | 479 | 354 | 130 | 112 | 118 | 453 | 456 | 677 | 1,280 | 1,100 | 473 |
| 14 | 629 | 332 | 317 | 130 | 110 | 115 | 486 | 379 | 618 | 826 | 925 | 652 |
| 15 | 517 | 416 | 296 | 128 | 107 | 112 | 443 | 378 | 754 | 799 | 841 | 645 |
| 16 | 715 | 717 | 282 | 125 | 108 | 108 | 423 | 450 | 1,180 | 995 | 964 | 553 |
| 17 | 737 | 576 | 279 | 123 | 104 | 107 | 356 | 463 | 1,900 | 1,310 | 1,090 | 861 |
| 18 | | | | | | | | | | | | |
| 19 | 1,150 | 470 | 317 | 122 | 104 | 106 | 369 | 446 | 1,070 | 1,360 | 1,080 | 388 |
| 20 | 713 | 404 | 288 | 120 | 102 | 104 | 388 | 453 | 790 | 1,350 | 1,100 | 290 |
| 21 | 614 | 367 | 256 | 118 | 100 | 102 | 360 | 479 | 677 | 925 | 1,140 | 249 |
| 22 | 653 | 320 | 336 | 116 | 97 | 101 | 372 | 548 | 608 | 1,060 | 1,210 | 352 |
| 23 | 630 | 293 | 323 | 115 | 98 | 98 | 466 | 754 | 558 | 1,190 | 1,210 | 408 |
| 24 | | | | | | | | | | | | |
| 25 | 476 | 274 | 293 | 115 | 95 | 98 | 697 | 1,160 | 572 | 1,350 | 1,060 | 413 |
| 26 | 470 | 249 | 276 | 113 | 92 | 102 | 611 | 1,700 | 685 | 1,450 | 1,080 | 502 |
| 27 | 466 | 238 | 268 | 113 | 91 | 98 | 479 | 1,450 | 835 | 1,230 | 1,210 | 530 |
| 28 | 466 | 341 | 244 | 113 | 90 | 97 | 417 | 1,450 | 804 | 1,080 | 902 | 529 |
| 29 | 456 | 407 | 225 | 118 | 90 | 94 | 369 | 1,900 | 786 | 1,160 | 565 | 487 |
| 30 | | | | | | | | | | | | |
| 31 | 382 | 351 | 201 | 122 | 87 | 92 | 326 | 1,470 | 741 | 1,340 | 473 | 487 |
| 2 | 342 | 320 | 198 | 123 | 87 | 90 | 299 | 980 | 835 | 1,280 | 401 | 451 |
| 3 | 308 | 302 | 191 | 120 | 85 | 92 | 282 | 794 | 1,140 | 1,100 | 476 | 420 |
| 4 | 274 | 427 | 180 | 116 | - | 94 | 268 | 729 | 1,330 | 995 | 410 | 423 |
| 5 | 249 | 682 | 176 | 115 | - | 98 | 274 | 790 | 1,590 | 1,010 | 433 | 516 |
| 6 | 238 | - | 169 | 113 | - | 115 | - | 817 | - | 1,030 | 427 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 17,719 | 1,660 | 238 | 572 | 5.84 | 6.72 | 35,150 |
| November..... | 10,734 | 717 | 213 | 358 | 3.65 | 4.07 | 21,290 |
| December..... | 12,758 | 1,710 | 169 | 412 | 4.20 | 4.84 | 25,310 |
| Calendar year 1941..... | 200,016 | 2,030 | 127 | 548 | 5.59 | 75.98 | 398,700 |
| January..... | 3,960 | 164 | 113 | 128 | 1.31 | 1.50 | 7,860 |
| February..... | 2,872 | 113 | 85 | 103 | 1.05 | 1.09 | 5,700 |
| March..... | 3,125 | 125 | 85 | 101 | 1.03 | 1.19 | 6,200 |
| April..... | 10,405 | 697 | 165 | 347 | 3.54 | 3.95 | 20,640 |
| May..... | 21,795 | 1,900 | 267 | 703 | 7.17 | 8.27 | 43,230 |
| June..... | 28,885 | 1,900 | 558 | 963 | 9.23 | 10.96 | 57,290 |
| July..... | 39,980 | 2,120 | 799 | 1,289 | 13.2 | 15.16 | 75,240 |
| August..... | 50,432 | 1,420 | 401 | 982 | 10.0 | 11.55 | 80,360 |
| September..... | 15,780 | 561 | 249 | 526 | 5.37 | 5.99 | 31,300 |
| Water year 1941-42..... | 198,415 | 2,120 | 85 | 544 | 5.55 | 75.29 | 393,600 |

Peak discharge.- Oct. 3 (12:20 p.m.) 3,080 sec.-ft.; May 25 (3 p.m.) 2,030 sec.-ft.; June 15 (5:30 a.m.) 2,370 sec.-ft.; July 4 (7:30 p.m.) 2,540 sec.-ft.

d Doubtful gage-height record; discharge interpolated.

Time basis.- Pacific standard time prior to 2 a.m. Feb. 9, 1943; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Stetattle Creek near Newhalem, Wash.

Location.- Water-stage recorder, lat. 48°43'40", long. 121°09'30", in NE¼ sec. 6, T. 37 N., R. 13 E., three-quarters of a mile upstream from mouth, 5½ miles northeast of Newhalem, and 18½ miles northeast of Marblemount.

Drainage area.- 21.4 square miles.

Records available.- September 1933 to September 1942. December 1913 to March 1914,

December 1914 to April 1915, at site half a mile downstream, published as

Stetattle Creek near Marblemount; records equivalent.

Extremes.- Maximum discharge during year, 2,680 second-feet Dec. 2 (gage height, 6.77 feet), from rating curve extended above 700 second-feet; minimum, 17 second-feet Sept. 29, 30 (gage height, 2.12 feet).

1913-15, 1933-42: Maximum discharge, 4,520 second-feet Nov. 5, 1934 (gage-height, 10.4 feet, site and datum then in use), from rating curve extended above 400 second-feet; minimum, 9 second-feet Nov. 9, 10, 11, 1936.

Remarks.- Records excellent. No diversion or regulation.

Cooperation.- Gage-height record collected in cooperation with city of Seattle, which furnished five discharge measurements.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 1

Dec. 2 to Sept. 30

| | | | | | | | | | |
|-----|-----|-----|-------|-----|-----|-----|-----|-----|-------|
| 2.5 | 48 | 4.0 | 477 | 2.2 | 25 | 3.2 | 199 | 5.0 | 1,060 |
| 2.7 | 76 | 4.5 | 745 | 2.4 | 44 | 3.5 | 282 | 5.5 | 1,430 |
| 3.0 | 134 | 5.0 | 1,060 | 2.6 | 71 | 4.0 | 491 | 6.0 | 1,880 |
| 3.5 | 274 | | | 2.9 | 125 | 4.5 | 750 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|------|-----|------|------|------|-------|
| 1 | 166 | 50 | 346 | 40 | 52 | 25 | 132 | 109 | 250 | 342 | 65 | 28 |
| 2 | 132 | 47 | 1,370 | 37 | 49 | 42 | 121 | 91 | 266 | 327 | 64 | 28 |
| 3 | 621 | 70 | 556 | 34 | 50 | 41 | 109 | 94 | 289 | 285 | 65 | 28 |
| 4 | 278 | 148 | 290 | 33 | 64 | 37 | 123 | 85 | 282 | 296 | 65 | 29 |
| 5 | 158 | 216 | 214 | 31 | 68 | 54 | 147 | 96 | 340 | 224 | 65 | 29 |
| 6 | 141 | 130 | 279 | 31 | 63 | 53 | 147 | 152 | 389 | 191 | 64 | 26 |
| 7 | 141 | 101 | 206 | 31 | 58 | 47 | 140 | 219 | 335 | 167 | 63 | 24 |
| 8 | 139 | 95 | 154 | 31 | 57 | 46 | 125 | 244 | 279 | 143 | 61 | 23 |
| 9 | 441 | 99 | 129 | 32 | 56 | 97 | 150 | 226 | 269 | 146 | 61 | 23 |
| 10 | 944 | 106 | 109 | 29 | 57 | 96 | 211 | 164 | 211 | 151 | 60 | 22 |
| 11 | 601 | 329 | 94 | 31 | 57 | 84 | 302 | 127 | 170 | 191 | 54 | 21 |
| 12 | 444 | 153 | 82 | 40 | 54 | 77 | 279 | 107 | 172 | 140 | 47 | 22 |
| 13 | 281 | 324 | 74 | 45 | 50 | 68 | 199 | 125 | 243 | 113 | 43 | 22 |
| 14 | 353 | 675 | 70 | 41 | 47 | 65 | 180 | 154 | 404 | 192 | 43 | 25 |
| 15 | 323 | 527 | 84 | 40 | 45 | 57 | 157 | 162 | 634 | 262 | 44 | 41 |
| 16 | 573 | 218 | 147 | 40 | 44 | 54 | 152 | 162 | 331 | 292 | 43 | 26 |
| 17 | 270 | 158 | 121 | 40 | 42 | 54 | 167 | 167 | 231 | 259 | 43 | 21 |
| 18 | 195 | 124 | 115 | 40 | 40 | 52 | 145 | 183 | 186 | 180 | 44 | 18 |
| 19 | 179 | 103 | 136 | 37 | 36 | 48 | 157 | 214 | 172 | 160 | 45 | 17 |
| 20 | 141 | 90 | 125 | 35 | 35 | 44 | 284 | 450 | 147 | 138 | 52 | 17 |
| 21 | 121 | 79 | 109 | 35 | 34 | 43 | 346 | 491 | 167 | 139 | 48 | 18 |
| 22 | 117 | 70 | 105 | 36 | 33 | 47 | 211 | 505 | 194 | 132 | 42 | 19 |
| 23 | 107 | 64 | 111 | 37 | 31 | 44 | 138 | 401 | 219 | 115 | 43 | 20 |
| 24 | 97 | 116 | 89 | 41 | 29 | 43 | 125 | 339 | 183 | 101 | 36 | 19 |
| 25 | 90 | 130 | 74 | 54 | 28 | 40 | 109 | 437 | 194 | 101 | 45 | 19 |
| 26 | 78 | 105 | 65 | 67 | 27 | 38 | 96 | 372 | 180 | 113 | 43 | 18 |
| 27 | 70 | 95 | 58 | 67 | 26 | 37 | 84 | 253 | 196 | 94 | 42 | 18 |
| 28 | 62 | 102 | 54 | 63 | 26 | 37 | 51 | 202 | 241 | 84 | 54 | 17 |
| 29 | 57 | 281 | 50 | 58 | - | 40 | 84 | 194 | 275 | 76 | 37 | 17 |
| 30 | 53 | 412 | 45 | 54 | - | 52 | 92 | 234 | 310 | 73 | 33 | 24 |
| 31 | 52 | - | 41 | 50 | - | 79 | - | 222 | - | 71 | 30 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 7,425 | 944 | 52 | 240 | 11.2 | 12.90 | 14,730 |
| November..... | 5,197 | 675 | 47 | 173 | 6.08 | 9.03 | 10,310 |
| December..... | 5,501 | 1,370 | 41 | 177 | 8.27 | 9.56 | 10,910 |
| Calendar year 1941..... | 52,345 | 1,370 | 35 | 145 | 6.68 | 90.96 | 105,800 |
| January..... | 1,280 | 67 | 29 | 41.3 | 1.93 | 2.22 | 2,540 |
| February..... | 1,258 | 66 | 26 | 44.9 | 2.10 | 2.19 | 2,500 |
| March..... | 1,641 | 97 | 25 | 52.9 | 2.47 | 2.65 | 3,250 |
| April..... | 4,793 | 346 | 81 | 160 | 7.48 | 8.33 | 9,510 |
| May..... | 7,063 | 505 | 84 | 228 | 10.7 | 12.26 | 13,990 |
| June..... | 7,739 | 634 | 147 | 288 | 12.1 | 13.45 | 15,350 |
| July..... | 5,296 | 342 | 71 | 171 | 7.99 | 9.20 | 10,500 |
| August..... | 1,544 | 65 | 30 | 49.6 | 2.33 | 2.68 | 3,060 |
| September..... | 679 | 41 | 17 | 22.6 | 1.06 | 1.18 | 1,350 |
| Water year 1941-42..... | 49,406 | 1,370 | 17 | 135 | 6.31 | 85.85 | 98,000 |

Peak discharge.- Oct. 10 (6 a.m.) 1,240 sec.-ft.; Nov. 14 (2 a.m.) 805 sec.-ft.; Dec. 2 (8:30 a.m.) 2,680 sec.-ft.; June 15 (12:30 a.m.) 930 sec.-ft.

Time basis.- Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

SKAGIT RIVER BASIN

Cascade River at Marblemount, Wash.

Location.- Water-stage recorder, lat. 49°31'45", long. 121°23'30", in SW¼ sec. 9, T. 35

N., R. 11 E., 2 miles east of Marblemount and 2½ miles upstream from mouth.

Drainage area.- 180 square miles.

Records available.- September 1928 to September 1942.

Average discharge.- 14 years, 951 second-feet.

Extremes.- Maximum discharge during year, 6,730 second-feet Dec. 2 (gage height, 7.66 feet); minimum, 246 second-feet Mar. 1 (gage height, 1.61 feet).

1928-42: Maximum discharge, 12,900 second-feet Feb. 26, 1932 (gage height, 9.88 feet); minimum, 149 second-feet Nov. 15, 1929, but may have been less during January or February 1929, when stage-discharge relation was affected by ice; minimum gage height, 1.11 feet Feb. 8, 1937.

Remarks.- Records excellent. No diversion or regulation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-------|-----|-------|
| 1.6 | 244 | 3.0 | 760 | 5.5 | 2,760 |
| 1.8 | 296 | 3.5 | 1,020 | 6.0 | 3,410 |
| 2.0 | 356 | 4.0 | 1,350 | 6.5 | 4,250 |
| 2.3 | 461 | 4.5 | 1,760 | | |
| 2.6 | 581 | 5.0 | 2,250 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 1,430 | 465 | 1,180 | 431 | 350 | 249 | 625 | 670 | 1,430 | 2,700 | 510 | 406 |
| 2 | 1,110 | 435 | 3,950 | 424 | 337 | 282 | 581 | 581 | 1,720 | 2,700 | 860 | 454 |
| 3 | 3,290 | 531 | 2,660 | 414 | 331 | 282 | 507 | 539 | 1,950 | 2,500 | 860 | 495 |
| 4 | 1,920 | 599 | 1,670 | 396 | 359 | 264 | 527 | 535 | 1,670 | 2,500 | 835 | 519 |
| 5 | 1,210 | 835 | 1,350 | 386 | 389 | 296 | 581 | 539 | 2,050 | 2,100 | 835 | 531 |
| 6 | 1,020 | 670 | 1,670 | 366 | 366 | 293 | 603 | 648 | 2,550 | 1,760 | 885 | 428 |
| 7 | 1,020 | 560 | 1,390 | 359 | 353 | 277 | 625 | 885 | 2,500 | 1,590 | 935 | 417 |
| 8 | 960 | 539 | 1,150 | 353 | 366 | 265 | 581 | 990 | 2,100 | 1,390 | 860 | 424 |
| 9 | 1,150 | 519 | 1,020 | 356 | 359 | 406 | 648 | 1,080 | 1,950 | 1,320 | 860 | 472 |
| 10 | 2,150 | 515 | 910 | 359 | 366 | 435 | 510 | 960 | 1,720 | 1,240 | 835 | 386 |
| 11 | 1,850 | 760 | 835 | 372 | 386 | 414 | 1,020 | 810 | 1,590 | 1,580 | 738 | 356 |
| 12 | 1,630 | 648 | 760 | 392 | 369 | 396 | 1,020 | 738 | 1,350 | 1,110 | 670 | 403 |
| 13 | 1,280 | 885 | 715 | 403 | 353 | 366 | 910 | 715 | 1,470 | 1,020 | 625 | 439 |
| 14 | 1,430 | 1,800 | 670 | 389 | 344 | 353 | 910 | 738 | 2,020 | 1,180 | 670 | 405 |
| 15 | 1,320 | 1,350 | 670 | 386 | 351 | 354 | 810 | 810 | 3,620 | 1,470 | 715 | 648 |
| 16 | 1,860 | 1,050 | 885 | 379 | 328 | 328 | 810 | 810 | 2,300 | 1,720 | 692 | 396 |
| 17 | 1,470 | 985 | 785 | 376 | 319 | 328 | 835 | 810 | 1,670 | 1,720 | 670 | 322 |
| 18 | 1,180 | 785 | 810 | 363 | 308 | 322 | 760 | 810 | 1,410 | 1,430 | 670 | 299 |
| 19 | 1,240 | 692 | 1,210 | 353 | 302 | 210 | 760 | 935 | 1,350 | 1,350 | 715 | 296 |
| 20 | 1,020 | 648 | 1,080 | 347 | 296 | 299 | 1,040 | 1,380 | 1,210 | 1,350 | 785 | 328 |
| 21 | 910 | 581 | 935 | 344 | 285 | 299 | 1,430 | 2,150 | 1,180 | 1,350 | 670 | 322 |
| 22 | 860 | 539 | 860 | 340 | 277 | 308 | 1,900 | 2,870 | 1,280 | 1,320 | 715 | 369 |
| 23 | 810 | 515 | 860 | 334 | 272 | 293 | 860 | 2,450 | 1,510 | 1,180 | 715 | 369 |
| 24 | 785 | 679 | 760 | 337 | 266 | 291 | 785 | 2,200 | 1,550 | 1,050 | 670 | 376 |
| 25 | 715 | 835 | 670 | 366 | 262 | 280 | 715 | 2,990 | 1,430 | 1,080 | 581 | 356 |
| 26 | 648 | 738 | 625 | 396 | 254 | 274 | 670 | 2,600 | 1,350 | 1,140 | 531 | 353 |
| 27 | 603 | 670 | 581 | 400 | 252 | 272 | 603 | 1,950 | 1,450 | 1,050 | 442 | 347 |
| 28 | 560 | 648 | 539 | 389 | 252 | 272 | 581 | 1,590 | 1,670 | 960 | 580 | 316 |
| 29 | 519 | 910 | 515 | 369 | - | 277 | 560 | 1,390 | 2,000 | 860 | 457 | 319 |
| 30 | 488 | 1,360 | 488 | 353 | - | 302 | 581 | 1,510 | 2,400 | 810 | 428 | 319 |
| 31 | 472 | - | 450 | 344 | - | 396 | - | 1,470 | - | 860 | 417 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|--------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 36,910 | 3,290 | 472 | 1,191 | 6.62 | 7.63 | 73,210 |
| November..... | 22,646 | 1,800 | 435 | 755 | 4.19 | 4.68 | 44,920 |
| December..... | 32,683 | 3,950 | 450 | 1,054 | 5.86 | 6.75 | 64,830 |
| Calendar year 1941 | 294,054 | 3,950 | 305 | 806 | 4.48 | 60.76 | 583,300 |
| January..... | 11,576 | 451 | 334 | 373 | 2.07 | 2.39 | 22,960 |
| February..... | 9,032 | 389 | 252 | 323 | 1.79 | 1.87 | 17,910 |
| March..... | 9,785 | 455 | 249 | 316 | 1.76 | 2.02 | 19,400 |
| April..... | 23,648 | 1,900 | 507 | 798 | 4.38 | 4.89 | 46,910 |
| May..... | 39,153 | 2,990 | 535 | 1,263 | 7.02 | 8.09 | 77,680 |
| June..... | 53,530 | 3,620 | 1,180 | 1,784 | 9.91 | 11.06 | 106,200 |
| July..... | 45,390 | 2,700 | 810 | 1,464 | 8.13 | 9.38 | 90,030 |
| August..... | 21,711 | 935 | 417 | 700 | 3.89 | 4.49 | 43,060 |
| September..... | 11,849 | 648 | 296 | 395 | 2.19 | 2.45 | 23,500 |
| Water year 1941-42 | 317,911 | 3,950 | 249 | 871 | 4.84 | 65.70 | 630,600 |

Peak discharge.- Oct. 3 (2 p.m.) 6,510 sec.-ft.; Dec. 2 (12:45 p.m.) 6,730 sec.-ft.; May 22 (4 a.m.) 3,080 sec.-ft.; May 25 (11 a.m.) 3,410 sec.-ft.; June 15 (9 a.m.) 4,430 sec.-ft.; July 1 (10:30 p.m.) 3,160 sec.-ft.

Time basis: Pacific standard time prior to 2 a.m., Feb 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Sauk River above Whitechuck River, near Darrington, Wash.

Location.- Water-stage recorder, lat. 46°10'00", long. 121°27'45", in NW¼ sec. 24, T. 31 N., R. 10 E., half a mile upstream from Whitechuck River and 9½ miles southeast of Darrington.

Drainage area.- 152 square miles.

Records available.- August to November 1910 (fragmentary gage heights), October 1917 to September 1922, August 1923 to September 1942.

Average discharge.- 19 years (1917-22, 1923-42), 1,076 second-feet.

Extremes.- Maximum discharge during year, 7,220 second-feet Dec. 2 (gage height, 7.61 feet); minimum, 132 second-feet Sept. 29, 30 (gage height, 2.01 feet).

1917-22, 1923-42: Maximum discharge, 23,000 second-feet Dec. 12, 1921 (gage height, 14.65 feet), from rating curve extended above 3,000 second-feet; minimum, 115 second-feet Nov. 15, 16, 30, Dec. 1, 1936.

Remarks.- Records good October and November, excellent thereafter except those for periods of no gage-height record, which are good. No diversion or regulation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Nov. 14 to Dec. 1)

| Oct. 1 to Dec. 1 | | | | Dec. 2 to Sept. 30 | | | |
|------------------|-------|-----|-------|--------------------|-----|-----|-------|
| 2.7 | 411 | 4.5 | 2,090 | 2.0 | 129 | 3.0 | 621 |
| 3.0 | 600 | 5.0 | 2,740 | 2.2 | 193 | 3.3 | 849 |
| 3.3 | 839 | 6.0 | 4,240 | 2.4 | 275 | 3.6 | 1,110 |
| 3.6 | 1,110 | 7.0 | 6,040 | 2.7 | 429 | | |
| 4.0 | 1,520 | | | | | | |

Note.- Same as preceding table above 3.6 feet.

Note.- Same as preceding table above 3.6 feet.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|-------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 1,850 | 446 | 1,310 | 429 | 401 | 224 | 866 | 891 | 1,520 | 2,030 | 453 | a240 |
| 2 | 1,420 | 423 | 5,030 | 423 | 379 | 289 | 833 | 841 | 1,680 | 2,030 | 465 | a230 |
| 3 | 2,020 | 665 | 3,470 | 401 | 368 | 317 | 716 | 769 | 1,850 | 1,850 | 441 | a230 |
| 4 | 1,680 | 964 | 2,280 | 373 | 489 | 327 | 686 | 739 | 1,740 | 1,800 | 447 | a230 |
| 5 | 1,220 | 1,520 | 1,800 | 353 | 635 | 368 | 746 | 723 | 1,910 | 1,620 | 423 | a220 |
| 6 | 1,100 | 1,060 | 2,340 | 348 | 540 | 368 | 769 | 833 | 2,600 | 1,250 | 412 | a210 |
| 7 | 1,310 | 814 | 1,630 | 327 | 459 | 332 | 1,120 | 2,470 | 1,120 | 1,120 | 412 | a200 |
| 8 | 1,310 | 699 | 520 | 327 | 459 | 337 | 769 | 1,300 | 2,090 | 1,000 | 395 | a200 |
| 9 | 1,850 | 635 | 1,280 | 327 | 447 | 917 | 785 | 1,410 | 2,090 | 991 | 390 | a195 |
| 10 | 3,700 | 600 | 1,020 | 342 | 465 | 874 | 933 | 1,250 | 2,470 | 849 | 373 | a190 |
| 11 | 3,100 | 789 | 965 | 348 | 534 | 686 | 1,230 | 1,060 | 2,210 | 1,030 | 368 | a185 |
| 12 | 2,960 | 731 | 874 | 368 | 477 | 601 | 1,360 | 942 | 1,850 | 933 | 327 | a180 |
| 13 | 2,150 | 1,440 | 785 | 379 | 423 | 580 | 1,250 | 866 | 1,800 | 793 | 313 | a185 |
| 14 | 1,800 | 3,100 | 739 | 363 | 354 | 459 | 1,250 | 866 | 2,030 | 793 | 313 | a180 |
| 15 | 1,590 | 1,970 | 809 | 348 | 368 | 423 | 1,120 | 1,000 | 3,780 | 1,060 | 313 | 176 |
| 16 | 2,060 | 1,470 | 1,520 | 348 | 337 | 395 | 1,070 | 1,020 | 3,020 | 1,310 | 303 | 176 |
| 17 | 1,910 | 1,180 | 1,160 | 337 | 317 | 418 | 1,190 | 1,000 | 2,340 | 1,850 | 298 | 169 |
| 18 | 1,470 | 991 | 1,230 | 322 | 308 | 407 | 1,050 | 1,010 | 1,970 | 1,410 | 298 | 173 |
| 19 | 1,360 | a870 | 2,540 | 313 | 289 | 373 | 1,030 | 1,240 | 1,800 | 1,080 | 298 | 159 |
| 20 | 1,180 | a760 | 1,800 | 308 | 284 | 353 | 1,310 | 1,630 | 1,520 | 994 | 298 | 150 |
| 21 | 1,030 | a680 | 1,360 | 303 | 275 | 348 | 1,850 | 2,280 | 1,410 | 933 | 275 | 147 |
| 22 | 936 | a610 | 1,140 | 298 | 266 | 368 | 1,630 | 3,100 | 1,460 | 874 | 271 | 147 |
| 23 | 665 | a600 | 1,170 | 294 | 258 | 353 | 1,310 | 2,670 | 1,520 | 777 | 262 | 150 |
| 24 | 797 | a800 | 950 | 303 | 249 | 332 | 1,270 | 1,200 | 1,460 | 666 | 262 | 153 |
| 25 | 731 | a1,700 | 809 | 407 | 241 | 313 | 1,200 | 1,630 | 1,410 | 643 | 254 | 147 |
| 26 | 660 | a1,200 | 708 | 483 | 232 | 298 | 1,240 | 2,740 | 1,310 | 650 | a290 | 144 |
| 27 | 593 | a900 | 643 | 508 | 228 | 298 | 942 | 2,250 | 1,360 | 614 | a260 | 147 |
| 28 | 566 | a800 | 594 | 540 | 228 | 294 | 849 | 1,910 | 1,520 | 575 | a350 | 141 |
| 29 | 519 | 1,050 | 547 | 429 | - | 294 | 609 | 1,890 | 1,740 | 521 | a330 | 132 |
| 30 | 482 | 1,420 | 515 | 395 | - | 280 | 785 | 1,580 | 1,910 | 495 | a280 | 138 |
| 31 | 463 | - | 459 | 368 | - | 441 | - | 1,520 | - | 471 | a255 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-foot |
| October..... | 44,662 | 3,700 | 463 | 1,441 | 9.48 | 10.93 | 88,590 |
| November..... | 30,890 | 3,100 | 423 | 1,030 | 6.78 | 7.56 | 61,270 |
| December..... | 43,237 | 5,030 | 459 | 1,395 | 9.18 | 10.58 | 85,760 |
| Calendar year 1941..... | 301,018 | 5,030 | 193 | 825 | 5.43 | 73.65 | 597,100 |
| January..... | 11,412 | 540 | 294 | 368 | 2.42 | 2.79 | 22,640 |
| February..... | 10,330 | 635 | 228 | 369 | 2.45 | 2.55 | 20,490 |
| March..... | 12,697 | 917 | 224 | 409 | 2.69 | 3.10 | 25,150 |
| April..... | 31,801 | 1,550 | 686 | 1,053 | 6.93 | 7.73 | 62,660 |
| May..... | 43,100 | 3,100 | 723 | 1,392 | 9.14 | 10.55 | 65,490 |
| June..... | 57,840 | 3,780 | 1,310 | 1,928 | 12.7 | 14.15 | 114,700 |
| July..... | 32,330 | 2,030 | 471 | 1,059 | 6.97 | 8.03 | 65,120 |
| August..... | 10,419 | 465 | 254 | 336 | 2.21 | 2.55 | 20,670 |
| September..... | 5,324 | 240 | 132 | 177 | 1.16 | 1.30 | 10,560 |
| Water year 1941-42..... | 334,312 | 5,030 | 132 | 916 | 6.03 | 81.80 | 663,100 |

Peak discharge.- Oct. 10 (9:20 a.m.) 4,100 sec.-ft.; Nov. 14 (7 to 8 a.m.) 3,620 sec.-ft.; Dec. 2 (12:30 p.m.) 7,220 sec.-ft.; May 22 (4 p.m.) 3,100 sec.-ft.; June 15 (11:30 a.m.) 4, 430 sec.-ft.

a No gage-height record; discharge computed on basis of records for South Fork of Skykomish River near Index.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

SKAGIT RIVER BASIN

Sauk River near Sauk, Wash.

Location.- Water-stage recorder, lat. 48°25'15", long. 121°33'45", in NW¼ sec. 19, T. 34 N., R. 10 E., 5 miles upstream from mouth, 5 miles southeast of Sauk, and 8 miles downstream from Suittate River. Datum of gage is approximately 226 feet above mean sea level (river-profile survey).

Drainage area.- 714 square miles.

Records available.- July 1928 to September 1942. August 1910 to August 1912, various gages between a point 1 mile downstream from and a point 5 miles upstream from present site, published as Sauk River near Suittate Crossing, near Sauk. All early discharge measurements made at point 5 miles upstream from present site.

Average discharge.- 14 years (1928-42), 4,004 second-feet.

Extremes.- Maximum discharge recorded during year, 19,000 second-feet Dec. 2 (gage height, 8.85 feet); minimum not determined (occurred during period of doubtful gage-height record).

1910-12, 1928-42: Maximum discharge, 68,500 second-feet Feb. 26, 1932 (gage height, 15.83 feet); minimum, 572 second-feet Dec. 5, 1929 but may have been less during period of ice effect Jan. 10-27, 1930.

Remarks.- Records fair October to July, poor thereafter. No diversion or regulation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|--------|-------|-------|-------|-------|--------|--------|-------|--------|--------|
| 1 | 4,760 | 2,130 | 4,880 | 2,070 | 2,050 | 1,180 | 3,140 | 3,250 | 5,260 | 8,630 | 2,470 | dl,200 |
| 2 | 4,140 | 2,050 | 13,500 | 2,070 | 2,030 | 1,680 | 3,250 | 3,040 | 5,780 | 8,960 | 2,740 | dl,250 |
| 3 | 6,800 | 2,710 | 11,400 | 1,990 | 1,940 | 1,890 | 2,740 | 2,840 | 6,620 | 8,140 | 2,650 | dl,300 |
| 4 | 5,390 | 3,800 | 9,640 | 1,810 | 2,470 | 1,870 | 2,560 | 2,650 | 6,060 | 7,980 | 2,580 | dl,450 |
| 5 | 4,880 | 4,760 | 7,980 | 1,740 | 2,040 | 1,920 | 2,740 | 2,650 | 6,620 | 7,060 | 2,470 | dl,400 |
| 6 | 5,260 | 4,500 | 9,300 | 1,740 | 2,650 | 1,990 | 2,840 | 2,940 | 8,630 | 6,060 | 2,560 | dl,500 |
| 7 | 4,380 | 3,800 | 8,630 | 1,680 | 2,380 | 1,870 | 2,540 | 3,910 | 8,630 | 5,390 | 2,560 | dl,200 |
| 8 | 3,680 | 3,360 | 7,060 | 1,660 | 2,300 | 1,780 | 2,740 | 4,500 | 7,360 | 4,760 | 2,560 | dl,200 |
| 9 | 4,630 | 3,040 | 5,920 | 1,660 | 2,300 | 3,590 | 2,740 | 4,580 | 4,260 | 2,560 | dl,300 | |
| 10 | 7,360 | 2,740 | 5,130 | 1,310 | 2,300 | 3,910 | 3,140 | 4,500 | 8,300 | 4,140 | 2,660 | dl,100 |
| 11 | 6,480 | 3,460 | 4,500 | 1,830 | 2,740 | 2,940 | 4,140 | 3,910 | 7,980 | 4,380 | 2,300 | dl,050 |
| 12 | 6,480 | 3,250 | 4,020 | 1,660 | 2,360 | 2,560 | 4,500 | 3,460 | 6,480 | 3,910 | 2,000 | dl,450 |
| 13 | 4,630 | 4,790 | 3,680 | 2,030 | 2,130 | 2,220 | 4,020 | 3,250 | 6,200 | 3,570 | 1,870 | dl,100 |
| 14 | 4,020 | 10,300 | 3,460 | 1,680 | 2,020 | 2,050 | 4,020 | 3,140 | 7,060 | 3,570 | 1,810 | dl,100 |
| 15 | 3,800 | 7,060 | 3,460 | 1,830 | 1,890 | 1,860 | 3,800 | 3,460 | 13,000 | 4,500 | 1,920 | dl,250 |
| 16 | 4,880 | 5,130 | 7,200 | 1,800 | 1,810 | 1,920 | 3,460 | 3,460 | 10,700 | 4,880 | 1,910 | dl,150 |
| 17 | 5,390 | 4,260 | 5,260 | 1,760 | 1,720 | 1,720 | 3,800 | 3,360 | 8,300 | 6,200 | 1,840 | dl,000 |
| 18 | 5,260 | 3,570 | 4,990 | 1,690 | 1,760 | 1,760 | 3,460 | 3,360 | 7,060 | 5,130 | 1,870 | d820 |
| 19 | 5,000 | 2,940 | 8,960 | 1,640 | 1,700 | 1,640 | 3,360 | 3,800 | 6,480 | 4,500 | 1,920 | d940 |
| 20 | 4,500 | 2,470 | 7,620 | 1,600 | 1,660 | 1,540 | 4,020 | 5,130 | 5,780 | 4,260 | 1,910 | dl,000 |
| 21 | 3,800 | 2,220 | 5,780 | 1,600 | 1,460 | 1,510 | 6,060 | 4,760 | 5,260 | 4,260 | 1,760 | d960 |
| 22 | 3,360 | 2,030 | 4,880 | 1,620 | 1,410 | 1,620 | 5,520 | 10,700 | 5,390 | 4,260 | 1,700 | d990 |
| 23 | 3,140 | 1,890 | 5,520 | 1,600 | 1,340 | 1,520 | 4,380 | 9,300 | 5,780 | 3,910 | 1,690 | dl,000 |
| 24 | 2,940 | 2,470 | 4,500 | 1,660 | 1,330 | 1,450 | 4,140 | 8,140 | 5,780 | 3,460 | 1,740 | dl,050 |
| 25 | 2,840 | 3,910 | 3,800 | 2,220 | 1,300 | 1,380 | 4,020 | 10,700 | 5,520 | 3,260 | dl,650 | d960 |
| 26 | 2,740 | 3,250 | 3,250 | 2,470 | 1,250 | 1,330 | 3,680 | 10,300 | 5,260 | 3,360 | dl,500 | d920 |
| 27 | 2,560 | 3,040 | 2,940 | 2,650 | 1,220 | 1,290 | 3,250 | 7,980 | 5,260 | 3,140 | dl,350 | d900 |
| 28 | 2,470 | 2,940 | 2,740 | 2,380 | 1,190 | 1,270 | 3,040 | 6,480 | 5,650 | 3,040 | dl,450 | d880 |
| 29 | 2,300 | 3,910 | 2,560 | 2,130 | - | 1,270 | 2,840 | 5,520 | 6,770 | 2,840 | dl,300 | d860 |
| 30 | 2,130 | 5,000 | 2,470 | 1,970 | - | 1,410 | 2,840 | 5,390 | 7,670 | 2,650 | dl,250 | d840 |
| 31 | 2,110 | - | 2,220 | 1,890 | - | 1,800 | - | 5,260 | - | 2,560 | dl,200 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 132,110 | 7,360 | 2,110 | 4,262 | 5.97 | 6.88 | 262,009 |
| November..... | 110,780 | 10,300 | 1,890 | 3,693 | 5.17 | 5.77 | 219,700 |
| December..... | 176,450 | 13,500 | 2,220 | 5,692 | 7.97 | 9.19 | 350,000 |
| Calendar year 1941..... | 1,177,200 | 13,500 | 1,480 | 3,225 | 4.52 | 61.30 | 2,335,000 |
| January..... | 52,350 | 2,650 | 1,600 | 1,882 | 2.64 | 3.04 | 115,700 |
| February..... | 53,760 | 3,040 | 1,190 | 1,920 | 2.65 | 2.90 | 104,600 |
| March..... | 57,740 | 3,910 | 1,180 | 1,863 | 2.61 | 3.01 | 114,500 |
| April..... | 107,080 | 6,060 | 2,560 | 3,569 | 5.00 | 5.88 | 212,400 |
| May..... | 156,020 | 10,700 | 2,650 | 5,033 | 7.05 | 8.13 | 309,500 |
| June..... | 208,000 | 13,000 | 5,260 | 6,933 | 9.71 | 10.83 | 412,600 |
| July..... | 147,010 | 8,960 | 2,560 | 4,742 | 6.64 | 7.66 | 291,600 |
| August..... | 61,630 | 2,740 | 1,200 | 1,988 | 2.78 | 3.21 | 122,200 |
| September..... | 32,670 | 1,450 | 840 | 1,089 | 1.53 | 1.70 | 64,800 |
| Water year 1941-42..... | 1,301,600 | 13,500 | 840 | 3,566 | 4.69 | 67.80 | 2,582,000 |

Peak discharge.- Nov. 14 (10:30 a.m.) 11,800 sec.-ft.; Dec. 2 (1:30 p.m.) 19,000 sec.-ft.; Dec. 19 (7 a.m.) 8,840 sec.-ft.; May 22 (10 a.m.) 11,000 sec.-ft.; May 25 (2-p.m.) and May 26 (4:30 a.m.) 11,800 sec.-ft.; June 15 (2 to 3 p.m.) 15,200 sec.-ft.

Doubtful gage-height record; discharge computed on basis of records for Sauk River above White-chuck River and Suittate River near Mansford.

Time basis: Pacific standard time prior to 2 a.m., Feb 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Suittale River near Mansford, Wash.

Location.- Water-stage recorder, lat. 48°21'50", long. 121°29'30", in N $\frac{1}{2}$ sec. 10, T. 33 N., R. 10 E., 2 $\frac{1}{2}$ miles downstream from Big Creek and 4 miles north of Mansford.

Drainage area.- 335 square miles.

Records available.- July 1938 to September 1942.

Extremes.- Maximum discharge during year, 7,530 second-feet Oct. 3 (gage height, 9.78 feet); minimum, 537 second-feet Feb. 28, Mar. 1 (gage height, 3.57 feet).
1938-42: Maximum discharge, 9,680 second-feet May 29, 1939 (gage height, 9.79 feet), from rating curve extended above 5,000 second-feet; minimum, 444 second-feet Oct. 8, 9, 1939 (gage height, 3.41 feet).

Remarks.- Records fair. No diversion or regulation.

Rating table, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Dec. 1, June to Sept. 30)

| | | | |
|-----|-------|-----|-------|
| 3.6 | 550 | 6.0 | 2,560 |
| 4.0 | 755 | 7.0 | 3,800 |
| 4.5 | 1,100 | 8.0 | 5,170 |
| 5.0 | 1,540 | 9.0 | 6,630 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1 | 2,240 | 918 | 1,640 | 980 | 732 | 546 | 1,180 | 1,320 | 2,670 | 4,750 | 1,540 | 811 |
| 2 | 1,790 | 870 | 4,700 | a950 | 704 | 640 | 1,060 | 1,180 | 2,970 | 4,890 | 1,690 | 918 |
| 3 | 4,490 | 1,180 | 3,900 | a900 | 698 | 635 | 982 | 1,180 | 3,410 | 4,610 | 1,640 | 982 |
| 4 | 3,020 | 1,320 | 2,790 | a850 | 786 | 596 | 1,020 | 1,100 | 3,030 | 4,610 | 1,640 | 1,060 |
| 5 | 1,940 | 2,090 | 2,560 | a800 | 792 | 682 | 1,140 | 1,100 | 3,410 | 3,930 | 1,590 | 1,060 |
| 6 | 1,690 | 1,540 | 2,970 | a750 | 755 | 650 | 1,180 | 1,270 | 4,330 | 3,280 | 1,640 | 870 |
| 7 | 1,690 | 1,320 | 2,500 | a730 | 721 | 618 | 1,180 | 1,690 | 4,190 | 3,090 | 1,640 | 887 |
| 8 | 1,590 | 1,220 | 2,190 | a730 | 732 | 640 | 1,140 | 1,890 | 3,670 | 2,730 | 1,690 | 833 |
| 9 | 1,790 | 1,180 | 1,990 | a750 | 732 | 652 | 1,270 | 2,090 | 3,540 | 2,500 | 1,690 | 922 |
| 10 | 2,970 | 1,140 | 1,790 | a750 | 755 | 652 | 1,540 | 1,840 | 3,540 | 2,450 | 1,690 | 761 |
| 11 | 2,850 | 1,450 | 1,640 | a750 | 817 | 870 | 1,940 | 1,590 | 3,410 | 2,560 | 1,500 | 738 |
| 12 | 2,620 | 1,270 | 1,500 | a800 | 767 | 817 | 1,990 | 1,450 | 2,970 | 2,140 | 1,220 | 850 |
| 13 | 2,040 | 1,730 | 1,400 | a800 | 726 | 761 | 1,840 | 1,400 | 3,030 | 2,040 | 1,140 | 918 |
| 14 | 1,990 | 3,220 | 1,400 | a770 | 709 | 732 | 1,840 | 1,450 | 3,670 | 2,140 | 1,180 | 830 |
| 15 | 1,940 | 2,500 | 1,740 | a750 | 687 | 704 | 1,640 | 1,590 | 5,450 | 2,560 | 1,320 | 982 |
| 16 | 2,510 | 2,040 | 1,890 | a740 | 672 | 687 | 1,590 | 1,590 | 4,190 | 2,730 | 1,320 | 698 |
| 17 | 2,240 | 1,740 | 1,640 | a720 | 656 | 693 | 1,640 | 1,540 | 3,540 | 2,650 | 1,270 | 606 |
| 18 | 1,890 | 1,500 | 2,430 | 720 | 635 | 677 | 1,500 | 1,540 | 3,090 | 2,450 | 1,320 | 582 |
| 19 | 1,890 | 1,360 | 2,730 | 726 | 625 | 645 | 1,500 | 1,790 | 3,030 | 2,400 | 1,320 | 606 |
| 20 | 1,690 | 1,220 | 2,290 | 715 | 620 | 635 | 1,990 | 2,450 | 2,620 | 2,540 | 1,450 | 682 |
| 21 | 1,540 | 1,180 | 1,990 | 715 | 601 | 640 | 2,580 | 3,540 | 2,500 | 2,450 | 1,400 | 650 |
| 22 | 1,450 | 1,060 | 2,040 | 709 | 595 | 635 | 2,140 | 4,610 | 2,670 | 2,450 | 1,360 | 682 |
| 23 | 1,360 | 982 | 1,640 | 698 | 616 | 678 | 1,740 | 4,190 | 2,910 | 2,240 | 1,360 | 715 |
| 24 | 1,320 | 1,250 | 1,640 | 715 | 573 | 606 | 1,640 | 3,930 | 2,850 | 2,040 | 1,320 | 715 |
| 25 | 1,220 | 1,500 | a1,500 | 786 | 564 | 587 | 1,540 | 5,170 | 2,790 | 1,990 | 1,060 | 698 |
| 26 | 1,180 | 1,320 | a1,400 | 843 | 550 | 578 | 1,400 | 4,610 | 2,620 | 2,040 | 952 | 656 |
| 27 | 1,140 | 1,220 | a1,300 | 857 | 546 | 573 | 1,270 | 3,670 | 2,730 | 1,940 | 830 | 643 |
| 28 | 1,100 | 1,180 | a1,200 | 817 | 542 | 573 | 1,220 | 3,030 | 3,150 | 1,790 | 952 | 540 |
| 29 | 1,020 | 1,450 | a1,100 | 767 | - | 578 | 1,180 | 2,670 | 3,670 | 1,690 | 824 | 650 |
| 30 | 952 | 1,690 | a1,050 | 732 | - | 630 | 1,180 | 2,670 | 4,330 | 1,590 | 894 | 635 |
| 31 | 952 | - | a1,000 | 715 | - | 780 | - | 2,620 | - | 1,590 | 792 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 58,104 | 4,490 | 952 | 1,874 | 5.59 | 6.45 | 115,200 |
| November..... | 43,640 | 3,220 | 870 | 1,455 | 4.34 | 4.74 | 86,560 |
| December..... | 61,650 | 4,700 | 1,000 | 1,989 | 5.94 | 6.84 | 122,300 |
| Calendar year 1941..... | 518,655 | 4,700 | 577 | 1,421 | 4.24 | 57.55 | 1,028,000 |
| January..... | 23,985 | 950 | 698 | 774 | 2.31 | 2.68 | 47,570 |
| February..... | 18,871 | 817 | 542 | 674 | 2.01 | 2.09 | 37,430 |
| March..... | 20,226 | 952 | 545 | 675 | 2.01 | 2.32 | 41,510 |
| April..... | 45,032 | 2,560 | 982 | 1,501 | 4.48 | 5.00 | 89,320 |
| May..... | 71,760 | 5,170 | 1,100 | 2,315 | 6.31 | 7.79 | 142,300 |
| June..... | 99,980 | 5,450 | 2,500 | 3,333 | 9.95 | 11.10 | 198,300 |
| July..... | 82,669 | 4,890 | 1,590 | 2,673 | 7.98 | 9.20 | 164,400 |
| August..... | 41,164 | 1,690 | 792 | 1,328 | 3.96 | 4.57 | 81,650 |
| September..... | 23,532 | 1,060 | 582 | 778 | 2.32 | 2.59 | 46,280 |
| Water year 1941-42..... | 591,304 | 5,450 | 542 | 1,620 | 4.84 | 65.63 | 1,173,000 |

Peak discharge.- Oct. 3 (1:45 p. m.) 7,530 sec.-ft.; Dec. 2 (10 a. m.) 6,480 sec.-ft.; May 25 (10:30 a. m.) 9,590 sec.-ft.; June 15 (9 a. m.) 6,330 sec.-ft.

a No gage-height record; discharge computed on basis of records for Sauk River near Sauk and Cascade River at Marblemount.

Time basis: Pacific standard time prior to 2 a. m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time subtract 1 hour.

WHATCOM CREEK BASIN

Whatcom Creek near Bellingham, Wash.

Location.- Water-stage recorder, lat. 48°45'10", long. 122°25'40", in NW¼E¼ sec. 28, T. 38 N., R. 3 E., in Whatcom Falls Park, three-quarters of a mile downstream from Lake Whatcom and 2 miles east of Bellingham. Datum of gage is 200.00 feet above mean sea level (city of Bellingham datum).

Drainage area.- 56 square miles.

Records available.- November 1910 to September 1914 (gage heights only October 1912 to September 1914), July 1939 to September 1942.

Extremes (regulated).- Maximum discharge during year, 538 second-feet Dec. 6 (gage height, 88.30 feet); minimum, 0.4 second-foot Feb. 13, July 9.
1910-12, 1939-42: Maximum discharge observed, 739 second-feet Nov. 20, 21, 1911 (gage height, 5.50 feet, site and datum then in use); minimum, 0.4 second-foot Jan. 13, 14, 1941, Feb. 13, July 9, 1942.

Remarks.- Records good except those below 10 second-feet, which are fair. Flow regulated by Lake Whatcom (usable capacity, about 28,800 acre-feet). City of Bellingham diverts about 30 second-feet from lake for municipal supply and small amount is diverted for use of fish hatchery.

Cooperation.- Gage-height record collected in cooperation with city of Bellingham.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|------|-------|
| 1 | 0.8 | 130 | 184 | a230 | 0.6 | 0.7 | 17 | 11 | 63 | 0.6 | 2.0 | 0.6 |
| 2 | .8 | 83 | 288 | 226 | .7 | .8 | 15 | 11 | 1.6 | .6 | 1.8 | .6 |
| 3 | 3.5 | 1.4 | 284 | 221 | .6 | .8 | 15 | 11 | 1.4 | .7 | 1.5 | .6 |
| 4 | .5 | 1.1 | 345 | 217 | .6 | .7 | 14 | 10 | 1.2 | .7 | 1.5 | .6 |
| 5 | .6 | 7.3 | 498 | 186 | .6 | .7 | 14 | 10 | 1.1 | .6 | 1.1 | .6 |
| 6 | 1.4 | 42 | 522 | 99 | .7 | .7 | 14 | 10 | 1.2 | .6 | 1.1 | .6 |
| 7 | .8 | 42 | 505 | 63 | .5 | .6 | 14 | 10 | 1.3 | .5 | .8 | .6 |
| 8 | .8 | 42 | 473 | 62 | .5 | .6 | 14 | 9.7 | 1.3 | .5 | .8 | .7 |
| 9 | .8 | 42 | 458 | 61 | .5 | .6 | 14 | 9.7 | 1.4 | .4 | .7 | .7 |
| 10 | 10 | 42 | 442 | 61 | .5 | .6 | 13 | 10 | 1.3 | .5 | .8 | .7 |
| 11 | 51 | 21 | 427 | 59 | .5 | .6 | 13 | 8.2 | 1.1 | .6 | .8 | .7 |
| 12 | 42 | .8 | 427 | 45 | .5 | .6 | 13 | 3.5 | 1.1 | .6 | .8 | .7 |
| 13 | 1.8 | 1.0 | 412 | 32 | .5 | .6 | 13 | 3.3 | 1.0 | .6 | .8 | .6 |
| 14 | 1.5 | 1.2 | 399 | 9.1 | .5 | .6 | 13 | 3.3 | 1.3 | .6 | .8 | .6 |
| 15 | 1.4 | 12 | 302 | 4.8 | .5 | .6 | 12 | 3.0 | 34 | .6 | .8 | .6 |
| 16 | 1.5 | 52 | 226 | 2.1 | .5 | .6 | 12 | 2.4 | 152 | 6.2 | .7 | .6 |
| 17 | 1.5 | 52 | 226 | 1.7 | .5 | .6 | 12 | 2.4 | 226 | 1.1 | .7 | .6 |
| 18 | 45 | 62 | 223 | 1.5 | .6 | .6 | 12 | 2.5 | 226 | .8 | .6 | .7 |
| 19 | 73 | 53 | 223 | 1.4 | .6 | .7 | 12 | 3.0 | 223 | .7 | .7 | .7 |
| 20 | 28 | 53 | 223 | 1.2 | .6 | 20 | 12 | 4.0 | 223 | 1.8 | .7 | .7 |
| 21 | 1.5 | 53 | 223 | 1.1 | .6 | 37 | 12 | 3.8 | 221 | 1.5 | .7 | .7 |
| 22 | 1.3 | 52 | 250 | 1.1 | .7 | 65 | 11 | 3.5 | 172 | 1.2 | .7 | 49 |
| 23 | 1.1 | 52 | 369 | .8 | .6 | 88 | 12 | 3.1 | 74 | 1.0 | .6 | 74 |
| 24 | 1.2 | 53 | 305 | .8 | .6 | 134 | 12 | 3.0 | 33 | .9 | .6 | 2.2 |
| 25 | 71 | 100 | 253 | 1.0 | .6 | 171 | 11 | 3.3 | .8 | 1.1 | .7 | 1.4 |
| 26 | 76 | 139 | 251 | a1.0 | .6 | 169 | 11 | 2.6 | .8 | 1.1 | .7 | .9 |
| 27 | 1.5 | 139 | 246 | a.9 | .6 | 169 | 11 | 2.5 | .8 | 1.0 | .7 | .8 |
| 28 | 1.2 | 141 | 256 | a.9 | .7 | 169 | 11 | 2.6 | .7 | .8 | .7 | .8 |
| 29 | .9 | 144 | a242 | a.8 | - | 140 | 11 | 71 | .7 | .7 | .7 | .8 |
| 30 | .6 | 171 | a238 | .8 | - | 34 | 11 | 204 | .6 | 81 | .7 | .9 |
| 31 | 25 | - | a234 | .6 | - | 16 | - | 149 | - | 96 | .8 | - |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | | |
| October..... | | | | 448.0 | 76 | 0.5 | 14.5 | 889 | | | | |
| November..... | | | | 1,774.8 | 171 | .8 | 59.2 | 3,620 | | | | |
| December..... | | | | 9,923.0 | 522 | 184 | 320 | 19,680 | | | | |
| Calendar year 1941..... | | | | 19,096.4 | 522 | .4 | 52.3 | 37,880 | | | | |
| January..... | | | | 1,592.6 | 230 | .6 | 51.4 | 3,160 | | | | |
| February..... | | | | 16.1 | .7 | .5 | 51.58 | 32 | | | | |
| March..... | | | | 1,224.3 | 171 | .6 | 39.5 | 2,430 | | | | |
| April..... | | | | 381.0 | 17 | 11 | 12.7 | 756 | | | | |
| May..... | | | | 586.4 | 204 | 2.4 | 18.9 | 1,160 | | | | |
| June..... | | | | 1,667.7 | 226 | .6 | 55.6 | 3,310 | | | | |
| July..... | | | | 205.7 | 96 | .4 | 6.64 | 408 | | | | |
| August..... | | | | 27.3 | 2.0 | .6 | .83 | 54 | | | | |
| September..... | | | | 144.3 | 74 | .6 | 4.81 | 286 | | | | |
| Water year 1941-42..... | | | | 17,991.2 | 522 | .4 | 49.3 | 35,680 | | | | |

a No gage-height record; discharge interpolated.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Nooksack River above Cascade Creek, near Glacier, Wash.

Location.- Water-stage recorder, lat. 48°54'20", long. 121°50'50", in NW 1/4 sec. 1, T. 39 N., R. 7 E., a quarter of a mile upstream from Cascade Creek, 4 1/4 miles east of Glacier, and 6 miles upstream from Glacier Creek.

Drainage area.- 105 square miles.

Records available.- October 1937 to September 1942.

Extremes.- Maximum discharge during year, 7,450 second-feet Dec. 2 (gage height, 9.02 feet), from rating curve extended above 2,000 second-feet; minimum, 187 second-feet, Feb. 22-27, Mar. 29, 30 (gage height, 1.53 feet).
1937-42: Maximum discharge, 9,670 second-feet Oct. 28, 1937 (gage height, 10.28 feet), from rating curve extended above 2,000 second-feet; minimum recorded, 85 second-feet (regulated) Mar. 30, 1938.

Remarks.- Records fair except those for periods of doubtful or no gage-height record or shifting control, which are poor. No diversion. Some regulation at low flow by power plant at Excelsior.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|
| 1 | 656 | 358 | 1,960 | d280 | 346 | 190 | 342 | 447 | 990 | 1,630 | d620 | 465 |
| 2 | 490 | 322 | 5,420 | a240 | 327 | 267 | 313 | 396 | 1,080 | 1,670 | d640 | 461 |
| 3 | 1,730 | 472 | 1,960 | a230 | 313 | 223 | 296 | 376 | 1,220 | 1,590 | d650 | 479 |
| 4 | 622 | 592 | 1,090 | a220 | 364 | 220 | 300 | 376 | 1,190 | 1,670 | d670 | 493 |
| 5 | 672 | 984 | 640 | a220 | 346 | 228 | 342 | 380 | 1,510 | 1,360 | d680 | 521 |
| 6 | 606 | 570 | 960 | a220 | 320 | 207 | 353 | 447 | 1,710 | 1,120 | d660 | 488 |
| 7 | 618 | 476 | 722 | a210 | 303 | 202 | 368 | 595 | 1,630 | 990 | d680 | 470 |
| 8 | 560 | 456 | 640 | a210 | 293 | 209 | 342 | 566 | 1,560 | 930 | d710 | 468 |
| 9 | 1,530 | 458 | 600 | a200 | 274 | 300 | 372 | 568 | 1,670 | 960 | d720 | 470 |
| 10 | 2,890 | 670 | 585 | a230 | 277 | 290 | 447 | 625 | 1,300 | 930 | d660 | 413 |
| 11 | 2,180 | 2,040 | 555 | a220 | 274 | 264 | 585 | 531 | 1,160 | 1,020 | d620 | 421 |
| 12 | 1,630 | 834 | 507 | a240 | 261 | 252 | 600 | 464 | 1,020 | 870 | d580 | 434 |
| 13 | 1,170 | 1,880 | 493 | d250 | 243 | 234 | 512 | 479 | 1,160 | 840 | d560 | 488 |
| 14 | 1,680 | 2,420 | 488 | d240 | 237 | 226 | 560 | 516 | 1,570 | 1,290 | d690 | 475 |
| 15 | 1,380 | 1,680 | 580 | 231 | 234 | 215 | 484 | 555 | 2,420 | 1,470 | d630 | 516 |
| 16 | 2,840 | 1,060 | 750 | 237 | 220 | 204 | 452 | 570 | 1,510 | 1,440 | 651 | 400 |
| 17 | 1,430 | 760 | 610 | 237 | 218 | 209 | 526 | 575 | 1,190 | 1,330 | 630 | 349 |
| 18 | 1,130 | 640 | 615 | 228 | 209 | 204 | 461 | 600 | 1,020 | 1,020 | 656 | 338 |
| 19 | 1,020 | 555 | 662 | 223 | 209 | 194 | 470 | 706 | 930 | 990 | 662 | 364 |
| 20 | 748 | 500 | 600 | 215 | 202 | 192 | 646 | 980 | 870 | 990 | 646 | 380 |
| 21 | 615 | 458 | 570 | 223 | 194 | 187 | 610 | 1,400 | 940 | 1,050 | 595 | 400 |
| 22 | d565 | 436 | 560 | 226 | 202 | 184 | 557 | 1,840 | 900 | 990 | 620 | 443 |
| 23 | d515 | 414 | 575 | 226 | 187 | 192 | 531 | 1,590 | 990 | 870 | 635 | 447 |
| 24 | d510 | 612 | 507 | 293 | 187 | 190 | 516 | 1,440 | 960 | 810 | 550 | 443 |
| 25 | 510 | 560 | 470 | 372 | 187 | 194 | 493 | 1,710 | 900 | d780 | 540 | 408 |
| 26 | 463 | 472 | 413 | 364 | 187 | 192 | 452 | 1,670 | 930 | d790 | 498 | 413 |
| 27 | 418 | 440 | 392 | 413 | 187 | 190 | 421 | 1,330 | 960 | d810 | 465 | 404 |
| 28 | 400 | 685 | 376 | 360 | 190 | 190 | 408 | 1,050 | 1,080 | d765 | 545 | 372 |
| 29 | 372 | 2,310 | 349 | 327 | - | 157 | 392 | 990 | 1,190 | d750 | 470 | 357 |
| 30 | 353 | 2,770 | 290 | 300 | - | 187 | 400 | 1,080 | 1,400 | d700 | 479 | 569 |
| 31 | 353 | - | d280 | 313 | - | 226 | - | 1,080 | - | d660 | 461 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 30,859 | 2,890 | 363 | 995 | 9.48 | 10.93 | 61,210 |
| November..... | 27,092 | 2,770 | 322 | 903 | 8.80 | 9.60 | 53,740 |
| December..... | 25,419 | 5,420 | 260 | 820 | 7.81 | 9.00 | 50,420 |
| Calendar year 1941..... | 247,595 | 5,420 | 168 | 678 | 6.46 | 87.61 | 490,700 |
| January..... | 7,961 | 413 | 200 | 257 | 2.45 | 2.83 | 15,830 |
| February..... | 6,976 | 384 | 187 | 249 | 2.37 | 2.47 | 13,840 |
| March..... | 6,677 | 300 | 187 | 215 | 2.05 | 2.36 | 13,240 |
| April..... | 13,551 | 810 | 296 | 462 | 4.40 | 4.91 | 27,470 |
| May..... | 26,148 | 1,840 | 376 | 843 | 6.03 | 9.26 | 51,850 |
| June..... | 36,850 | 2,420 | 840 | 1,228 | 11.70 | 13.06 | 73,090 |
| July..... | 33,065 | 1,670 | 660 | 1,067 | 10.16 | 11.71 | 65,880 |
| August..... | 18,773 | 720 | 461 | 606 | 5.77 | 6.65 | 37,240 |
| September..... | 13,259 | 659 | 338 | 442 | 4.21 | 4.70 | 26,300 |
| Water year 1941-42..... | 246,944 | 5,420 | 187 | 677 | 6.45 | 87.47 | 489,800 |

a No gage-height record; discharge computed on basis of records for other streams in basin.
d Doubtful gage-height record; discharge computed on basis of records for other streams in basin.
Note.- Shifting-control method used Oct. 3 to Dec. 1, Apr. 14 to Sept. 30.
Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Nooksack River at Deming, Wash.

Location.— Water-stage recorder, lat. 48°48'35", long. 122°12'15", in lot 12, sec. 6, T. 38 N., R. 5 E., 800 feet downstream from South Fork and 1 mile southeast of Deming. Datum of gage is 203.6 feet above mean sea level, datum of 1929.

Drainage area.— 500 square miles.

Records available.— July 1935 to September 1942. September to December 1910 (gage heights only) at site 1 1/8 miles downstream; December 1910 to March 1911 (gage heights only) at Nugents' bridge, 4 miles downstream from Deming.

Extremes.— Maximum discharge during year, 15,800 second-feet Dec. 2 and June 15 (gage height, 9.73 feet); minimum, 714 second-feet Sept. 18 (gage height, 3.18 feet).
1935-42: Maximum discharge, 33,200 second-feet Oct. 28, 1937 (gage height, 13.21 feet), from rating curve extended above 11,000 second-feet; minimum, 560 second-feet Nov. 9, 10, 1936, but may have been less during periods of ice effect.

Remarks.— Records good. No diversion. Slight regulation by power plant at Excelsior has little if any effect at this station.

Rating tables, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Dec. 2 | | | | | Dec. 3 to Sept. 30 | | | | |
|------------------|-------|-----|-------|-----|--------------------|-----|-------|-----|-------|
| 3.0 | 785 | 5.0 | 2,690 | 8.0 | 9,680 | 3.2 | 725 | 5.0 | 2,500 |
| 3.5 | 1,120 | 5.5 | 3,510 | 9.0 | 13,000 | 3.5 | 920 | 5.5 | 3,300 |
| 4.0 | 1,510 | 6.0 | 4,470 | | | 4.0 | 1,360 | 6.0 | 4,300 |
| 4.5 | 2,050 | 7.0 | 6,840 | | | 4.5 | 1,890 | 7.0 | 6,800 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|---------|--------|--------|-------|-------|-------|--------|-------|-------|-------|
| 1 | 3,510 | 1,610 | 4,270 | bl,600 | 2,000 | 1,020 | 3,400 | 2,500 | 2,870 | 3,680 | 1,720 | 984 |
| 2 | 2,690 | 1,460 | 13,600 | bl,500 | 2,000 | 2,050 | 2,500 | 2,240 | 2,950 | 3,880 | 1,750 | 1,120 |
| 3 | 2,260 | 2,200 | *10,600 | bl,400 | 1,890 | 2,060 | 2,060 | 2,120 | 3,210 | 3,580 | 1,840 | 1,120 |
| 4 | 4,600 | 3,540 | 6,380 | bl,360 | 2,370 | 1,560 | 1,940 | 1,690 | 3,040 | 3,580 | 1,890 | 1,260 |
| 5 | 3,160 | 5,460 | 5,220 | bl,320 | 2,570 | 1,900 | 2,000 | 1,780 | 3,680 | 3,120 | 1,780 | 1,260 |
| 6 | 2,690 | 3,160 | 6,660 | bl,340 | 2,240 | 1,890 | 2,000 | 1,940 | 4,300 | 2,640 | 1,890 | 1,050 |
| 7 | 2,840 | 2,480 | 5,100 | bl,340 | 2,000 | 1,620 | 1,890 | 2,440 | 4,300 | 2,370 | 1,890 | 1,010 |
| 8 | 3,240 | 2,230 | 4,090 | bl,350 | 1,940 | 1,620 | 1,720 | 2,500 | 4,300 | 2,240 | 1,890 | 1,070 |
| 9 | 5,670 | 2,050 | 3,580 | 1,360 | 1,940 | 4,490 | 1,750 | 2,870 | 5,720 | 2,240 | 1,940 | 1,010 |
| 10 | 11,500 | 1,990 | 3,120 | 1,620 | 2,180 | 3,400 | 2,120 | 2,570 | 5,720 | 2,180 | 1,890 | 864 |
| 11 | 6,570 | 4,780 | 2,870 | 1,510 | 2,240 | 2,500 | 2,570 | 2,300 | 4,980 | 2,440 | 1,720 | 857 |
| 12 | 8,260 | 3,760 | 2,570 | 1,620 | 2,000 | 2,180 | 2,640 | 2,060 | 3,780 | 2,120 | 1,560 | 1,010 |
| 13 | as,600 | 7,110 | 2,440 | *1,780 | al,680 | 1,940 | 2,240 | 2,060 | 3,490 | 1,940 | 1,460 | 1,020 |
| 14 | as,400 | 12,300 | 2,440 | 1,560 | al,720 | 1,780 | 2,720 | 2,060 | 4,970 | 2,440 | 1,560 | 992 |
| 15 | 4,370 | 7,690 | 2,720 | 1,460 | al,600 | 1,620 | 2,720 | 2,180 | 11,800 | 3,300 | 1,670 | 1,260 |
| 16 | 8,010 | 5,220 | 5,340 | 1,460 | al,500 | 1,560 | 2,500 | 2,180 | 7,360 | 3,400 | 1,720 | 913 |
| 17 | 4,170 | 4,170 | 3,680 | 1,510 | al,410 | 1,620 | 2,720 | 2,120 | 6,250 | 5,850 | 1,670 | 792 |
| 18 | 4,370 | 3,330 | 3,340 | 1,410 | 1,360 | 1,560 | 2,300 | 2,180 | 4,980 | 4,060 | 1,670 | 767 |
| 19 | 4,070 | 3,000 | 6,100 | 1,360 | 1,260 | 1,510 | 2,180 | 2,370 | 4,300 | 2,950 | 1,720 | 779 |
| 20 | 3,330 | 2,620 | 4,640 | al,320 | *1,260 | 1,410 | 2,720 | 3,680 | 3,780 | 2,790 | 1,720 | 824 |
| 21 | 2,920 | 2,550 | 3,880 | al,360 | 1,170 | 1,410 | 3,490 | 4,410 | 3,400 | 2,640 | 1,560 | 837 |
| 22 | 2,620 | 2,230 | 3,460 | 1,360 | 1,120 | 1,560 | 2,790 | 5,600 | 3,210 | 2,570 | 1,620 | 920 |
| 23 | 2,420 | 2,110 | 4,520 | 1,360 | 1,060 | 1,510 | 2,240 | 4,640 | 3,300 | 2,300 | 1,620 | 944 |
| 24 | 2,110 | 3,370 | 3,400 | 2,500 | 1,050 | 1,410 | 2,370 | 3,880 | 3,210 | 2,180 | 1,410 | 998 |
| 25 | 2,110 | 4,070 | 2,790 | 3,040 | 1,020 | 1,360 | 2,570 | 4,750 | 2,950 | 2,120 | 1,220 | 982 |
| 26 | 1,820 | *3,060 | 2,500 | 2,500 | 1,000 | 1,310 | 2,440 | 5,470 | 2,670 | 2,180 | 1,220 | 878 |
| 27 | 1,820 | 2,690 | 2,300 | 2,790 | 992 | 1,260 | 2,180 | 4,090 | 2,950 | 2,120 | 1,070 | 850 |
| 28 | 1,710 | 2,560 | 2,120 | 2,440 | 1,000 | 1,310 | 2,120 | 3,400 | 2,950 | 2,000 | 1,310 | 788 |
| 29 | 1,610 | as,000 | 2,000 | 2,120 | - | 1,360 | 2,060 | 3,040 | 3,210 | 1,890 | 1,070 | 785 |
| 30 | 1,610 | 5,580 | 1,890 | 1,890 | - | 1,510 | 2,060 | 3,210 | 3,490 | 1,840 | 1,030 | 1,100 |
| 31 | 1,610 | - | bl,700 | 1,750 | - | 2,000 | - | 3,210 | - | 1,780 | 1,000 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|--------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 127,170 | 11,300 | 1,510 | 4,102 | 7.07 | 8.15 | 252,200 |
| November..... | 111,410 | 12,300 | 1,460 | 3,714 | 6.40 | 7.14 | 221,600 |
| December..... | 129,350 | 13,600 | 1,700 | 4,173 | 7.19 | 8.29 | 256,600 |
| Calendar year 1941..... | 1,001,990 | 13,600 | 1,050 | 2,745 | 4.73 | 64.23 | 1,988,000 |
| January..... | 52,340 | 3,040 | 1,320 | 1,688 | 2.91 | 3.36 | 103,800 |
| February..... | 45,792 | 2,570 | 992 | 1,635 | 2.82 | 2.94 | 90,830 |
| March..... | 55,290 | 4,490 | 1,020 | 1,784 | 3.08 | 3.55 | 109,700 |
| April..... | 71,040 | 3,490 | 1,720 | 2,368 | 4.08 | 4.56 | 140,900 |
| May..... | 91,440 | 5,800 | 1,760 | 2,950 | 5.09 | 5.86 | 181,400 |
| June..... | 126,820 | 11,800 | 2,870 | 4,227 | 7.29 | 8.13 | 251,500 |
| July..... | 84,620 | 5,850 | 1,760 | 2,750 | 4.71 | 5.43 | 167,800 |
| August..... | 49,110 | 1,940 | 1,000 | 1,584 | 2.73 | 3.15 | 97,410 |
| September..... | 28,894 | 1,260 | 767 | 963 | 1.66 | 1.86 | 57,310 |
| Water year 1941-42 | 973,276 | 13,600 | 767 | 2,667 | 4.60 | 62.41 | 1,930,000 |

Peak discharge.— Oct. 10 (7:20 a.m.) 13,800 sec.-ft.; Nov. 14 (12 m.) 13,000 sec.-ft.; Dec. 2 (12 p.m.) 15,800 sec.-ft.; June 15 (6:30 a.m.) 15,800 sec.-ft.

* Winter discharge measurement made this day.

a No gage-height record; discharge computed on basis of records for South Fork of Nooksack River near Wierkaham.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

South Fork of Nooksack River near Wickersham, Wash.

Location.- Water-stage recorder, lat. 48°39'50", long. 122°07'50", in lot 2, sec. 28, T. 37 N., R. 5 E., three-quarters of a mile upstream from Skookum Creek and 4 miles east of Wickersham.

Drainage area.- 103 square miles.

Records available.- May 1934 to September 1942.

Extremes.- Maximum discharge during year, 7,370 second-feet Nov. 13 (gage height, 8.26 feet); minimum, 73 second-feet Sept. 25-30 (gage height, 2.13 feet).
1934-42: Maximum discharge, 12,900 second-feet Oct. 28, 1937 (gage height, 10.70 feet); minimum, 68 second-feet Oct. 9, 1940 (gage height, 2.11 feet).

Remarks.- Records excellent. No diversion or regulation.

Rating tables, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Nov. 13

Nov. 14 to Sept. 30

| | | | | | | | | | | | |
|-----|-----|-----|-------|-----|--------|-----|-----|-----|-------|-----|-------|
| 2.8 | 246 | 4.0 | 894 | 5.5 | 2,460. | 2.1 | 68 | 3.5 | 550 | 5.5 | 2,460 |
| 3.0 | 321 | 4.5 | 1,340 | 6.0 | 3,140 | 2.3 | 103 | 4.0 | 880 | 6.0 | 3,130 |
| 3.5 | 563 | 5.0 | 1,860 | 6.5 | 3,910 | 2.6 | 178 | 4.5 | 1,340 | 7.0 | 4,790 |
| | | | | | | 3.0 | 315 | 5.0 | 1,860 | 8.0 | 6,740 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|-------|-------|-------|-------|-------|------|-------|
| 1 | 1,150 | 321 | 1,340 | b330 | 512 | 222 | 1,390 | 702 | 534 | 399 | 161 | 94 |
| 2 | 716 | 275 | 3,670 | b325 | 486 | 325 | 828 | 591 | 528 | 373 | 153 | 92 |
| 3 | 2,400 | 877 | 2,620 | b290 | 461 | 615 | 639 | 523 | 556 | 335 | 150 | 90 |
| 4 | 1,120 | 1,000 | 1,390 | b270 | 735 | 422 | 596 | 466 | 518 | 319 | 145 | 88 |
| 5 | 702 | 1,690 | 1,170 | b270 | 820 | 566 | 614 | 446 | 602 | 288 | 138 | 86 |
| 6 | 683 | 742 | 1,750 | b275 | 639 | 528 | 585 | 501 | 690 | 256 | 135 | 86 |
| 7 | 709 | 546 | 1,210 | b275 | 534 | 427 | 639 | 658 | 683 | 242 | 132 | 84 |
| 8 | 962 | 461 | 904 | b360 | 534 | 446 | 476 | 627 | 828 | 226 | 128 | 82 |
| 9 | 2,620 | 404 | 763 | 413 | 518 | 1,830 | 501 | 614 | 1,340 | 219 | 125 | 81 |
| 10 | 3,780 | 386 | 659 | 441 | 639 | 1,070 | 670 | 573 | 1,970 | 212 | 123 | 81 |
| 11 | 2,580 | 1,400 | 591 | 388 | 683 | 715 | 791 | 496 | 1,440 | 249 | 123 | 81 |
| 12 | 2,060 | 864 | 518 | 399 | 534 | 591 | 690 | 446 | 920 | 235 | 118 | 81 |
| 13 | 1,280 | 2,680 | 481 | 466 | 456 | 496 | 573 | 422 | 742 | 203 | 114 | 79 |
| 14 | 1,090 | 4,350 | 476 | 377 | 406 | 432 | 763 | 437 | 1,230 | 252 | 112 | 82 |
| 15 | 848 | 1,980 | 633 | 347 | 377 | 399 | 784 | 476 | 5,230 | 347 | 105 | 121 |
| 16 | 2,400 | 1,300 | 1,410 | *347 | 347 | 395 | 702 | 481 | 1,860 | 529 | 103 | 103 |
| 17 | 1,340 | 1,000 | 812 | 355 | 319 | 437 | 722 | 471 | 1,590 | 1,340 | 101 | 92 |
| 18 | 934 | 784 | 1,050 | 327 | 304 | 408 | 591 | 528 | 1,140 | 725 | 99 | 86 |
| 19 | 894 | 658 | 2,020 | 304 | 285 | 368 | 679 | 573 | 920 | 427 | 99 | 82 |
| 20 | 702 | 562 | 1,220 | 288 | 274 | 339 | 806 | 865 | 770 | 331 | 95 | 81 |
| 21 | 598 | 496 | 936 | 300 | 260 | 347 | 912 | 944 | 664 | 285 | 97 | 79 |
| 22 | 519 | 446 | 886 | 304 | 245 | 395 | 664 | 1,160 | 591 | 260 | 94 | 78 |
| 23 | 456 | 413 | 1,220 | 296 | 235 | 381 | 507 | 850 | 567 | 239 | 92 | 78 |
| 24 | 413 | 1,400 | 820 | 377 | 235 | 359 | 709 | 709 | 539 | 226 | 92 | 76 |
| 25 | 381 | 1,400 | 658 | 888 | 219 | 327 | 770 | 944 | 476 | 209 | 105 | 74 |
| 26 | 355 | 784 | 556 | 791 | 216 | 325 | 670 | 1,220 | 446 | 200 | 142 | 73 |
| 27 | 329 | 627 | 486 | 842 | 212 | 331 | 562 | 855 | 427 | 194 | 121 | 73 |
| 28 | 309 | 678 | 441 | 702 | 216 | 355 | 528 | 690 | 395 | 184 | 145 | 73 |
| 29 | 280 | 1,270 | 399 | 579 | - | 395 | 545 | 620 | 395 | 181 | 125 | 73 |
| 30 | 271 | 896 | 373 | 486 | - | 481 | 579 | 633 | 399 | 175 | 105 | 103 |
| 31 | 290 | - | 343 | 441 | - | 676 | - | 579 | - | 164 | 101 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-foot |
| October..... | 33,121 | 3,780 | 271 | 1,088 | 10.4 | 11.96 | 65,690 |
| November..... | 30,590 | 4,350 | 275 | 1,020 | 9.90 | 11.05 | 60,670 |
| December..... | 31,804 | 3,670 | 343 | 1,026 | 9.96 | 11.48 | 63,060 |
| Calendar year 1941..... | 236,838 | 4,350 | 71 | 649 | 6.30 | 85.51 | 469,800 |
| January..... | 12,638 | 888 | 270 | 414 | 4.02 | 4.63 | 25,450 |
| February..... | 11,704 | 820 | 212 | 415 | 4.06 | 4.23 | 23,210 |
| March..... | 15,992 | 1,630 | 222 | 516 | 5.01 | 5.77 | 31,720 |
| April..... | 20,284 | 1,390 | 476 | 676 | 6.56 | 7.32 | 40,230 |
| May..... | 20,060 | 1,220 | 422 | 648 | 6.29 | 7.25 | 39,530 |
| June..... | 26,990 | 3,230 | 395 | 900 | 8.74 | 9.75 | 53,530 |
| July..... | 9,824 | 1,340 | 164 | 317 | 3.08 | 3.55 | 19,490 |
| August..... | 3,678 | 161 | 92 | 119 | 1.16 | 1.33 | 7,300 |
| September..... | 2,532 | 121 | 73 | 84.4 | .82 | .91 | 6,020 |
| Water year 1941-42..... | 219,432 | 4,350 | 73 | 601 | 5.83 | 79.23 | 435,200 |

Peak discharge.- Oct. 10 (4:15 a.m.) 5,720 sec.-ft.; Nov. 13 (6:30 p.m.) 7,370 sec.-ft.; Dec. 2 (3 a.m.) 4,970 sec.-ft.; June 15 (3 a.m.) 4,610 sec.-ft.

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

UPPER COLUMBIA RIVER BASIN

COLUMBIA RIVER MAIN STEM

Columbia River at Birchbank, British Columbia

(International gaging station)

Location.— Water-stage recorder, lat. 49°10', long. 117°43', at Birchbank, British Columbia, 7 miles upstream from Trail, 11 miles downstream from Kootenai River, and 17 miles upstream from international boundary. Datum of gage is 1,338.00 feet above mean sea level (levels by Geodetic Survey of Canada in 1930).

Drainage area.— 34,000 square miles.

Records available.— October 1937 to September 1942. April 1913 to September 1937 at site at Trail, 7 miles downstream, published as Columbia River at Trail, British Columbia.

Average discharge.— 29 years, 70,000 second-feet.

Extremes.— Maximum discharge during year, 208,000 second-feet June 11 (gage height, 35.50 feet); minimum, 19,400 second-feet Mar. 6 (gage height, 6.19 feet).

1913-42: Maximum discharge observed, 312,000 second-feet June 14, 15, 1913 (gage height, 41.6 feet, site and datum then in use); minimum observed, 8,940 second-feet Feb. 3, 1937 (gage height, 6.27 feet, site and datum then in use).

Remarks.— Records excellent. Small amount of water diverted above station for irrigation. Slight fluctuation at low water caused by power plant on Kootenai River. Flow affected by natural storage in numerous lakes and by artificial regulation in Kootenai River Basin.

Cooperation.— This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|------|--------|------|--------|------|---------|------|---------|
| 6.0 | 18,700 | 12.0 | 45,800 | 21.0 | 95,000 | 30.0 | 160,000 |
| 8.0 | 26,900 | 15.0 | 60,800 | 24.0 | 114,000 | 33.0 | 185,000 |
| 10.0 | 36,100 | 18.0 | 77,100 | 27.0 | 136,000 | 35.5 | 208,000 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|--------|
| 1 | 57,200 | 48,200 | 31,500 | 25,100 | 22,300 | 20,100 | 22,700 | 48,800 | 182,000 | 159,000 | 132,000 | 86,800 |
| 2 | 56,800 | 47,700 | 34,600 | 25,000 | 23,000 | 20,000 | 22,400 | 49,400 | 180,000 | 162,000 | 128,000 | 82,600 |
| 3 | 56,400 | 49,800 | 44,100 | 25,200 | 23,000 | 20,200 | 21,400 | 50,700 | 179,000 | 167,000 | 128,000 | 59,700 |
| 4 | 56,900 | 51,500 | 48,200 | 24,800 | 21,900 | 20,000 | 21,400 | 51,500 | 180,000 | 173,000 | 123,000 | 58,000 |
| 5 | 54,800 | 51,600 | 48,300 | 24,400 | 24,400 | 20,200 | 21,400 | 50,600 | 181,000 | 180,000 | 122,000 | 56,400 |
| 6 | 53,400 | 50,300 | 47,800 | 24,400 | 25,000 | 19,900 | 21,900 | 50,600 | 185,000 | 186,000 | 120,000 | 54,600 |
| 7 | 52,400 | 45,600 | 49,000 | 22,800 | 24,100 | 20,400 | 22,400 | 51,200 | 191,000 | 191,000 | 118,000 | 52,800 |
| 8 | 52,800 | 41,200 | 52,700 | 22,600 | 21,900 | 20,400 | 22,800 | 52,000 | 197,000 | 194,000 | 116,000 | 51,600 |
| 9 | 53,900 | 40,200 | 47,300 | 23,500 | 21,000 | 21,000 | 21,800 | 54,200 | 202,000 | 196,000 | 114,000 | 51,300 |
| 10 | 56,500 | 39,000 | 41,900 | 23,600 | 21,400 | 23,100 | 23,100 | 57,800 | 206,000 | 196,000 | 113,000 | 50,400 |
| 11 | 55,200 | 38,400 | 36,500 | 22,800 | 22,200 | 23,100 | 23,700 | 61,700 | 207,000 | 192,000 | 111,000 | 49,700 |
| 12 | 55,400 | 39,600 | 35,300 | 22,800 | 23,100 | 22,700 | 24,500 | 65,600 | 207,000 | 190,000 | 110,000 | 49,000 |
| 13 | 56,000 | 41,600 | 39,800 | 22,400 | 22,400 | 23,100 | 25,200 | 71,300 | 204,000 | 188,000 | 107,000 | 49,600 |
| 14 | 56,600 | 45,000 | 36,500 | 23,000 | 22,500 | 23,100 | 25,900 | 77,900 | 201,000 | 184,000 | 101,000 | 47,800 |
| 15 | 57,800 | 46,700 | 36,600 | 22,000 | 22,700 | 23,100 | 27,300 | 83,000 | 201,000 | 180,000 | 96,700 | 47,400 |
| 16 | 59,200 | 46,800 | 36,700 | 21,500 | 22,600 | 23,000 | 28,300 | 87,400 | 201,000 | 177,000 | 94,500 | 46,900 |
| 17 | 59,800 | 44,200 | 36,800 | 20,600 | 21,200 | 22,900 | 29,400 | 90,900 | 200,000 | 175,000 | 92,300 | 46,900 |
| 18 | 58,800 | 42,000 | 36,900 | 20,100 | 20,800 | 23,000 | 30,300 | 93,600 | 199,000 | 174,000 | 92,300 | 46,500 |
| 19 | 58,200 | 38,900 | 37,000 | 21,000 | 21,300 | 22,900 | 31,900 | 95,000 | 204,000 | 172,000 | 93,400 | 45,800 |
| 20 | 57,800 | 36,100 | 42,300 | 21,300 | 22,100 | 22,600 | 32,600 | 96,100 | 200,000 | 170,000 | 93,600 | 44,900 |
| 21 | 58,200 | 36,100 | 46,500 | 21,600 | 22,000 | 22,000 | 34,600 | 97,400 | 186,000 | 166,000 | 90,600 | 44,600 |
| 22 | 58,400 | 36,300 | 44,100 | 21,400 | 21,800 | 21,800 | 32,800 | 101,000 | 180,000 | 163,000 | 84,100 | 43,800 |
| 23 | 58,800 | 34,300 | 45,800 | 20,400 | 20,400 | 21,200 | 38,900 | 106,000 | 175,000 | 161,000 | 85,200 | 42,800 |
| 24 | 59,100 | 33,700 | 46,200 | 19,900 | 21,000 | 21,200 | 41,000 | 113,000 | 169,000 | 158,000 | 82,200 | 42,000 |
| 25 | 58,600 | 33,300 | 36,400 | 20,800 | 21,200 | 21,200 | 43,900 | 123,000 | 164,000 | 156,000 | 81,200 | 41,400 |
| 26 | 57,200 | 32,800 | 31,000 | 21,600 | 20,900 | 21,100 | 45,200 | 140,000 | 161,000 | 153,000 | 79,800 | 40,600 |
| 27 | 57,400 | 33,000 | 28,900 | 21,400 | 21,000 | 21,100 | 46,800 | 154,000 | 158,000 | 150,000 | 79,300 | 40,400 |
| 28 | 56,900 | 33,600 | 29,100 | 23,700 | 20,400 | 21,200 | 47,600 | 164,000 | 156,000 | 147,000 | 76,900 | 39,600 |
| 29 | 56,000 | 31,800 | 27,400 | 28,200 | - | 21,500 | 48,200 | 176,000 | 156,000 | 143,000 | 73,800 | 39,600 |
| 30 | 53,600 | 31,500 | 26,900 | 27,000 | - | 21,300 | 48,600 | 181,000 | 156,000 | 139,000 | 71,500 | 37,700 |
| 31 | 50,000 | - | 25,400 | 23,100 | - | 21,600 | - | 183,000 | - | 135,000 | 69,300 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|---------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 1,747,900 | 59,800 | 50,000 | 56,400 | 1.66 | 1.91 | 3,487,000 |
| November..... | 1,220,800 | 51,600 | 31,500 | 40,700 | 1.20 | 1.34 | 2,421,000 |
| December..... | 1,207,500 | 52,700 | 25,400 | 39,000 | 1.16 | 1.33 | 2,596,000 |
| Calendar year 1941..... | 22,168,200 | 152,000 | 16,700 | 60,700 | 1.79 | 24.29 | 43,950,000 |
| January..... | 707,900 | 28,200 | 19,900 | 22,800 | .67 | .77 | 1,404,000 |
| February..... | 617,600 | 25,000 | 20,400 | 22,100 | .65 | .68 | 1,225,000 |
| March..... | 670,000 | 23,100 | 19,900 | 21,600 | .64 | .74 | 1,329,000 |
| April..... | 928,000 | 48,600 | 21,400 | 30,900 | .91 | 1.02 | 1,641,000 |
| May..... | 2,877,600 | 133,000 | 48,800 | 92,800 | 2.73 | 3.15 | 5,708,000 |
| June..... | 5,668,000 | 207,000 | 166,000 | 186,000 | 5.47 | 6.10 | 11,040,000 |
| July..... | 5,278,000 | 196,000 | 135,000 | 170,000 | 5.00 | 5.76 | 10,480,000 |
| August..... | 3,076,700 | 132,000 | 69,300 | 99,200 | 2.92 | 3.37 | 6,103,000 |
| September..... | 1,448,600 | 66,300 | 37,700 | 48,300 | 1.42 | 1.58 | 2,873,000 |
| Water year 1941-42..... | 25,346,600 | 207,000 | 19,900 | 69,400 | 2.04 | 27.75 | 50,270,000 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Columbia River Reservoir at Grand Coulee Dam, Wash.

Location.- Water-stage recorder, lat. 47°57'20", long. 118°59'10", in lot 3, sec. 1, T. 28 N., R. 30 E., in block 12 of Grand Coulee Dam at Grand Coulee. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to Apr. 24, 1942, staff gage on right shore 2,000 feet upstream, at same datum.

Drainage area.- 74,100 square miles.

Records available.- April 1938 to September 1942.

Extremes.- Maximum water-surface elevation recorded during year, 1,290.30 feet July 17; minimum observed, 1,236.60 feet Apr. 12.

1938-42: Maximum water-surface elevation recorded, that of July 17, 1942; minimum observed, 956.1 feet Aug. 29, 1938.

Remarks.- Reservoir is formed by concrete dam; construction of dam started in 1934, completed in 1941; storage began early in construction period. Capacity, 5,151,000 acre-feet (revised) between elevations 1,208 feet (proposed lower limit of operation) and 1,288 feet (revised, top of gates). Dead storage, 4,326,000 acre-feet. Figures given herein represent total contents. Water is used for power development and will be used for irrigation on Grand Coulee Project of Bureau of Reclamation.

Cooperation.- Gage-height record and reservoir areas furnished by Bureau of Reclamation.

Elevation, in feet, at 8 a.m., water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 55.60 | 56.35 | 52.35 | 42.65 | 43.00 | 42.65 | 39.75 | 45.44 | 66.80 | 84.76 | 88.04 | 89.65 |
| 2 | 55.45 | 56.30 | 51.85 | 42.35 | 42.65 | 42.70 | 39.35 | 45.68 | 69.10 | 85.19 | 87.88 | 89.53 |
| 3 | 55.25 | 56.25 | 51.60 | 42.15 | 42.65 | 42.75 | 38.85 | 45.94 | 71.12 | 85.49 | 87.69 | 89.38 |
| 4 | 55.30 | 56.15 | 51.60 | 42.40 | 42.65 | 42.75 | 38.40 | 46.15 | 72.84 | 86.06 | 87.52 | 89.29 |
| 5 | 55.35 | 56.45 | 52.30 | 42.50 | 42.70 | 42.70 | 38.00 | 46.43 | 74.45 | 86.50 | 87.36 | 89.23 |
| 6 | 55.35 | 56.80 | 52.85 | 42.60 | 42.85 | 42.70 | 37.65 | 46.55 | 76.20 | 87.12 | 87.17 | 89.12 |
| 7 | 55.30 | 56.95 | 53.30 | 42.85 | 42.80 | 42.60 | 37.45 | 46.77 | 77.64 | 87.63 | 87.07 | 88.91 |
| 8 | 55.30 | 56.90 | 53.60 | 42.75 | 42.65 | 42.60 | 37.15 | 47.02 | 79.16 | 88.27 | 87.08 | 88.73 |
| 9 | 55.30 | 56.75 | 53.50 | 42.70 | 42.45 | 42.50 | 37.00 | 47.23 | 80.76 | 88.81 | 87.06 | 88.67 |
| 10 | 55.25 | 56.60 | 52.90 | 42.60 | 42.35 | 42.50 | 36.60 | 47.64 | 82.13 | 89.13 | 87.05 | 88.51 |
| 11 | 55.45 | 56.55 | 52.30 | 42.50 | 42.20 | 42.55 | 36.70 | 48.15 | 83.21 | 89.35 | 86.99 | 88.17 |
| 12 | 55.50 | 56.40 | 51.55 | 42.50 | 42.30 | 42.50 | 36.60 | 48.72 | 83.68 | 89.80 | 86.91 | 87.99 |
| 13 | 55.65 | 56.65 | 50.80 | 42.55 | 42.50 | 42.60 | 36.85 | 49.21 | 84.00 | 89.84 | 87.01 | 87.74 |
| 14 | 55.75 | 56.75 | 50.15 | 42.50 | 42.20 | 42.70 | 37.00 | 49.74 | 83.89 | 89.95 | 86.97 | 87.56 |
| 15 | 56.00 | 57.25 | 49.65 | 42.70 | 42.20 | 42.60 | 37.30 | 50.41 | 83.74 | 89.92 | 86.68 | 87.34 |
| 16 | 56.20 | 57.30 | 48.75 | 42.80 | 42.10 | 42.55 | 37.90 | 50.99 | 83.52 | 90.05 | 86.93 | 87.11 |
| 17 | 56.40 | 57.30 | 48.20 | 42.75 | 42.30 | 42.42 | 38.30 | 51.43 | 83.93 | 90.22 | 87.26 | 87.00 |
| 18 | 56.60 | 57.30 | 47.70 | 42.60 | 42.30 | 42.10 | 38.95 | 51.70 | 83.63 | 90.25 | 87.67 | 87.02 |
| 19 | 56.60 | 57.40 | 47.15 | 42.40 | 42.30 | 41.90 | 39.70 | 51.99 | 83.68 | 90.23 | 86.24 | 87.02 |
| 20 | 56.55 | 57.20 | 46.80 | 42.35 | 42.25 | 41.90 | 40.45 | 51.98 | 83.45 | 90.13 | 86.69 | 87.01 |
| 21 | 56.60 | 56.90 | 46.70 | 42.35 | 42.25 | 41.95 | 41.20 | 51.82 | 83.21 | 89.95 | 89.05 | 86.95 |
| 22 | 56.65 | 56.55 | 46.70 | 42.25 | 42.20 | 41.70 | 41.90 | 51.64 | 83.16 | 89.72 | 89.29 | 86.94 |
| 23 | 56.70 | 56.15 | 46.55 | 42.30 | 42.15 | 41.70 | 42.85 | 51.69 | 82.79 | 89.49 | 89.44 | 86.91 |
| 24 | 56.75 | 55.80 | 46.35 | 42.40 | 42.15 | 41.70 | 43.33 | 51.85 | 82.52 | 89.28 | 89.63 | 86.90 |
| 25 | 56.75 | 56.30 | 46.00 | 42.15 | 42.20 | 41.70 | 43.62 | 52.43 | 82.43 | 89.16 | 89.81 | 86.80 |
| 26 | 56.85 | 54.90 | 45.40 | 42.00 | 42.40 | 41.70 | 44.00 | 53.16 | 82.59 | 89.05 | 89.82 | 86.94 |
| 27 | 56.90 | 54.40 | 44.60 | 41.90 | 42.45 | 41.85 | 44.37 | 54.78 | 82.68 | 88.88 | 89.87 | 86.94 |
| 28 | 56.80 | 53.85 | 44.10 | 41.80 | 42.55 | 41.55 | 44.65 | 56.92 | 83.05 | 88.65 | 89.96 | 86.92 |
| 29 | 56.60 | 53.50 | 43.60 | 42.05 | - | 41.10 | 45.02 | 59.34 | 83.60 | 88.49 | 89.98 | 86.95 |
| 30 | 56.65 | 52.90 | 43.40 | 42.45 | - | 40.60 | 45.30 | 61.82 | 84.23 | 88.30 | 89.88 | 87.01 |
| 31 | 56.55 | - | 43.30 | 42.92 | - | 40.20 | - | 64.32 | - | 88.15 | 89.79 | - |

Note.- Add 1,200 feet to obtain elevation above mean sea level.

Monthly elevation and contents, water year October 1941 to September 1942

| Date | Elevation (feet)† | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|-------------------|----------------------|---|
| Sept. 30..... | 1,255.6 | 7,055,400 | - |
| Oct. 31..... | 1,256.5 | 7,117,500 | +62,100 |
| Nov. 30..... | 1,252.5 | 6,844,500 | -273,000 |
| Dec. 31..... | 1,243.1 | 6,234,300 | -610,200 |
| Calendar year 1941..... | - | - | +4,415,300 |
| Jan. 31..... | 1,243.0 | 6,228,000 | -6,300 |
| Feb. 28..... | 1,242.6 | 6,202,600 | -25,200 |
| Mar. 31..... | 1,239.9 | 6,034,900 | -167,900 |
| Apr. 30..... | 1,245.2 | 6,566,800 | +531,900 |
| May 31..... | 1,257.0 | 7,152,000 | +785,200 |
| June 30..... | 1,284.6 | 9,206,400 | +2,054,400 |
| July 31..... | 1,287.9 | 9,469,000 | +262,600 |
| Aug. 31..... | 1,289.6 | 9,506,600 | +37,600 |
| Sept. 30..... | 1,286.9 | 9,589,000 | -17,600 |
| Water year 1941-42..... | - | - | +2,533,600 |

† Elevation at midnight (prior to April, midnight elevation based on daily staff-gage readings at 8 a.m. and 4 p.m.)

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time subtract 1 hour.

Columbia River at Grand Coulee, Wash.

Location.— Water-stage recorder, lat. 47°58'00", long. 118°58'45", opposite lot 4, sec. 35, T. 29 N., R. 30 E., in pier 3 of highway bridge at Grand Coulee, 2,500 feet downstream from Grand Coulee Dam and 14 miles upstream from Nespelem River. Datum of gage is at mean sea level, datum of 1929.

Drainage area.— 75,100 square miles.

Records available.— April 1913 to September 1942 (monthly discharge only, April 1913 to June 1923, January 1924 to May 1928).

Average discharge.— 29 years, 106,400 second-feet, adjusted for storage in Columbia River Reservoir beginning October 1939.

Extremes.— Maximum discharge during year, 315,100 second-feet (regulated) June 13 (elevation, 939.15 feet); minimum, 34,200 second-feet (regulated) Mar. 1 (elevation, 936.74 feet).

1913-42: Maximum discharge, 492,000 second-feet June 15, 1913 (computed on basis of records of peak discharge at other gaging stations); minimum may have been less than 15,300 second-feet (estimated) in January or February 1937, when stage-discharge relation was affected by ice.

Maximum discharge known, 725,000 second-feet (estimated) during flood of June 1894. **Remarks.**— Records excellent. Diversion above station for irrigation is small percentage of flow past gage. Some diurnal fluctuation caused by power plants on Spokane River and by regulation at Grand Coulee Dam. Flow affected by natural storage in many lakes and by artificial regulation in Kootenai, Pend Oreille and Spokane River Basins and in Columbia River Reservoir at Grand Coulee Dam (see preceding page).

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-------|--------|-------|--------|-------|---------|-------|---------|
| 937.0 | 35,400 | 941.0 | 55,800 | 948.0 | 101,300 | 957.0 | 177,300 |
| 938.0 | 40,000 | 942.0 | 61,600 | 950.0 | 116,900 | 960.0 | 207,000 |
| 939.0 | 46,000 | 944.0 | 74,000 | 952.0 | 132,900 | 964.0 | 250,000 |
| 940.0 | 50,200 | 946.0 | 87,300 | 954.0 | 150,300 | 968.0 | 300,000 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|---------|--------|--------|--------|---------|---------|---------|---------|---------|--------|
| 1 | 81,000 | 75,400 | 75,200 | 80,100 | 56,700 | 37,800 | 61,000 | 100,700 | 202,700 | 213,400 | 174,000 | 90,200 |
| 2 | 81,000 | 70,800 | 75,200 | 72,500 | 59,200 | 38,500 | 64,000 | 100,600 | 208,800 | 222,100 | 169,000 | 86,500 |
| 3 | 77,300 | 68,100 | 75,200 | 58,700 | 56,800 | 40,600 | 66,400 | 100,600 | 217,200 | 221,600 | 165,600 | 80,200 |
| 4 | 74,400 | 64,900 | 74,700 | 54,300 | 55,600 | 42,600 | 66,400 | 100,600 | 225,800 | 224,900 | 161,800 | 78,200 |
| 5 | 78,100 | 62,000 | 77,800 | 64,500 | 58,300 | 42,600 | 66,400 | 100,700 | 216,400 | 224,500 | 168,000 | 76,000 |
| 6 | 73,800 | 63,300 | 85,300 | 54,600 | 57,200 | 42,500 | 65,600 | 99,100 | 223,400 | 232,400 | 162,100 | 76,600 |
| 7 | 74,100 | 67,300 | 89,300 | 57,600 | 59,300 | 42,600 | 66,000 | 98,100 | 232,200 | 231,000 | 146,300 | 74,900 |
| 8 | 75,400 | 68,000 | 94,400 | 60,100 | 59,600 | 42,500 | 66,100 | 98,500 | 232,600 | 235,000 | 141,400 | 72,900 |
| 9 | 71,300 | 65,300 | 102,000 | 60,000 | 57,200 | 42,500 | 66,000 | 100,200 | 239,200 | 245,100 | 138,100 | 72,000 |
| 10 | 71,600 | 62,900 | 103,500 | 60,200 | 53,800 | 42,500 | 66,000 | 100,200 | 256,000 | 247,800 | 139,000 | 72,000 |
| 11 | 72,400 | 69,600 | 103,500 | 60,200 | 50,900 | 44,400 | 65,800 | 175,400 | 274,000 | 229,300 | 134,800 | 71,900 |
| 12 | 71,500 | 59,000 | 103,600 | 59,800 | 51,000 | 46,200 | 65,200 | 114,700 | 292,100 | 243,900 | 130,900 | 75,000 |
| 13 | 71,200 | 56,400 | 99,200 | 60,200 | 51,000 | 46,200 | 65,800 | 126,500 | 306,700 | 248,600 | 132,000 | 70,700 |
| 14 | 71,400 | 55,400 | 94,900 | 60,200 | 51,100 | 49,200 | 65,500 | 125,500 | 306,000 | 242,100 | 127,900 | 69,700 |
| 15 | 71,300 | 60,400 | 97,200 | 60,200 | 51,400 | 49,400 | 65,800 | 131,500 | 303,900 | 232,300 | 122,700 | 70,500 |
| 16 | 71,300 | 67,200 | 97,400 | 62,200 | 48,600 | 54,800 | 65,500 | 140,400 | 300,000 | 225,400 | 102,600 | 68,300 |
| 17 | 73,400 | 70,400 | 94,900 | 64,000 | 46,400 | 57,100 | 65,400 | 149,900 | 302,800 | 226,400 | 98,900 | 62,200 |
| 18 | 79,400 | 70,600 | 94,700 | 63,400 | 46,200 | 55,100 | 65,800 | 154,800 | 306,700 | 231,700 | 99,600 | 61,700 |
| 19 | 80,800 | 75,600 | 94,900 | 61,000 | 46,400 | 49,900 | 65,200 | 161,500 | 299,700 | 229,500 | 91,200 | 59,900 |
| 20 | 80,100 | 76,400 | 95,700 | 55,800 | 46,400 | 47,300 | 66,100 | 171,800 | 290,400 | 228,000 | 94,600 | 59,600 |
| 21 | 77,600 | 75,900 | 97,200 | 59,200 | 47,100 | 47,400 | 68,400 | 174,600 | 285,200 | 225,900 | 97,500 | 59,200 |
| 22 | 77,600 | 75,900 | 99,800 | 57,000 | 46,700 | 47,500 | 75,000 | 178,500 | 283,400 | 218,900 | 95,300 | 59,600 |
| 23 | 77,700 | 75,800 | 105,200 | 55,200 | 42,800 | 45,900 | 81,800 | 182,100 | 277,100 | 214,100 | 93,500 | 56,800 |
| 24 | 77,600 | 75,800 | 107,500 | 58,000 | 39,800 | 44,000 | 90,100 | 185,000 | 284,600 | 209,400 | 93,600 | 56,300 |
| 25 | 77,600 | 75,900 | 108,300 | 60,000 | 39,600 | 44,000 | 94,600 | 189,600 | 280,600 | 204,200 | 97,600 | 54,600 |
| 26 | 77,900 | 76,000 | 108,900 | 58,000 | 39,300 | 43,900 | 98,300 | 193,400 | 244,300 | 201,000 | 97,500 | 53,600 |
| 27 | 80,100 | 76,000 | 101,800 | 55,200 | 39,500 | 45,400 | 96,700 | 194,000 | 230,200 | 199,000 | 95,800 | 53,300 |
| 28 | 81,800 | 76,000 | 92,900 | 52,700 | 39,600 | 54,500 | 96,800 | 195,600 | 218,100 | 195,200 | 95,100 | 52,200 |
| 29 | 78,800 | 75,900 | 85,600 | 48,200 | - | 58,700 | 98,800 | 196,900 | 206,800 | 189,200 | 95,100 | 51,200 |
| 30 | 75,900 | 75,200 | 80,400 | 46,000 | - | 58,800 | 100,300 | 197,200 | 209,000 | 184,200 | 93,000 | 52,300 |
| 31 | 76,200 | - | 80,600 | 49,200 | - | 58,800 | - | 198,800 | - | 180,000 | 91,800 | - |

| Month | Observed | | | | Change in contents in Columbia River Reservoir (acre-feet) | Adjusted for change in reservoir contents | | | |
|-------------------------|--------------------------|--------------|---------|----------------------|--|---|--------------------------|--------------------|-------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run-off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | Mean | Per square mile | |
| October..... | 81,800 | 71,200 | 75,930 | 4,668,000 | +62,100 | 4,730,000 | 76,930 | 1.04 | 1.20 |
| November..... | 76,000 | 56,400 | 69,040 | 4,108,000 | -273,000 | 3,835,000 | 64,460 | .870 | .97 |
| December..... | 108,900 | 74,700 | 93,410 | 5,743,000 | -610,200 | 5,133,000 | 83,480 | 1.13 | 1.30 |
| Calendar year 1941.... | 169,100 | 31,700 | 82,610 | 59,810,000 | +4,415,100 | 64,220,000 | 88,710 | 1.20 | 16.24 |
| January..... | 80,100 | 46,000 | 58,780 | 3,614,000 | -6,300 | 3,608,000 | 58,680 | .792 | .91 |
| February..... | 59,600 | 39,300 | 49,740 | 2,762,000 | -28,200 | 2,737,000 | 49,280 | .665 | .69 |
| March..... | 58,800 | 37,800 | 47,190 | 2,902,000 | -167,900 | 2,734,000 | 44,460 | .600 | .69 |
| April..... | 100,300 | 61,000 | 73,610 | 4,380,000 | +331,900 | 4,712,000 | 79,190 | 1.07 | 1.19 |
| May..... | 198,800 | 95,100 | 143,700 | 8,835,000 | +785,200 | 9,620,000 | 156,600 | 2.11 | 2.43 |
| June..... | 306,000 | 202,700 | 256,800 | 15,280,000 | +2,084,400 | 17,330,000 | 291,200 | 3.93 | 4.38 |
| July..... | 248,600 | 180,000 | 221,000 | 13,590,000 | +262,600 | 13,850,000 | 225,200 | 3.04 | 3.50 |
| August..... | 174,000 | 89,600 | 119,900 | 7,371,000 | +137,600 | 7,509,000 | 122,100 | 1.65 | 1.90 |
| September..... | 90,200 | 51,200 | 66,610 | 3,958,000 | -217,600 | 3,740,000 | 62,650 | .848 | .95 |
| Water year 1941-42..... | 506,000 | 37,800 | 106,600 | 77,210,000 | +2,333,600 | 79,540,000 | 109,900 | 1.48 | 20.11 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

COLUMBIA RIVER MAIN STEM

93

Columbia River at Trinidad, Wash.

Location.— Water-stage recorder, lat. 47°13'30", long. 120°00'50", in SE $\frac{1}{4}$ sec. 13, T. 20 N., R. 22 E., half a mile southwest of Trinidad, $\frac{3}{4}$ mile downstream from Colocham Creek, and 12 miles downstream from Rock Island Dam. Datum of gage is 500 feet above mean sea level, subject to correction to 1929 datum.

Drainage area.— 89,700 square miles.

Records available.— October 1930 to September 1942. January to December 1910 (gage heights only), May 1913 to December 1916, at sites about 1 mile above and at highway bridge at Wenatchee, 24 miles upstream, published as Columbia River at Wenatchee; January 1917, at Beverly, 29 miles downstream; January 1917 to September 1930, at site half a mile north of Vernita, 50 miles downstream, published as Columbia River at Vernita.

Average discharge.— 29 years, 116,100 second-feet (adjusted for storage in Columbia River Reservoir beginning October 1939).

Extremes.— Maximum discharge during year, 321,000 second-feet June 16 (gage height, 44.50 feet); minimum, 40,300 second-feet (regulated) Mar. 2 (gage height, 20.18 feet).

1913-42: Maximum discharge, 528,000 second-feet June 15, 16, 1913 (gage height, 45.7 feet, site and datum then in use); minimum, 4,120 second-feet (regulated) Feb. 10, 1932 (gage height, 11.40 feet).

Maximum discharge known, about 740,000 second-feet June 7, 1894 (based on information obtained at other points).

Remarks.— Records excellent. Considerable water diverted for irrigation above gage, but quantity small in proportion to flow past gage. Some diurnal fluctuation caused by power plant at Rock Island and by construction at Grand Coulee Dam. Flow affected by natural storage in numerous lakes and by artificial regulation in Kootenai, Pend Oreille, Spokane, Okanogan, and Chelan River Basins, and in Columbia River Reservoir (see p. 91).

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | | | |
|------|--------|------|--------|------|---------|------|---------|------|---------|
| 20.0 | 39,200 | 24.0 | 65,000 | 30.0 | 116,000 | 36.0 | 184,000 | 42.0 | 276,000 |
| 21.0 | 45,300 | 26.0 | 79,800 | 32.0 | 137,000 | 38.0 | 211,000 | 44.0 | 312,000 |
| 22.0 | 51,600 | 28.0 | 97,000 | 34.0 | 159,000 | 40.0 | 242,000 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|---------|--------|--------|--------|---------|---------|---------|---------|---------|--------|
| 1 | 86,100 | 80,800 | 80,000 | 83,200 | 53,400 | 43,100 | 63,200 | 111,200 | 226,000 | 226,000 | 181,100 | 94,500 |
| 2 | 85,000 | 82,500 | 81,500 | 83,300 | 61,100 | 41,600 | 65,500 | 111,900 | 226,300 | 250,800 | 174,800 | 93,000 |
| 3 | 86,300 | 70,700 | 84,700 | 79,200 | 63,900 | 42,400 | 69,500 | 110,100 | 231,100 | 238,600 | 169,800 | 99,600 |
| 4 | 82,700 | 73,500 | 84,600 | 68,300 | 62,300 | 43,600 | 72,200 | 110,100 | 240,600 | 235,300 | 166,300 | 84,000 |
| 5 | 80,500 | 70,000 | 84,000 | 53,700 | 62,000 | 46,000 | 72,400 | 110,100 | 245,200 | 237,000 | 162,400 | 83,600 |
| 6 | 80,600 | 67,700 | 86,300 | 58,900 | 60,800 | 46,400 | 71,400 | 110,000 | 240,700 | 233,400 | 158,400 | 84,700 |
| 7 | 79,800 | 68,600 | 82,500 | 60,100 | 62,100 | 46,200 | 71,900 | 107,800 | 250,500 | 241,400 | 154,400 | 76,600 |
| 8 | 79,800 | 71,900 | 95,600 | 61,800 | 64,000 | 45,900 | 72,300 | 106,800 | 258,800 | 236,700 | 149,100 | 71,200 |
| 9 | 79,200 | 73,000 | 101,500 | 65,100 | 63,900 | 46,300 | 72,600 | 110,500 | 259,800 | 240,400 | 145,100 | 75,700 |
| 10 | 77,200 | 70,200 | 108,000 | 65,000 | 62,500 | 47,400 | 72,900 | 114,400 | 266,800 | 248,000 | 142,200 | 75,200 |
| 11 | 78,100 | 66,100 | 109,900 | 65,000 | 59,000 | 47,700 | 73,600 | 115,300 | 279,600 | 248,600 | 143,300 | 74,500 |
| 12 | 79,200 | 65,800 | 109,600 | 65,600 | 56,100 | 48,300 | 74,900 | 119,500 | 293,600 | 241,400 | 138,900 | 74,500 |
| 13 | 78,900 | 64,300 | 107,600 | 65,700 | 56,700 | 50,700 | 75,200 | 128,900 | 311,100 | 245,800 | 134,400 | 74,200 |
| 14 | 78,400 | 62,800 | 103,900 | 65,600 | 55,600 | 51,300 | 76,700 | 134,600 | 318,800 | 246,400 | 134,400 | 72,800 |
| 15 | 78,200 | 63,500 | 100,400 | 66,500 | 56,000 | 52,600 | 77,400 | 140,700 | 318,700 | 241,600 | 131,000 | 72,700 |
| 16 | 78,200 | 67,000 | 103,200 | 65,400 | 55,800 | 53,600 | 77,400 | 147,600 | 318,500 | 230,200 | 126,300 | 73,600 |
| 17 | 79,000 | 73,400 | 102,600 | 67,000 | 54,200 | 58,400 | 76,500 | 154,800 | 316,900 | 224,600 | 107,200 | 72,200 |
| 18 | 79,700 | 76,900 | 100,500 | 68,600 | 51,300 | 60,600 | 77,300 | 163,300 | 316,500 | 227,400 | 103,100 | 66,600 |
| 19 | 86,000 | 76,600 | 100,700 | 67,900 | 51,500 | 58,300 | 76,400 | 167,500 | 316,700 | 231,600 | 94,300 | 66,000 |
| 20 | 87,800 | 78,300 | 100,600 | 66,500 | 51,300 | 54,200 | 76,900 | 176,700 | 307,100 | 229,000 | 94,800 | 64,300 |
| 21 | 86,300 | 79,900 | 101,100 | 64,200 | 51,300 | 51,700 | 79,600 | 187,900 | 300,100 | 227,500 | 97,800 | 63,600 |
| 22 | 84,000 | 80,100 | 102,700 | 63,700 | 51,900 | 51,700 | 83,600 | 194,400 | 294,700 | 225,700 | 99,900 | 63,700 |
| 23 | 83,600 | 79,500 | 106,800 | 62,100 | 51,300 | 51,500 | 90,700 | 204,600 | 292,700 | 218,200 | 97,700 | 63,700 |
| 24 | 83,800 | 79,800 | 110,000 | 59,800 | 47,700 | 50,600 | 97,800 | 214,600 | 284,800 | 212,600 | 96,500 | 61,800 |
| 25 | 83,300 | 79,800 | 111,500 | 62,500 | 44,200 | 46,200 | 103,700 | 220,800 | 271,900 | 208,300 | 96,400 | 60,600 |
| 26 | 83,500 | 80,500 | 112,000 | 65,400 | 43,700 | 47,900 | 107,400 | 236,100 | 258,800 | 203,500 | 100,200 | 58,900 |
| 27 | 81,600 | 80,600 | 112,800 | 64,700 | 43,300 | 47,900 | 108,600 | 240,900 | 253,700 | 199,700 | 100,000 | 56,900 |
| 28 | 84,900 | 81,200 | 104,600 | 63,200 | 43,400 | 48,700 | 108,400 | 235,100 | 241,000 | 199,100 | 98,900 | 56,700 |
| 29 | 86,400 | 80,600 | 97,000 | 59,700 | - | 57,300 | 108,000 | 232,700 | 226,600 | 194,400 | 98,200 | 56,600 |
| 30 | 83,900 | 80,400 | 90,000 | 54,200 | - | 61,200 | 110,100 | 229,200 | 221,200 | 188,700 | 97,300 | 55,400 |
| 31 | 80,900 | - | 84,600 | 52,300 | - | 62,600 | - | 226,600 | - | 165,000 | 94,700 | - |

| Month | Observed | | | | Change in contents in Columbia River Reservoir (acre-feet) | Adjusted for change in reservoir contents | | | |
|-------------------------|--------------------------|----------|---------|----------------------|--|---|--------------------------|-----------------|-------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run-off in inches |
| | Maxi-mum | Mini-mum | Mean | | | | Mean | Per square mile | |
| | | | | | | | | | |
| October..... | 87,800 | 77,200 | 81,990 | 5,042,000 | +62,100 | 5,104,000 | 85,010 | 0.925 | 1.07 |
| November..... | 82,500 | 62,800 | 74,270 | 4,420,000 | -275,000 | 4,147,000 | 69,690 | .777 | .87 |
| December..... | 112,800 | 80,000 | 99,030 | 6,089,000 | -610,200 | 5,479,000 | 89,110 | .993 | 1.14 |
| Calendar year 1941..... | 172,300 | 34,800 | 68,300 | 69,930,000 | +4,415,000 | 68,340,000 | 94,400 | 1.06 | 14.31 |
| January..... | 83,500 | 52,300 | 64,940 | 3,993,000 | -6,300 | 3,987,000 | 64,840 | .723 | .83 |
| February..... | 64,000 | 43,300 | 54,980 | 3,053,000 | -25,200 | 3,028,000 | 54,520 | .608 | .63 |
| March..... | 62,600 | 41,800 | 50,470 | 3,103,000 | -167,900 | 2,935,000 | 47,730 | .532 | .61 |
| April..... | 110,100 | 63,200 | 82,140 | 4,897,000 | +331,900 | 5,219,000 | 87,710 | .976 | 1.09 |
| May..... | 240,900 | 106,600 | 160,500 | 9,867,000 | +785,200 | 10,650,000 | 173,200 | 1.95 | 2.22 |
| June..... | 318,800 | 221,200 | 275,000 | 16,940,000 | +2,054,000 | 18,290,000 | 307,400 | 3.43 | 3.82 |
| July..... | 248,800 | 185,000 | 225,600 | 13,870,000 | +268,600 | 14,139,000 | 229,800 | 2.56 | 2.95 |
| August..... | 161,100 | 94,700 | 125,500 | 7,715,000 | +137,600 | 7,853,000 | 127,700 | 1.42 | 1.64 |
| September..... | 94,500 | 55,400 | 71,250 | 4,239,000 | -217,600 | 4,021,000 | 67,580 | .753 | .84 |
| Water year 1941-42..... | 318,800 | 41,600 | 114,000 | 82,520,000 | +2,334,000 | 84,840,000 | 117,200 | 1.31 | 17.71 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

KOOTENAI RIVER BASIN

Kootenai River at Newgate, B. C.

(International gaging station)

Location.- Two staff gages, one on main river and one on slough, lat. 49°01', long. 115°10', at highway bridge, 0.7 mile northwest of Newgate and 0.9 mile north of the international boundary, respectively.

Drainage area.- 7,660 square miles.

Records available.- October 1930 to September 1942.

Average discharge.- 12 years (1930-42), 9,328 second-feet.

Extremes.- Maximum discharge observed during year, 57,100 second-feet May 27; minimum, observed, 2,160 second-feet Feb. 18.
1930-42: Maximum discharge observed, 83,500 second-feet June 18, 1933; minimum observed, 994 second-feet Feb. 7, 1936.

Remarks.- Records good. Gages read once daily. Records give total flow of main channel and slough.

Cooperation.- This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|-------|-------|-------|--------|--------|--------|--------|--------|-------|
| 1 | 8,430 | 6,130 | 4,410 | 2,300 | 2,870 | 2,300 | 2,720 | 9,150 | 30,100 | 43,500 | 16,000 | 7,560 |
| 2 | 8,140 | 5,870 | 4,600 | 2,400 | 3,010 | 2,440 | 2,860 | 9,630 | 30,900 | 44,300 | 15,900 | 7,540 |
| 3 | 7,780 | 5,870 | 13,100 | 2,580 | 2,930 | 2,440 | 3,270 | 10,300 | 32,200 | 44,900 | 15,800 | 7,390 |
| 4 | 7,780 | 5,850 | 11,600 | 2,730 | 2,950 | 2,460 | 3,580 | 10,400 | 39,500 | 43,900 | 14,900 | 7,210 |
| 5 | 7,740 | 5,790 | 9,620 | 2,730 | 2,950 | 2,500 | 4,050 | 9,980 | 43,000 | 41,900 | 14,400 | 7,010 |
| 6 | 7,560 | 5,690 | 8,510 | 2,750 | 2,950 | 2,560 | 4,110 | 9,670 | 45,400 | 41,200 | 14,300 | 6,750 |
| 7 | 7,430 | 5,560 | 7,490 | 2,770 | 2,910 | 2,600 | 4,190 | 10,500 | 46,700 | 39,100 | 14,100 | 6,840 |
| 8 | 7,180 | 5,420 | 6,950 | 2,810 | 2,860 | 2,480 | 4,330 | 11,400 | 48,700 | 36,800 | 13,700 | 6,520 |
| 9 | 6,980 | 5,240 | 6,480 | 2,860 | 2,770 | 2,580 | 4,450 | 14,300 | 48,500 | 33,200 | 13,300 | 6,780 |
| 10 | 6,930 | 5,130 | 6,890 | 3,580 | 2,620 | 2,630 | 4,620 | 22,200 | 44,900 | 30,000 | 12,900 | 6,810 |
| 11 | 7,040 | 5,070 | 5,770 | 3,700 | 2,660 | 2,700 | 5,440 | 31,000 | 39,400 | 28,800 | 12,700 | 6,830 |
| 12 | 7,390 | 4,980 | 5,560 | 3,830 | 2,660 | 2,640 | 7,200 | 40,000 | 35,300 | 29,500 | 12,600 | 6,580 |
| 13 | 8,000 | 5,150 | 5,270 | 3,820 | 2,460 | 2,580 | 8,360 | 37,900 | 31,000 | 27,800 | 12,400 | 6,580 |
| 14 | 7,920 | 5,400 | 4,930 | 3,770 | 2,540 | 2,540 | 8,980 | 33,500 | 31,400 | 24,900 | 12,200 | 6,640 |
| 15 | 7,680 | 5,730 | 4,730 | 3,690 | 2,630 | 2,480 | 9,480 | 29,500 | 34,500 | 23,500 | 11,200 | 6,770 |
| 16 | 7,640 | 5,670 | 4,890 | 3,550 | 2,440 | 2,440 | 8,840 | 25,000 | 41,000 | 24,900 | 10,600 | 6,940 |
| 17 | 7,680 | 5,560 | 5,320 | 3,370 | 2,380 | 2,400 | 8,340 | 22,200 | 39,000 | 25,500 | 10,300 | 7,440 |
| 18 | 7,660 | 5,310 | 5,030 | 3,340 | 2,160 | 2,360 | 8,390 | 21,600 | 32,700 | 25,000 | 10,200 | 7,690 |
| 19 | 7,440 | 5,100 | 5,110 | 3,280 | 2,180 | 2,340 | 8,500 | 19,600 | 30,900 | 24,000 | 9,970 | 7,530 |
| 20 | 7,460 | 4,970 | 5,590 | 3,280 | 2,220 | 2,360 | 9,510 | 19,800 | 28,400 | 22,600 | 9,940 | 7,000 |
| 21 | 7,410 | 4,550 | 6,390 | 3,150 | 2,300 | 2,380 | 11,500 | 22,500 | 27,600 | 21,900 | 9,870 | 7,000 |
| 22 | 7,560 | 4,310 | 5,770 | 3,080 | 2,320 | 2,420 | 15,400 | 27,200 | 27,100 | 21,000 | 9,660 | 6,970 |
| 23 | 7,360 | 4,000 | 5,660 | 2,950 | 2,360 | 2,440 | 17,100 | 41,200 | 26,400 | 20,800 | 9,410 | 6,930 |
| 24 | 7,540 | 3,970 | 5,260 | 2,860 | 2,360 | 2,380 | 14,400 | 45,600 | 26,400 | 20,500 | 8,960 | 6,880 |
| 25 | 7,540 | 4,070 | 5,000 | 2,970 | 2,540 | 2,340 | 12,600 | 50,800 | 28,600 | 19,800 | 8,850 | 6,830 |
| 26 | 7,360 | 4,240 | 3,970 | 3,040 | 2,340 | 2,340 | 11,300 | 54,900 | 31,200 | 19,200 | 8,680 | 6,760 |
| 27 | 7,140 | 4,220 | 3,610 | 3,090 | 2,340 | 2,360 | 10,800 | 57,100 | 34,400 | 18,600 | 8,460 | 6,720 |
| 28 | 7,020 | 4,210 | 3,470 | 3,270 | 2,340 | 2,360 | 10,000 | 49,700 | 37,400 | 17,900 | 8,350 | 6,440 |
| 29 | 6,840 | 4,310 | 3,220 | - | - | 2,360 | 9,450 | 41,400 | 40,000 | 16,800 | 7,890 | 6,330 |
| 30 | 6,630 | 4,360 | 3,000 | 3,160 | - | 2,380 | 9,330 | 35,700 | 43,300 | 16,400 | 7,660 | 6,080 |
| 31 | 6,280 | - | 2,500 | 3,040 | - | 2,480 | - | 32,000 | - | 16,000 | 7,760 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|--------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 229,820 | 8,430 | 6,280 | 7,410 | 0.97 | 1.12 | 455,800 |
| November..... | 151,650 | 6,130 | 5,060 | 5,970 | .66 | .74 | 300,800 |
| December..... | 178,400 | 13,100 | 2,500 | 5,760 | .75 | .86 | 353,900 |
| Calendar year 1941..... | 2,753,810 | 23,300 | 1,770 | 7,540 | .98 | 13.37 | 5,462,000 |
| January..... | 96,970 | 3,830 | 2,300 | 3,130 | .41 | .47 | 192,300 |
| February..... | 71,750 | 3,010 | 2,160 | 2,560 | .33 | .34 | 142,300 |
| March..... | 76,940 | 2,700 | 2,300 | 2,500 | .32 | .37 | 150,600 |
| April..... | 242,810 | 17,100 | 2,720 | 8,090 | 1.06 | 1.18 | 481,600 |
| May..... | 856,530 | 57,100 | 9,150 | 27,600 | 3.60 | 4.15 | 1,697,000 |
| June..... | 1,075,900 | 48,700 | 26,400 | 35,900 | 4.69 | 5.23 | 2,134,000 |
| July..... | 864,100 | 44,900 | 16,000 | 27,900 | 3.64 | 4.20 | 1,714,000 |
| August..... | 352,530 | 16,000 | 7,660 | 11,400 | 1.49 | 1.72 | 699,200 |
| September..... | 207,250 | 7,690 | 6,080 | 6,910 | .90 | 1.00 | 411,100 |
| Water year 1941-42..... | 4,402,630 | 57,100 | 2,160 | 12,100 | 1.58 | 21.38 | 8,733,000 |

b Stage-discharge relation on main channel affected by ice.

Time basis: Mountain standard time.

Kootenai River at Libby, Mont.

Location.— Water-stage recorder, lat. 48°24', long. 115°33', in NW¼ sec. 3, T. 30 N., R. 31 W., 1,200 feet downstream from highway bridge at Libby and half a mile downstream from Libby Creek.

Drainage area.— 10,240 square miles.

Records available.— October 1910 to September 1942.

Average discharge.— 16 years (1912-15, 1917-18, 1928-32, 1934-42), 10,450 second-feet.

Extremes.— Maximum discharge during year, 67,900 second-feet May 27 (gage height, 14.45 feet); minimum, 2,000 second-feet Jan. 1 (gage height, 0.85 foot).
1910-42: Maximum discharge, 130,000 second-feet June 21, 1916 (gage height, 19.17 feet); minimum, 895 second-feet Jan. 11, 1930, discharge measurement (stage-discharge relation affected by ice).

Remarks.— Records excellent except those for periods of ice effect, which are fair. No known diversion or regulation above station.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|---------|------------------|--------|---------|---------|--------|-----------------|---------|------------|-------|
| 1 | 9,240 | 6,950 | 5,140 | 2,500 | 4,160 | 2,880 | 3,340 | 12,000 | 34,400 | 45,800 | 16,100 | 8,060 |
| 2 | 8,940 | 6,820 | 5,640 | 2,580 | 3,920 | 2,900 | 3,680 | 12,000 | 32,800 | 45,800 | 16,500 | 8,060 |
| 3 | 8,640 | 6,820 | *11,500 | 2,700 | 3,920 | 2,990 | 4,040 | 12,300 | 32,800 | 45,800 | 15,800 | 7,780 |
| 4 | 8,640 | 6,680 | 116,900 | 2,800 | 3,900 | 3,220 | 4,400 | 12,600 | 37,200 | 45,800 | 15,400 | 7,780 |
| 5 | 8,640 | 6,680 | 14,700 | 3,000 | 3,800 | 3,220 | 4,760 | 12,600 | 45,100 | 45,100 | 14,700 | 7,500 |
| 6 | 8,640 | 6,560 | 12,300 | 3,300 | 3,920 | 3,220 | 5,390 | 12,300 | 49,400 | 42,600 | 14,300 | 7,220 |
| 7 | 8,350 | 6,420 | 10,800 | 3,600 | 3,800 | 3,220 | 5,900 | 12,300 | 51,600 | 40,700 | 14,000 | 7,220 |
| 8 | 8,060 | 6,280 | 9,640 | 3,800 | 3,800 | 3,100 | 6,030 | 13,000 | 53,100 | 36,300 | 14,000 | 7,220 |
| 9 | 8,060 | 6,160 | 8,640 | 3,900 | 3,680 | 3,100 | 6,160 | 14,700 | 54,600 | 36,100 | 13,600 | 7,220 |
| 10 | 7,780 | 5,900 | 8,060 | 4,000 | 3,680 | 3,560 | 6,420 | 18,000 | 52,400 | 32,800 | 13,300 | 6,950 |
| 11 | 7,780 | 5,770 | 7,600 | 4,100 | 3,450 | 3,680 | 7,220 | 25,900 | 47,200 | 30,300 | 13,000 | 6,950 |
| 12 | 8,060 | 5,770 | 7,220 | 4,200 | 3,450 | 3,450 | 8,940 | 36,600 | 41,300 | 28,800 | 12,600 | 6,950 |
| 13 | 8,640 | 5,770 | 6,820 | 4,400 | 3,560 | 3,340 | 10,800 | 45,100 | 36,100 | 29,300 | 12,600 | 6,820 |
| 14 | 8,940 | 6,290 | 6,420 | *4,500 | 3,340 | 3,220 | 12,300 | 40,700 | 32,800 | 27,300 | 12,600 | 6,820 |
| 15 | 8,940 | 7,220 | 6,160 | 4,500 | 3,340 | 3,220 | 13,300 | 36,100 | 33,900 | 24,400 | 12,000 | 6,950 |
| 16 | 8,640 | 7,600 | 6,030 | 4,400 | 3,340 | 3,100 | 13,000 | 31,800 | 38,900 | 23,500 | 11,400 | 6,950 |
| 17 | 8,640 | 7,220 | 6,280 | 4,300 | 3,200 | 3,100 | 12,300 | 28,300 | 42,500 | 24,900 | 10,800 | 7,220 |
| 18 | 8,640 | 6,950 | 6,550 | 4,300 | 2,600 | 3,100 | 11,700 | 25,400 | 39,500 | 25,400 | 10,400 | 7,780 |
| 19 | 8,640 | 6,550 | 6,950 | 4,200 | 2,600 | 2,990 | 11,700 | 23,500 | 34,400 | 24,900 | 10,400 | 7,780 |
| 20 | 8,640 | 6,160 | 8,350 | 4,100 | 2,600 | 2,970 | 11,700 | 23,000 | 31,300 | 23,500 | 10,100 | 7,500 |
| 21 | 8,350 | 5,900 | 9,540 | 4,100 | 2,650 | 2,970 | 13,000 | 23,500 | 29,800 | 22,100 | 10,100 | 7,220 |
| 22 | 8,350 | 5,820 | 9,940 | 4,040 | *2,600 | 2,970 | 17,500 | 26,800 | 29,300 | 20,700 | 10,100 | 7,220 |
| 23 | 8,350 | 5,020 | 8,350 | 4,040 | 2,500 | 2,990 | 22,100 | 34,400 | 27,800 | 20,300 | 10,100 | 7,220 |
| 24 | 8,350 | 5,020 | 7,500 | 3,920 | 2,400 | 3,100 | 21,200 | 47,600 | 27,300 | 20,300 | 9,540 | 6,950 |
| 25 | 8,060 | 4,890 | 6,950 | 3,920 | 2,700 | 3,100 | 18,500 | 57,000 | 27,800 | 19,800 | 9,240 | 6,950 |
| 26 | 8,060 | 5,020 | 5,640 | 3,920 | 2,800 | 2,970 | 16,500 | 62,800 | 30,300 | 19,000 | 9,240 | 6,950 |
| 27 | 8,060 | 5,020 | 4,520 | 3,920 | 2,850 | 2,920 | 16,000 | 67,000 | 33,300 | 18,500 | 8,940 | 6,950 |
| 28 | 8,060 | 5,260 | 3,680 | 4,040 | 2,850 | *2,880 | 14,000 | 65,300 | 37,200 | 18,100 | 8,940 | 6,820 |
| 29 | 7,780 | 5,140 | 3,680 | 4,280 | - | 2,860 | 12,600 | 55,400 | 40,700 | 16,900 | 8,640 | 6,550 |
| 30 | 7,780 | 5,020 | 3,560 | 4,400 | - | 2,880 | 12,300 | 45,100 | 43,600 | 16,100 | 8,350 | 6,420 |
| 31 | 7,220 | - | 2,990 | 4,280 | - | 3,100 | - | 38,300 | - | 15,800 | 8,060 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Per square mile | Run-off | | |
| | | | | | | | | | | Inches | Acres-feet | |
| October..... | | | | 268,970 | | 9,240 | 7,220 | 8,554 | 0.816 | 0.94 | 513,700 | |
| November..... | | | | 182,280 | | 7,600 | 4,890 | 6,076 | .593 | .66 | 361,500 | |
| December..... | | | | 236,860 | | 16,900 | 2,990 | 7,641 | .746 | .86 | 469,800 | |
| Calendar year 1941..... | | | | 3,088,790 | | 25,800 | 1,780 | 8,462 | .826 | 11.22 | 6,127,000 | |
| January..... | | | | 120,040 | | 4,500 | 2,500 | 3,872 | .378 | .44 | 238,100 | |
| February..... | | | | 91,310 | | 4,160 | 2,400 | 3,261 | .318 | .33 | 181,100 | |
| March..... | | | | 96,310 | | 3,680 | 2,850 | 3,107 | .303 | .36 | 191,000 | |
| April..... | | | | 325,780 | | 22,100 | 3,340 | 10,860 | 1.06 | 1.18 | 646,200 | |
| May..... | | | | 971,400 | | 67,000 | 12,000 | 31,340 | 3.06 | 3.53 | 1,927,000 | |
| June..... | | | | 1,148,600 | | 54,600 | 27,300 | 38,290 | 3.74 | 4.17 | 2,278,000 | |
| July..... | | | | 888,600 | | 45,800 | 15,800 | 28,660 | 2.80 | 3.23 | 1,763,000 | |
| August..... | | | | 364,850 | | 16,500 | 8,060 | 11,770 | 1.15 | 1.33 | 723,700 | |
| September..... | | | | 215,980 | | 8,060 | 6,420 | 7,199 | .703 | .78 | 428,400 | |
| Water year 1941-42..... | | | | 4,900,980 | | 67,000 | 2,400 | 13,430 | 1.31 | 17.80 | 9,722,000 | |

* Winter discharge measurement made on this day.

f Computed on basis of partly estimated gage-height record.

Note.— Stage-discharge relation affected by ice Jan. 1-21, Feb. 17-28.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Kootenai River at Leonia, Idaho

Location.- Water-stage recorder, lat. 48°37', long. 116°03', in Sw⁴ sec. 17, T. 33 N., R. 34 W., at Leonia, 450 feet east of Montana-Idaho State line and half a mile upstream from Boulder Creek. Datum of gage is 1,700.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Drainage area.- 11,740 square miles.

Records available.- March 1928 to September 1942.

Average discharge.- 14 years, 12,260 second-feet.

Extremes.- Maximum discharge during year, 74,300 second-feet May 27 (elevation, 1,816.60 feet); minimum daily, 2,800 second-feet Feb. 24; minimum elevation, 1,799.76 feet Feb. 24 (ice affected).

1928-42: Maximum discharge, 95,500 second-feet June 18, 1933 (elevation, 1,818.11 feet); minimum, 996 second-feet Dec. 9, 1936; minimum elevation, 1,797.56 feet Dec. 10, 1929.

Floods of June 1894 and 1916 reached elevations of 1,824.6 and 1,821.6 feet, respectively, from information by Great Northern Railway Co.

Remarks.- Records good. No diversion or regulation above station.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| 1 | 10,000 | 7,620 | 6,020 | b5,200 | 4,740 | 3,630 | 4,160 | 15,500 | 40,600 | 50,900 | 17,600 | 8,620 |
| 2 | 9,670 | 7,380 | 8,300 | b5,200 | 4,620 | 3,660 | 4,560 | 15,400 | 38,100 | 50,800 | 17,800 | 8,620 |
| 3 | 9,360 | 7,300 | 24,000 | b5,500 | 4,600 | 3,720 | 5,070 | 13,700 | 38,100 | 50,800 | 17,200 | 8,370 |
| 4 | 9,470 | 7,270 | 24,200 | b5,700 | 4,680 | 3,780 | 5,610 | 14,000 | 42,700 | 50,500 | 16,700 | 8,120 |
| 5 | 9,600 | 7,300 | 19,700 | b4,000 | 4,640 | 3,870 | 6,260 | 13,900 | 51,800 | 49,000 | 16,900 | 7,990 |
| 6 | 9,300 | 7,240 | 16,200 | b4,200 | 4,620 | 3,870 | 7,160 | 13,600 | 57,000 | 46,500 | 15,400 | 7,760 |
| 7 | 9,300 | 7,090 | 14,000 | b4,500 | 4,640 | 3,840 | 8,020 | 13,600 | 58,600 | 44,600 | 15,300 | 7,690 |
| 8 | 9,050 | 6,910 | 12,400 | b4,400 | 4,500 | 3,640 | 8,460 | 14,400 | 59,000 | 42,000 | 15,000 | 7,530 |
| 9 | 8,800 | 6,670 | 11,500 | b4,600 | 4,560 | 3,890 | 8,800 | 16,700 | 59,500 | 39,200 | 14,800 | 7,630 |
| 10 | 8,710 | 6,440 | 10,700 | b4,700 | 4,200 | 4,260 | 9,280 | 21,600 | 58,300 | 36,100 | 14,800 | 7,420 |
| 11 | 8,850 | 6,290 | *9,880 | b4,700 | *4,160 | 4,420 | 10,700 | 29,300 | 53,500 | 33,100 | 14,000 | 7,340 |
| 12 | 8,470 | 6,190 | 9,400 | b4,800 | 4,120 | 4,340 | 13,500 | 40,700 | 47,500 | 31,400 | 13,600 | 7,370 |
| 13 | 10,000 | 6,260 | 8,940 | b5,200 | 4,120 | 4,240 | 15,900 | 50,500 | 41,600 | 31,500 | 13,400 | 7,260 |
| 14 | 10,500 | 7,700 | 8,430 | b5,500 | 4,020 | 4,120 | 17,700 | 48,200 | 37,600 | 29,900 | 13,500 | 7,120 |
| 15 | 10,200 | 8,990 | 8,040 | b5,500 | 3,970 | 4,020 | 18,600 | 42,900 | 37,900 | 26,800 | 13,100 | 7,230 |
| 16 | 9,810 | 9,470 | 8,200 | b5,500 | 3,970 | 3,960 | 17,900 | 37,900 | 42,600 | 25,700 | 12,300 | 7,310 |
| 17 | 9,220 | 9,160 | 8,500 | b5,400 | 3,740 | *3,890 | 16,900 | 33,100 | 46,800 | 26,900 | 11,700 | 7,530 |
| 18 | 9,720 | 8,630 | 8,690 | 5,380 | b3,200 | 3,910 | 16,100 | 29,700 | 44,000 | 27,500 | 11,300 | 7,980 |
| 19 | 9,640 | 8,050 | 9,970 | 5,240 | b3,000 | 3,860 | 15,600 | 27,600 | 38,700 | 26,900 | 11,100 | 8,170 |
| 20 | 9,680 | 7,640 | 16,000 | *5,190 | b3,000 | 3,800 | 15,900 | 26,600 | 35,000 | 25,600 | 11,000 | 8,010 |
| 21 | 9,410 | 7,090 | 16,100 | 5,190 | b3,000 | 3,780 | 17,900 | 27,200 | 33,200 | 24,000 | 10,900 | 7,640 |
| 22 | 9,250 | 6,670 | 14,700 | b5,100 | b3,000 | 3,820 | 22,600 | 30,600 | 32,100 | 22,700 | 10,800 | 7,500 |
| 23 | 9,130 | 5,940 | 13,100 | b5,000 | b2,900 | 3,870 | 28,400 | 39,500 | 30,800 | 22,200 | 10,600 | 7,450 |
| 24 | 9,050 | 5,770 | 11,800 | 4,860 | b2,800 | 3,930 | 27,000 | 54,000 | 30,000 | 21,900 | 10,300 | 7,370 |
| 25 | 8,940 | 5,800 | 10,700 | 4,840 | b3,200 | 3,890 | 23,100 | 64,000 | 30,400 | 21,400 | 10,000 | 7,310 |
| 26 | 8,850 | 5,820 | 9,100 | 4,700 | b3,300 | 3,820 | 19,900 | 70,200 | 34,000 | 20,700 | 9,600 | 7,290 |
| 27 | 8,770 | 5,870 | b7,000 | 4,780 | b3,500 | 3,760 | 17,800 | 74,100 | 36,400 | 20,200 | 9,570 | 7,210 |
| 28 | 8,560 | 5,940 | b5,500 | 4,880 | b3,600 | 3,700 | 16,000 | 72,500 | 43,400 | 19,800 | 9,340 | 7,180 |
| 29 | 8,490 | 5,920 | b5,000 | 4,940 | - | 3,700 | 14,700 | 63,500 | 46,700 | 18,600 | 9,130 | 6,830 |
| 30 | 8,270 | 5,920 | b4,500 | 4,920 | - | 3,740 | 13,900 | 53,400 | 49,200 | 18,000 | 8,870 | 6,770 |
| 31 | 7,970 | - | b4,000 | 4,860 | - | 3,650 | - | 45,600 | - | 17,600 | 8,710 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|--------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 287,440 | 10,500 | 7,970 | 9,272 | 0.790 | 0.91 | 570,100 |
| November..... | 110,240 | 9,470 | 7,008 | 7,597 | .597 | .67 | 417,000 |
| December..... | 344,570 | 24,200 | 4,000 | 11,120 | .947 | 1.09 | 683,400 |
| Calendar year 1941..... | 3,528,980 | 30,800 | 2,480 | 9,668 | .824 | 11.18 | 7,000,000 |
| January..... | 146,180 | 5,500 | 3,200 | 4,715 | .402 | .46 | 299,900 |
| February..... | 108,200 | 4,740 | 2,800 | 3,864 | .329 | .34 | 214,800 |
| March..... | 120,760 | 4,420 | 3,830 | 3,895 | .332 | .36 | 239,500 |
| April..... | 427,680 | 28,400 | 4,160 | 14,260 | 1.21 | 1.35 | 848,300 |
| May..... | 1,108,800 | 74,100 | 13,400 | 35,770 | 3.05 | 3.51 | 2,199,000 |
| June..... | 1,297,100 | 59,500 | 30,000 | 43,240 | 3.68 | 4.11 | 2,575,000 |
| July..... | 973,100 | 50,900 | 17,600 | 31,390 | 2.67 | 3.08 | 1,930,000 |
| August..... | 393,020 | 17,800 | 8,710 | 12,680 | 1.08 | 1.25 | 779,500 |
| September..... | 227,370 | 8,620 | 6,770 | 7,579 | .646 | .72 | 451,000 |
| Water year 1941-42..... | 5,644,460 | 74,100 | 2,800 | 15,460 | 1.32 | 17.87 | 11,800,000 |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Kootenai River at Boom Camp, near Bonners Ferry, Idaho

Location.- Water-stags recorder, lat. 48°42'05", long. 116°14'30", in NW¼ sec. 29, T. 62 N., R. 2 E., 600 feet east of Boom Camp, 3½ miles upstream from Bonners Ferry, and 4 miles downstream from Moyie River. Datum of gage is 1,700.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Records available.- October 1927 to September 1942 in reports of Geological Survey. April 1925 to September 1927 in reports of Dominion Water and Power Bureau, Canada.

Extremes.- Maximum water-surface elevation during year, 1,774.37 feet May 28; minimum, 1,757.02 feet Feb. 19.
1927-42: Maximum water-surface elevation recorded, 1,776.58 feet June 18, 1933; minimum, 1,755.53 feet Dec. 9, 1936.

Remarks.- Elevations affected by backwater from Kootenay Lake May 12 to July 10.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 59.66 | 58.93 | 58.39 | 61.28 | 59.85 | 57.27 | 57.49 | 61.17 | 67.59 | 68.53 | 61.52 | 59.06 |
| 2 | 59.65 | 58.84 | 59.02 | 61.18 | 59.76 | 57.27 | 57.72 | 61.14 | 66.76 | 68.55 | 61.58 | 59.06 |
| 3 | 59.44 | 58.82 | 62.77 | 60.92 | 59.76 | 57.28 | 57.99 | 61.19 | 66.47 | 68.55 | 61.44 | 58.97 |
| 4 | 59.48 | 58.81 | 63.44 | 60.81 | 59.84 | 57.26 | 58.23 | 61.25 | 67.29 | 68.46 | 61.31 | 58.90 |
| 5 | 59.49 | 58.81 | 62.70 | 60.68 | 59.81 | 57.28 | 58.52 | 61.22 | 68.92 | 68.24 | 61.13 | 58.85 |
| 6 | 59.43 | 58.82 | 61.81 | 61.00 | 59.72 | 57.25 | 58.85 | 61.15 | 70.17 | 67.75 | 61.00 | 58.77 |
| 7 | 59.43 | 58.77 | 61.21 | 61.00 | 59.63 | 57.20 | 59.19 | 61.13 | 70.74 | 67.30 | 60.95 | 58.71 |
| 8 | 59.36 | 58.70 | 60.75 | 61.37 | 59.50 | 57.17 | 59.33 | 61.31 | 70.94 | 66.81 | 60.90 | 58.69 |
| 9 | 59.28 | 58.61 | 60.43 | 61.33 | 59.33 | 57.21 | 59.47 | 61.83 | 71.04 | 66.25 | 60.84 | 58.69 |
| 10 | 59.27 | 58.54 | 60.15 | 61.52 | 59.13 | 57.45 | 59.63 | 62.82 | 71.00 | 65.64 | 60.78 | 58.65 |
| 11 | 59.36 | 58.47 | 59.90 | 61.64 | 59.00 | 57.55 | 60.08 | 64.10 | 70.24 | 65.00 | 60.63 | 58.62 |
| 12 | 59.37 | 58.44 | 59.70 | 61.52 | 58.78 | 57.50 | 60.80 | 65.99 | 69.94 | 65.59 | 60.52 | 58.53 |
| 13 | 59.76 | 58.45 | 59.53 | 61.64 | 58.46 | 57.42 | 61.37 | 67.64 | 67.56 | 64.54 | 60.46 | 58.59 |
| 14 | 59.58 | 58.99 | 59.36 | 61.50 | 58.18 | 57.35 | 61.86 | 67.95 | 66.46 | 64.23 | 60.50 | 58.55 |
| 15 | 59.79 | 59.41 | 59.20 | 61.40 | 57.96 | 57.32 | 62.13 | 67.19 | 66.21 | 63.61 | 60.38 | 58.59 |
| 16 | 59.67 | 59.60 | 59.23 | 61.23 | 57.73 | 57.26 | 61.96 | 66.32 | 66.92 | 63.30 | 60.16 | 58.61 |
| 17 | 59.63 | 59.51 | 59.36 | 61.09 | 57.46 | 57.23 | 61.74 | 65.30 | 67.60 | 63.51 | 60.00 | 58.70 |
| 18 | 59.63 | 59.33 | 59.40 | 60.96 | 57.24 | 57.23 | 61.56 | 64.69 | 67.61 | 63.66 | 59.98 | 58.54 |
| 19 | 59.60 | 59.12 | 59.72 | 60.85 | 57.14 | 57.21 | 61.42 | 64.19 | 66.59 | 63.55 | 59.62 | 58.53 |
| 20 | 59.59 | 58.95 | 61.25 | 60.75 | 57.20 | 57.17 | 61.50 | 63.95 | 66.72 | 63.28 | 59.77 | 58.86 |
| 21 | 59.55 | 58.80 | 61.43 | 60.58 | 57.14 | 57.17 | 61.95 | 64.12 | 65.22 | 62.95 | 59.75 | 58.75 |
| 22 | 59.48 | 58.65 | 61.07 | 60.39 | 57.32 | 57.21 | 63.04 | 64.80 | 64.91 | 62.67 | 59.72 | 58.69 |
| 23 | 59.44 | 58.41 | 60.65 | 60.28 | 57.19 | 57.24 | 63.76 | 66.31 | 64.57 | 62.54 | 59.68 | 58.66 |
| 24 | 59.41 | 58.31 | 60.26 | 60.32 | 57.18 | 57.27 | 63.67 | 66.69 | 64.35 | 62.49 | 59.58 | 58.64 |
| 25 | 59.37 | 58.32 | 59.97 | 60.25 | 57.27 | 57.25 | 63.05 | 70.86 | 64.40 | 62.36 | 59.46 | 58.61 |
| 26 | 59.34 | 58.33 | 59.48 | 60.14 | 57.42 | 57.20 | 62.49 | 72.57 | 65.20 | 62.22 | 59.37 | 58.60 |
| 27 | 59.31 | 58.33 | 59.33 | 60.12 | 57.32 | 57.16 | 62.09 | 73.91 | 66.16 | 62.12 | 59.37 | 58.56 |
| 28 | 59.26 | 58.35 | 59.07 | 60.14 | 57.32 | 57.13 | 61.73 | 74.27 | 67.19 | 62.06 | 59.30 | 58.55 |
| 29 | 59.22 | 58.35 | 59.11 | 60.09 | - | 57.13 | 61.47 | 73.16 | 67.85 | 61.80 | 59.23 | 58.44 |
| 30 | 59.14 | 58.35 | 59.29 | 60.00 | - | 57.17 | 61.27 | 71.13 | 68.23 | 61.61 | 59.15 | 58.40 |
| 31 | 59.05 | - | 60.62 | 59.87 | - | 57.28 | - | 69.05 | - | 61.52 | 59.10 | - |

Notes.- Add 1,700 feet to obtain elevation above mean sea level.

Time basis. Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Kootenai River at Bonners Ferry, Idaho

Location.- Wire-weight gage, lat. 48°42'00", long. 116°18'45", in NE¼ sec. 27, T. 62 N., R. 1 E., on highway bridge at Bonners Ferry. Beginning May 9, 1942, water-stage recorder across river at same datum used as supplemental gage. Datum of gage is 1,743.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Drainage area.- 13,000 square miles.

Records available.- October 1927 to September 1942. May to October 1904, at site three-quarters of a mile downstream. Gage heights collected by U. S. Weather Bureau May 1904 to September 1927.

Average discharge.- 14 years (1928-42), 13,240 second-feet.

Extremes.- Maximum daily discharge during year, 81,100 second-feet May 27; maximum elevation, 1,772.00 feet May 28; minimum daily discharge, 3,100 second-feet Feb. 24; minimum elevation observed, 1,742.74 feet Mar. 30.

1927-42: Maximum discharge, 99,800 second-feet June 18, 1933; maximum elevation, 1,774.98 feet June 19, 1933; minimum daily discharge, 1,300 second-feet, Feb. 8, 1936; minimum elevation, 1,741.14 feet Dec. 5, 1929.

Maximum water-surface elevation known, 1,777.2 feet in June 1894.

Remarks.- Records good. Gage read twice daily. Backwater effect from Kootenay Lake during entire year. Discharge for period of backwater at Boom Camp computed on basis of fall between gages at Boom Camp and near Bonners Ferry; that for remainder of year on basis of stage-discharge relation for station at Boom Camp. Discharge measurements made at station near Bonners Ferry. No diversion or regulation above station.

KOOTENAI RIVER BASIN

Elevation, in feet, of Kootenai River at Bonners Ferry, Idaho, water year
October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 50.04 | 49.37 | 48.96 | 49.65 | 48.97 | 45.44 | 42.92 | 50.34 | 64.68 | 64.98 | 52.10 | 48.32 |
| 2 | 49.96 | 49.32 | 49.22 | 49.60 | 48.90 | 45.34 | 43.34 | 50.26 | 63.38 | 65.10 | 52.08 | 48.37 |
| 3 | 49.92 | 49.31 | 54.06 | 49.44 | 48.84 | 45.26 | 43.66 | 50.34 | 62.80 | 65.08 | 51.78 | 48.35 |
| 4 | 49.88 | 49.30 | 55.35 | 49.38 | 48.78 | 45.14 | 43.93 | 50.48 | 63.56 | 65.00 | 51.46 | 48.30 |
| 5 | 49.83 | 49.26 | 55.56 | 49.34 | 48.66 | 45.01 | 44.26 | 50.44 | 65.42 | 64.76 | 51.08 | 48.29 |
| 6 | 49.77 | 49.20 | 54.15 | 49.33 | 48.58 | 44.84 | 44.76 | 50.34 | 67.00 | 64.26 | 50.78 | 48.19 |
| 7 | 49.78 | 49.12 | 52.81 | 49.32 | 48.52 | 44.64 | 45.31 | 50.32 | 67.86 | 65.68 | 50.57 | 48.22 |
| 8 | 49.76 | 49.08 | 51.92 | 49.30 | 48.32 | 44.42 | 45.60 | 50.64 | 68.18 | 65.10 | 50.41 | 48.27 |
| 9 | 49.63 | 49.06 | 51.27 | 49.28 | 48.19 | 44.31 | 45.83 | 51.40 | 68.36 | 62.34 | 50.22 | 48.31 |
| 10 | 49.64 | 49.03 | 50.84 | 49.30 | 47.98 | 44.45 | 46.16 | 53.26 | 68.42 | 61.46 | 50.00 | 48.35 |
| 11 | 49.80 | 49.01 | 50.54 | 49.54 | 47.78 | 44.42 | 46.80 | 55.62 | 67.76 | 60.52 | 49.76 | 48.36 |
| 12 | 49.92 | 49.08 | 50.32 | 49.56 | 47.60 | 44.26 | 47.91 | 58.90 | 66.32 | 59.80 | 49.53 | 48.38 |
| 13 | 50.32 | 49.14 | 50.15 | 49.42 | 47.57 | 44.15 | 49.31 | 62.24 | 64.76 | 59.42 | 49.34 | 48.40 |
| 14 | 50.35 | 49.25 | 49.92 | 49.34 | 47.27 | 44.03 | 50.35 | 63.56 | 63.08 | 59.04 | 49.33 | 48.43 |
| 15 | 50.33 | 49.92 | 49.82 | 49.27 | 47.07 | 43.83 | 51.18 | 62.78 | 62.44 | 58.00 | 49.22 | 48.46 |
| 16 | 50.17 | 50.14 | 49.74 | 49.24 | 46.63 | 43.70 | 51.16 | 61.60 | 63.22 | 57.16 | 48.89 | 48.62 |
| 17 | 50.09 | 50.07 | 49.97 | 49.23 | 46.29 | 43.57 | 50.84 | 60.08 | 64.32 | 57.10 | 48.64 | 48.78 |
| 18 | 50.06 | 49.86 | 49.95 | 49.25 | 46.12 | 43.64 | 50.44 | 58.74 | 64.28 | 57.58 | 48.49 | 48.88 |
| 19 | 50.03 | 49.64 | 50.14 | 49.18 | 46.04 | 43.44 | 50.20 | 57.74 | 63.32 | 57.10 | 48.39 | 48.90 |
| 20 | 50.04 | 49.48 | 52.59 | 49.15 | 46.12 | 43.50 | 50.32 | 57.28 | 62.02 | 56.56 | 48.32 | 48.96 |
| 21 | 50.02 | 49.38 | 52.92 | 49.10 | 46.06 | 43.18 | 51.06 | 57.28 | 60.92 | 56.02 | 48.28 | 48.96 |
| 22 | 49.96 | 49.22 | 52.33 | 49.05 | 45.91 | 43.14 | 52.97 | 58.28 | 60.42 | 55.28 | 48.28 | 48.92 |
| 23 | 49.92 | 49.08 | 51.72 | 49.04 | 45.82 | 43.16 | 54.89 | 60.76 | 59.74 | 54.90 | 48.31 | 48.89 |
| 24 | 49.89 | 48.96 | 51.14 | 49.12 | 45.74 | 43.14 | 55.10 | 64.26 | 59.24 | 54.60 | 48.32 | 48.93 |
| 25 | 49.82 | 49.04 | 50.68 | 49.26 | 45.70 | 43.09 | 54.30 | 67.30 | 59.20 | 54.30 | 48.25 | 48.94 |
| 26 | 49.79 | 49.05 | 50.18 | 49.32 | 45.72 | 42.99 | 53.24 | 69.54 | 60.06 | 53.96 | 48.26 | 48.93 |
| 27 | 49.76 | 48.95 | 50.24 | 49.30 | 45.66 | 42.90 | 52.46 | 71.22 | 61.44 | 53.66 | 48.30 | 48.94 |
| 28 | 49.67 | 48.93 | 50.38 | 49.30 | 45.58 | 42.81 | 51.65 | 71.90 | 62.90 | 53.48 | 48.31 | 48.90 |
| 29 | 49.59 | 48.96 | 50.70 | 49.31 | - | 42.76 | 51.04 | 71.00 | 63.96 | 53.00 | 48.26 | 48.84 |
| 30 | 49.52 | 48.96 | 50.47 | 49.24 | - | 42.76 | 50.57 | 68.82 | 64.56 | 52.57 | 48.26 | 48.80 |
| 31 | 49.44 | - | 50.11 | 49.10 | - | 42.82 | - | 66.64 | - | 52.50 | 48.26 | - |

Note.- Add 1,700 feet to obtain elevations above mean sea level. Mean gage heights are computed from twice-daily wire-weight gage readings except those for May 9 to July 28, which are computed from recorder record and adjusted to basis of wire-weight gage readings.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|--------|-------|
| 1 | 10,800 | 8,410 | 6,850 | 3,800 | 5,100 | 3,900 | 4,750 | 17,000 | 45,900 | 53,800 | 18,100 | 8,810 |
| 2 | 10,400 | 8,140 | 8,680 | 3,600 | 5,000 | 3,900 | 5,270 | 16,900 | 43,000 | 53,600 | 18,400 | 8,810 |
| 3 | 10,000 | 8,080 | 24,100 | 3,800 | 5,000 | 4,000 | 5,930 | 17,100 | 42,100 | 53,400 | 17,800 | 8,530 |
| 4 | 10,200 | 8,050 | 27,700 | 4,000 | 5,100 | 4,150 | 6,560 | 17,400 | 47,100 | 52,900 | 17,200 | 8,320 |
| 5 | 10,200 | 8,050 | 23,700 | 4,300 | 5,000 | 4,190 | 7,590 | 17,200 | 56,200 | 51,600 | 16,400 | 8,170 |
| 6 | 10,000 | 8,080 | 19,400 | 4,500 | 5,000 | 4,230 | 8,380 | 16,900 | 61,500 | 49,200 | 15,900 | 7,930 |
| 7 | 10,000 | 7,930 | 16,800 | 4,600 | 4,900 | 4,120 | 9,470 | 16,800 | 63,000 | 46,800 | 15,700 | 7,760 |
| 8 | 9,770 | 7,730 | 14,900 | 4,700 | 4,800 | 4,060 | 9,970 | 17,600 | 63,200 | 44,400 | 15,600 | 7,700 |
| 9 | 9,510 | 7,470 | 13,600 | 4,800 | 4,700 | 4,150 | 10,500 | 20,000 | 63,100 | 41,300 | 15,200 | 7,700 |
| 10 | 9,470 | 7,270 | 12,500 | 5,000 | 4,500 | 4,660 | 11,000 | 24,900 | 62,300 | 38,400 | 15,000 | 7,580 |
| 11 | 9,770 | 7,080 | 11,600 | 5,100 | 4,500 | 4,840 | 12,600 | 32,100 | 57,800 | 37,000 | 14,400 | 7,500 |
| 12 | 10,500 | 6,990 | 10,900 | 5,100 | 4,400 | 4,770 | 15,500 | 41,500 | 51,200 | 34,500 | 13,900 | 7,530 |
| 13 | 11,200 | 7,020 | 10,300 | 5,600 | 4,400 | 4,590 | 17,900 | 52,500 | 45,800 | 34,200 | 13,800 | 7,410 |
| 14 | 11,500 | 8,590 | 9,770 | 6,000 | 4,300 | 4,440 | 20,200 | 53,000 | 41,200 | 32,300 | 13,900 | 7,300 |
| 15 | 11,200 | 9,930 | 9,250 | 5,900 | 4,300 | 4,380 | 21,400 | 48,300 | 40,500 | 28,700 | 13,400 | 7,410 |
| 16 | 10,800 | 10,600 | 9,350 | 5,900 | 4,200 | 4,250 | 20,600 | 43,200 | 44,900 | 26,900 | 12,600 | 7,470 |
| 17 | 10,700 | 10,300 | 9,770 | 5,800 | 4,000 | 4,190 | 19,500 | 38,300 | 49,400 | 28,100 | 12,000 | 7,730 |
| 18 | 10,700 | 9,870 | 9,800 | 5,800 | 3,500 | 4,190 | 18,700 | 34,000 | 47,700 | 28,900 | 11,500 | 8,140 |
| 19 | 10,600 | 8,990 | 11,000 | 5,700 | 3,200 | 4,150 | 18,100 | 31,100 | 42,300 | 28,300 | 11,300 | 8,410 |
| 20 | 10,500 | 8,470 | 16,900 | 5,600 | 3,200 | 4,060 | 18,500 | 29,600 | 38,300 | 26,800 | 11,200 | 8,200 |
| 21 | 10,400 | 8,020 | 17,700 | 5,600 | 3,200 | 4,060 | 20,500 | 30,400 | 36,600 | 25,000 | 11,100 | 7,880 |
| 22 | 10,200 | 7,580 | 16,200 | 5,500 | 3,200 | 4,150 | 26,000 | 34,400 | 35,100 | 23,600 | 11,000 | 7,700 |
| 23 | 10,200 | 6,910 | 14,500 | 5,400 | 3,200 | 4,210 | 30,100 | 43,600 | 33,300 | 22,900 | 10,800 | 7,610 |
| 24 | 9,930 | 6,640 | 12,900 | 5,300 | 3,100 | 4,270 | 29,600 | 57,500 | 32,200 | 22,600 | 10,500 | 7,560 |
| 25 | 9,800 | 6,660 | 11,900 | 5,300 | 3,500 | 4,230 | 26,100 | 67,700 | 32,500 | 22,000 | 10,100 | 7,470 |
| 26 | 9,700 | 6,690 | 10,200 | 5,100 | 3,600 | 4,120 | 23,200 | 75,000 | 37,000 | 21,300 | 9,800 | 7,440 |
| 27 | 9,600 | 6,690 | 8,300 | 5,200 | 3,900 | 4,040 | 21,200 | 81,100 | 42,100 | 20,800 | 9,800 | 7,330 |
| 28 | 9,440 | 6,740 | 7,000 | 5,300 | 3,900 | 3,980 | 19,500 | 79,800 | 48,000 | 20,600 | 9,670 | 7,300 |
| 29 | 9,310 | 6,740 | 6,200 | 5,300 | - | 3,980 | 18,300 | 70,600 | 51,000 | 19,400 | 9,350 | 6,990 |
| 30 | 9,060 | 6,740 | 5,500 | 5,300 | - | 4,060 | 17,500 | 59,600 | 52,500 | 18,500 | 9,090 | 6,880 |
| 31 | 8,780 | - | 4,900 | 5,200 | - | 4,290 | - | 50,800 | - | 18,100 | 8,930 | - |

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 27 to Mar. 5.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Monthly discharge, in second-feet, of Kootenai River at Bonners Ferry, Idaho,
water year October 1941 to September 1942

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|--------|-----------------|---------|------------|
| | | | | | | Inches | Acres-foot |
| October..... | 314,240 | 11,500 | 8,780 | 10,140 | 0.780 | 0.90 | 625,500 |
| November..... | 236,260 | 10,800 | 6,640 | 7,875 | .606 | .68 | 469,600 |
| December..... | 392,270 | 27,700 | 4,900 | 12,650 | .973 | 1.12 | 778,100 |
| Calendar year 1941..... | 3,809,370 | 35,200 | 2,690 | 10,440 | .603 | 10.90 | 7,556,000 |
| January..... | 158,100 | 6,000 | 3,600 | 5,100 | .392 | .45 | 313,600 |
| February..... | 116,700 | 5,100 | 3,100 | 4,168 | .321 | .33 | 251,500 |
| March..... | 130,610 | 4,840 | 3,900 | 4,213 | .324 | .37 | 259,100 |
| April..... | 49,210 | 29,500 | 4,750 | 16,470 | 1.27 | 1.41 | 980,800 |
| May..... | 1,235,900 | 81,100 | 16,800 | 39,870 | 3.07 | 3.54 | 2,481,000 |
| June..... | 1,406,800 | 63,200 | 32,200 | 46,890 | 3.61 | 4.02 | 2,790,000 |
| July..... | 1,025,900 | 53,800 | 18,100 | 33,090 | 2.65 | 2.94 | 2,035,000 |
| August..... | 403,240 | 18,400 | 6,930 | 13,010 | 1.00 | 1.15 | 799,800 |
| September..... | 232,570 | 8,810 | 6,880 | 7,752 | .596 | .67 | 461,300 |
| Water year 1941-42..... | 6,146,800 | 81,100 | 3,100 | 16,840 | 1.30 | 17.58 | 12,190,000 |

Kootenai River near Bonners Ferry, Idaho

Location.- Water-stage recorder, lat. 48°41'55", long. 116°20'40", in NW 1/4 sec. 28, T. 62 N., R. 1 E., 1.6 miles downstream from highway bridge at Bonners Ferry. Datum of gage is 1,700.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Drainage area.- 13,000 square miles.

Records available.- May 1928 to September 1942.

Extremes.- Maximum water-surface elevation during year, 1,771.28 feet May 28; minimum, 1,741.68 feet Mar. 31.

1928-42: Maximum water-surface elevation, 1,774.17 feet June 20, 1933; minimum, 1,740.23 feet Mar. 11, 17, 1939.

Remarks.- Elevations affected by backwater from Kootenay Lake.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 49.81 | 49.21 | 48.82 | 748.70 | 47.48 | 44.74 | 41.73 | 49.73 | 64.18 | 64.36 | 51.62 | 48.08 |
| 2 | 46.69 | 49.14 | 49.29 | 748.80 | 47.39 | 44.67 | 41.95 | 49.63 | 62.92 | 64.47 | 51.61 | 48.10 |
| 3 | 49.82 | 49.13 | 55.89 | 748.55 | 47.29 | 44.38 | 42.24 | 49.75 | 62.32 | 64.48 | 51.33 | 48.10 |
| 4 | 49.65 | 49.13 | 55.87 | 748.50 | 47.28 | 44.58 | 42.59 | 49.90 | 62.98 | 64.43 | 51.01 | 48.06 |
| 5 | 49.63 | 49.08 | 55.51 | 748.45 | 47.26 | 44.52 | 42.95 | 49.86 | 64.76 | 64.22 | 50.60 | 48.04 |
| 6 | 49.53 | 49.07 | 55.74 | 748.40 | 47.16 | 44.47 | 43.48 | 49.73 | 66.38 | 63.68 | 50.26 | 47.93 |
| 7 | 49.58 | 749.00 | 52.54 | 748.30 | 47.06 | 44.24 | 44.06 | 49.70 | 67.24 | 63.13 | 50.07 | 48.00 |
| 8 | 49.51 | 748.95 | 51.61 | 748.30 | 46.96 | 44.06 | 44.40 | 49.99 | 67.88 | 62.51 | 49.90 | 48.06 |
| 9 | 49.42 | 748.95 | 51.00 | 748.25 | 46.88 | 43.92 | 44.67 | 50.82 | 67.77 | 61.80 | 49.69 | 48.09 |
| 10 | 49.40 | 748.95 | 50.61 | 748.25 | 46.76 | 44.03 | 44.98 | 52.61 | 67.81 | 60.99 | 49.50 | 48.12 |
| 11 | 49.52 | 748.90 | 50.29 | 748.30 | 46.68 | 43.96 | 45.68 | 54.98 | 67.13 | 60.03 | 49.19 | 48.16 |
| 12 | 49.75 | 748.91 | 50.10 | 748.33 | 46.60 | 43.80 | 46.94 | 58.22 | 65.80 | 59.35 | 49.02 | 48.17 |
| 13 | 50.02 | 48.88 | 49.91 | 48.40 | 46.48 | 43.71 | 48.41 | 61.50 | 64.13 | 59.00 | 48.86 | 48.20 |
| 14 | 50.10 | 49.26 | 49.70 | 48.44 | 46.36 | 43.49 | 49.50 | 62.81 | 62.63 | 58.56 | 48.81 | 48.22 |
| 15 | 50.05 | 49.65 | 49.55 | 48.43 | 46.27 | 43.28 | 50.44 | 62.08 | 62.04 | 57.54 | 48.68 | 48.34 |
| 16 | 49.88 | 49.85 | 49.56 | 48.37 | 46.12 | 43.16 | 50.50 | 61.00 | 62.72 | 56.69 | 48.38 | 48.42 |
| 17 | 49.84 | 49.79 | 49.37 | 48.32 | 45.87 | 42.24 | 50.05 | 59.53 | 63.73 | 56.69 | 48.13 | 48.68 |
| 18 | 49.82 | 49.62 | 49.71 | 48.31 | 45.66 | 42.93 | 49.75 | 58.24 | 63.75 | 56.91 | 47.99 | 48.59 |
| 19 | 49.79 | 49.44 | 49.98 | 48.28 | 45.53 | 42.80 | 49.49 | 57.25 | 62.73 | 56.68 | 47.90 | 48.81 |
| 20 | 49.81 | 49.28 | 51.76 | 48.22 | 45.47 | 42.61 | 49.56 | 56.68 | 61.42 | 56.16 | 47.82 | 48.81 |
| 21 | 49.78 | 49.18 | 52.60 | 48.13 | 45.38 | 42.44 | 50.30 | 56.76 | 60.54 | 55.50 | 47.82 | 48.77 |
| 22 | 49.73 | 49.08 | 52.09 | 48.02 | 45.28 | 42.33 | 52.17 | 57.81 | 59.92 | 54.86 | 47.83 | 48.74 |
| 23 | 49.68 | 48.93 | 51.44 | 47.94 | 45.14 | 42.35 | 54.14 | 60.17 | 59.32 | 54.42 | 47.85 | 49.75 |
| 24 | 49.65 | 48.80 | 50.56 | 47.92 | 45.07 | 42.23 | 54.51 | 63.59 | 58.83 | 54.15 | 47.86 | 48.78 |
| 25 | 49.59 | 48.85 | 50.38 | 47.94 | 45.07 | 42.20 | 53.74 | 66.55 | 58.74 | 53.87 | 47.76 | 48.78 |
| 26 | 49.56 | 48.86 | 49.84 | 47.92 | 45.03 | 42.08 | 52.65 | 68.83 | 59.62 | 53.52 | 47.81 | 48.77 |
| 27 | 49.54 | 48.86 | 49.52 | 47.89 | 44.94 | 41.93 | 51.81 | 70.48 | 60.92 | 53.19 | 47.94 | 48.77 |
| 28 | 49.51 | 48.83 | 49.30 | 47.93 | 44.81 | 41.84 | 51.09 | 71.19 | 62.28 | 53.02 | 47.94 | 48.76 |
| 29 | 49.44 | 48.82 | 49.36 | 47.85 | - | 41.78 | 50.47 | 70.38 | 63.34 | 52.57 | 47.94 | 48.68 |
| 30 | 49.33 | 48.78 | 49.32 | 47.70 | - | 41.72 | 50.04 | 68.38 | 63.92 | 52.13 | 48.01 | 48.65 |
| 31 | 49.26 | - | 748.02 | 45.54 | - | 41.70 | - | 66.08 | - | 51.82 | 48.01 | - |

f Gage heights computed on basis of fragmentary record and records for other stations on Kootenai River.

Note.- Add 1,700 feet to obtain elevation above mean sea level.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Kootenai River at Klockmann Ranch, near Bonners Ferry, Idaho

Location.- Water-stage recorder, lat. 48°47'40", long. 116°22'50", in SE¼ sec. 19, T. 83 N., R. 1 E., at Klockmann Ranch, 800 feet south of viaduct on Kootenai Valley branch of Great Northern Railway and 8 miles north of Bonners Ferry. Datum of stage is 1,700.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Records available.- May 1928 to September 1942.

Extremes.- Maximum water-surface elevation during year, 1,768.46 feet May 28; minimum, 1,740.86 Apr. 1.
1928-42: Maximum water-surface elevation, 1,771.24 feet June 20, 1933; minimum, 1,739.11 feet Mar. 18, 1939.

Remarks.- Elevations affected by backwater from Kootenay Lake.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 49.17 | 48.76 | 48.48 | 48.24 | 47.08 | 44.29 | 40.92 | 48.56 | 62.56 | 62.25 | 50.43 | 47.42 |
| 2 | 49.10 | 48.70 | 48.82 | 48.20 | 46.99 | 44.21 | 41.04 | 48.23 | 61.55 | 62.38 | 50.39 | 47.49 |
| 3 | 48.97 | 48.70 | 52.23 | 48.11 | 46.81 | 44.20 | 41.20 | 48.30 | 60.76 | 62.41 | 50.15 | 47.53 |
| 4 | 49.06 | 48.71 | 54.30 | 48.07 | 46.88 | 44.11 | 41.44 | 48.44 | 61.80 | 62.40 | 49.80 | 47.52 |
| 5 | 49.04 | 48.67 | 53.86 | 48.03 | 46.66 | 44.04 | 41.70 | 48.42 | 62.73 | 62.27 | 49.43 | 47.52 |
| 6 | 48.98 | 48.63 | 52.50 | 48.00 | 46.75 | 44.01 | 42.10 | 48.32 | 64.16 | 61.23 | 49.10 | 47.47 |
| 7 | 49.02 | 48.64 | 51.45 | 47.51 | 46.63 | 43.86 | 42.57 | 48.28 | 64.96 | 61.37 | 48.90 | 47.53 |
| 8 | 48.98 | 48.62 | 50.55 | 47.90 | 46.54 | 43.71 | 42.88 | 48.49 | 65.32 | 60.86 | 48.72 | 47.59 |
| 9 | 48.91 | 48.52 | 50.15 | 47.86 | 46.47 | 43.61 | 43.10 | 49.20 | 65.61 | 60.21 | 48.52 | 47.65 |
| 10 | 48.89 | 48.51 | 49.84 | 47.84 | 46.35 | 43.62 | 43.38 | 50.51 | 65.90 | 59.48 | 48.52 | 47.70 |
| 11 | 48.98 | 48.52 | 49.60 | 47.90 | 46.28 | 43.52 | 43.97 | 53.00 | 65.08 | 58.60 | 48.08 | 47.73 |
| 12 | 49.14 | 48.57 | 49.45 | 47.91 | 46.20 | 43.40 | 45.08 | 55.99 | 63.99 | 57.92 | 47.91 | 47.75 |
| 13 | 49.33 | 48.53 | 49.32 | 47.95 | 46.09 | 43.27 | 46.45 | 59.07 | 62.56 | 57.55 | 47.75 | 47.78 |
| 14 | 49.43 | 48.82 | 49.16 | 47.98 | 45.97 | 43.06 | 47.51 | 60.39 | 61.17 | 57.15 | 47.65 | 47.82 |
| 15 | 49.41 | 49.09 | 49.04 | 47.96 | 45.87 | 42.89 | 48.50 | 59.91 | 60.54 | 56.25 | 47.57 | 47.92 |
| 16 | 49.28 | 49.23 | 49.07 | 47.92 | 45.71 | 42.76 | 48.61 | 58.94 | 61.00 | 55.41 | 47.35 | 48.02 |
| 17 | 49.23 | 49.18 | 49.14 | 47.88 | 45.53 | 42.58 | 48.28 | 57.67 | 61.86 | 55.32 | 47.16 | 48.13 |
| 18 | 49.20 | 49.07 | 49.15 | 47.88 | 45.37 | 42.49 | 48.00 | 56.49 | 61.99 | 55.47 | 47.05 | 48.22 |
| 19 | 49.17 | 48.93 | 49.33 | 47.85 | 45.24 | 42.35 | 47.76 | 55.59 | 61.08 | 55.27 | 46.96 | 48.23 |
| 20 | 49.19 | 48.82 | 50.72 | 47.81 | 45.16 | 42.16 | 47.82 | 55.05 | 59.92 | 54.82 | 46.91 | 48.34 |
| 21 | 49.18 | 48.75 | 51.46 | 47.73 | 45.04 | 41.98 | 48.51 | 55.09 | 59.08 | 54.21 | 46.90 | 48.34 |
| 22 | 49.14 | 48.66 | 51.09 | 47.65 | 44.92 | 41.85 | 50.21 | 55.86 | 58.49 | 53.61 | 46.92 | 48.33 |
| 23 | 49.11 | 48.59 | 50.56 | 47.59 | 44.77 | 41.81 | 52.10 | 55.08 | 57.90 | 53.18 | 46.99 | 48.34 |
| 24 | 49.08 | 48.48 | 50.06 | 47.60 | 44.73 | 41.69 | 52.60 | 61.17 | 57.41 | 52.89 | 47.08 | 48.37 |
| 25 | 49.04 | 48.52 | 49.66 | 47.58 | 44.67 | 41.62 | 51.93 | 64.02 | 57.23 | 52.62 | 47.02 | 48.39 |
| 26 | 49.01 | 48.53 | 49.24 | 47.55 | 44.60 | 41.50 | 50.97 | 65.95 | 57.91 | 52.28 | 47.07 | 48.38 |
| 27 | 49.01 | 48.52 | 48.79 | 47.52 | 44.50 | 41.34 | 50.20 | 67.57 | 59.10 | 51.95 | 47.22 | 48.38 |
| 28 | 48.97 | 48.49 | 48.62 | 47.54 | 44.38 | 41.21 | 49.55 | 68.36 | 60.24 | 51.78 | 47.27 | 48.38 |
| 29 | 48.92 | 48.49 | 48.69 | 47.45 | - | 41.08 | 48.98 | 67.57 | 61.33 | 51.38 | 47.28 | 48.35 |
| 30 | 48.92 | 48.46 | 48.71 | 47.28 | - | 41.00 | 48.62 | 66.26 | 61.55 | 50.98 | 47.38 | 48.32 |
| 31 | 48.77 | - | 48.46 | 47.13 | - | 40.95 | - | 64.28 | - | 50.87 | 47.42 | - |

Notes.- Add 1,700 feet to obtain elevation above mean sea level.

Time basis.- Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Kootenai River near Copeland, Idaho

(International gaging station)

Location.- Water-stage recorder, lat. 48°54'45", long. 116°25'00", in NW 1/4 sec. 12, T. 64 N., R. 1 W., at Andrews Ranch, three-quarters of a mile downstream from Mission Creek and 1 1/2 miles northwest of Copeland. Datum of gage is 1,700.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Drainage area.- 13,400 square miles.

Records available.- October 1927 to September 1942 (gage-height record only prior to May 1929) in reports of Geological Survey. April 1925 to September 1927 (gage heights only) in reports of Dominion Water and Power Bureau, Department of Mines and Resources, Canada.

Average discharge.- 13 years, 13,790 second-feet.

Extremes.- Maximum daily discharge during year, 80,000 second-feet May 28; maximum elevation, 1,764.72 feet May 28; minimum daily discharge, 3,330 second-feet Feb. 24, during period of ice effect; minimum elevation, 1,740.52 feet Apr. 1.
1929-42: Maximum daily discharge, 90,500 second-feet June 19, 1933; maximum elevation, 1,767.98 feet June 20, 1933; minimum daily discharge, 1,350 second-feet Feb. 8, 1939, during period of ice effect; minimum elevation, 1,738.94 feet Mar. 18, 1939.

Remarks.- Records good except those for periods of ice effect, which are fair. Discharge computed from mean elevation-conveyance curve determined on basis of fall in reach between stations at Klockmann Ranch near Bonners Ferry and at Port Hill; discharge measurements made at station near Copeland. Stage-discharge relation affected by back-water from Kootenay Lake.

Cooperation.- This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 48.72 | 48.47 | 48.32 | 48.13 | 46.91 | 44.12 | 40.57 | 46.84 | 60.31 | 59.29 | 49.12 | 47.02 |
| 2 | 48.67 | 48.45 | 48.56 | 48.10 | 46.82 | 44.04 | 40.59 | 46.75 | 59.25 | 59.47 | 49.01 | 47.07 |
| 3 | 48.58 | 48.45 | 50.89 | 48.03 | 46.72 | 44.01 | 40.65 | 46.80 | 58.68 | 59.54 | 48.77 | 47.15 |
| 4 | 48.64 | 48.44 | 52.50 | 47.98 | 46.68 | 43.99 | 40.76 | 46.91 | 58.81 | 59.57 | 48.49 | 47.16 |
| 5 | 48.62 | 48.40 | 52.27 | 47.93 | 46.63 | 43.93 | 40.68 | 46.89 | 59.97 | 59.51 | 48.17 | 47.18 |
| 6 | 48.68 | 48.35 | 51.20 | 47.90 | 46.53 | 43.80 | 41.12 | 46.82 | 61.15 | 59.22 | 47.88 | 47.13 |
| 7 | 48.61 | 48.28 | 50.35 | 47.82 | 46.43 | 43.66 | 41.42 | 46.81 | 61.92 | 58.86 | 47.69 | 47.22 |
| 8 | 48.58 | 48.28 | 49.77 | 47.80 | 46.34 | 43.55 | 41.63 | 46.99 | 62.29 | 58.45 | 47.51 | 47.28 |
| 9 | 48.52 | 48.30 | 49.35 | 47.76 | 46.28 | 43.46 | 41.80 | 47.55 | 62.48 | 57.83 | 47.33 | 47.36 |
| 10 | 48.53 | 48.30 | 49.13 | 47.72 | 46.19 | 43.43 | 42.01 | 48.82 | 62.60 | 57.33 | 47.15 | 47.41 |
| 11 | 48.62 | 48.32 | 48.98 | 47.74 | 46.12 | 43.28 | 42.42 | 50.58 | 62.26 | 56.63 | 46.95 | 47.46 |
| 12 | 48.76 | 48.38 | 48.92 | 47.73 | 46.04 | 43.17 | 43.25 | 53.00 | 61.45 | 56.07 | 46.82 | 47.48 |
| 13 | 48.87 | 48.34 | 48.82 | 47.74 | 45.92 | 43.02 | 44.36 | 55.66 | 60.25 | 55.66 | 46.67 | 47.53 |
| 14 | 48.90 | 48.54 | 48.71 | 47.74 | 45.81 | 42.85 | 45.25 | 57.03 | 59.09 | 55.28 | 46.56 | 47.58 |
| 15 | 48.88 | 48.68 | 48.63 | 47.72 | 45.71 | 42.67 | 46.14 | 56.83 | 58.60 | 54.55 | 46.51 | 47.68 |
| 16 | 48.79 | 48.77 | 48.64 | 47.68 | 45.65 | 42.54 | 46.36 | 56.14 | 58.77 | 53.83 | 46.38 | 47.77 |
| 17 | 48.76 | 48.74 | 48.69 | 47.65 | 45.41 | 42.37 | 46.14 | 55.16 | 59.56 | 53.67 | 46.27 | 47.87 |
| 18 | 48.73 | 48.67 | 48.69 | 47.66 | 45.28 | 42.27 | 45.97 | 54.18 | 59.48 | 53.71 | 46.22 | 47.95 |
| 19 | 48.72 | 48.58 | 48.80 | 47.64 | 45.16 | 42.14 | 45.82 | 53.45 | 58.76 | 53.50 | 46.17 | 48.03 |
| 20 | 48.75 | 48.51 | 49.69 | 47.61 | 45.07 | 41.95 | 45.91 | 53.01 | 57.86 | 53.09 | 46.14 | 48.06 |
| 21 | 48.73 | 48.49 | 50.27 | 47.54 | 44.93 | 41.78 | 46.48 | 53.06 | 57.12 | 52.58 | 46.15 | 48.08 |
| 22 | 48.72 | 48.46 | 50.01 | 47.48 | 44.81 | 41.68 | 47.87 | 53.77 | 56.55 | 52.07 | 46.20 | 48.08 |
| 23 | 48.71 | 48.39 | 49.65 | 47.43 | 44.67 | 41.59 | 49.49 | 55.52 | 56.02 | 51.68 | 46.30 | 48.10 |
| 24 | 48.68 | 48.32 | 49.29 | 47.44 | 44.62 | 41.45 | 50.01 | 58.00 | 55.60 | 51.29 | 46.44 | 48.14 |
| 25 | 48.64 | 48.35 | 48.99 | 47.41 | 44.55 | 41.39 | 49.67 | 60.41 | 55.45 | 51.12 | 46.42 | 48.16 |
| 26 | 48.63 | 48.36 | 48.75 | 47.39 | 44.44 | 41.26 | 48.84 | 62.32 | 55.97 | 50.80 | 46.53 | 48.16 |
| 27 | 48.62 | 48.35 | 48.46 | 47.37 | 44.33 | 41.11 | 48.24 | 63.77 | 55.79 | 50.48 | 46.69 | 48.17 |
| 28 | 48.59 | 48.32 | 48.31 | 47.36 | 44.22 | 40.98 | 47.76 | 64.60 | 57.66 | 50.32 | 46.75 | 48.16 |
| 29 | 48.52 | 48.32 | 48.38 | 47.24 | - | 40.85 | 47.33 | 64.38 | 54.45 | 49.97 | 46.82 | 48.15 |
| 30 | 48.48 | 48.29 | 48.40 | 47.07 | - | 40.74 | 47.05 | 63.30 | 58.92 | 49.62 | 46.95 | 48.13 |
| 31 | 48.46 | - | 48.25 | 46.96 | - | 40.65 | - | 61.76 | - | 49.35 | 46.99 | - |

f Mean daily gage heights computed on basis of fragmentary record and records for other stations on Kootenai River.

Note.- Add 1,700.00 feet to obtain elevation above mean sea level.

Discharge, in second-feet, of Kootenai River near Copeland, Idaho, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|--------|-------|
| 1 | 11,000 | 8,690 | 7,150 | 4,240 | 5,370 | 4,100 | 5,090 | 17,900 | 49,800 | 54,000 | 18,800 | 8,770 |
| 2 | 10,800 | 8,260 | 8,400 | 3,890 | 5,310 | 4,080 | 5,560 | 17,500 | 45,200 | 54,000 | 19,100 | 8,750 |
| 3 | 10,200 | 8,180 | 21,700 | 4,010 | 5,260 | 4,210 | 6,230 | 17,600 | 43,200 | 53,600 | 18,800 | 8,680 |
| 4 | 10,400 | 8,350 | 28,700 | 4,220 | 5,360 | 4,380 | 7,010 | 18,000 | 46,000 | 53,500 | 18,000 | 8,250 |
| 5 | 10,300 | 8,250 | 26,700 | 4,560 | 5,390 | 4,320 | 7,770 | 18,000 | 53,600 | 52,600 | 17,200 | 8,140 |
| 6 | 10,100 | 8,390 | 22,200 | 4,870 | 5,360 | 4,530 | 8,740 | 17,700 | 59,600 | 50,100 | 16,600 | 7,910 |
| 7 | 10,200 | 8,110 | 19,000 | 4,870 | 5,210 | 4,400 | 9,880 | 17,500 | 62,300 | 48,200 | 16,300 | 7,840 |
| 8 | 10,000 | 7,850 | 16,600 | 4,840 | 5,060 | 4,340 | 10,500 | 17,900 | 63,500 | 46,000 | 16,000 | 7,800 |
| 9 | 9,750 | 7,610 | 14,900 | 5,080 | 4,960 | 4,330 | 11,000 | 19,800 | 64,100 | 43,600 | 15,700 | 7,750 |
| 10 | 9,600 | 7,350 | 15,600 | 5,170 | 4,780 | 4,910 | 11,500 | 23,900 | 64,200 | 40,700 | 15,400 | 7,650 |
| 11 | 10,000 | 7,070 | 12,600 | 5,330 | 4,760 | 5,150 | 12,600 | 30,100 | 61,200 | 37,300 | 14,800 | 7,650 |
| 12 | 10,400 | 7,180 | 11,500 | 5,340 | 4,670 | 5,080 | 15,000 | 39,900 | 56,000 | 35,000 | 14,500 | 7,660 |
| 13 | 11,100 | 7,160 | 11,100 | 5,770 | 4,680 | 4,820 | 17,800 | 49,800 | 49,700 | 34,500 | 14,200 | 7,440 |
| 14 | 11,700 | 8,640 | 10,500 | 6,250 | 4,600 | 4,840 | 20,200 | 55,000 | 44,000 | 33,500 | 14,100 | 7,380 |
| 15 | 11,700 | 10,000 | 9,900 | 6,160 | 4,570 | 4,660 | 22,300 | 50,100 | 41,800 | 30,600 | 13,800 | 7,450 |
| 16 | 11,200 | 10,800 | 10,100 | 6,180 | 4,510 | 4,650 | 22,200 | 45,800 | 44,500 | 28,000 | 13,000 | 7,630 |
| 17 | 11,000 | 10,600 | 10,500 | 6,030 | 4,290 | 4,460 | 21,100 | 40,900 | 49,000 | 28,600 | 12,300 | 7,760 |
| 18 | 11,000 | 10,200 | 10,700 | 6,030 | 3,760 | 4,440 | 20,100 | 36,700 | 49,600 | 29,600 | 11,800 | 8,040 |
| 19 | 10,800 | 9,470 | 11,400 | 5,960 | 3,440 | 4,440 | 19,300 | 33,600 | 45,300 | 29,400 | 11,500 | 8,460 |
| 20 | 10,600 | 8,890 | 17,200 | 5,860 | 3,450 | 4,390 | 19,200 | 31,700 | 40,900 | 28,300 | 11,300 | 8,240 |
| 21 | 10,600 | 8,280 | 19,600 | 5,880 | 3,450 | 4,390 | 20,800 | 31,700 | 38,000 | 26,600 | 11,200 | 7,950 |
| 22 | 10,300 | 7,830 | 18,200 | 5,790 | 3,400 | 4,320 | 25,000 | 34,400 | 36,500 | 25,000 | 10,900 | 7,690 |
| 23 | 10,200 | 7,370 | 16,200 | 5,630 | 3,450 | 4,470 | 29,900 | 41,300 | 34,900 | 23,900 | 10,800 | 7,610 |
| 24 | 10,100 | 6,970 | 14,500 | 5,460 | 3,330 | 4,530 | 30,900 | 52,900 | 33,500 | 25,600 | 10,500 | 7,630 |
| 25 | 10,100 | 6,890 | 15,100 | 5,560 | 3,660 | 4,450 | 28,400 | 64,000 | 33,400 | 23,100 | 10,200 | 7,560 |
| 26 | 9,960 | 6,980 | 11,100 | 5,350 | 3,820 | 4,420 | 25,400 | 70,700 | 36,600 | 22,500 | 9,670 | 7,470 |
| 27 | 9,960 | 6,980 | 9,000 | 5,410 | 4,160 | 4,330 | 25,100 | 77,400 | 41,900 | 21,700 | 9,650 | 7,470 |
| 28 | 9,860 | 6,970 | 7,560 | 5,530 | 4,110 | 4,210 | 21,200 | 80,000 | 47,500 | 21,600 | 9,580 | 7,470 |
| 29 | 9,610 | 7,060 | 6,570 | 5,670 | - | 4,230 | 19,500 | 76,300 | 51,000 | 20,600 | 9,180 | 7,210 |
| 30 | 9,260 | 6,960 | 6,150 | 5,680 | - | 4,310 | 18,600 | 67,400 | 52,800 | 19,700 | 9,000 | 7,110 |
| 31 | 9,010 | - | 5,380 | 5,480 | - | 4,520 | - | 57,600 | - | 19,000 | 8,960 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off |
|-------------------------|------------------|---------|---------|--------|-----------------|---------|
| | | | | | | Inches |
| | | | | | | Acres |
| October..... | 320,810 | 11,700 | 9,010 | 10,350 | 0.772 | 0.89 |
| November..... | 243,210 | 10,800 | 6,890 | 8,107 | .605 | .67 |
| December..... | 422,010 | 28,700 | 5,380 | 15,610 | 1.02 | 1.17 |
| Calendar year 1941..... | 3,943,610 | 36,500 | 2,650 | 10,800 | .806 | 10.95 |
| January..... | 165,990 | 6,250 | 3,890 | 5,551 | .599 | .46 |
| February..... | 124,170 | 5,390 | 3,330 | 4,455 | .531 | .34 |
| March..... | 139,650 | 5,150 | 4,080 | 4,473 | .534 | .38 |
| April..... | 516,180 | 30,900 | 4,900 | 17,210 | 1.28 | 1.43 |
| May..... | 1,251,100 | 80,000 | 17,500 | 40,560 | 3.01 | 3.47 |
| June..... | 1,439,400 | 64,200 | 33,400 | 47,980 | 3.58 | 3.99 |
| July..... | 1,057,400 | 54,000 | 19,000 | 34,110 | 2.55 | 2.93 |
| August..... | 412,650 | 19,100 | 8,960 | 15,510 | .993 | 1.15 |
| September..... | 234,550 | 8,770 | 7,110 | 7,812 | .583 | .65 |
| Water year 1941-42..... | 6,325,020 | 80,000 | 3,330 | 17,350 | 1.29 | 17.53 |

* Winter discharge measurement made on this day.

Note.- Channel conveyance affected by ice Dec. 27 to Mar. 31; discharge computed on basis of four discharge measurements and records for station at Bonners Ferry, intervening inflow, and channel storage.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Kootenai River at Port Hill, Idaho

(International gaging station)

Location.- Water-stage recorder, lat. 49°00'00", long. 116°30'10", in SW $\frac{1}{4}$ sec. 8, T. 65 N., R. 1 W., 300 feet south of international boundary at Port Hill. Datum of gage is 1,700.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum) and 1,699.80 feet above mean sea level, datum of Geodetic Survey of Canada (adjustment of 1928).

Drainage area.- 13,700 square miles.

Records available.- May to July 1904, October 1927 to April 1928 (gage heights only) and April 1928 to September 1942 in reports of Geological Survey. October 1924 to September 1927 (gage heights only) in reports of Dominion Water and Power Bureau, Department of Mines and Resources, Canada.

Average discharge.- 14 years, 14,000 second-feet.

Extremes.- Maximum daily discharge during year, 81,900 second-feet May 28; maximum elevation, 1,760.58 feet May 28; minimum daily discharge, 3,440 second-feet Feb. 24; minimum elevation, 1,740.21 feet Apr. 1.

1928-42: Maximum daily discharge, 93,200 second-feet June 19, 1933; maximum elevation, 1,764.08 feet May 31, 1933; minimum daily discharge, 1,380 second-feet Feb. 8, 1936; minimum elevation, 1,738.65 feet Mar. 18, 1936.

Maximum elevation known, 1,772.7 feet sometime in June 1944.

Remarks.- Records good except those for period of ice effect at Copeland, which are fair. Daily discharge represents entire flow passing international boundary, computed by adding tributary inflow, including that of Boundary Creek, to flow at station near Copeland. Boundary dike of Reclamation Farm and Forest Service roadway dike (south side of Boundary Creek) remained intact and flow of river was confined throughout year to main channel on which gage and cableway are located. Elevations affected by backwater from Kootenay Lake.

Cooperation.- This station is one of the international gaging stations maintained by United States under agreement with Canada.

Elevation, in feet, of Kootenai River at Port Hill, Idaho, water year
October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 48.24 | 48.12 | 48.01 | 47.89 | 46.61 | 43.84 | 40.26 | 45.72 | 57.85 | 56.57 | 48.15 | 46.62 |
| 2 | 48.20 | 48.11 | 48.22 | 47.87 | 46.54 | 43.75 | 40.23 | 45.66 | 57.07 | 56.76 | 48.01 | 46.70 |
| 3 | 48.14 | 48.12 | 48.83 | 47.82 | 46.45 | 43.73 | 40.23 | 45.71 | 56.62 | 56.88 | 47.79 | 46.76 |
| 4 | 48.21 | 48.11 | 50.99 | 47.77 | 46.41 | 43.60 | 40.28 | 45.78 | 56.71 | 56.93 | 47.54 | 46.82 |
| 5 | 48.20 | 48.08 | 50.84 | 47.72 | 46.36 | 43.54 | 40.35 | 45.76 | 57.36 | 56.92 | 47.26 | 46.84 |
| 6 | 48.17 | 48.02 | 50.06 | 47.69 | 46.26 | 43.49 | 40.52 | 45.71 | 58.20 | 56.77 | 47.01 | 46.82 |
| 7 | 48.20 | 47.96 | 49.42 | 47.62 | 46.13 | 43.37 | 40.71 | 45.72 | 58.84 | 56.51 | 46.83 | 46.90 |
| 8 | 48.18 | 47.97 | 48.92 | 47.61 | 46.06 | 43.25 | 40.87 | 45.87 | 59.15 | 56.22 | 46.66 | 46.97 |
| 9 | 48.14 | 48.01 | 48.66 | 47.56 | 46.00 | 43.17 | 40.99 | 46.29 | 59.31 | 55.83 | 46.49 | 47.04 |
| 10 | 48.14 | 48.02 | 48.63 | 47.51 | 45.91 | 43.13 | 41.17 | 47.33 | 59.43 | 55.38 | 46.32 | 47.11 |
| 11 | 48.18 | 48.06 | 48.43 | 47.49 | 45.84 | 42.98 | 41.47 | 48.66 | 59.24 | 54.85 | 46.16 | 47.14 |
| 12 | 48.30 | 48.10 | 48.42 | 47.47 | 45.76 | 42.87 | 42.16 | 50.44 | 58.87 | 54.41 | 46.07 | 47.16 |
| 13 | 48.41 | 48.06 | 48.36 | 47.44 | 45.64 | 42.73 | 43.00 | 52.58 | 57.88 | 54.03 | 45.91 | 47.22 |
| 14 | 48.42 | 48.19 | 48.28 | 47.44 | 45.54 | 42.58 | 43.71 | 53.86 | 57.03 | 53.69 | 45.80 | 47.27 |
| 15 | 48.41 | 48.30 | 48.23 | 47.41 | 45.44 | 42.41 | 44.42 | 53.87 | 56.61 | 53.09 | 45.78 | 47.37 |
| 16 | 48.33 | 48.34 | 48.24 | 47.38 | 45.27 | 42.28 | 44.66 | 53.46 | 56.72 | 52.52 | 45.70 | 47.45 |
| 17 | 48.31 | 48.31 | 48.25 | 47.36 | 45.15 | 42.11 | 44.55 | 52.77 | 57.03 | 52.31 | 45.64 | 47.55 |
| 18 | 48.28 | 48.25 | 48.24 | 47.37 | 45.04 | 42.00 | 44.48 | 52.08 | 57.10 | 52.27 | 45.51 | 47.51 |
| 19 | 48.28 | 48.20 | 48.32 | 47.36 | 44.92 | 41.86 | 44.42 | 51.54 | 56.62 | 52.05 | 45.59 | 47.67 |
| 20 | 48.32 | 48.16 | 48.90 | 47.32 | 44.82 | 41.69 | 44.54 | 51.24 | 55.94 | 51.70 | 45.57 | 47.71 |
| 21 | 48.32 | 48.16 | 49.30 | 47.26 | 44.68 | 41.51 | 45.00 | 51.30 | 55.36 | 51.27 | 45.58 | 47.75 |
| 22 | 48.31 | 48.14 | 49.13 | 47.21 | 44.55 | 41.40 | 46.11 | 51.88 | 54.87 | 50.83 | 45.55 | 47.77 |
| 23 | 48.30 | 48.10 | 48.90 | 47.16 | 44.42 | 41.31 | 47.32 | 53.28 | 54.41 | 50.50 | 45.77 | 47.79 |
| 24 | 48.28 | 48.03 | 48.63 | 47.16 | 44.36 | 41.17 | 47.80 | 55.16 | 54.03 | 50.22 | 45.92 | 47.82 |
| 25 | 48.24 | 48.08 | 48.41 | 47.13 | 44.29 | 41.10 | 47.59 | 57.02 | 55.81 | 49.96 | 45.92 | 47.85 |
| 26 | 48.22 | 48.08 | 48.27 | 47.11 | 44.16 | 40.97 | 47.09 | 58.59 | 54.07 | 49.69 | 46.07 | 47.85 |
| 27 | 48.22 | 48.07 | 48.11 | 47.10 | 44.06 | 40.82 | 46.69 | 59.74 | 54.59 | 49.40 | 46.24 | 47.85 |
| 28 | 48.19 | 48.04 | 48.01 | 47.07 | 43.94 | 40.69 | 46.36 | 60.46 | 55.21 | 49.22 | 46.31 | 47.85 |
| 29 | 48.17 | 48.03 | 48.06 | 46.94 | - | 40.57 | 46.08 | 60.46 | 55.84 | 48.92 | 46.39 | 47.85 |
| 30 | 48.11 | 48.01 | 48.07 | 46.79 | - | 40.44 | 45.87 | 59.79 | 56.23 | 48.63 | 46.53 | 47.83 |
| 31 | 48.09 | - | 47.96 | 46.66 | - | 40.35 | - | 58.81 | - | 48.40 | 46.58 | - |

Note.- Add 1,700 feet to obtain elevation above mean sea level.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|-------|-------|-------|--------|--------|--------|--------|--------|-------|
| 1 | 11,400 | 8,970 | 7,540 | 4,480 | 5,520 | 4,210 | 5,240 | 18,600 | 51,300 | 54,900 | 19,000 | 8,840 |
| 2 | 11,100 | 8,530 | 10,400 | 4,080 | 5,460 | 4,200 | 5,750 | 18,200 | 45,700 | 54,800 | 19,300 | 8,820 |
| 3 | 10,600 | 8,460 | 24,400 | 4,170 | 5,400 | 4,320 | 6,410 | 18,300 | 44,700 | 54,300 | 19,000 | 8,760 |
| 4 | 10,800 | 8,660 | 30,100 | 4,360 | 5,510 | 4,480 | 7,220 | 18,600 | 47,400 | 53,900 | 18,200 | 8,290 |
| 5 | 10,600 | 8,620 | 27,800 | 4,700 | 5,540 | 4,410 | 8,010 | 18,600 | 56,000 | 53,100 | 17,400 | 8,200 |
| 6 | 10,400 | 8,730 | 23,200 | 4,810 | 5,500 | 4,620 | 9,000 | 18,400 | 61,200 | 50,600 | 16,800 | 7,970 |
| 7 | 10,600 | 8,420 | 19,900 | 5,010 | 5,350 | 4,490 | 10,200 | 18,300 | 64,100 | 48,700 | 16,500 | 7,900 |
| 8 | 10,300 | 8,140 | 17,400 | 4,990 | 5,190 | 4,430 | 10,800 | 18,900 | 64,900 | 46,400 | 16,200 | 7,860 |
| 9 | 10,100 | 7,790 | 15,600 | 5,230 | 5,080 | 4,440 | 11,300 | 21,100 | 65,600 | 45,900 | 15,900 | 7,810 |
| 10 | 10,300 | 7,600 | 14,200 | 5,340 | 4,910 | 5,050 | 11,900 | 25,500 | 65,600 | 41,000 | 15,600 | 7,760 |
| 11 | 10,600 | 7,340 | 13,200 | 5,520 | 4,890 | 5,260 | 13,300 | 31,400 | 62,300 | 37,800 | 14,900 | 7,730 |
| 12 | 11,500 | 7,450 | 12,100 | 5,540 | 4,790 | 5,170 | 15,700 | 41,100 | 57,000 | 35,400 | 14,400 | 7,730 |
| 13 | 11,900 | 7,640 | 11,600 | 5,970 | 4,790 | 5,000 | 18,600 | 51,100 | 50,600 | 34,900 | 14,300 | 7,510 |
| 14 | 12,300 | 9,680 | 11,000 | 6,440 | 4,730 | 4,940 | 20,900 | 54,300 | 45,000 | 35,800 | 14,200 | 7,450 |
| 15 | 12,300 | 10,800 | 10,400 | 6,350 | 4,700 | 4,760 | 23,000 | 51,300 | 43,500 | 30,900 | 13,900 | 7,500 |
| 16 | 11,800 | 11,400 | 10,700 | 6,370 | 4,630 | 4,650 | 22,800 | 46,900 | 45,900 | 28,400 | 13,100 | 7,700 |
| 17 | 11,500 | 11,200 | 11,100 | 6,220 | 4,400 | 4,560 | 21,800 | 41,900 | 50,200 | 28,000 | 12,400 | 7,640 |
| 18 | 11,500 | 10,700 | 11,200 | 6,220 | 3,860 | 4,530 | 20,800 | 37,600 | 50,600 | 39,100 | 11,900 | 8,120 |
| 19 | 11,300 | 9,920 | 12,000 | 6,160 | 3,540 | 4,530 | 20,000 | 34,600 | 46,300 | 29,800 | 11,600 | 8,530 |
| 20 | 11,100 | 9,510 | 18,300 | 6,040 | 3,560 | 4,480 | 20,000 | 33,000 | 41,800 | 28,600 | 11,400 | 8,310 |
| 21 | 11,100 | 8,700 | 20,400 | 6,040 | 3,560 | 4,480 | 22,000 | 33,500 | 38,800 | 26,800 | 11,300 | 7,990 |
| 22 | 10,700 | 8,200 | 18,900 | 5,950 | 3,510 | 4,420 | 26,400 | 36,900 | 37,300 | 25,300 | 11,000 | 7,750 |
| 23 | 10,600 | 7,740 | 16,600 | 5,790 | 3,650 | 4,570 | 31,000 | 44,600 | 35,700 | 24,200 | 10,900 | 7,670 |
| 24 | 10,600 | 7,530 | 15,100 | 5,620 | 3,440 | 4,630 | 31,800 | 55,900 | 34,400 | 25,700 | 10,800 | 7,680 |
| 25 | 10,500 | 7,240 | 13,600 | 5,720 | 3,770 | 4,540 | 29,200 | 66,900 | 34,600 | 25,300 | 10,300 | 7,610 |
| 26 | 10,300 | 7,320 | 11,500 | 5,520 | 3,930 | 4,510 | 26,100 | 73,800 | 38,000 | 22,500 | 9,750 | 7,520 |
| 27 | 10,300 | 7,320 | 9,430 | 5,580 | 4,270 | 4,430 | 23,800 | 80,100 | 45,100 | 21,900 | 9,750 | 7,520 |
| 28 | 10,200 | 7,260 | 8,000 | 5,700 | 4,220 | 4,310 | 21,900 | 81,200 | 45,500 | 21,800 | 9,660 | 7,520 |
| 29 | 9,930 | 7,580 | 7,140 | 5,830 | - | 4,340 | 20,200 | 78,000 | 52,100 | 20,900 | 9,280 | 7,260 |
| 30 | 9,560 | 7,500 | 6,520 | 5,830 | - | 4,420 | 19,300 | 69,000 | 53,800 | 20,000 | 9,080 | 7,160 |
| 31 | 9,500 | - | 5,670 | 5,630 | - | 4,650 | - | 59,100 | - | 19,300 | 9,040 | - |

KOOTENAI RIVER BASIN

Monthly discharge, in second-feet, of Kootenai River at Port Hill, Idaho,
water year October 1941 to September 1942

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|--------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 334,990 | 12,300 | 9,300 | 10,810 | 0.789 | 0.91 | 664,400 |
| November..... | 255,170 | 11,400 | 7,240 | 8,506 | .621 | .69 | 506,100 |
| December..... | 446,200 | 30,100 | 5,670 | 14,360 | 1.05 | 1.21 | 883,000 |
| Calendar year 1941..... | 4,111,080 | 38,800 | 2,720 | 11,260 | .822 | 11.16 | 8,164,000 |
| January..... | 171,200 | 6,440 | 4,080 | 5,523 | .403 | .46 | 339,600 |
| February..... | 127,610 | 5,540 | 3,440 | 4,558 | .333 | .35 | 253,100 |
| March..... | 141,830 | 5,260 | 4,200 | 4,575 | .334 | .39 | 281,300 |
| April..... | 534,410 | 31,800 | 5,050 | 17,810 | 1.30 | 1.45 | 1,060,000 |
| May..... | 1,297,400 | 81,900 | 18,200 | 41,850 | 3.05 | 3.52 | 2,573,000 |
| June..... | 1,476,900 | 65,600 | 34,400 | 49,200 | 3.59 | 4.01 | 2,927,000 |
| July..... | 1,070,000 | 54,900 | 18,300 | 34,520 | 2.52 | 2.91 | 2,122,000 |
| August..... | 416,640 | 19,300 | 9,400 | 15,440 | .981 | 1.15 | 866,400 |
| September..... | 236,310 | 8,840 | 7,160 | 7,877 | .576 | .64 | 468,700 |
| Water year 1941-42..... | 6,506,660 | 81,900 | 3,440 | 17,830 | 1.30 | 17.67 | 12,900,000 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Kootenay Lake at Kuskanook, British Columbia
(International gaging station)

Location.- Water-stage recorder, lat. 49°18', long. 116°40', on east shore of lake at Kuskanook. Prior to April 25, 1938, staff gage at same site at datum 3.00 feet higher. Datum of gage is 1,735.00 feet above mean sea level, datum of Geodetic Survey of Canada, adjustment of 1928 (provisional levels by Department of Mines and Resources, Canada). Elevations given herein are to U. S. Coast and Geodetic Survey datum, which is 0.20 foot lower than Canadian datum as determined at Port Hill, Idaho.

Records available.- April 1936 to September 1942.

Extremes.- Maximum daily elevations for the period April 1936 to September 1942 are contained in the following table:

| Water year | Maximum | | Minimum | |
|------------|-------------|------------------|--------------|------------------|
| | Date | Elevation (feet) | Date | Elevation (feet) |
| 1936† | June 4 | 1,755.65 | Apr. 6 | 1,739.80 |
| 1937 | June 24 | 1,753.30 | Mar. 30, 31, | 1,739.90 |
| | | | Apr. 2 | |
| 1938 | June 7 | 1,758.90 | Mar. 9, 11 | 1,740.45 |
| 1939 | June 1, 2 | 1,751.21 | Mar. 19, 20 | 1,738.32 |
| 1940 | May 30 | 1,751.20 | Apr. 11 | 1,740.15 |
| 1941 | June 14, 15 | 1,748.07 | Apr. 1, 2 | 1,740.48 |
| 1942 | June 11 | 1,753.69 | Apr. 6, 7 | 1,739.60 |

† Period Apr. 5 to Sept. 30, 1936.

Remarks.- Elevation of water surface subject to partial regulation by Corra Linn Dam below outlet. There is practically no diversion or regulation above Kootenay Lake.

Cooperation.- Since December 1940 this station is an international gaging station maintained by Canada under agreement with the United States. Records prior to December 1940 collected by the Dominion Water and Power Bureau, Department of Mines and Resources, Canada.

Elevation, in feet, 1936-42

1936

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1 | | | | | | | - | 48.65 | 54.85 | 49.75 | 45.40 | 45.08 |
| 2 | | | | | | | - | 48.75 | 55.40 | 49.51 | 45.34 | 45.14 |
| 3 | | | | | | | - | 49.02 | 55.75 | 49.15 | 45.25 | 45.09 |
| 4 | | | | | | | - | 49.30 | 55.85 | 48.90 | 45.11 | 45.09 |
| 5 | | | | | | | 39.84 | 49.65 | 55.70 | 48.75 | 45.00 | 45.00 |
| 6 | | | | | | | 39.80 | 50.10 | 55.55 | 48.64 | 44.95 | 45.00 |
| 7 | | | | | | | 39.82 | 50.40 | 55.15 | 48.55 | 44.80 | 42.94 |
| 8 | | | | | | | 39.82 | 50.60 | 54.85 | 48.38 | 44.75 | 42.90 |
| 9 | | | | | | | 39.83 | 50.85 | 54.45 | 48.15 | 44.63 | 42.90 |
| 10 | | | | | | | 39.80 | 51.00 | 54.13 | 48.11 | 44.55 | 42.84 |
| 11 | | | | | | | 39.93 | 51.30 | 53.75 | 47.95 | 44.53 | 42.80 |
| 12 | | | | | | | 39.94 | 51.61 | 53.45 | 47.88 | 44.45 | 42.70 |
| 13 | | | | | | | 40.10 | 51.96 | 53.20 | 47.77 | 44.40 | 42.60 |
| 14 | | | | | | | 40.20 | 52.35 | 52.95 | 47.55 | 44.40 | 42.50 |
| 15 | | | | | | | 40.51 | 52.90 | 52.70 | 47.46 | 44.35 | 42.50 |
| 16 | | | | | | | 40.80 | 53.25 | 52.53 | 47.35 | 44.25 | 42.39 |
| 17 | | | | | | | 41.20 | 53.65 | 52.40 | 47.18 | 44.15 | 42.34 |
| 18 | | | | | | | 41.61 | 53.83 | 52.30 | 47.05 | 44.10 | 42.31 |
| 19 | | | | | | | 42.10 | 54.02 | 52.10 | 46.94 | 44.05 | 42.29 |
| 20 | | | | | | | 42.94 | 54.02 | 51.94 | 46.80 | 43.97 | 42.28 |
| 21 | | | | | | | 43.68 | 53.91 | 51.65 | 46.65 | 43.85 | 42.25 |
| 22 | | | | | | | 44.39 | 53.71 | 51.42 | 46.55 | 43.80 | 42.20 |
| 23 | | | | | | | 45.13 | 53.49 | 51.15 | 46.40 | 43.65 | 42.09 |
| 24 | | | | | | | 45.90 | 53.25 | 50.90 | 46.30 | 43.60 | 42.05 |
| 25 | | | | | | | 46.55 | 53.05 | 50.80 | 46.25 | 43.49 | 42.05 |
| 26 | | | | | | | 47.20 | 52.93 | 50.68 | 46.15 | 43.50 | 42.07 |
| 27 | | | | | | | 47.70 | 52.90 | 50.45 | 46.05 | 43.44 | 42.03 |
| 28 | | | | | | | 48.05 | 52.95 | 50.39 | 45.89 | 43.37 | 42.01 |
| 29 | | | | | | | 48.30 | 53.35 | 50.20 | 45.77 | 43.29 | 41.97 |
| 30 | | | | | | | 48.50 | 53.83 | 49.99 | 45.63 | 43.15 | 41.95 |
| 31 | | | | | | | - | 54.30 | - | 45.45 | 43.05 | - |

Note.- Add 1,700 feet to obtain elevation above mean sea level.

Elevation, in feet, of Kootenay Lake at Kuskanook, British Columbia, 1936-42--Continued

1936-37

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 41.89 | 41.16 | 40.30 | 40.60 | 40.30 | 40.45 | 39.95 | 42.00 | 51.60 | 52.40 | 46.61 | 43.67 |
| 2 | 41.86 | 41.10 | 40.30 | 40.70 | 40.40 | 40.50 | 39.90 | 42.15 | 51.85 | 52.30 | 46.45 | 43.58 |
| 3 | 41.84 | 41.10 | 40.25 | 40.60 | 40.45 | 40.45 | 39.95 | 42.45 | 52.05 | 52.16 | 46.27 | 43.55 |
| 4 | 41.83 | 41.10 | 40.20 | 40.50 | 40.45 | 40.45 | 39.95 | 42.65 | 52.35 | 52.03 | 46.20 | 43.48 |
| 5 | 41.80 | 41.05 | 40.25 | 40.40 | 40.40 | 40.40 | 39.95 | 43.25 | 52.55 | 51.85 | 46.06 | 43.42 |
| 6 | 41.78 | 41.04 | 40.25 | 40.30 | 40.50 | 40.40 | 39.95 | 43.80 | 52.75 | 51.65 | 45.94 | 43.50 |
| 7 | 41.78 | 41.02 | 40.25 | 40.40 | 40.50 | 40.40 | 40.00 | 44.30 | 52.80 | 51.35 | 45.55 | 43.48 |
| 8 | 41.73 | 40.98 | 40.21 | 40.30 | 40.50 | 40.40 | 40.00 | 44.65 | 52.80 | 51.10 | 45.55 | 43.47 |
| 9 | 41.70 | 40.95 | 40.20 | 40.40 | 40.50 | 40.40 | 40.00 | 45.05 | 52.75 | 50.75 | 45.40 | 43.45 |
| 10 | 41.67 | 40.91 | 40.15 | 40.30 | 40.55 | 40.40 | 40.05 | 45.25 | 52.70 | 50.50 | 45.37 | 43.42 |
| 11 | 41.63 | 40.88 | 40.15 | 40.40 | 40.55 | 40.30 | 40.05 | 45.55 | 52.65 | 50.20 | 45.25 | 43.40 |
| 12 | 41.60 | 40.88 | 40.10 | 40.25 | 40.55 | 40.30 | 40.10 | 45.75 | 52.55 | 49.95 | 45.18 | 43.35 |
| 13 | 41.57 | 40.88 | 40.10 | 40.20 | 40.55 | 40.25 | 40.15 | 45.95 | 52.45 | 49.85 | 44.98 | 43.32 |
| 14 | 41.56 | 40.85 | 40.10 | 40.20 | 40.55 | 40.20 | 40.20 | 46.00 | 52.40 | 49.55 | 44.85 | 43.30 |
| 15 | 41.56 | 40.80 | 40.20 | 40.30 | 40.60 | 40.15 | 40.45 | 46.35 | 52.40 | 49.43 | 44.86 | 43.30 |
| 16 | 41.56 | 40.78 | 40.20 | 40.30 | 40.55 | 40.20 | 40.40 | 46.60 | 52.44 | 49.20 | 44.82 | 43.19 |
| 17 | 41.54 | 40.79 | 40.10 | 40.30 | 40.55 | 40.15 | 40.75 | 46.95 | 52.60 | 49.15 | 44.72 | 43.30 |
| 18 | 41.53 | 40.73 | 40.10 | 40.35 | 40.60 | 40.10 | 40.85 | 47.10 | 52.70 | 49.00 | 44.69 | 43.30 |
| 19 | 41.50 | 40.75 | 40.10 | 40.30 | 40.60 | 40.20 | 40.90 | 47.52 | 52.95 | 48.80 | 44.52 | 43.25 |
| 20 | 41.49 | 40.77 | 40.30 | 40.25 | 40.65 | 40.10 | 41.05 | 47.73 | 53.05 | 48.59 | 44.45 | 43.20 |
| 21 | 41.40 | 40.78 | 40.20 | 40.20 | 40.65 | 40.10 | 41.10 | 47.95 | 53.15 | 48.45 | 44.40 | 43.25 |
| 22 | 41.35 | 40.75 | 40.30 | 40.25 | 40.60 | 40.10 | 41.25 | 48.20 | 53.20 | 48.25 | 44.30 | 43.30 |
| 23 | 41.32 | 40.75 | 40.40 | 40.25 | 40.65 | 40.00 | 41.35 | 48.50 | 53.25 | 48.00 | 44.15 | 43.35 |
| 24 | 41.25 | 40.73 | 40.45 | 40.25 | 40.65 | 40.05 | 41.40 | 48.75 | 53.30 | 47.85 | 44.08 | 43.35 |
| 25 | 41.27 | 40.65 | 40.50 | 40.25 | 40.65 | 40.05 | 41.50 | 49.00 | 53.20 | 47.65 | 44.06 | 43.30 |
| 26 | 41.26 | 40.60 | 40.60 | 40.40 | 40.60 | 40.00 | 41.50 | 49.50 | 53.10 | 47.53 | 44.03 | 43.30 |
| 27 | 41.26 | 40.50 | 40.60 | 40.25 | 40.60 | 40.00 | 41.55 | 49.95 | 52.95 | 47.35 | 44.01 | 43.28 |
| 28 | 41.29 | 40.40 | 40.60 | 40.25 | 40.50 | 40.00 | 41.70 | 50.22 | 52.75 | 47.20 | 43.95 | 43.28 |
| 29 | 41.20 | 40.40 | 40.50 | 40.40 | - | 39.95 | 41.75 | 50.27 | 52.59 | 46.90 | 43.90 | 43.28 |
| 30 | 41.15 | 40.30 | 40.65 | 40.30 | - | 39.90 | 41.95 | 51.25 | 52.50 | 46.75 | 43.78 | 43.25 |
| 31 | 41.15 | - | 40.60 | 40.30 | - | 39.90 | - | 51.45 | - | 46.66 | 43.70 | - |

f Mean daily gage height computed on basis of records for station at Queens Bay.
 Note.- Add 1,700 feet to obtain elevation above mean sea level.

1937-38

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 43.20 | 44.59 | 44.00 | 42.40 | 41.55 | 40.50 | 41.45 | 45.39 | 58.13 | 56.75 | 47.46 | 43.44 |
| 2 | 43.28 | 44.65 | 43.85 | 42.55 | 41.48 | 40.50 | 41.45 | 45.91 | 58.39 | 56.46 | 47.26 | 43.40 |
| 3 | 43.26 | 44.70 | 43.85 | 42.55 | 41.46 | 40.55 | 41.45 | 49.40 | 58.58 | 56.12 | 47.02 | 43.33 |
| 4 | 43.36 | 44.87 | 43.75 | 42.58 | 41.35 | 40.62 | 41.46 | 49.60 | 58.70 | 55.76 | 46.81 | 43.30 |
| 5 | 43.36 | 44.90 | 43.65 | 42.50 | 41.32 | 40.56 | 41.49 | 50.11 | 58.80 | 55.37 | 46.58 | 43.28 |
| 6 | 43.55 | 44.80 | 43.60 | 42.58 | 41.30 | 40.48 | 41.49 | 50.27 | 58.85 | 55.03 | 46.40 | 43.20 |
| 7 | 43.32 | 44.70 | 43.50 | 42.55 | 41.33 | 40.46 | 41.55 | 50.30 | 58.90 | 54.67 | 46.20 | 43.16 |
| 8 | 43.33 | 44.70 | 43.47 | 42.50 | 41.30 | 40.52 | 41.58 | 50.25 | 58.72 | 54.35 | 46.05 | 43.14 |
| 9 | 43.34 | 44.73 | 43.35 | 42.45 | 41.35 | 40.45 | 41.65 | 50.16 | 58.61 | 54.02 | 45.90 | 43.10 |
| 10 | 43.31 | 44.69 | 43.30 | 42.47 | 41.32 | 40.48 | 41.75 | 50.04 | 58.51 | 53.67 | 45.69 | 43.08 |
| 11 | 43.29 | 44.65 | 43.20 | 42.40 | 41.28 | 40.45 | 41.96 | 49.91 | 58.31 | 53.30 | 45.50 | 43.05 |
| 12 | 43.28 | 44.62 | 43.17 | 42.30 | 41.26 | 40.46 | 42.07 | 49.84 | 58.11 | 52.95 | 45.34 | 42.94 |
| 13 | 43.27 | 44.55 | 43.10 | 42.15 | 41.30 | 40.48 | 42.20 | 49.85 | 57.90 | 52.60 | 45.18 | 42.89 |
| 14 | 43.25 | 44.64 | 43.05 | 42.10 | 41.28 | 40.55 | 42.35 | 49.91 | 57.72 | 52.27 | 45.02 | 42.84 |
| 15 | 43.23 | 44.60 | 43.00 | 42.25 | 41.15 | 40.62 | 42.55 | 50.03 | 57.52 | 51.94 | 44.88 | 42.80 |
| 16 | 43.24 | 44.53 | 42.88 | 42.18 | 41.10 | 40.68 | 42.65 | 50.17 | 57.39 | 51.64 | 44.79 | 42.74 |
| 17 | 43.25 | 44.40 | 42.75 | 42.15 | 41.06 | 40.72 | 42.98 | 50.34 | 57.32 | 51.34 | 44.65 | 42.73 |
| 18 | 43.26 | 44.20 | 42.70 | 42.10 | 41.03 | 40.80 | 43.45 | 50.49 | 57.29 | 51.03 | 44.56 | 42.70 |
| 19 | 43.26 | 44.10 | 42.60 | 42.05 | 40.93 | 40.98 | 44.24 | 50.58 | 57.25 | 50.75 | 44.45 | 42.66 |
| 20 | 43.28 | 44.05 | 42.53 | 42.03 | 40.91 | 41.08 | 45.03 | 50.65 | 57.21 | 50.54 | 44.34 | 42.62 |
| 21 | 43.28 | 43.90 | 42.48 | 41.98 | 40.90 | 41.17 | 45.25 | 50.77 | 57.25 | 50.25 | 44.24 | 42.63 |
| 22 | 43.36 | 43.90 | 42.40 | 41.95 | 40.83 | 41.22 | 46.20 | 50.88 | 57.33 | 49.98 | 44.17 | 42.64 |
| 23 | 43.34 | 43.80 | 42.32 | 41.93 | 40.78 | 41.25 | 46.53 | 51.35 | 57.41 | 49.74 | 44.09 | 42.69 |
| 24 | 43.32 | 43.85 | 42.25 | 41.95 | 40.75 | 41.27 | 46.75 | 51.95 | 57.52 | 49.50 | 43.97 | 42.75 |
| 25 | 43.35 | 43.90 | 42.20 | 41.93 | 40.70 | 41.25 | 46.88 | 52.79 | 57.59 | 49.19 | 43.88 | 42.84 |
| 26 | 43.42 | 43.95 | 42.25 | 41.95 | 40.67 | 41.25 | 47.05 | 53.78 | 57.60 | 48.92 | 43.79 | 42.80 |
| 27 | 43.40 | 44.00 | 42.23 | 41.95 | 40.65 | 41.30 | 47.23 | 54.79 | 57.59 | 48.66 | 43.72 | 42.84 |
| 28 | 43.50 | 44.05 | 42.25 | 41.82 | 40.57 | 41.33 | 47.42 | 55.67 | 57.45 | 48.39 | 43.64 | 42.85 |
| 29 | 43.90 | 44.00 | 42.26 | 41.70 | - | 41.35 | 47.66 | 56.45 | 57.27 | 48.14 | 43.55 | 42.80 |
| 30 | 44.10 | 44.05 | 42.30 | 41.65 | - | 41.38 | 48.09 | 57.17 | 57.03 | 47.90 | 43.52 | 42.90 |
| 31 | 44.30 | - | 42.35 | 41.57 | - | 41.34 | - | 57.73 | - | 47.65 | 43.48 | - |

f Mean daily gage height computed on basis of records for station at Queens Bay.
 Note.- Add 1,700 feet to obtain elevation above mean sea level.

KOOTENAI RIVER BASIN

Elevation, in feet, of Kootenay Lake at Kuskanook, British Columbia, 1936-42--Continued

1938-39

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|-------|-------|--------|--------|-------|-------|-------|-------|-------|--------|
| 1 | 42.96 | 43.07 | 42.70 | 41.52 | 40.45 | h38.84 | 39.38 | 44.95 | 51.21 | 49.14 | 45.58 | 45.92 |
| 2 | 43.02 | 43.07 | 42.67 | 41.54 | 40.34 | h38.84 | 39.46 | 45.51 | 51.21 | 49.23 | 45.45 | 45.88 |
| 3 | 43.04 | 43.09 | 42.65 | 41.54 | 40.26 | h38.85 | 39.64 | 46.10 | 51.08 | 49.27 | 45.30 | 45.85 |
| 4 | 43.09 | 43.12 | 42.63 | 41.59 | 40.19 | h38.82 | 39.85 | 46.70 | 50.85 | 49.33 | 45.17 | h45.82 |
| 5 | 43.11 | 43.10 | 42.63 | 41.63 | 40.12 | h38.78 | 40.04 | 47.27 | 50.64 | 49.38 | 45.04 | h45.85 |
| 6 | 43.12 | 43.08 | 42.61 | 41.61 | 40.06 | h38.76 | 40.19 | 47.72 | 50.35 | 49.36 | 44.95 | 45.95 |
| 7 | 43.09 | 43.07 | 42.61 | 41.59 | 39.92 | h38.73 | 40.32 | 48.03 | 50.09 | 49.28 | 44.75 | 45.93 |
| 8 | 42.97 | 43.04 | 42.59 | 41.54 | 39.87 | h38.70 | 40.44 | 48.20 | 49.83 | 49.18 | 44.58 | 45.93 |
| 9 | 42.95 | 43.06 | 42.56 | 41.55 | 39.77 | h38.60 | 40.52 | 48.27 | 49.57 | 49.06 | 44.45 | 45.92 |
| 10 | 42.95 | 43.10 | 42.54 | 41.49 | 39.69 | h38.58 | 40.55 | 48.25 | 49.33 | 48.90 | 44.39 | 45.89 |
| 11 | 42.98 | 43.10 | 42.51 | 41.47 | 39.69 | h38.55 | 40.56 | 48.22 | 49.12 | 48.78 | 44.36 | 45.87 |
| 12 | 43.01 | 43.09 | 42.46 | 41.39 | 39.62 | h38.56 | 40.55 | 48.18 | 48.92 | 48.68 | 44.47 | 45.82 |
| 13 | 43.04 | h43.09 | 42.36 | 41.36 | h39.50 | h38.55 | 40.56 | 48.17 | 48.84 | 48.56 | 44.63 | 45.75 |
| 14 | 43.07 | 43.12 | 42.28 | 41.32 | h39.35 | h38.51 | 40.57 | 48.25 | 48.74 | 48.43 | 44.77 | 45.70 |
| 15 | 43.12 | 43.13 | 42.19 | 41.29 | h39.40 | h38.48 | 40.63 | 48.50 | 48.62 | 48.35 | 44.88 | 45.67 |
| 16 | 43.14 | 43.17 | 42.04 | 41.21 | h39.38 | h38.45 | 40.63 | 48.92 | 48.63 | 48.25 | 44.98 | 45.66 |
| 17 | 43.14 | 43.17 | 41.98 | 41.16 | h39.33 | h38.38 | 40.70 | 49.40 | 48.61 | 48.08 | 44.81 | 45.70 |
| 18 | 43.15 | 43.14 | 41.97 | 41.10 | h39.28 | h38.36 | 40.81 | 49.85 | 48.60 | 47.85 | 45.27 | 45.72 |
| 19 | 43.15 | 43.17 | 41.96 | 41.06 | h39.24 | h38.32 | 40.95 | 50.24 | 48.60 | 47.62 | 45.32 | 45.73 |
| 20 | 43.09 | 43.17 | 41.90 | 41.05 | h39.20 | h38.32 | 41.06 | 50.49 | 48.64 | 47.43 | 45.38 | 45.72 |
| 21 | 43.08 | 43.20 | 41.86 | 40.98 | h39.18 | h38.33 | 41.24 | 50.63 | 48.69 | 47.16 | 45.47 | 45.71 |
| 22 | 43.07 | 43.16 | 41.76 | 40.92 | h39.14 | h38.36 | 41.54 | 50.72 | 48.76 | 46.92 | 45.52 | 45.70 |
| 23 | 43.05 | 43.12 | 41.74 | 40.87 | h39.08 | h38.40 | 41.56 | 50.79 | 48.85 | 46.69 | 45.59 | 45.70 |
| 24 | 43.02 | 43.07 | 41.69 | 40.82 | h39.05 | h38.49 | 42.23 | 50.77 | 48.97 | 46.49 | 45.67 | 45.69 |
| 25 | 43.02 | 43.00 | 41.68 | 40.79 | h39.00 | h38.62 | 42.61 | 50.75 | 49.05 | 46.30 | 45.75 | 45.70 |
| 26 | 43.02 | 42.93 | 41.58 | 40.73 | h39.00 | h38.79 | 42.93 | 50.69 | 49.12 | 46.15 | 45.86 | 45.72 |
| 27 | 43.03 | 42.87 | 41.55 | 40.69 | h38.95 | h38.90 | 43.18 | 50.66 | 49.12 | 46.01 | 45.93 | 45.75 |
| 28 | 43.05 | 42.83 | 41.53 | 40.62 | h38.90 | h39.02 | 43.42 | 50.65 | 49.08 | 45.94 | 45.92 | 45.75 |
| 29 | 43.04 | 42.77 | 41.47 | 40.56 | - | h39.15 | 43.78 | 50.76 | 49.06 | 45.87 | 45.90 | 45.75 |
| 30 | 43.05 | 42.75 | 41.36 | 40.58 | - | h39.25 | 44.58 | 51.01 | 49.09 | 45.77 | 45.90 | 45.72 |
| 31 | 43.06 | - | 41.40 | 40.52 | - | h39.33 | - | 51.14 | - | 45.67 | 45.93 | - |

f Mean daily gage height computed on basis of records for station at Queens Bay.
h Staff-gage reading.

Note.- Add 1,700 feet to obtain elevation above mean sea level.

1939-40

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 45.71 | 46.81 | 45.86 | 44.89 | 43.35 | 41.88 | 40.69 | 42.25 | 51.14 | 47.46 | 45.58 | 45.76 |
| 2 | 45.73 | 46.65 | 45.88 | 44.88 | 43.27 | 41.85 | 40.67 | 42.33 | 51.17 | 47.26 | 45.56 | 45.74 |
| 3 | 45.72 | 46.50 | 45.87 | 44.88 | 43.24 | 41.77 | 40.64 | 42.48 | 51.16 | 47.08 | 45.53 | 45.75 |
| 4 | 45.67 | 46.30 | 45.87 | 44.88 | 43.12 | 41.70 | 40.58 | 42.70 | 51.13 | 46.94 | 45.48 | 45.77 |
| 5 | 45.70 | 46.08 | 45.85 | 44.90 | 43.10 | 41.63 | 40.51 | 42.90 | 51.03 | 46.79 | 45.40 | 45.77 |
| 6 | 45.73 | 45.92 | 45.85 | 44.89 | 43.07 | 41.50 | 40.41 | 43.14 | 50.89 | 46.65 | 45.33 | 45.82 |
| 7 | 45.73 | 45.90 | 45.86 | 44.88 | 43.05 | 41.42 | 40.34 | 43.34 | 50.74 | 46.42 | 45.31 | 45.85 |
| 8 | 45.72 | 45.98 | 45.90 | 44.85 | 42.95 | 41.31 | 40.23 | 43.48 | 50.53 | 46.22 | 45.31 | 45.86 |
| 9 | 45.69 | 46.03 | 45.90 | 44.79 | 42.91 | 41.20 | 40.22 | 43.61 | 50.31 | 46.02 | 45.40 | 45.90 |
| 10 | 45.67 | 46.03 | 45.92 | 44.78 | 42.90 | 41.03 | 40.16 | 43.80 | 50.08 | 45.84 | 45.54 | 45.93 |
| 11 | 45.65 | 46.02 | 45.95 | 44.74 | 42.85 | 40.85 | 40.15 | 44.14 | 49.88 | 45.69 | 45.66 | 45.93 |
| 12 | 45.65 | 46.02 | 45.94 | 44.65 | 42.80 | 40.74 | 40.16 | 44.72 | 49.80 | 45.59 | 45.74 | 45.93 |
| 13 | 45.66 | 45.98 | 45.90 | 44.57 | 42.75 | 40.65 | 40.16 | 45.30 | 49.79 | 45.53 | 45.79 | 45.94 |
| 14 | 45.65 | 45.95 | 45.86 | 44.50 | 42.73 | 40.60 | 40.20 | 45.90 | 49.81 | 45.49 | 45.81 | 46.00 |
| 15 | 45.67 | 45.92 | 45.85 | 44.45 | 42.66 | 40.54 | 40.25 | 46.43 | 49.80 | 45.46 | 45.83 | 45.99 |
| 16 | 45.64 | h45.88 | 45.85 | 44.43 | 42.63 | 40.45 | 40.30 | 46.85 | 49.79 | 45.48 | 45.81 | 45.96 |
| 17 | 45.62 | h45.85 | 45.83 | 44.40 | 42.58 | 40.38 | 40.40 | 47.09 | 49.73 | 45.61 | 45.78 | 45.90 |
| 18 | 45.60 | h45.81 | 45.76 | 44.33 | 42.57 | 40.34 | 40.52 | 47.31 | 49.63 | 45.66 | 45.75 | 45.85 |
| 19 | 45.58 | h45.81 | 45.63 | 44.28 | 42.52 | 40.29 | 40.60 | 47.50 | 49.53 | 45.72 | 45.70 | 45.77 |
| 20 | 45.57 | h45.81 | 45.50 | 44.20 | 42.46 | 40.27 | 40.72 | 47.72 | 49.47 | 45.75 | 45.67 | 45.68 |
| 21 | 45.63 | h45.82 | 45.37 | 44.10 | 42.40 | 40.26 | 40.86 | 48.00 | 49.36 | 45.79 | 45.61 | 45.58 |
| 22 | 45.80 | h45.97 | 45.20 | 44.00 | 42.31 | 40.25 | 40.59 | 48.36 | 49.27 | 45.79 | 45.59 | 45.58 |
| 23 | 46.25 | h45.95 | 45.06 | 43.90 | 42.24 | 40.27 | 41.11 | 48.80 | 49.13 | 45.80 | 45.60 | 45.58 |
| 24 | 46.68 | h45.86 | 45.04 | 43.84 | 42.19 | 40.27 | 41.24 | 49.29 | 48.97 | 45.78 | 45.59 | 45.60 |
| 25 | 46.84 | h45.86 | 45.05 | 43.78 | 42.15 | 40.29 | 41.37 | 49.79 | 48.80 | 45.77 | 45.64 | 45.63 |
| 26 | 46.98 | 45.87 | 45.06 | 43.74 | 42.09 | 40.31 | 41.61 | 50.35 | 48.63 | 45.72 | 45.70 | 45.68 |
| 27 | 47.10 | 45.87 | 45.02 | 43.68 | 42.00 | 40.40 | 41.73 | 50.75 | 48.45 | 45.67 | 45.79 | 45.73 |
| 28 | 47.12 | 45.87 | 44.99 | 43.61 | 41.97 | 40.52 | 41.82 | 51.02 | 48.19 | 45.60 | 45.82 | 45.76 |
| 29 | 47.14 | 45.85 | 44.95 | 43.53 | 41.93 | 40.62 | 42.03 | 51.15 | 47.95 | 45.58 | 45.80 | 45.76 |
| 30 | 47.05 | 45.86 | 44.93 | 43.48 | - | 40.72 | 42.15 | 51.20 | 47.70 | 45.55 | 45.80 | 45.80 |
| 31 | 46.95 | - | 44.90 | 43.41 | - | 40.73 | - | 51.15 | - | 45.55 | 45.78 | - |

f Mean daily gage height computed on basis of records for station at Queens Bay.

Note.- Add 1,700 feet to obtain elevation above mean sea level.

Elevation, in feet, of Kootenay Lake at Kuskanook, British Columbia, 1936-42--Continued

1940-41

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 45.78 | 45.82 | 45.03 | 44.18 | 43.16 | 41.57 | 40.48 | 43.00 | 47.55 | 46.67 | 47.95 | 47.80 |
| 2 | 45.83 | 45.62 | 45.02 | 44.15 | 43.12 | 41.56 | 40.48 | 43.40 | 47.67 | 46.58 | 47.91 | 47.81 |
| 3 | 45.84 | 45.65 | 44.98 | 44.15 | 43.10 | 41.58 | 40.52 | 43.80 | 47.77 | 46.55 | 47.83 | 47.76 |
| 4 | 45.82 | 45.66 | 44.96 | 44.04 | 43.05 | 41.61 | 40.55 | 44.16 | 47.84 | 46.69 | 47.82 | 47.75 |
| 5 | 45.82 | 45.67 | 44.95 | 43.98 | 43.02 | 41.60 | 40.60 | 44.47 | 47.94 | 47.00 | 47.81 | 47.78 |
| 6 | 45.82 | 45.68 | 44.94 | 43.96 | 42.97 | 41.60 | 40.66 | 44.72 | 48.02 | 47.37 | 47.80 | 47.83 |
| 7 | 45.83 | 45.67 | 44.95 | 43.92 | 42.90 | 41.60 | 40.66 | 44.87 | 48.04 | 47.72 | 47.79 | 47.83 |
| 8 | 45.80 | 45.70 | 44.96 | 43.86 | 42.86 | 41.60 | 40.65 | 44.95 | 48.05 | 47.60 | 47.80 | 47.78 |
| 9 | 45.77 | 45.75 | 44.94 | 43.81 | 42.80 | 41.60 | 40.65 | 45.00 | 48.06 | 47.82 | 47.83 | 47.76 |
| 10 | 45.76 | 45.73 | 44.92 | 43.78 | 42.73 | 41.56 | 40.67 | 44.98 | 48.03 | 47.83 | 47.89 | 47.74 |
| 11 | 45.85 | 45.74 | 44.87 | 43.72 | 42.70 | 41.54 | 40.69 | 44.94 | 47.99 | 47.83 | 47.90 | 47.77 |
| 12 | 45.87 | 45.70 | 44.83 | 43.70 | 42.61 | 41.52 | 40.75 | 44.96 | 47.99 | 47.81 | 47.90 | 47.78 |
| 13 | 45.88 | 45.63 | 44.75 | 43.68 | 42.55 | 41.52 | 40.83 | 45.09 | 48.05 | 47.78 | 47.89 | 47.76 |
| 14 | 45.90 | 45.67 | 44.67 | 43.65 | 42.50 | 41.50 | 40.91 | 45.31 | 48.07 | 47.73 | 47.85 | 47.84 |
| 15 | 45.90 | 45.52 | 44.60 | 43.63 | 42.40 | 41.45 | 41.01 | 45.53 | 48.07 | 47.79 | 47.83 | 47.84 |
| 16 | 45.89 | 45.47 | 44.52 | 43.58 | 42.33 | 41.34 | 41.16 | 45.78 | 48.06 | 47.92 | 47.87 | 47.82 |
| 17 | 45.88 | 45.43 | 44.44 | 43.57 | 42.25 | 41.23 | 41.26 | 46.20 | 48.02 | 47.98 | 47.87 | 47.83 |
| 18 | 45.88 | 45.42 | 44.38 | 43.56 | 42.17 | 41.16 | 41.33 | 46.70 | 47.97 | 47.97 | 47.83 | 47.84 |
| 19 | 45.92 | 45.36 | 44.33 | 43.56 | 42.10 | 41.15 | 41.38 | 47.04 | 47.93 | 47.92 | 47.78 | 47.79 |
| 20 | 45.95 | 45.33 | 44.30 | 43.54 | 42.04 | 41.10 | 41.42 | 47.27 | 47.88 | 47.87 | 47.77 | 47.77 |
| 21 | 46.00 | 45.30 | 44.30 | 43.52 | 41.98 | 41.04 | 41.43 | 47.39 | 47.77 | 47.83 | 47.81 | 47.77 |
| 22 | 46.03 | 45.28 | 44.22 | 43.48 | 41.94 | 41.00 | 41.45 | 47.35 | 47.63 | 47.76 | 47.85 | 47.78 |
| 23 | 45.98 | 45.22 | 44.22 | 43.42 | 41.85 | 40.97 | 41.52 | 47.33 | 47.51 | 47.77 | 47.83 | 47.81 |
| 24 | 45.94 | 45.20 | 44.23 | 43.40 | 41.77 | 40.95 | 41.58 | 47.30 | 47.35 | 47.85 | 47.82 | 47.83 |
| 25 | 45.89 | 45.17 | 44.23 | 43.40 | 41.70 | 40.92 | 41.67 | 47.28 | 47.23 | 47.90 | 47.77 | 47.80 |
| 26 | 45.85 | 45.14 | 44.24 | 43.40 | 41.64 | 40.84 | 41.78 | 47.28 | 47.16 | 47.92 | 47.71 | 47.82 |
| 27 | 45.78 | 45.13 | 44.25 | 43.35 | 41.60 | 40.76 | 41.96 | 47.29 | 47.05 | 47.91 | 47.73 | 47.82 |
| 28 | 45.70 | 45.11 | 44.24 | 43.32 | 41.60 | 40.66 | 42.17 | 47.33 | 46.94 | 47.87 | 47.74 | 47.83 |
| 29 | 45.65 | 45.08 | 44.25 | 43.27 | - | 40.57 | 42.58 | 47.35 | 46.86 | 47.84 | 47.75 | 47.77 |
| 30 | 45.65 | 45.05 | 44.26 | 43.25 | - | 40.53 | 42.65 | 47.41 | 46.77 | 47.86 | 47.75 | 47.73 |
| 31 | 45.63 | - | 44.22 | 43.20 | - | 40.50 | - | 47.44 | - | 47.94 | 47.77 | - |

Note.- Add 1,700 feet to obtain elevation above mean sea level.

1941-42

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 47.74 | 47.76 | 47.77 | 47.71 | 46.37 | 43.64 | 39.91 | 43.76 | 53.07 | 51.24 | 46.63 | 46.21 |
| 2 | 47.71 | 47.77 | 47.81 | 47.70 | 46.28 | 43.57 | 39.78 | 43.77 | 52.89 | 51.51 | 46.42 | 46.30 |
| 3 | 47.71 | 47.78 | 47.94 | 47.68 | 46.20 | 43.52 | 39.71 | 43.80 | 52.71 | 51.77 | 46.22 | 46.37 |
| 4 | 47.72 | 47.77 | 48.17 | 47.67 | 46.17 | 43.38 | 39.65 | 43.78 | 52.64 | 51.97 | 46.04 | 46.44 |
| 5 | 47.72 | 47.73 | 48.16 | 47.60 | 46.08 | 43.32 | 39.62 | 43.77 | 52.64 | 52.13 | 45.85 | 46.49 |
| 6 | 47.72 | 47.67 | 48.06 | 47.53 | 45.98 | 43.24 | 39.60 | 43.77 | 52.76 | 52.27 | 45.65 | 46.53 |
| 7 | 47.76 | 47.64 | 47.85 | 47.47 | 45.88 | 43.14 | 39.60 | 43.79 | 53.00 | 52.32 | 45.47 | 46.59 |
| 8 | 47.78 | 47.67 | 47.68 | 47.40 | 45.80 | 43.05 | 39.62 | 43.84 | 53.27 | 52.30 | 45.31 | 46.66 |
| 9 | 47.72 | 47.71 | 47.67 | 47.33 | 45.75 | 42.96 | 39.65 | 43.94 | 53.47 | 52.21 | 45.15 | 46.75 |
| 10 | 47.70 | 47.75 | 47.67 | 47.27 | 45.69 | 42.84 | 39.70 | 44.26 | 53.63 | 52.02 | 45.00 | 46.80 |
| 11 | 47.70 | 47.79 | 47.72 | 47.22 | 45.62 | 42.70 | 39.77 | 44.70 | 53.69 | 51.83 | 44.91 | 46.83 |
| 12 | 47.73 | 47.82 | 47.80 | 47.20 | 45.53 | 42.59 | 39.90 | 45.14 | 53.64 | 51.61 | 44.88 | 46.85 |
| 13 | 47.76 | 47.79 | 47.77 | 47.15 | 45.43 | 42.45 | 40.08 | 45.70 | 53.47 | 51.31 | 44.75 | 46.93 |
| 14 | 47.78 | 47.81 | 47.76 | 47.10 | 45.30 | 42.30 | 40.30 | 46.34 | 53.25 | 50.99 | 44.65 | 47.00 |
| 15 | 47.77 | 47.77 | 47.76 | 47.10 | 45.20 | 42.15 | 40.61 | 46.88 | 53.11 | 50.69 | 44.68 | 47.09 |
| 16 | 47.74 | 47.77 | 47.77 | 47.08 | 45.05 | 42.02 | 40.88 | 47.30 | 53.02 | 50.37 | 44.72 | 47.18 |
| 17 | 47.73 | 47.76 | 47.73 | 47.12 | 44.97 | 41.89 | 41.12 | 47.57 | 52.87 | 50.10 | 44.76 | 47.26 |
| 18 | 47.72 | 47.77 | 47.73 | 47.08 | 44.84 | 41.75 | 41.34 | 47.73 | 52.73 | 49.86 | 44.79 | 47.31 |
| 19 | 47.73 | 47.77 | 47.77 | 47.10 | 44.70 | 41.60 | 41.55 | 47.77 | 52.56 | 49.62 | 44.80 | 47.34 |
| 20 | 47.75 | 47.78 | 47.81 | 47.06 | 44.58 | 41.43 | 41.72 | 47.77 | 52.34 | 49.38 | 44.79 | 47.40 |
| 21 | 47.76 | 47.82 | 47.78 | 47.02 | 44.46 | 41.28 | 41.91 | 47.81 | 52.06 | 49.14 | 44.82 | 47.46 |
| 22 | 47.78 | 47.83 | 47.77 | 47.03 | 44.36 | 41.14 | 42.21 | 47.87 | 51.74 | 48.88 | 44.96 | 47.50 |
| 23 | 47.79 | 47.84 | 47.79 | 46.97 | 44.26 | 41.03 | 42.55 | 48.37 | 51.42 | 49.65 | 45.15 | 47.52 |
| 24 | 47.78 | 47.83 | 47.68 | 46.94 | 44.17 | 40.91 | 42.92 | 48.94 | 51.12 | 48.36 | 45.33 | 47.55 |
| 25 | 47.77 | 47.84 | 47.65 | 47.06 | 44.07 | 40.81 | 43.26 | 49.67 | 50.88 | 48.13 | 45.41 | 47.58 |
| 26 | 47.78 | 47.83 | 47.68 | 46.85 | 43.96 | 40.67 | 43.50 | 50.56 | 50.72 | 47.90 | 45.61 | 47.59 |
| 27 | 47.77 | 47.83 | 47.73 | 46.87 | 43.85 | 40.54 | 43.64 | 51.44 | 50.62 | 47.70 | 45.75 | 47.59 |
| 28 | 47.76 | 47.79 | 47.70 | 46.83 | 43.74 | 40.42 | 43.72 | 52.17 | 50.64 | 47.47 | 45.86 | 47.60 |
| 29 | 47.74 | 47.77 | 47.72 | 46.71 | - | 40.27 | 43.75 | 52.72 | 50.79 | 47.23 | 45.96 | 47.62 |
| 30 | 47.71 | 47.76 | 47.74 | 46.55 | - | 40.15 | 43.77 | 53.02 | 50.59 | 47.02 | 46.08 | 47.63 |
| 31 | 47.71 | - | 47.72 | 46.45 | - | 40.03 | - | 53.14 | - | 46.85 | 46.16 | - |

f Mean daily gage height computed on basis of records for station at Queens Bay.
h Staff-gage reading.

Note.- Add 1,700 feet to obtain elevation above mean sea level.

Time basis: Pacific standard time.

KOOTENAI RIVER BASIN

Granite Creek near Libby, Mont.

Location.- Staff gage and concrete control, lat. $43^{\circ}18'$, long. $115^{\circ}35'$, in SE $\frac{1}{4}$ sec. 5, T. 29 N., R. 51 W., at mine of Glacier Silver Lead Mining Co., $2\frac{1}{2}$ miles upstream from Cherry Creek and 7 miles southwest of Libby.

Drainage area.- 23.6 square miles.

Records available.- January to December 1933, August 1936 to September 1942.

Extremes.- Maximum discharge during year, 965 second-feet Dec. 3 (gage height, 4.80 feet, from graph based on gage readings); minimum observed, 7.0 second-feet Sept. 25, 28-30 (gage height, 1.83 feet).

1933, 1936-42: Maximum discharge observed, 1,960 second-feet Apr. 18, 1938 (gage height, 4.40 feet, prior to construction of concrete control); no flow Jan. 4, 1933 (creek blocked by snow slide).

Remarks.- Records good except those for period of ice effect, which are fair. Some fluctuation at low flow caused by concentrating mill. Gage read once daily.

Rating tables, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Apr. 21 | | | | Apr. 22 to Sept. 30 | | | |
|-------------------|-----|-----|-----|---------------------|-----|-----|-----|
| 2.0 | 10 | 3.3 | 206 | 1.8 | 6.2 | 3.0 | 129 |
| 2.2 | 19 | 3.6 | 314 | 2.0 | 12 | 3.3 | 212 |
| 2.4 | 35 | 4.0 | 500 | 2.2 | 21 | 3.7 | 358 |
| 2.7 | 67 | 4.5 | 775 | 2.4 | 35 | 4.1 | 550 |
| 3.0 | 124 | | | 2.7 | 71 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 56 | 37 | 44 | b36 | 18 | 11 | 34 | 90 | 152 | 179 | 33 | 10 |
| 2 | 35 | 33 | 216 | b35 | 17 | 11 | 36 | 95 | 157 | 174 | 31 | 9.7 |
| 3 | 56 | 33 | 727 | b30 | 17 | 11 | 39 | 96 | 191 | 168 | 28 | 9.7 |
| 4 | 60 | 42 | 314 | b28 | 17 | 10 | 41 | 76 | 244 | 152 | 28 | 9.7 |
| 5 | 70 | 42 | 182 | b28 | 19 | 10 | 50 | 73 | 244 | 132 | 26 | 9.7 |
| 6 | 61 | 42 | 129 | b24 | 17 | 11 | 57 | 76 | 244 | 122 | 26 | 9.7 |
| 7 | 64 | 33 | 124 | b22 | 17 | 11 | 60 | 109 | 279 | 109 | 25 | 10 |
| 8 | 56 | 35 | 106 | b23 | 17 | 11 | 63 | 152 | 244 | 105 | 24 | 10 |
| 9 | 51 | 37 | 94 | b24 | 16 | 14 | 72 | 185 | 255 | 90 | 25 | 9.0 |
| 10 | 56 | 35 | 83 | b24 | 15 | 32 | 51 | 262 | 209 | 83 | 24 | 9.7 |
| 11 | 61 | 33 | 73 | b25 | 15 | 30 | 89 | 185 | 162 | 90 | 22 | 9.7 |
| 12 | 61 | 37 | 64 | b25 | 15 | 26 | 179 | 146 | 132 | 90 | 22 | 10 |
| 13 | 64 | 37 | 59 | 26 | 15 | 24 | 179 | 122 | 127 | 70 | 20 | 9.0 |
| 14 | 67 | 115 | 56 | *24 | 14 | 24 | 169 | 132 | 185 | 61 | 18 | 8.4 |
| 15 | 70 | 120 | 56 | 23 | 14 | 22 | 152 | 146 | 244 | 64 | 16 | 9.7 |
| 16 | 73 | 124 | 64 | 23 | 14 | 20 | 126 | 122 | 238 | 67 | 16 | 9.0 |
| 17 | 94 | 97 | 61 | 22 | 13 | 19 | 122 | 105 | 168 | 80 | 16 | 9.7 |
| 18 | 87 | 73 | 59 | 22 | 13 | 19 | 122 | 98 | 132 | 76 | 15 | 9.0 |
| 19 | 87 | 124 | 115 | 20 | 12 | 20 | 104 | 98 | 142 | 64 | 16 | 8.7 |
| 20 | 83 | 111 | 226 | 22 | 12 | 19 | 126 | 118 | 122 | 56 | 16 | 8.0 |
| 21 | 77 | 53 | 182 | 20 | 13 | 18 | 191 | 191 | 109 | 56 | 16 | 8.0 |
| 22 | 70 | 49 | 139 | 19 | 13 | 20 | 358 | 298 | 101 | 53 | 15 | 8.0 |
| 23 | 64 | 44 | 139 | 19 | 12 | 20 | 289 | 450 | 101 | 53 | 14 | 7.4 |
| 24 | 59 | 40 | 98 | 19 | 13 | 19 | 168 | 525 | 101 | 61 | 13 | 7.4 |
| 25 | 56 | 40 | 83 | 19 | 13 | 17 | 136 | 402 | 122 | 49 | 12 | 7.0 |
| 26 | 51 | 42 | 77 | 19 | 12 | 17 | 132 | 380 | 203 | 42 | 12 | 7.4 |
| 27 | 46 | 40 | 80 | 20 | 12 | 18 | 98 | 262 | 179 | 40 | 11 | 7.4 |
| 28 | 44 | 37 | 73 | 19 | 12 | 18 | 90 | 222 | 194 | 40 | 10 | 7.0 |
| 29 | 42 | 35 | 64 | 20 | - | 20 | 83 | 168 | 185 | 40 | 9.7 | 7.0 |
| 30 | 38 | 46 | 53 | 20 | - | 24 | 56 | 152 | 165 | 36 | 11 | 7.0 |
| 31 | 38 | - | 42 | 19 | - | 28 | - | 132 | - | 36 | 11 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Runoff | |
|--------------------|------------------|---------|---------|------|-----------------|--------|------------|
| | | | | | | Inches | Acres-feet |
| October | 1,917 | 94 | 35 | 61.8 | 2.62 | 3.02 | 3,800 |
| November | 1,656 | 124 | 33 | 55.2 | 2.34 | 2.61 | 3,280 |
| December | 3,882 | 727 | 42 | 125 | 5.30 | 6.11 | 7,700 |
| Calendar year 1941 | 22,332 | 727 | 6.8 | 61.2 | 2.69 | 35.17 | 44,290 |
| January | 715 | 36 | 19 | 23.1 | .979 | 1.13 | 1,420 |
| February | 407 | 18 | 12 | 14.5 | .614 | .64 | .807 |
| March | 574 | 32 | 10 | 18.5 | .784 | .90 | 1,140 |
| April | 3,450 | 358 | 34 | 116 | 4.92 | 5.49 | 6,900 |
| May | 5,661 | 525 | 73 | 183 | 7.75 | 8.93 | 11,230 |
| June | 5,334 | 279 | 101 | 178 | 7.54 | 8.41 | 10,580 |
| July | 2,528 | 179 | 36 | 81.5 | 3.45 | 3.98 | 5,010 |
| August | 586.7 | 33 | 9.7 | 18.9 | .601 | .92 | 1,150 |
| September | 262.0 | 10 | 7.0 | 8.73 | .370 | .41 | 520 |
| Water year 1941-42 | 27,002.7 | 727 | 7.0 | 74.0 | 3.14 | 42.56 | 53,550 |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Boulder Creek near Leonia, Idaho

Location.— Water-stage recorder, lat. 48°36', long. 116°06', in NW¼ sec. 32, T. 61 N., R. 3 E., half a mile downstream from McInty Creek, 1 mile upstream from buildings of the Idamount Lead-Zinc Mines Co., 3 miles upstream from mouth, and 3 miles southwest of Leonia.

Drainage area.— 53 square miles.

Records available.— November 1928 to September 1942. April to November 1928 at site 1½ miles downstream.

Average discharge.— 13 years (1929-42), 105 second-feet.

Extremes.— Maximum discharge during year, 2,170 second-feet Dec. 2; maximum gage height, 6.28 feet Dec. 2 (drift jam); minimum, 9 second-feet Sept. 28-30 (gage height, 0.40 foot).

1928-42: Maximum discharge, that of Dec. 2, 1941; maximum gage height, that of Dec. 2, 1941; minimum discharge, 2 second-feet Aug. 28, Sept. 5, 1931.

Remarks.— Records good except those for periods of ice effect, which are fair. No diversion or regulation.

Rating tables, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Dec. 3-6)

| Oct. 1 to Dec. 6 | | | | Dec. 7 to Sept. 30 | | | |
|------------------|-----|-----|-------|--------------------|-----|-----|-----|
| 1.2 | 48 | 2.6 | 440 | 0.4 | 9 | 1.8 | 234 |
| 1.5 | 88 | 3.0 | 630 | .7 | 28 | 2.2 | 385 |
| 1.8 | 150 | 3.5 | 890 | 1.0 | 60 | 2.6 | 560 |
| 2.2 | 272 | 4.0 | 1,170 | 1.4 | 127 | 3.0 | 760 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|------|-----|------|------|------|-------|
| 1 | 71 | 55 | 129 | 70 | 41 | 28 | 61 | 222 | 244 | 153 | 39 | 16 |
| 2 | 50 | 54 | 987 | 50 | 40 | 58 | 66 | 201 | 251 | 156 | 37 | 14 |
| 3 | 60 | 63 | 1,200 | 40 | 40 | 29 | 78 | 187 | 226 | 123 | 35 | 14 |
| 4 | 78 | 75 | 503 | 40 | 42 | 28 | 85 | 190 | 207 | 114 | 34 | 13 |
| 5 | 68 | 93 | 354 | 40 | 41 | 28 | 103 | 196 | 207 | 103 | 32 | 13 |
| 6 | 62 | 85 | 295 | 40 | 40 | 27 | 119 | 216 | 207 | 92 | 32 | 12 |
| 7 | 97 | 74 | 257 | 41 | 39 | 27 | 134 | 257 | 193 | 84 | 31 | 12 |
| 8 | 50 | 69 | 228 | 42 | 39 | 27 | 160 | 321 | 166 | 77 | 30 | 12 |
| 9 | 77 | 64 | 201 | 43 | 38 | 42 | 171 | 409 | 179 | 70 | 27 | 12 |
| 10 | 155 | 62 | 192 | 45 | 38 | 53 | 201 | 443 | 182 | 66 | 27 | 13 |
| 11 | 153 | 62 | *166 | 50 | *37 | 41 | 282 | 317 | 171 | 77 | 24 | 13 |
| 12 | 268 | 66 | 155 | 60 | 36 | 39 | 361 | 282 | 180 | 71 | 23 | 12 |
| 13 | 211 | 114 | 143 | 60 | 35 | 37 | 321 | 286 | 141 | 63 | 22 | 12 |
| 14 | 158 | 346 | 134 | 67 | 35 | 36 | 381 | 297 | 132 | 60 | 21 | 13 |
| 15 | 136 | 287 | 129 | 55 | 35 | 35 | 313 | 290 | 219 | 59 | 20 | 13 |
| 16 | 125 | 218 | 207 | 55 | 33 | 34 | 287 | 250 | 193 | 80 | 18 | 14 |
| 17 | 116 | 176 | 187 | 55 | 30 | 34 | 286 | 237 | 160 | 101 | 18 | 15 |
| 18 | 104 | 160 | 166 | 56 | 28 | 32 | 271 | 237 | 150 | 84 | 17 | 14 |
| 19 | 101 | 134 | 406 | 68 | 26 | 32 | 275 | 850 | 145 | 68 | 15 | 12 |
| 20 | 99 | 123 | 820 | 64 | 27 | 32 | 341 | 341 | 136 | 61 | 15 | 11 |
| 21 | 90 | 114 | 434 | 52 | 28 | 32 | 479 | 385 | 125 | 56 | 14 | 10 |
| 22 | 83 | 106 | 321 | 51 | 27 | 35 | 600 | 461 | 116 | 52 | 14 | 10 |
| 23 | 78 | 99 | 287 | 50 | 27 | 34 | 365 | 560 | 114 | 47 | 14 | 10 |
| 24 | 74 | 93 | 228 | 52 | 27 | 33 | 305 | 502 | 110 | 45 | 14 | 10 |
| 25 | 69 | 97 | 196 | 56 | 27 | 32 | 264 | 461 | 134 | 41 | 14 | 10 |
| 26 | 66 | 99 | 166 | 49 | 28 | 31 | 234 | 524 | 176 | 41 | 14 | 10 |
| 27 | 63 | 92 | 140 | 47 | 28 | 32 | 213 | 470 | 187 | 40 | 15 | 9 |
| 28 | 63 | 86 | 120 | 47 | 28 | 32 | 204 | 341 | 228 | 50 | 14 | 9 |
| 29 | 59 | 85 | 180 | 45 | - | 34 | 207 | 297 | 196 | 45 | 14 | 9 |
| 30 | 56 | 108 | 120 | 44 | - | 39 | 222 | 275 | 171 | 46 | 15 | 9 |
| 31 | 55 | - | 100 | 41 | - | 47 | - | 254 | - | 41 | 18 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 3,025 | 268 | 50 | 97.6 | 1.84 | 2.12 | 6,000 |
| November..... | 3,349 | 346 | 64 | 112 | 2.11 | 2.35 | 6,640 |
| December..... | 9,051 | 1,200 | 100 | 291 | 5.49 | 6.34 | 17,910 |
| Calendar year 1941..... | 36,482 | 1,200 | 8 | 100 | 1.89 | 25.58 | 72,350 |
| January..... | 1,545 | 70 | 40 | 49.8 | .940 | 1.08 | 3,060 |
| February..... | 937 | 42 | 26 | 33.5 | .632 | .66 | 1,660 |
| March..... | 1,052 | 53 | 27 | 33.9 | .640 | .74 | 2,090 |
| April..... | 7,354 | 600 | 61 | 245 | 4.62 | 5.16 | 14,590 |
| May..... | 9,959 | 860 | 187 | 321 | 5.06 | 6.99 | 19,750 |
| June..... | 5,195 | 244 | 110 | 173 | 3.28 | 3.65 | 10,300 |
| July..... | 2,246 | 153 | 40 | 72.6 | 1.37 | 1.58 | 4,450 |
| August..... | 677 | 39 | 14 | 21.8 | .411 | .48 | 1,340 |
| September..... | 356 | 16 | 9 | 11.9 | .225 | .25 | 706 |
| Water year 1941-42..... | 44,726 | 1,200 | 9 | 123 | 2.32 | 31.40 | 88,700 |

* Winter discharge measurement made on this day.

Note.— Stage-discharge relation affected by ice Dec. 27 to Jan. 24, Feb. 17-28 (no gage-height record Dec. 27 to Jan. 14, Jan. 16-24); discharge computed on basis of weather records, records for nearby streams, and discharge measurement of Jan. 15.

KOOTENAI RIVER BASIN

Moyle River at Eastport, Idaho
(International gaging station)

Location.- Water-stage recorder, lat. 49°00', long. 116°11', in SE¼ sec. 10, T. 65 N., R. 2 E., at Eastport, 1,000 feet downstream from international boundary.

Drainage area.- 570 square miles.

Records available.- August 1929 to September 1942 in reports of Geological Survey.

January to December 1915, March to December 1916, and discharge measurements during 1914 and 1917 in reports of the Dominion Water and Power Bureau, Department of Mines and Resources, Canada.

Average discharge.- 13 years, 609 second-feet.

Extremes.- Maximum discharge during year, 5,680 second-feet May 27 (gauge height, 8.74 feet), from rating curve extended above 4,500 second-feet; minimum, 104 second-feet Sept. 30 (gauge height, 3.68 feet).

1929-42: Maximum discharge, 6,240 second-feet Apr. 23, 1934 (gauge height, 9.46 feet), from rating curve extended above 5,500 second-feet; minimum, 23 second-feet Nov. 7, 1936 (gauge height, 3.20 feet).

Remarks.- Records excellent except those for periods of ice effect or no gauge-height record, which are fair. No regulation or diversion above station.

Cooperation.- This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table, water year 1941-42, except periods of ice effect (gauge height, in feet, and discharge, in second-feet).
(Shifting-control method used Jan. 18, 19, Jan. 25 to Feb. 15, 23, Mar. 1 to Apr. 11, Aug. 16 to Sept. 30)

| | | | | | |
|-----|-----|-----|-------|-----|-------|
| 3.6 | 86 | 5.2 | 919 | 7.0 | 2,960 |
| 4.0 | 205 | 5.6 | 1,300 | 7.5 | 3,680 |
| 4.4 | 379 | 6.0 | 1,720 | 8.0 | 4,450 |
| 4.8 | 615 | 6.5 | 2,300 | 8.8 | 5,760 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|--------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 395 | 406 | 421 | 300 | 224 | 152 | 354 | 1,350 | 2,890 | 2,560 | 400 | 146 |
| 2 | 279 | 395 | 370 | 220 | 220 | 152 | 390 | 1,350 | 2,690 | 2,240 | 390 | 140 |
| 3 | 374 | 395 | 3,100 | 180 | 220 | 156 | 483 | 1,350 | 2,760 | 2,000 | 364 | 137 |
| 4 | 379 | 400 | 2,160 | 180 | 224 | 145 | 589 | 1,300 | 4,210 | 1,750 | 345 | 134 |
| 5 | 369 | 427 | 1,780 | 180 | 224 | 152 | 706 | 1,240 | 4,450 | 1,610 | 330 | 129 |
| 6 | 354 | 449 | *, 610 | 180 | 216 | 149 | 853 | 1,220 | 3,980 | 1,400 | 330 | 126 |
| 7 | 369 | 427 | 1,400 | 185 | 209 | 146 | 894 | 1,260 | 3,600 | 1,270 | 321 | 123 |
| 8 | 364 | 416 | 1,300 | 190 | *202 | 146 | 911 | 1,400 | 3,240 | 1,130 | 308 | 123 |
| 9 | 364 | 395 | 1,190 | 195 | 198 | 165 | 1,020 | 1,660 | 2,960 | 1,020 | 298 | 126 |
| 10 | 432 | 384 | 1,070 | 200 | 195 | 195 | 1,150 | 2,560 | 2,820 | 919 | 285 | 132 |
| 11 | 495 | 374 | 998 | 250 | 191 | 178 | 1,500 | 2,690 | 2,620 | 954 | 272 | 123 |
| 12 | 622 | 369 | 902 | 320 | 188 | 178 | 1,780 | 2,820 | 2,360 | 998 | 256 | 118 |
| 13 | 670 | 390 | 828 | 320 | 185 | *174 | 1,780 | 3,310 | 2,120 | 902 | 251 | 118 |
| 14 | 629 | 608 | 789 | 300 | 181 | 171 | 2,240 | 3,310 | 1,940 | 820 | 243 | 126 |
| 15 | 608 | 670 | 751 | 290 | 178 | 171 | 2,000 | 3,380 | 2,000 | 774 | 235 | 123 |
| 16 | 596 | 677 | 836 | 280 | 170 | 168 | 1,720 | 2,760 | 2,000 | 743 | 224 | 120 |
| 17 | 589 | 658 | 844 | 280 | 150 | 168 | 1,780 | 2,560 | 2,060 | 751 | 213 | 129 |
| 18 | 578 | 608 | 781 | 290 | 140 | 168 | 1,720 | 2,300 | 1,880 | 774 | 202 | 132 |
| 19 | 570 | 566 | 878 | *290 | 145 | 165 | 1,660 | 2,190 | 1,780 | 706 | 195 | 129 |
| 20 | 596 | 520 | 1,450 | 270 | 150 | 165 | 1,830 | 2,120 | 1,660 | 656 | 188 | 126 |
| 21 | 582 | 501 | 1,350 | 250 | 150 | 171 | 2,240 | 2,240 | 1,610 | 608 | 181 | 120 |
| 22 | 563 | 449 | 1,140 | 250 | 150 | 191 | 2,620 | 2,620 | 1,500 | 583 | 174 | 120 |
| 23 | 544 | 458 | 1,040 | 255 | 149 | 188 | 2,240 | 3,310 | 1,400 | 532 | 166 | 118 |
| 24 | 526 | 416 | 928 | 260 | al50 | 185 | 2,000 | 2,680 | 1,400 | 501 | 165 | 118 |
| 25 | 513 | 411 | 820 | 251 | al50 | 178 | 1,630 | 4,130 | 1,610 | 472 | 159 | 115 |
| 26 | 489 | 400 | 728 | 247 | al50 | 174 | 1,720 | 5,090 | 2,620 | 460 | 156 | 115 |
| 27 | 472 | 390 | 650 | 243 | al50 | 174 | 1,610 | 5,420 | 3,240 | 443 | 152 | 115 |
| 28 | 466 | 384 | 600 | 251 | al50 | 181 | 1,500 | 4,690 | 3,900 | 427 | 149 | 112 |
| 29 | 449 | 379 | 620 | 243 | - | 195 | 1,400 | 4,210 | 3,360 | 443 | 146 | 109 |
| 30 | 427 | 395 | 580 | 232 | - | 224 | 1,350 | 3,600 | 2,890 | 443 | 146 | 107 |
| 31 | 416 | - | 500 | 268 | - | 285 | - | 3,170 | - | 427 | 156 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off Inches | Run-off Acres-foot |
|-------------------------|------------------|---------|---------|-------|-----------------|-------------------|-----------------------|
| October..... | 15,177 | 670 | 354 | 490 | 0.860 | 0.99 | 30,100 |
| November..... | 13,665 | 677 | 369 | 456 | .800 | .89 | 27,140 |
| December..... | 32,934 | 3,100 | 421 | 1,062 | 1.86 | 2.15 | 65,320 |
| Calendar year 1941..... | 195,884 | 3,100 | 68 | 537 | .942 | 12.76 | 388,500 |
| January..... | 7,650 | 320 | 180 | 247 | .433 | .50 | 15,170 |
| February..... | 5,009 | 224 | 140 | 179 | .314 | .33 | 9,940 |
| March..... | 5,414 | 285 | 146 | 175 | .307 | .35 | 10,740 |
| April..... | 43,870 | 2,620 | 354 | 1,462 | 2.56 | 2.86 | 87,010 |
| May..... | 64,280 | 5,420 | 1,220 | 2,719 | 4.77 | 5.50 | 167,200 |
| June..... | 77,570 | 4,450 | 1,400 | 2,586 | 4.54 | 5.06 | 153,900 |
| July..... | 29,326 | 2,560 | 427 | 946 | 1.66 | 1.91 | 58,170 |
| August..... | 7,402 | 400 | 146 | 239 | .419 | .48 | 14,680 |
| September..... | 3,709 | 146 | 107 | 124 | .218 | .24 | 7,360 |
| Water year 1941-42..... | 326,026 | 5,420 | 107 | 893 | 1.57 | 21.26 | 646,700 |

* Winter discharge measurement made on this day.

a No gauge-height record; discharge computed on basis of weather records, records for nearby streams, and records for station at Elisen.

Note.- Stage-discharge relation affected by ice Dec. 27 to Jan. 17, Jan. 20-24, Feb. 16-22 (no gauge-height record Feb. 18-21).

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Moyie River at Eileen, Idaho

Location.-- Water-stage recorder, lat. 48°46', long. 116°10', in NE¼ sec. 35, T. 63 N., R. 2 E., an eighth of a mile downstream from Skin Creek, a quarter of a mile southeast of Eileen, and 4 miles upstream from mouth.

Drainage area.-- 755 square miles.

Records available.-- October 1925 to September 1942.

Average discharge.-- 17 years, 773 second-feet.

Extremes.-- Maximum discharge during year, 6,320 second-feet May 27 (gage-height, 4.23 feet); minimum, 152 second-feet Sept. 30.
1925-42: Maximum discharge, 8,780 second-feet Apr. 29, 1934, from rating curve extended above 6,500 second-feet; maximum gage height, 4.8 feet May 17, June 10, 11, 1927, May 13, 17-19, 1928; minimum discharge, 40 second-feet Nov. 27, 1936; minimum gage height, -0.40 foot Sept. 4, 1940.

Remarks.-- Records good except those for periods of ice effect or no gage-height record, which are fair. No diversion or regulation above station.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|------|--------|------------------|---------|---------|-------|-----------------|---------|------------|------|-------|
| 1 | 508 | 551 | 592 | 450 | 332 | 235 | 480 | 1,680 | 3,560 | 3,120 | 535 | 212 |
| 2 | 497 | 529 | 995 | 320 | 322 | 235 | 580 | 1,680 | 3,310 | 2,770 | 519 | 202 |
| 3 | 482 | 540 | 3,670 | 270 | 322 | 240 | 700 | 1,670 | 3,220 | 2,490 | 492 | 194 |
| 4 | 497 | 551 | 2,850 | 270 | 344 | 230 | 800 | 1,610 | 4,460 | 2,220 | 463 | 192 |
| 5 | 482 | 569 | 2,320 | 270 | 344 | 230 | 1,000 | 1,560 | 4,860 | 1,990 | 448 | 184 |
| 6 | 468 | 604 | *2,090 | 270 | 329 | 230 | 1,200 | 1,530 | 4,430 | 1,770 | 439 | 179 |
| 7 | 497 | 586 | 1,840 | 270 | 329 | 225 | 1,250 | 1,570 | 4,120 | 1,600 | 430 | 174 |
| 8 | 497 | 569 | 1,670 | 285 | 305 | 230 | 1,300 | 1,740 | 3,720 | 1,440 | 412 | 172 |
| 9 | 487 | 551 | 1,540 | 290 | 294 | 250 | 1,450 | 2,090 | 3,470 | 1,300 | 399 | 172 |
| 10 | 575 | 529 | 1,400 | 300 | 291 | 300 | 1,700 | 3,070 | 3,310 | 1,190 | 378 | 184 |
| 11 | 741 | 519 | 1,320 | 350 | 285 | 270 | 2,150 | 3,240 | 3,120 | 1,190 | 362 | 182 |
| 12 | 375 | 513 | 1,210 | 500 | *279 | 270 | 2,450 | 3,380 | 2,530 | 1,270 | 347 | 172 |
| 13 | 1,000 | 540 | 1,110 | 500 | 276 | *269 | 2,500 | 3,940 | 2,560 | 1,140 | 332 | 172 |
| 14 | 911 | 797 | 1,060 | 450 | 270 | 260 | 2,800 | 3,940 | 2,370 | 1,050 | 329 | 177 |
| 15 | 875 | 902 | 1,010 | 400 | 260 | 260 | 2,400 | 3,970 | 2,440 | 990 | 315 | 177 |
| 16 | 848 | 940 | 1,120 | 380 | 240 | 251 | 2,200 | 3,540 | 2,510 | 970 | 305 | 172 |
| 17 | 822 | 911 | 1,180 | 380 | 220 | 248 | 2,200 | 3,200 | 2,510 | 980 | 294 | 186 |
| 18 | 797 | 857 | 1,100 | 390 | 210 | 251 | 2,140 | 2,910 | 2,320 | 920 | 282 | 169 |
| 19 | 769 | 797 | 1,200 | *399 | 215 | 246 | 2,060 | 2,710 | 2,170 | 911 | 269 | 164 |
| 20 | 614 | 741 | 2,110 | 365 | 220 | 243 | 2,270 | 2,620 | 2,030 | 848 | 257 | 177 |
| 21 | 797 | 719 | 2,030 | 350 | 220 | 251 | 2,700 | 2,770 | 1,990 | 797 | 251 | 172 |
| 22 | 764 | 662 | 1,710 | 340 | 220 | 282 | 3,140 | 3,160 | 1,860 | 741 | 245 | 170 |
| 23 | 741 | 636 | 1,560 | 355 | 220 | 288 | 2,770 | 3,750 | 1,750 | 697 | 234 | 168 |
| 24 | 712 | 616 | 1,380 | 380 | 225 | 276 | 2,470 | 4,290 | 1,720 | 656 | 228 | 165 |
| 25 | 662 | 604 | 1,240 | 373 | 225 | 266 | 2,270 | 4,800 | 1,840 | 625 | 220 | 163 |
| 26 | 656 | 586 | 1,040 | 370 | 225 | 257 | 2,110 | 5,690 | 3,030 | 604 | 215 | 161 |
| 27 | 636 | 580 | 950 | 366 | 225 | 257 | 1,980 | 6,150 | 3,720 | 586 | 219 | 158 |
| 28 | 623 | 263 | 902 | 366 | 230 | 260 | 1,560 | 5,500 | 4,520 | 575 | 212 | 156 |
| 29 | 610 | 557 | 970 | 358 | - | 280 | 1,770 | 4,930 | 3,990 | 586 | 209 | 154 |
| 30 | 580 | 563 | 884 | 347 | - | 320 | 1,700 | 4,350 | 3,540 | 580 | 209 | 152 |
| 31 | 563 | - | 726 | 325 | - | 380 | - | 3,840 | - | 569 | 220 | - |
| | | | | | | | | | | | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | | | |
| | | | | | | | | | Inches | Acres-feet | | |
| October..... | | | | 20,626 | 1,000 | 468 | 672 | 0.890 | 1.03 | 41,310 | | |
| November..... | | | | 19,182 | 940 | 513 | 639 | .846 | .94 | 38,050 | | |
| December..... | | | | 44,779 | 3,670 | 592 | 1,444 | 1.91 | 2.21 | 88,820 | | |
| Calendar year 1941..... | | | | 256,441 | 3,670 | 104 | 703 | .931 | 12.65 | 508,700 | | |
| January..... | | | | 11,054 | 500 | 270 | 357 | .473 | .54 | 21,930 | | |
| February..... | | | | 7,459 | 344 | 210 | 266 | .362 | .37 | 14,790 | | |
| March..... | | | | 8,090 | 380 | 225 | 261 | .346 | .40 | 16,050 | | |
| April..... | | | | 56,400 | 3,140 | 480 | 1,880 | 2.49 | 2.73 | 111,900 | | |
| May..... | | | | 100,880 | 6,150 | 1,530 | 3,284 | 4.31 | 4.97 | 200,100 | | |
| June..... | | | | 91,220 | 4,360 | 1,720 | 3,043 | 4.03 | 4.50 | 181,100 | | |
| July..... | | | | 37,233 | 3,120 | 569 | 1,201 | 1.59 | 1.83 | 75,850 | | |
| August..... | | | | 10,066 | 535 | 209 | 325 | .430 | .50 | 19,970 | | |
| September..... | | | | 5,272 | 212 | 152 | 176 | .233 | .26 | 10,460 | | |
| Water year 1941-42..... | | | | 412,521 | 6,150 | 152 | 1,130 | 1.50 | 20.33 | 818,500 | | |

* Winter discharge measurement made on this day.

Note.-- No gage-height record Jan. 1-18, Feb. 14 to Mar. 12, Mar. 28 to Apr. 14; discharge computed on basis of weather records and records for Moyie River at Eastport and nearby streams. Stage-discharge relation affected by ice Jan. 19-24 and probably during periods of no gage-height record Jan. 1-18, Feb. 14-28.

Time basis.-- Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Deep Creek at Moravia, Idaho

Location.- Staff gage, lat. 48°38', long. 116°24', in sec. 18, T. 61 N., R. 1 E., at concrete highway bridge, 1 mile downstream from Ruby Creek and 1 mile southwest of Moravia.

Drainage area.- 133 square miles.

Records available.- May 1928 to September 1942 (no winter records prior to 1933).

Average discharge.- 10 years (1932-42), 132 second-feet.

Extremes.- Maximum discharge observed during year, 921 second-feet Dec. 20; maximum gage height observed, 4.20 feet Jan. 5 (ice effect); minimum discharge observed, 14 second-feet Sept. 29 (gage height, 0.24 foot).

1928-42: Maximum discharge observed, 1,300 second-feet Dec. 22, 1933; maximum gage height observed, 4.20 feet Dec. 22, 1933, Apr. 18, 1938, Jan. 5, 1942 (ice effect); minimum discharge observed, 5 second-feet Aug. 14, 22, 1940; minimum gage height observed, 0.00 foot Aug. 22, 1940.

Remarks.- Records fair except those for periods of ice effect, which are poor. Staff gage read once daily. Small diversion above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 60 | 57 | 111 | b150 | 86 | 59 | 146 | 194 | 253 | 185 | 49 | 19 |
| 2 | 47 | 60 | 390 | b100 | 86 | 63 | 171 | 190 | 252 | 163 | 35 | 19 |
| 3 | 51 | 70 | *702 | b70 | 85 | 74 | 185 | 190 | 232 | 141 | 40 | 18 |
| 4 | 67 | 84 | 428 | b70 | 137 | 71 | 185 | 180 | 223 | 141 | 39 | 18 |
| 5 | 62 | 84 | 351 | b70 | 168 | 74 | 194 | 176 | 213 | 155 | 26 | 17 |
| 6 | 53 | 81 | 309 | b70 | 125 | 68 | 208 | 176 | 213 | 113 | 55 | 16 |
| 7 | 57 | 70 | 271 | b72 | 105 | 68 | 213 | 176 | 232 | 102 | 34 | 16 |
| 8 | 60 | 67 | 250 | b74 | 95 | 68 | 218 | 185 | 203 | 92 | 39 | 18 |
| 9 | 61 | 67 | 245 | b76 | 95 | 101 | 223 | 208 | 248 | 84 | 29 | 17 |
| 10 | 94 | 67 | 211 | b80 | 89 | 117 | 232 | 253 | 223 | 86 | 29 | 18 |
| 11 | 104 | 67 | 201 | b90 | 89 | 102 | 317 | 273 | 213 | 92 | 26 | 18 |
| 12 | 111 | 70 | 187 | b100 | *84 | 95 | 300 | 281 | 190 | 86 | 24 | 18 |
| 13 | 104 | 80 | 176 | b100 | 84 | 92 | 387 | 279 | 180 | 73 | 23 | 17 |
| 14 | 94 | 225 | 169 | b95 | 81 | 86 | 399 | 273 | 165 | 71 | 23 | 17 |
| 15 | 64 | 215 | 169 | b90 | 81 | 86 | 328 | 253 | 185 | 71 | 23 | 17 |
| 16 | 80 | 196 | 314 | *b88 | 74 | *83 | 328 | 242 | 235 | 89 | 22 | 17 |
| 17 | 73 | 187 | 287 | b88 | b70 | 84 | 317 | 228 | 166 | 92 | 23 | 22 |
| 18 | 73 | 176 | 266 | b90 | b65 | 85 | 328 | 223 | 156 | 86 | 25 | 20 |
| 19 | 70 | 135 | 487 | b92 | b60 | 83 | 317 | 228 | 156 | 73 | 22 | 19 |
| 20 | 73 | 125 | 921 | b85 | b62 | 83 | 311 | 213 | 148 | 63 | 20 | 17 |
| 21 | 70 | 119 | 658 | b86 | b65 | 80 | 328 | 218 | 141 | 59 | 20 | 16 |
| 22 | 67 | 111 | 490 | b84 | b65 | 80 | 304 | 253 | 137 | 52 | 20 | 16 |
| 23 | 70 | 104 | 429 | b82 | b65 | 80 | 258 | 405 | 129 | 50 | 19 | 16 |
| 24 | 62 | 101 | 366 | 83 | b65 | 83 | 248 | 325 | 141 | 48 | 19 | 18 |
| 25 | 60 | 108 | 317 | 92 | 68 | 83 | 238 | 354 | 208 | 50 | 18 | 16 |
| 26 | 60 | 108 | 253 | 94 | 68 | 83 | 213 | 435 | 295 | 48 | 18 | 16 |
| 27 | 60 | 102 | 238 | 92 | 61 | 67 | 208 | 435 | 287 | 52 | 18 | 17 |
| 28 | 65 | 99 | b210 | 89 | 59 | 83 | 203 | 369 | 284 | 66 | 18 | 18 |
| 29 | 67 | 99 | b220 | 106 | - | 87 | 199 | 334 | 238 | 55 | 19 | 14 |
| 30 | 59 | 111 | b210 | 102 | - | 89 | 190 | 290 | 206 | 68 | 19 | 15 |
| 31 | 57 | - | b190 | 102 | - | 102 | - | 263 | - | 53 | 24 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-foot |
| October..... | 2,175 | 111 | 47 | 70.2 | 0.528 | 0.61 | 4,310 |
| November..... | 3,245 | 225 | 57 | 108 | .812 | .91 | 6,440 |
| December..... | 10,004 | 921 | 111 | 323 | 2.43 | 2.80 | 19,840 |
| Calendar year 1941..... | 40,927 | 921 | 9 | 112 | .642 | 11.46 | 81,180 |
| January..... | 2,765 | 150 | 70 | 89.2 | .671 | .77 | 5,480 |
| February..... | 2,326 | 158 | 59 | 83.1 | .625 | .65 | 4,610 |
| March..... | 2,577 | 117 | 59 | 83.1 | .625 | .72 | 5,110 |
| April..... | 7,696 | 399 | 146 | 257 | 1.93 | 2.15 | 15,260 |
| May..... | 8,085 | 435 | 176 | 261 | 1.96 | 2.26 | 16,040 |
| June..... | 6,122 | 295 | 129 | 204 | 1.53 | 1.71 | 12,140 |
| July..... | 2,635 | 155 | 48 | 85.0 | .639 | .74 | 5,230 |
| August..... | 796 | 49 | 16 | 25.7 | .193 | .22 | 1,580 |
| September..... | 518 | 22 | 14 | 17.3 | .130 | .14 | 1,030 |
| Water year 1941-42..... | 48,944 | 921 | 14 | 134 | 1.01 | 13.68 | 97,070 |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Long Canyon Creek near Port Hill, Idaho

Location.- Water-stage recorder, lat. 48°57', long. 116°32', in NW¼ sec. 36, T. 65 N., R. 2 W., at U. S. Forest Service bridge at mouth of canyon, 4 miles southwest of Port Hill.

Drainage area.- 29 square miles.

Records available.- May 1928 to September 1942 (no winter records prior to 1935).

Extremes.- Maximum discharge during year, 568 second-feet May 25 (gage height, 4.71 feet); minimum, 6 second-feet Mar. 26; minimum gage height, 1.56 feet Sept. 30.

1928-42: Maximum daily discharge, 950 second-feet (estimated) June 15, 1933; maximum gage height, 8.55 feet, present datum June 14, 15, 1933 (drift jam); minimum discharge, 3 second-feet Nov. 1-3, 28, Dec. 4-10, 1936, Jan. 6-8, 1937, Dec. 13, 1940; minimum gage height, that of Sept. 30, 1942.

Remarks.- Records good except those for periods of ice effect, which are poor. No diversion above gage.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 50 | 49 | 48 | b28 | 21 | 13 | 19 | 65 | 207 | 156 | 32 | 13 |
| 2 | 44 | 48 | 202 | b22 | 21 | 13 | 21 | 81 | 211 | 145 | 30 | 12 |
| 3 | 52 | 48 | 315 | b20 | 21 | 13 | 23 | 79 | 234 | 134 | 28 | 12 |
| 4 | 53 | 49 | 211 | b20 | 22 | 13 | 25 | 76 | 217 | 120 | 27 | 11 |
| 5 | 48 | 51 | 174 | b20 | 21 | 13 | 28 | 75 | 221 | 106 | 30 | 11 |
| 6 | 47 | 48 | 152 | b20 | 20 | 12 | 32 | 80 | 256 | 94 | 30 | 10 |
| 7 | 50 | 46 | 131 | b20 | 20 | 12 | 32 | 90 | 286 | 87 | 27 | 10 |
| 8 | 48 | 44 | 116 | b20 | 19 | 12 | 33 | 111 | 215 | 80 | 25 | 10 |
| 9 | 48 | 43 | *104 | b21 | 18 | 15 | 35 | 152 | 209 | 72 | 23 | 10 |
| 10 | 75 | 42 | 95 | b22 | 18 | 18 | 39 | 199 | 186 | 67 | 22 | 12 |
| 11 | 71 | 42 | 90 | b25 | 18 | 15 | 50 | 178 | 156 | 77 | 21 | 11 |
| 12 | 113 | 42 | 85 | b30 | 18 | 15 | 62 | 176 | 140 | 72 | 19 | 10 |
| 13 | 100 | 58 | 78 | b30 | *16 | 15 | 64 | 172 | 139 | 61 | 19 | 10 |
| 14 | 95 | 103 | 74 | b27 | 18 | *14 | 71 | 171 | 144 | 55 | 18 | 10 |
| 15 | 85 | 76 | 71 | b25 | 18 | 13 | 67 | 168 | 147 | 54 | 18 | 10 |
| 16 | 84 | 68 | 82 | b25 | 16 | 12 | 63 | 144 | 199 | 57 | 17 | 10 |
| 17 | 78 | 65 | 75 | b25 | 12 | 12 | 65 | 136 | 156 | 64 | 16 | 13 |
| 18 | 72 | 60 | 69 | b25 | b14 | 12 | 64 | 129 | 140 | 65 | 16 | 12 |
| 19 | 70 | 58 | 90 | b28 | b14 | 12 | 66 | 132 | 152 | 52 | 15 | 11 |
| 20 | 73 | 57 | 120 | b24 | b14 | 12 | 80 | 156 | 119 | 47 | 14 | 11 |
| 21 | 73 | 55 | 94 | *b23 | b14 | 12 | 119 | 221 | 110 | 44 | 14 | 10 |
| 22 | 71 | 50 | 85 | b23 | b14 | 13 | 148 | 322 | 108 | 42 | 14 | 10 |
| 23 | 70 | 51 | 80 | b23 | 14 | 13 | 125 | 445 | 108 | 40 | 13 | 9 |
| 24 | 68 | 49 | 74 | b23 | 13 | 13 | 112 | 445 | 125 | 35 | 13 | 9 |
| 25 | 66 | 48 | 86 | b23 | 13 | 12 | 102 | 457 | 163 | 37 | 13 | 9 |
| 26 | 63 | 47 | 60 | 24 | 13 | 11 | 94 | 430 | 195 | 38 | 13 | 9 |
| 27 | 60 | 50 | 53 | 24 | 13 | 11 | 89 | 354 | 189 | 35 | 13 | 9 |
| 28 | 59 | 44 | b50 | 24 | 13 | 11 | 85 | 300 | 193 | 37 | 13 | 9 |
| 29 | 55 | 44 | b52 | 23 | - | 12 | 84 | 260 | 185 | 36 | 13 | 9 |
| 30 | 53 | 48 | b50 | 22 | - | 13 | 84 | 225 | 171 | 38 | 12 | 8 |
| 31 | 51 | - | b35 | 21 | - | 16 | - | 209 | - | 34 | 14 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|-----------|
| | | | | | | Inches | Acre-feet |
| October..... | 2,045 | 113 | 44 | 65.0 | 2.28 | 2.62 | 4,060 |
| November..... | 1,583 | 103 | 42 | 52.8 | 1.82 | 2.03 | 3,140 |
| December..... | 3,072 | 315 | 35 | 99.1 | 3.42 | 3.94 | 6,090 |
| Calendar year 1941..... | 20,678 | 427 | 5 | 57.2 | 1.97 | 26.80 | 41,420 |
| January..... | 727 | 30 | 20 | 23.5 | .810 | .93 | 1,440 |
| February..... | 466 | 22 | 12 | 16.6 | .572 | .60 | 924 |
| March..... | 403 | 18 | 11 | 13.0 | .448 | .52 | 799 |
| April..... | 1,984 | 148 | 19 | 66.1 | 2.28 | 2.54 | 3,940 |
| May..... | 6,259 | 457 | 75 | 202 | 6.97 | 6.02 | 12,410 |
| June..... | 5,280 | 286 | 106 | 175 | 6.03 | 6.74 | 10,430 |
| July..... | 2,081 | 156 | 34 | 67.1 | 2.31 | 2.67 | 4,130 |
| August..... | 592 | 32 | 12 | 19.1 | .659 | .76 | 1,170 |
| September..... | 310 | 13 | 8 | 10.3 | .355 | .40 | 615 |
| Water year 1941-42..... | 24,782 | 457 | 8 | 67.9 | 2.34 | 31.77 | 49,150 |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Smith Creek near Port Hill, Idaho

Location.- Water-stage recorder, lat. 48°57'40", long. 116°33'20", in NE¼ sec. 26, T. 65 N., R. 2 W., at U. S. Forest Service bridge, 1 mile south of Smith Creek ranger station and 4 miles southwest of Port Hill.

Drainage area.- 70 square miles.

Records available.- May 1928 to September 1942 (no winter records 1928-30, 1932-34).

Average discharge.- 10 years (1930-32, 1934-42), 160 second-feet.

Extremes.- Maximum discharge during year, 2,750 second-feet Dec. 2 (gage height, 7.00 feet), from rating curve extended above 1,600 second-feet; minimum, 12 second-feet Sept. 30 (gage height, 1.17 feet).

1928-42: Maximum discharge, 3,150 second-feet May 17, 1941 (gage height, 7.36 feet), from rating curve extended above 1,600 second-feet; minimum, 4 second-feet Dec. 4-10, 1936; minimum gage height, 0.78 foot Sept. 4, 1931.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. No diversion above gage.

Rating tables, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 25

Feb. 1 to Sept. 30

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-------|-----|----|-----|-----|
| 2.3 | 101 | 3.5 | 370 | 4.9 | 1,020 | 1.1 | 10 | 2.4 | 114 |
| 2.6 | 146 | 3.8 | 475 | 5.3 | 1,290 | 1.4 | 20 | 2.8 | 185 |
| 2.9 | 207 | 4.1 | 800 | 5.7 | 1,580 | 1.7 | 39 | 3.2 | 281 |
| 3.2 | 281 | 4.5 | 790 | | | 2.0 | 67 | | |

Note.- Same as preceding table above 3.2 feet.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|------|-------|------|------|------|-------|
| 1 | 169 | 117 | 169 | 100 | 54 | 41 | 53 | 303 | 592 | 545 | 86 | 22 |
| 2 | 134 | 111 | 1,070 | 90 | 54 | 45 | 61 | 276 | 595 | 512 | 80 | 20 |
| 3 | 200 | 116 | 1,400 | 70 | 53 | 42 | 66 | 260 | 618 | 281 | 72 | 19 |
| 4 | 207 | 138 | 627 | 55 | 53 | 41 | 72 | 250 | 560 | 250 | 67 | 18 |
| 5 | 165 | 167 | 483 | 55 | 52 | 29 | 84 | 252 | 551 | 216 | 63 | 17 |
| 6 | 148 | 152 | 410 | 55 | 50 | 30 | 91 | 295 | 627 | 194 | 66 | 16 |
| 7 | 179 | 134 | 348 | 56 | 49 | 32 | 95 | 354 | 730 | 173 | 65 | 15 |
| 8 | 161 | 124 | 512 | 58 | 47 | 30 | 101 | 456 | 555 | 157 | 62 | 15 |
| 9 | 173 | 118 | *281 | 60 | 42 | 40 | 118 | 551 | 568 | 143 | 55 | 16 |
| 10 | 351 | 113 | 255 | 68 | 48 | 56 | 141 | 650 | 547 | 129 | 50 | 32 |
| 11 | 327 | 110 | 235 | 75 | 46 | 45 | 205 | 510 | 445 | 196 | 45 | 21 |
| 12 | 543 | 114 | 216 | 75 | 42 | 43 | 287 | 456 | 380 | 179 | 42 | 18 |
| 13 | 370 | 195 | 203 | 72 | *41 | 41 | 278 | 494 | 367 | 141 | 40 | 18 |
| 14 | 298 | 498 | 196 | 70 | 46 | *39 | 271 | 494 | 400 | 126 | 37 | 18 |
| 15 | 271 | 367 | 187 | 70 | 44 | 38 | 260 | 456 | 815 | 120 | 36 | 20 |
| 16 | 255 | 292 | 250 | 70 | 41 | 37 | 232 | 356 | 632 | 157 | 33 | 17 |
| 17 | 238 | 255 | 230 | 70 | 40 | 36 | 250 | 358 | 502 | 194 | 32 | 21 |
| 18 | 218 | 225 | 203 | 70 | 36 | 35 | 255 | 345 | 434 | 181 | 30 | 23 |
| 19 | 209 | 203 | 255 | 70 | 38 | 33 | 255 | 383 | 434 | 143 | 29 | 19 |
| 20 | 214 | 189 | 534 | 65 | 40 | 34 | 333 | 510 | 393 | 126 | 27 | 18 |
| 21 | 207 | 179 | 364 | *61 | 40 | 37 | 530 | 686 | 351 | 114 | 26 | 16 |
| 22 | 194 | 163 | 295 | 59 | 40 | 38 | 604 | 990 | 321 | 105 | 24 | 16 |
| 23 | 185 | 154 | 263 | 59 | 40 | 38 | 424 | 1,290 | 321 | 97 | 24 | 15 |
| 24 | 175 | 150 | 232 | 60 | 40 | 37 | 348 | 1,120 | 373 | 89 | 23 | 14 |
| 25 | 167 | 146 | 209 | 60 | 40 | 35 | 312 | 1,080 | 504 | 85 | 22 | 14 |
| 26 | 157 | 143 | 180 | 60 | 40 | 33 | 284 | 1,220 | 560 | 96 | 22 | 13 |
| 27 | 148 | 139 | 180 | 60 | 40 | 35 | 263 | 1,060 | 498 | 87 | 27 | 13 |
| 28 | 144 | 131 | 190 | 60 | 40 | 35 | 248 | 725 | 479 | 87 | 24 | 13 |
| 29 | 136 | 132 | 200 | 58 | - | 39 | 258 | 654 | 438 | 102 | 23 | 13 |
| 30 | 126 | 159 | 150 | 56 | - | 42 | 289 | 591 | 390 | 114 | 22 | 12 |
| 31 | 120 | - | 120 | 54 | - | 46 | - | 554 | - | 104 | 23 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 6,589 | 543 | 120 | 213 | 3.04 | 3.50 | 13,070 |
| November..... | 5,234 | 498 | 110 | 174 | 2.49 | 2.78 | 10,360 |
| December..... | 10,247 | 1,400 | 120 | 331 | 4.73 | 5.44 | 20,320 |
| Calendar year 1941..... | 72,548 | 2,390 | 10 | 199 | 2.84 | 38.51 | 143,900 |
| January..... | 2,010 | 100 | 54 | 64.8 | .928 | 1.07 | 3,990 |
| February..... | 1,235 | 54 | 35 | 44.1 | .630 | .66 | 2,450 |
| March..... | 1,183 | 56 | 29 | 38.2 | .546 | .63 | 2,360 |
| April..... | 7,068 | 604 | 53 | 236 | 3.37 | 3.76 | 14,020 |
| May..... | 18,009 | 1,200 | 250 | 561 | 8.30 | 9.57 | 36,720 |
| June..... | 14,961 | 815 | 321 | 499 | 7.13 | 7.95 | 29,670 |
| July..... | 4,843 | 345 | 85 | 166 | 2.23 | 2.57 | 9,610 |
| August..... | 1,279 | 88 | 22 | 41.3 | .590 | .68 | 2,540 |
| September..... | 522 | 32 | 12 | 17.4 | .249 | .28 | 1,040 |
| Water year 1941-42..... | 75,180 | 1,400 | 12 | 200 | 2.86 | 38.89 | 145,200 |

* Winter discharge measurement made on this day.

Note.- No gage-height record Dec. 26 to Feb. 12; discharge computed on basis of weather records, records for nearby streams, and discharge measurement of Jan. 21. Stage-discharge relation affected by ice Feb. 17 to Mar. 3.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Boundary Creek near Port Hill, Idaho

(International gaging station)

Location.- Water-stage recorder, lat. 48°59'50", long. 116°34'05", in SW¼ sec. 11, T. 65 N., R. 2 W., 140 feet downstream from bridge at mouth of canyon, 0.2 mile south of international boundary, and 3 miles west of Port Hill.

Drainage area.- 97 square miles.

Records available.- May 1928 to September 1942.

Average discharge.- 12 years (1930-42), 171 second-feet.

Extremes.- Maximum discharge during year, 1,610 second-feet sometime during period May 23-27 when recorder was not operating (gage height, 4.50 feet); minimum, 24 second-feet Sept. 5 and probably Sept. 30 (gage height, 0.74 foot).

1928-42: Maximum discharge, 2,400 second-feet June 15, 1933 (gage height, 5.22 feet), from rating curve extended above 1,500 second-feet; minimum, 5 second-feet sometime between Nov. 10 and Dec. 3, 1936 (gage height, 0.27 foot).

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. No diversion above gage.

Cooperation.- This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating tables, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Dec. 2

Dec. 3 to Sept. 30

| | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1.4 | 92 | 2.4 | 363 | 0.7 | 22 | 2.2 | 278 | 4.0 | 1,200 |
| 1.7 | 149 | 2.8 | 541 | 1.0 | 44 | 2.6 | 423 | 4.5 | 1,610 |
| 2.0 | 225 | 3.2 | 750 | 1.4 | 90 | 3.0 | 595 | | |
| | | | | 1.8 | 165 | 3.5 | 860 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|--------|------|------|------|-------|
| 1 | 120 | 99 | 145 | 90 | 63 | 46 | 63 | 302 | a610 | 309 | 115 | 36 |
| 2 | 97 | 95 | 692 | 70 | 61 | 50 | 69 | 288 | a590 | 281 | 107 | 33 |
| 3 | 124 | 100 | S30 | 55 | 60 | 48 | 76 | 295 | a600 | 253 | 96 | 31 |
| 4 | 134 | 104 | 514 | 55 | 60 | 43 | 59 | 281 | a560 | 229 | 90 | 30 |
| 5 | 115 | 130 | 404 | 55 | 59 | 41 | 104 | 275 | a550 | 206 | 96 | 30 |
| 6 | 106 | 122 | 363 | 56 | 58 | 40 | 110 | 292 | a630 | 188 | 98 | 27 |
| 7 | 128 | 109 | 319 | 57 | *56 | 41 | 122 | 354 | a730 | 170 | 100 | 27 |
| 8 | 117 | 106 | 292 | 55 | 55 | 41 | 128 | 400 | a560 | 161 | 86 | 27 |
| 9 | 130 | 99 | *272 | 60 | 48 | 44 | 149 | 490 | a570 | 140 | 77 | 29 |
| 10 | 228 | 27 | 244 | 65 | 57 | 50 | 182 | 618 | a650 | 130 | 72 | 80 |
| 11 | 208 | 99 | 238 | 75 | 54 | 45 | 247 | 514 | a450 | 175 | 68 | 42 |
| 12 | 348 | 102 | 212 | 85 | 48 | 44 | 312 | 484 | a380 | 165 | 63 | a35 |
| 13 | 263 | 196 | 201 | 85 | 46 | 42 | 302 | 528 | a370 | 136 | 60 | a35 |
| 14 | 219 | 379 | 196 | 80 | 53 | *43 | 302 | 550 | a400 | 122 | 57 | a35 |
| 15 | 205 | 297 | 195 | 78 | 53 | 42 | 298 | 528 | a650 | 136 | 54 | a40 |
| 16 | 194 | 240 | 241 | 78 | 50 | 41 | 269 | 463 | 471 | 185 | 53 | a34 |
| 17 | 184 | 214 | 220 | 78 | 48 | 41 | 295 | 431 | 431 | 223 | 50 | a40 |
| 18 | 171 | 189 | 204 | 75 | 40 | 39 | 298 | 408 | 385 | 195 | 47 | a45 |
| 19 | 162 | 164 | 217 | 80 | 45 | 39 | 302 | 415 | 374 | 160 | 45 | a38 |
| 20 | 167 | 160 | 396 | 75 | 45 | 41 | 370 | a550 | 363 | 138 | 43 | a35 |
| 21 | 158 | 158 | 316 | *69 | 45 | 42 | 523 | a750 | 337 | 126 | 41 | a35 |
| 22 | 147 | 136 | 272 | 65 | 45 | 45 | 595 | a1,100 | 512 | 117 | 39 | a31 |
| 23 | 141 | 141 | 250 | 68 | 45 | 41 | 447 | a1,400 | 309 | 108 | 38 | a30 |
| 24 | 134 | 136 | 217 | 70 | 45 | 41 | 381 | a1,250 | 355 | 99 | 38 | a28 |
| 25 | 126 | 136 | 193 | 70 | 45 | 38 | 344 | a1,200 | 443 | 99 | 36 | a28 |
| 26 | 122 | 132 | 160 | 69 | 45 | 37 | 316 | a1,300 | 523 | 93 | 41 | a26 |
| 27 | 117 | 126 | 165 | 69 | 45 | 41 | 298 | a1,100 | 459 | 96 | 48 | a26 |
| 28 | 115 | 120 | 170 | 69 | 45 | 42 | 281 | a600 | 415 | 117 | 41 | a26 |
| 29 | 109 | 120 | 150 | 65 | - | 45 | 251 | a700 | 378 | 140 | 39 | a28 |
| 30 | 104 | 134 | 140 | 63 | - | 49 | 292 | a650 | 341 | 147 | 38 | a24 |
| 31 | 100 | - | 110 | 59 | - | 55 | - | a600 | - | 124 | 38 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 4,795 | 348 | 97 | 155 | 1.60 | 1.84 | 9,510 |
| November..... | 4,440 | 379 | 95 | 148 | 1.53 | 1.70 | 8,810 |
| December..... | 8,530 | 850 | 110 | 275 | 2.84 | 3.27 | 16,920 |
| Calendar year 1941..... | 64,220 | 1,500 | 21 | 176 | 1.81 | 24.62 | 127,400 |
| January..... | 2,149 | 90 | 55 | 69.3 | .714 | .82 | 4,260 |
| February..... | 1,412 | 63 | 40 | 50.7 | .523 | .54 | 2,810 |
| March..... | 1,355 | 55 | 37 | 43.1 | .444 | .51 | 2,650 |
| April..... | 7,835 | 595 | 63 | 261 | 2.69 | 3.00 | 15,540 |
| May..... | 19,276 | 1,400 | 276 | 622 | 6.41 | 7.39 | 36,230 |
| June..... | 14,096 | 730 | 309 | 470 | 4.55 | 5.40 | 27,960 |
| July..... | 4,958 | 309 | 93 | 160 | 1.65 | 1.90 | 9,830 |
| August..... | 1,916 | 115 | 36 | 61.8 | .637 | .73 | 3,800 |
| September..... | 1,007 | 80 | 24 | 33.6 | .346 | .39 | 2,000 |
| Water year 1941-42..... | 71,754 | 1,400 | 24 | 197 | 2.03 | 27.42 | 142,300 |

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for nearby streams.

Note.- Stage-discharge relation affected by ice Dec. 27 to Jan. 23, Feb. 18 to Mar. 3 (no gage-height record Jan. 14-20).

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

PEND OREILLE RIVER BASIN

Clark Fork above Missoula, Mont.

Location.- Water-stage recorder, lat. 46°53', long. 113°56', in NW¼ sec. 19, T. 13 N., R. 18 W., 3 miles downstream from Blackfoot River and 3 miles east of Missoula.

Drainage area.- 5,740 square miles.

Records available.- March 1929 to September 1942.

Average discharge.- 13 years, 2,186 second-feet.

Extremes.- Maximum discharge during year, 19,100 second-feet June 12 (gage height, 9.58 feet); minimum not determined, occurred during period of ice effect; minimum daily, 620 second-feet Jan. 5.

1929-42: Maximum discharge, 21,600 second-feet June 2, 1933 (gage height, 9.90 feet); minimum, 86 second-feet Jan. 8, 1930 (gage height, 0.52 foot, ice jam above station); minimum daily, 224 second-feet Jan. 8, 1930 (ice jam above station).

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Regulation by power plant at Bonner. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|--------|--------|--------|-------|-------|------------------|---------|---------|--------|----------------------|-------|-------|
| 1 | 1,300 | al,240 | 1,460 | 750 | 1,200 | 1,160 | 2,060 | 3,960 | 9,830 | 4,780 | 1,570 | 1,100 |
| 2 | 1,330 | al,220 | 1,410 | 700 | 1,150 | 1,260 | 3,050 | 3,960 | 9,290 | 4,680 | 1,570 | 1,080 |
| 3 | 1,340 | al,250 | 1,510 | 680 | 1,250 | 1,280 | 2,810 | 3,860 | 8,750 | 4,470 | 1,550 | 1,080 |
| 4 | 1,430 | al,320 | 1,710 | 720 | 1,300 | 1,210 | 3,050 | 3,780 | 9,560 | 4,260 | 1,480 | 960 |
| 5 | 1,460 | al,260 | 1,650 | 620 | 1,350 | 1,210 | 3,130 | 3,670 | 11,000 | 4,060 | 1,600 | 1,030 |
| 6 | 1,480 | al,300 | 1,530 | 700 | 1,320 | 1,250 | 3,130 | 3,480 | 11,500 | 3,860 | 1,610 | 990 |
| 7 | 1,470 | al,270 | 1,590 | 740 | 1,300 | 1,220 | 3,390 | 3,920 | 11,500 | 3,760 | 1,530 | 1,000 |
| 8 | 1,430 | al,210 | 1,530 | 760 | 1,300 | 1,270 | 2,680 | 3,300 | 12,400 | 3,570 | 1,510 | 886 |
| 9 | 1,370 | 1,190 | *1,340 | 850 | 1,310 | 1,330 | 2,810 | 3,390 | 13,000 | 3,570 | 1,460 | 913 |
| 10 | 1,420 | 1,210 | 1,340 | 950 | 1,210 | 1,580 | 2,810 | 3,760 | 12,700 | 3,300 | 1,390 | 1,130 |
| 11 | 1,350 | 1,200 | 1,310 | 1,150 | 1,200 | 1,850 | 2,890 | 4,470 | 12,100 | 3,480 | 1,400 | 1,000 |
| 12 | 1,330 | 1,200 | 1,290 | 1,300 | 1,230 | 2,280 | 3,030 | 4,950 | 11,800 | 3,040 | 1,280 | 990 |
| 13 | al,370 | 1,290 | 1,430 | 1,350 | 1,210 | 2,360 | 4,060 | 5,330 | 9,560 | 2,680 | 1,280 | 1,010 |
| 14 | al,360 | 1,390 | 1,120 | 1,250 | 1,210 | 2,350 | 4,470 | 5,660 | 8,490 | 2,730 | 1,250 | 1,020 |
| 15 | al,330 | 1,530 | 1,360 | 1,100 | 1,210 | 2,060 | 4,660 | 5,660 | 8,230 | 2,580 | 1,220 | 1,030 |
| 16 | al,300 | 1,650 | 1,490 | *960 | 1,190 | 1,780 | 4,680 | 5,660 | 8,490 | 2,500 | 1,210 | 1,110 |
| 17 | al,320 | 1,770 | 1,530 | 1,100 | 900 | 1,680 | 4,470 | 5,330 | 8,230 | 2,420 | 1,200 | 1,020 |
| 18 | al,350 | 1,710 | 1,510 | 1,220 | 700 | 1,680 | 4,360 | 5,000 | 7,210 | 2,280 | 1,150 | 1,150 |
| 19 | al,350 | 1,710 | 1,460 | 1,350 | 850 | 1,300 | 4,360 | 4,780 | 6,960 | 2,280 | 1,050 | 1,080 |
| 20 | al,340 | al,500 | 1,470 | 1,250 | 950 | 1,320 | 4,260 | 4,680 | 6,960 | 2,130 | 1,050 | 1,170 |
| 21 | al,330 | al,450 | 1,650 | 1,050 | 1,000 | 1,420 | 4,470 | 4,580 | 6,470 | 2,060 | 1,040 | 1,190 |
| 22 | al,320 | al,300 | 1,710 | 1,020 | 960 | 1,420 | 5,330 | 5,110 | 6,000 | 1,920 | 970 | 1,060 |
| 23 | al,300 | al,000 | 1,510 | 920 | 900 | 1,580 | 6,000 | 6,710 | 5,660 | 1,920 | 960 | 1,130 |
| 24 | al,270 | 762 | 1,490 | 1,100 | 940 | 1,700 | 5,770 | 9,660 | 5,330 | 1,850 | 922 | 1,100 |
| 25 | al,250 | 1,510 | 1,490 | 1,150 | *960 | 1,650 | 5,560 | 11,500 | 5,110 | 1,750 | 1,020 | 1,140 |
| 26 | al,240 | 1,530 | 1,310 | 1,200 | 950 | 1,560 | 5,220 | 13,300 | 5,330 | 1,750 | 950 | 1,050 |
| 27 | al,250 | 1,530 | 1,050 | 1,250 | 1,100 | 1,400 | 4,890 | 16,100 | 6,000 | 1,640 | 922 | 1,020 |
| 28 | 1,270 | 1,530 | 650 | 1,280 | 1,150 | 1,440 | 4,580 | 15,400 | 5,770 | 1,640 | 960 | 1,120 |
| 29 | 1,250 | 1,450 | 720 | 1,250 | - | 1,490 | 4,260 | 13,900 | 5,440 | 1,610 | 1,020 | 1,070 |
| 30 | al,260 | 1,430 | 900 | 1,280 | - | 1,530 | 4,160 | 12,100 | 5,110 | 1,480 | 1,030 | 1,040 |
| 31 | al,200 | - | 980 | 1,250 | - | 1,720 | - | 11,000 | - | 1,580 | 1,040 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 41,390 | 1,480 | 1,200 | 1,335 | 82,100 | | |
| November..... | | | | | | 40,912 | 1,770 | 762 | 1,364 | 81,160 | | |
| December..... | | | | | | 42,500 | 1,710 | 650 | 1,371 | 84,300 | | |
| Calendar year 1941..... | | | | | | 512,522 | 5,060 | 533 | 1,404 | 1,017,000 | | |
| January..... | | | | | | 32,280 | 1,350 | 620 | 1,041 | 64,030 | | |
| February..... | | | | | | 31,300 | 1,350 | 700 | 1,118 | 62,080 | | |
| March..... | | | | | | 48,300 | 2,350 | 1,180 | 1,558 | 95,800 | | |
| April..... | | | | | | 120,880 | 6,000 | 2,060 | 4,029 | 239,800 | | |
| May..... | | | | | | 207,080 | 16,100 | 3,220 | 6,680 | 410,700 | | |
| June..... | | | | | | 253,780 | 13,000 | 5,110 | 8,459 | 503,400 | | |
| July..... | | | | | | 86,610 | 4,760 | 1,480 | 2,762 | 169,800 | | |
| August..... | | | | | | 38,214 | 1,610 | 922 | 1,233 | 76,800 | | |
| September..... | | | | | | 31,649 | 1,190 | 886 | 1,055 | 62,770 | | |
| Water year 1941-42 | | | | | | 973,895 | 16,100 | 620 | 2,668 | 1,932,000 | | |

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records of output of Milltown power plant.

Note.- Stage-discharge relation affected by ice Dec. 27 to Feb. 8, Feb. 17-27.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Clark Fork below Missoula, Mont.

Location.- Water-stage recorder, lat. 46°52', long. 114°07', in SE $\frac{1}{4}$ sec. 21, T. 13 N., R. 20 W., 2 miles downstream from Bitterroot River and 6 miles west of Missoula.

Drainage area.- 8,690 square miles.

Records available.- October 1929 to September 1942.

Average discharge.- 13 years, 4,050 second-feet.

Extremes.- Maximum discharge during year, 30,500 second-feet May 27 (gage height, 8.96 feet); minimum, 1,000 second-feet Feb. 19 (gage height, 0.73 foot).
1929-42: Maximum discharge, 36,800 second-feet June 11, 1933 (gage height, 10.14 feet); minimum, 388 second-feet Jan. 18, 1933 (gage height, 0.58 foot, affected by ice).

Remarks.- Records excellent except those for periods of shifting control, which are good, and those for period of ice effect, which are fair. Slight regulation by power plant at Bonner. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|-------|--------|-------|------------------|---------|---------|--------|--------|----------------------|-------|
| 1 | 2,710 | 2,430 | 3,000 | 11,520 | 2,170 | 1,950 | 3,000 | 6,680 | 18,200 | 10,400 | 2,310 | 1,630 |
| 2 | 2,800 | 2,340 | 3,000 | 11,500 | 2,220 | 2,050 | 3,930 | 6,680 | 16,900 | 9,980 | 2,310 | 1,630 |
| 3 | 2,800 | 2,520 | 3,600 | 11,500 | 2,270 | 2,120 | 3,820 | 6,520 | 16,500 | 9,610 | 2,240 | 1,660 |
| 4 | 3,200 | 2,710 | 4,600 | 11,500 | 2,260 | 2,100 | 4,040 | 6,370 | 18,700 | 9,060 | 2,200 | 1,560 |
| 5 | 3,600 | 2,710 | 4,370 | 11,600 | 2,340 | 2,100 | 4,260 | 6,070 | 22,500 | 8,700 | 2,270 | 1,580 |
| 6 | 3,710 | 2,800 | 3,930 | 11,650 | 2,320 | 2,150 | 4,370 | 5,780 | 23,000 | 8,340 | 2,270 | 1,540 |
| 7 | 3,600 | 2,710 | 3,820 | 11,750 | 2,270 | 2,150 | 4,600 | 5,350 | 23,500 | 7,650 | 2,220 | 1,540 |
| 8 | 3,500 | 2,520 | 3,710 | 1,850 | 2,220 | 2,240 | 4,370 | 5,490 | 24,500 | 7,150 | 2,140 | 1,480 |
| 9 | 3,400 | 2,430 | 3,400 | 2,000 | 2,240 | 2,340 | 4,260 | 5,920 | 24,500 | 6,520 | 2,070 | 1,470 |
| 10 | 3,500 | 2,430 | 3,300 | 2,200 | 2,150 | 2,600 | 4,480 | 7,150 | 25,000 | 5,920 | 2,020 | 1,760 |
| 11 | 3,400 | 2,340 | 3,200 | 2,350 | 2,100 | 3,200 | 4,840 | 8,680 | 24,000 | 5,780 | 2,000 | 1,700 |
| 12 | 3,400 | 2,340 | 3,100 | 2,500 | 2,150 | 3,600 | 6,070 | 9,240 | 20,700 | 5,590 | 1,870 | 1,690 |
| 13 | 3,200 | 2,430 | 3,000 | 2,700 | 2,150 | 3,600 | 7,820 | 9,610 | 18,700 | 4,720 | 1,810 | 1,720 |
| 14 | 3,100 | 2,620 | 2,800 | 2,400 | 2,120 | 3,500 | 8,880 | 9,980 | 16,500 | 4,600 | 1,760 | 1,760 |
| 15 | 3,000 | 3,300 | 3,100 | 2,100 | 2,140 | 3,300 | 9,240 | 9,980 | 16,100 | 4,370 | 1,740 | 1,600 |
| 16 | 3,000 | 3,820 | 3,300 | 2,020 | 2,080 | 2,900 | 8,880 | 9,980 | 17,400 | 4,260 | 1,720 | 1,840 |
| 17 | 3,000 | 4,150 | 3,400 | 2,200 | 1,650 | 2,800 | 8,170 | 9,610 | 16,900 | 4,040 | 1,720 | 1,750 |
| 18 | 3,100 | 4,040 | 3,300 | 2,270 | 1,260 | 2,710 | 7,820 | 9,060 | 16,200 | 3,820 | 1,660 | 1,890 |
| 19 | 3,000 | 3,820 | 3,300 | 2,290 | 1,380 | 2,640 | 7,480 | 8,700 | 14,000 | 3,710 | 1,590 | 1,820 |
| 20 | 2,900 | 3,710 | 3,400 | 2,140 | 1,580 | 2,220 | 7,320 | 8,340 | 13,500 | 3,500 | 1,560 | 1,920 |
| 21 | 2,900 | 3,600 | 3,710 | 1,920 | 1,810 | 2,430 | 7,820 | 8,340 | 12,700 | 3,400 | 1,540 | 1,940 |
| 22 | 2,800 | 3,500 | 3,710 | 1,860 | 1,870 | 2,430 | 9,980 | 9,980 | 11,500 | 3,200 | 1,460 | 1,820 |
| 23 | 2,800 | 3,200 | 3,400 | 1,780 | 1,810 | 2,520 | 11,100 | 13,300 | 10,400 | 3,000 | 1,470 | 1,820 |
| 24 | 2,710 | 2,620 | 3,400 | 2,030 | 1,800 | 2,710 | 10,400 | 19,200 | 9,610 | 2,900 | 1,400 | 1,840 |
| 25 | 2,710 | 3,600 | 3,200 | 2,140 | 1,820 | 2,710 | 9,610 | 23,000 | 9,610 | 2,620 | 1,460 | 1,870 |
| 26 | 2,710 | 3,600 | 2,430 | 2,290 | 1,760 | 2,520 | 9,240 | 25,500 | 10,700 | 2,710 | 1,400 | 1,760 |
| 27 | 2,710 | 3,600 | 1,950 | 2,310 | 1,890 | 2,320 | 8,880 | 29,500 | 12,300 | 2,520 | 1,380 | 1,720 |
| 28 | 2,710 | 3,400 | 1,550 | 2,310 | 1,940 | 2,340 | 8,340 | 28,500 | 11,500 | 2,520 | 1,450 | 1,800 |
| 29 | 2,710 | 3,200 | 1,640 | 2,340 | - | 2,430 | 7,650 | 25,500 | 11,100 | 2,430 | 1,540 | 1,750 |
| 30 | 2,620 | 3,100 | 2,230 | 2,340 | - | 2,430 | 6,990 | 22,500 | 10,700 | 2,290 | 1,560 | 1,700 |
| 31 | 2,430 | - | 2,200 | 2,190 | - | 2,710 | - | 20,100 | - | 2,340 | 1,590 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | | Run-off in acre-feet | |
| October..... | | | | | | 93,730 | 3,710 | 2,430 | 3,024 | | 185,900 | |
| November..... | | | | | | 91,490 | 4,150 | 2,340 | 3,050 | | 181,500 | |
| December..... | | | | | | 97,950 | 4,600 | 1,550 | 3,160 | | 194,300 | |
| Calendar year 1941..... | | | | | | 1,046,720 | 9,980 | 1,060 | 2,865 | | 2,074,000 | |
| January..... | | | | | | 63,650 | 2,700 | 1,500 | 2,053 | | 126,200 | |
| February..... | | | | | | 55,770 | 2,340 | 1,280 | 1,992 | | 110,600 | |
| March..... | | | | | | 79,320 | 3,600 | 1,950 | 2,576 | | 159,300 | |
| April..... | | | | | | 207,660 | 11,100 | 3,000 | 6,922 | | 411,900 | |
| May..... | | | | | | 380,610 | 29,500 | 5,350 | 12,280 | | 755,300 | |
| June..... | | | | | | 496,420 | 25,000 | 9,610 | 16,550 | | 984,600 | |
| July..... | | | | | | 157,650 | 10,400 | 2,290 | 5,085 | | 312,700 | |
| August..... | | | | | | 55,720 | 2,310 | 1,380 | 1,797 | | 110,500 | |
| September..... | | | | | | 51,760 | 1,940 | 1,470 | 1,725 | | 102,700 | |
| Water year 1941-42..... | | | | | | 1,632,430 | 29,500 | 1,260 | 5,020 | | 3,634,000 | |

* Winter discharge measurement made on this day.

f Computed from partly estimated gage-height record.

h Computed from staff-gage readings.

Note.- Stage-discharge relation affected by ice Jan. 2-16. Shifting-control method used Mar. 15 to May 22, Aug. 8 to Sept. 20.

* Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Clark Fork at St. Regis, Mont.

Location.- Water-stage recorder, lat. 47°18', long. 115°05', in sec. 19, T. 18 N., R. 27 W., at St. Regis, half a mile downstream from St. Regis River.

Drainage area.- 10,500 square miles.

Records available.- October 1910 to September 1923, February 1929 to September 1942.

Average discharge.- 26 years, 7,059 second-feet.

Extremes.- Maximum discharge during year, 35,800 second-feet May 28 (gage height, 14.22 feet); minimum, 1,640 second-feet Feb. 19 (gage height, 4.14 feet).
1910-23, 1929-42: Maximum discharge observed, 62,800 second-feet May 30, 31, 1913 (gage height, 19.1 feet); minimum discharge, 1,000 second-feet Dec. 17, 1940 (gage height, 3.36 feet), but may have been less during period of ice effect Feb. 19-22, 1929.

Remarks.- Records excellent except those for periods of ice effect, no gage-height record, or shifting control, which are good. Many diversions and slight regulation above station.

Rating table, water year 1941-42, except periods of ice effect or shifting control (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-------|-----|--------|------|--------|
| 4.2 | 1,690 | 6.0 | 4,660 | 10.0 | 16,400 |
| 4.6 | 2,210 | 7.0 | 6,050 | 11.0 | 20,400 |
| 5.0 | 2,830 | 8.0 | 9,490 | 12.0 | 24,700 |
| 5.5 | 3,700 | 9.0 | 12,720 | 14.1 | 35,200 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|---------|-------|-------|--------|--------|--------|--------|-------|-------|
| 1 | 3,330 | 3,160 | 3,890 | h2,000 | 3,160 | 2,670 | 3,700 | 9,200 | 23,400 | 12,700 | 3,160 | 2,210 |
| 2 | 3,330 | 3,160 | 3,960 | b1,700 | 3,080 | 2,750 | 4,060 | 6,920 | 21,600 | 12,400 | 3,160 | 2,280 |
| 3 | 3,330 | 3,080 | 6,330 | b1,700 | 3,160 | 2,750 | 5,060 | 8,920 | 20,400 | 12,000 | 3,080 | 2,280 |
| 4 | 3,600 | 3,330 | 7,100 | b1,700 | 3,240 | 2,830 | 5,060 | 8,640 | 20,800 | 11,400 | 3,080 | 2,280 |
| 5 | 3,890 | 3,510 | 7,100 | b1,800 | 3,420 | 2,830 | 5,470 | 8,370 | 23,800 | 10,700 | 3,080 | 2,210 |
| 6 | 4,270 | 3,420 | 6,610 | b1,900 | 3,420 | 2,830 | 5,690 | 8,110 | 26,600 | 10,400 | 3,080 | 2,210 |
| 7 | 4,360 | 3,600 | 5,910 | *b2,050 | 3,420 | 2,830 | 5,910 | 7,850 | 27,000 | 9,790 | 3,080 | 2,140 |
| 8 | 4,270 | 3,420 | 5,690 | b2,150 | 3,240 | 2,830 | 6,370 | 7,850 | 27,500 | 8,920 | 2,990 | 2,140 |
| 9 | 4,270 | 3,330 | 5,470 | b2,300 | 3,240 | 2,990 | 6,140 | 8,110 | 28,500 | 8,370 | 2,910 | 2,140 |
| 10 | 4,180 | 3,160 | 5,060 | 2,670 | 3,160 | 3,330 | 6,370 | 9,200 | 28,600 | 7,850 | 2,910 | 2,140 |
| 11 | 4,270 | 3,160 | 4,860 | 3,080 | 2,990 | 3,800 | 7,100 | 10,400 | 28,500 | 7,600 | 2,830 | 2,440 |
| 12 | 4,180 | 3,160 | 4,660 | 3,330 | 2,910 | 4,060 | 7,370 | 11,700 | 25,600 | 7,600 | 2,750 | 2,440 |
| 13 | 4,180 | 3,160 | 4,560 | 3,600 | 2,910 | 4,360 | 10,100 | 11,700 | 23,000 | 6,850 | 2,670 | 2,360 |
| 14 | 4,060 | 3,700 | 4,360 | 3,700 | 2,910 | 4,460 | 12,400 | 12,400 | 20,800 | 6,370 | 2,590 | 2,440 |
| 15 | 3,890 | 4,060 | 4,270 | 3,420 | 2,910 | 4,360 | 13,400 | 12,700 | 19,500 | 5,910 | 2,510 | 2,440 |
| 16 | 3,800 | 4,660 | 4,560 | 3,420 | 2,910 | 4,060 | 13,100 | 12,700 | 19,500 | 5,910 | 2,510 | 2,440 |
| 17 | 3,800 | 5,060 | 4,760 | 3,240 | 2,670 | 3,800 | 12,000 | 12,400 | 20,400 | 5,470 | 2,440 | 2,510 |
| 18 | 3,800 | 5,260 | 4,760 | 3,240 | 2,140 | 3,600 | 11,400 | 12,000 | 19,100 | 5,470 | 2,440 | 2,440 |
| 19 | 3,690 | 4,960 | 4,660 | 3,420 | 1,810 | 3,510 | 10,700 | 11,400 | 17,500 | 5,060 | 2,360 | 2,590 |
| 20 | 3,600 | 4,760 | 5,260 | 3,330 | 2,070 | 3,330 | 10,400 | 11,100 | 16,900 | 4,960 | 2,280 | 2,510 |
| 21 | 3,700 | 4,660 | 5,470 | 3,160 | 2,360 | 3,080 | 10,700 | 11,100 | 16,000 | 4,760 | 2,210 | 2,590 |
| 22 | 3,600 | 4,560 | 5,470 | 2,910 | 2,510 | 3,240 | 12,700 | 12,000 | 14,900 | 4,560 | 2,140 | 2,590 |
| 23 | 3,600 | 4,270 | 5,470 | 2,750 | 2,590 | 3,240 | 14,600 | 14,600 | 13,800 | 4,360 | 2,070 | 2,510 |
| 24 | 3,510 | 4,060 | 5,060 | 2,830 | 2,510 | 3,330 | 14,600 | 19,600 | 12,700 | 4,180 | 2,070 | 2,510 |
| 25 | 3,420 | 3,700 | 5,060 | 3,080 | 2,510 | 3,420 | 13,400 | 28,400 | 12,400 | 3,980 | 2,000 | 2,510 |
| 26 | 3,420 | 4,360 | 4,560 | 3,160 | 2,510 | 3,420 | 12,700 | 28,500 | 12,700 | 3,700 | 2,000 | 2,510 |
| 27 | 3,330 | 4,360 | 3,510 | 3,240 | 2,510 | 3,240 | 12,000 | 32,100 | 14,200 | 3,800 | 2,070 | 2,440 |
| 28 | 3,420 | 4,270 | a3,100 | 3,330 | 2,510 | 3,160 | 11,400 | 35,200 | 14,600 | 3,700 | 2,070 | 2,360 |
| 29 | 3,330 | 4,060 | h2,910 | 3,330 | - | 3,160 | 10,400 | 32,600 | 15,800 | 3,600 | 2,070 | 2,440 |
| 30 | 3,330 | 3,980 | a3,100 | 3,330 | - | 3,240 | 9,790 | 28,500 | 13,400 | 3,420 | 2,140 | 2,440 |
| 31 | 3,240 | - | h3,510 | 3,330 | - | 3,330 | - | 25,600 | - | 3,240 | 2,210 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|--------|----------------------|
| October..... | 116,420 | 4,560 | 3,240 | 3,755 | 230,900 |
| November..... | 117,450 | 5,260 | 3,080 | 3,915 | 233,000 |
| December..... | 151,270 | 7,100 | 2,910 | 4,880 | 300,000 |
| Calendar year 1941..... | 1,407,620 | 11,700 | 1,580 | 3,856 | 2,792,000 |
| January..... | 88,200 | 3,700 | 1,700 | 2,645 | 174,900 |
| February..... | 78,780 | 3,420 | 1,610 | 2,514 | 156,300 |
| March..... | 103,380 | 4,460 | 2,870 | 3,351 | 206,000 |
| April..... | 285,110 | 14,600 | 3,700 | 9,504 | 585,500 |
| May..... | 468,870 | 35,200 | 7,850 | 15,120 | 930,000 |
| June..... | 598,300 | 28,500 | 12,400 | 19,940 | 1,187,000 |
| July..... | 209,030 | 12,700 | 3,240 | 6,743 | 414,600 |
| August..... | 78,960 | 3,160 | 2,000 | 2,547 | 156,600 |
| September..... | 71,540 | 2,590 | 2,140 | 2,385 | 141,900 |
| Water year 1941-42..... | 2,367,810 | 35,200 | 1,700 | 6,487 | 4,697,000 |

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for station below Missoula.

b Stage-discharge relation affected by ice.

c Computed from staff-gage readings.

Note.- Shifting-control method used Oct. 1 to Dec. 3.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Clark Fork near Plains, Mont.

Location.- Water-stage recorder, lat. 47°28', long. 114°51', on lot 7, SW¼ sec. 1, T. 19 N., R. 26 W., 2 miles upstream from Plains and 6 miles downstream from Flathead River.

Drainage area.- 19,900 square miles.

Records available.- October 1910 to September 1942.

Average discharge.- 26 years (1912-15, 1917-19, 1920-24, 1925-42), 17,930 second-feet.

Extremes.- Maximum discharge during year, 74,000 second-feet June 11 (gage height, 13.65 feet); minimum, 5,950 second-feet Mar. 6 (gage height, 3.70 feet), but may have been less during period of ice effect.

1910-42: Maximum discharge, 126,000 second-feet May 23, 1928 (gage height, 18.4 feet); minimum, 3,200 second-feet Feb. 8, 1936 (affected by ice), Dec. 10, 1940 (gage height, 2.85 feet).

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions for irrigation above station. Partial regulation since April 1936 by Kerr Dam, 4 miles below Flathead Lake (see p. 149).

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|--------|--------|--------|---------|--------|------------------|--------|---------|---------|--------|----------------------|-------|
| 1 | 7,810 | 9,800 | 10,800 | 21,200 | 9,200 | 8,800 | 6,870 | 26,000 | 59,300 | 46,400 | 10,800 | 9,800 |
| 2 | 7,810 | 9,600 | 11,200 | 20,600 | 9,200 | 8,600 | 7,430 | 25,400 | 55,800 | 47,200 | 11,200 | 9,000 |
| 3 | 7,810 | 9,800 | 12,500 | 20,600 | 9,200 | 7,620 | 8,200 | 25,400 | 44,200 | 43,000 | 11,600 | 7,240 |
| 4 | 8,000 | 9,200 | 14,200 | 219,000 | 9,200 | 7,810 | 8,200 | 25,400 | 37,500 | 34,500 | 10,800 | 7,060 |
| 5 | 8,200 | 10,000 | 14,200 | 218,500 | 9,600 | 7,430 | 8,400 | 25,400 | 40,500 | 31,500 | 10,400 | 7,060 |
| 6 | 8,600 | 10,000 | 14,200 | 218,500 | 10,400 | 6,680 | 8,400 | 24,700 | 44,700 | 36,800 | 10,400 | 6,870 |
| 7 | 8,600 | 10,000 | 13,300 | 220,000 | 10,400 | 6,870 | 8,400 | 24,700 | 50,600 | 37,500 | 10,400 | 6,870 |
| 8 | 8,800 | 10,000 | 13,300 | 222,300 | 10,400 | 7,430 | 9,200 | 24,100 | 59,300 | 36,000 | 10,400 | 7,430 |
| 9 | 8,800 | 9,800 | 13,300 | 224,000 | 10,400 | 7,430 | 9,200 | 24,100 | 64,000 | 31,500 | 10,500 | 8,400 |
| 10 | 8,400 | 9,800 | 13,700 | 225,000 | 10,000 | 8,600 | 9,000 | 25,400 | 66,000 | 27,300 | 10,800 | 8,400 |
| 11 | 8,600 | 9,800 | 15,100 | 224,000 | 10,000 | 9,000 | 9,400 | 27,300 | 73,000 | 22,400 | 10,400 | 8,600 |
| 12 | 8,600 | 9,800 | 15,100 | 222,700 | 9,800 | 9,000 | 10,400 | 30,000 | 63,000 | 21,200 | 9,800 | 8,800 |
| 13 | 8,400 | 9,800 | 14,200 | 21,800 | 9,800 | 9,000 | 12,000 | 31,500 | 49,800 | 21,200 | 10,000 | 8,600 |
| 14 | 8,400 | 10,000 | 13,700 | 21,200 | 9,800 | 9,400 | 15,100 | 33,000 | 41,300 | 20,100 | 10,000 | 8,200 |
| 15 | 8,400 | 10,800 | 12,900 | 20,100 | 9,800 | 8,800 | 19,000 | 34,500 | 39,000 | 21,800 | 9,900 | 8,200 |
| 16 | 8,200 | 11,200 | 12,500 | 19,000 | 9,800 | 8,200 | 20,100 | 35,200 | 49,500 | 21,200 | 9,800 | 7,240 |
| 17 | 8,200 | 11,600 | 12,500 | 18,000 | 9,400 | 8,200 | 20,600 | 35,200 | 52,400 | 19,000 | 9,700 | 7,240 |
| 18 | 8,000 | 11,600 | 12,900 | 17,400 | 8,400 | 7,810 | 20,100 | 35,200 | 50,600 | 16,400 | 9,700 | 7,240 |
| 19 | 8,200 | 11,600 | 13,700 | 16,900 | 7,800 | 8,000 | 20,100 | 34,500 | 48,100 | 15,100 | 9,600 | 7,200 |
| 20 | 7,810 | 11,200 | 16,400 | 16,000 | 7,200 | 7,620 | 20,100 | 33,800 | 42,200 | 16,000 | 9,600 | 7,300 |
| 21 | 7,810 | 11,200 | 16,900 | 15,500 | 7,400 | 7,240 | 21,200 | 33,800 | 40,500 | 17,400 | 9,600 | 7,200 |
| 22 | 8,000 | 11,200 | 17,400 | 15,100 | 7,500 | 7,430 | 23,000 | 34,500 | 39,000 | 16,900 | 9,800 | 7,400 |
| 23 | 8,000 | 11,200 | 17,400 | 14,500 | 7,600 | 7,620 | 26,000 | 36,800 | 38,200 | 14,600 | 9,800 | 7,200 |
| 24 | 8,000 | 11,200 | 18,500 | 13,700 | 7,600 | 7,060 | 28,000 | 42,200 | 27,400 | 14,200 | 9,600 | 7,060 |
| 25 | 7,810 | 10,800 | 20,600 | 12,900 | 7,600 | 7,500 | 28,000 | 50,600 | 22,400 | 14,600 | 9,600 | 7,060 |
| 26 | 8,400 | 11,200 | 21,200 | 12,900 | 7,400 | 7,810 | 28,000 | 56,600 | 20,600 | 13,300 | 9,600 | 7,060 |
| 27 | 9,800 | 11,600 | 21,800 | 11,600 | 7,700 | 7,600 | 28,000 | 62,100 | 28,200 | 12,900 | 9,600 | 7,060 |
| 28 | 10,000 | 11,600 | 23,500 | 9,800 | 7,400 | 7,430 | 28,000 | 68,000 | 40,500 | 12,500 | 9,600 | 6,870 |
| 29 | 10,000 | 11,200 | 22,400 | 9,600 | - | 6,870 | 27,300 | 69,000 | 45,600 | 12,000 | 9,600 | 7,810 |
| 30 | 10,000 | 11,200 | 23,000 | 9,600 | - | 6,320 | 26,600 | 66,000 | 45,600 | 10,800 | 8,600 | 8,200 |
| 31 | 9,800 | - | 23,000 | 9,400 | - | 6,500 | - | 62,100 | - | 10,400 | 8,600 | - |
| Month | | | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | 263,260 | | 19,000 | 7,810 | 8,492 | 522,200 | |
| November..... | | | | | | 317,800 | | 11,600 | 9,200 | 10,590 | 630,300 | |
| December..... | | | | | | 495,400 | | 23,500 | 10,800 | 15,950 | 982,600 | |
| Calendar year 1941..... | | | | | | 3,697,070 | | 31,500 | 3,990 | 10,130 | 7,333,000 | |
| January..... | | | | | | 540,800 | | 25,000 | 9,400 | 17,450 | 1,073,000 | |
| February..... | | | | | | 251,000 | | 10,400 | 7,200 | 8,964 | 497,900 | |
| March..... | | | | | | 241,680 | | 9,400 | 6,320 | 7,796 | 479,400 | |
| April..... | | | | | | 514,500 | | 28,000 | 6,870 | 17,150 | 1,020,000 | |
| May..... | | | | | | 1,162,500 | | 69,000 | 24,100 | 37,500 | 2,306,000 | |
| June..... | | | | | | 1,379,100 | | 73,000 | 20,600 | 45,970 | 2,735,000 | |
| July..... | | | | | | 715,700 | | 47,200 | 10,400 | 23,090 | 1,420,000 | |
| August..... | | | | | | 309,800 | | 11,600 | 8,600 | 9,994 | 614,500 | |
| September..... | | | | | | 229,670 | | 9,800 | 6,870 | 7,656 | 455,500 | |
| Water year 1941-42..... | | | | | | 6,421,210 | | 73,000 | 6,320 | 17,590 | 12,740,000 | |

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for stations at Heron and St. Regis and Flathead River near Polson.

b Stage-discharge relation affected by ice.

Time Basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Clark Fork near Heron, Mont.

Location.- Water-stage recorder, lat. 48°04', long. 115°59', in sec. 28, T. 27 N., R. 34 W., 600 feet upstream from Dead Horse Creek and 1½ miles northwest of Heron.

Drainage area.- 21,800 square miles.

Records available.- September 1928 to September 1942.

Average discharge.- 14 years, 18,200 second-feet.

Extremes.- Maximum discharge during year, 77,100 second-feet June 12 (gage height, 32.89 feet); minimum, 3,150 second-feet (regulated) Sept. 30 (gage height, 9.06 feet), from rating curve extended below 4,000 second-feet.

1928-42: Maximum discharge, 137,000 second-feet June 17, 1933 (gage height, 46.62 feet, present datum); minimum, 620 second-feet Dec. 23, 1935, during period of extreme regulation (gage height, 7.59 feet), from rating curve extended below 4,000 second-feet.

Maximum stage known, 59.1 feet, present datum, June 1894.

Remarks.- Records good. Flow subject to regulation on Flathead River; power plant at Thompson Falls causes diurnal fluctuation during low water. Considerable water diverted from tributaries above station for irrigation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | |
|------|--------|------|--------|
| 11.0 | 6,130 | 22.0 | 34,600 |
| 13.0 | 9,920 | 28.0 | 56,800 |
| 15.0 | 14,500 | 35.0 | 77,500 |
| 18.0 | 22,300 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1 | 7,720 | 11,000 | 12,600 | 24,000 | 10,800 | 9,710 | 7,530 | 30,300 | 64,900 | 48,200 | 11,200 | 9,690 |
| 2 | 8,040 | 10,100 | 12,800 | 21,500 | 9,710 | 9,710 | 8,690 | 30,000 | 62,400 | 49,400 | 11,700 | 10,600 |
| 3 | 8,890 | 10,100 | 15,900 | 20,900 | 10,800 | 9,090 | 8,890 | 29,400 | 56,800 | 47,800 | 11,900 | 9,290 |
| 4 | 9,710 | 10,600 | 19,300 | 19,300 | 10,300 | 8,890 | 10,100 | 29,400 | 44,500 | 42,600 | 12,600 | 8,490 |
| 5 | 8,290 | 10,300 | 19,000 | 19,600 | 10,300 | 8,690 | 9,920 | 29,100 | 44,100 | 36,200 | 11,900 | 7,910 |
| 6 | 8,690 | 10,600 | 18,800 | 20,400 | 11,000 | 8,690 | 10,800 | 28,800 | 47,100 | 36,200 | 11,400 | 7,720 |
| 7 | 9,710 | 10,800 | 17,700 | 21,200 | 11,400 | 7,720 | 11,000 | 28,400 | 50,900 | 40,100 | 11,400 | 7,350 |
| 8 | 9,500 | 11,000 | 17,000 | 23,700 | 11,700 | 7,530 | 11,400 | 28,400 | 57,600 | 39,400 | 11,400 | 7,720 |
| 9 | 9,090 | 10,800 | 16,200 | 25,500 | 11,700 | 8,290 | 12,100 | 28,400 | 65,700 | 37,300 | 11,400 | 8,690 |
| 10 | 9,710 | 10,800 | 16,000 | 26,000 | 11,400 | 8,690 | 12,800 | 29,700 | 67,800 | 32,900 | 11,400 | 9,290 |
| 11 | 9,090 | 10,600 | 17,000 | 26,000 | 10,800 | 9,710 | 12,800 | 31,300 | 72,000 | 28,400 | 11,700 | 9,290 |
| 12 | 9,920 | 10,800 | 17,500 | 26,300 | 11,400 | 10,300 | 15,000 | 33,600 | 73,200 | 25,200 | 11,400 | 9,500 |
| 13 | 9,500 | 11,000 | 17,200 | 24,900 | 10,600 | 10,100 | 17,200 | 35,000 | 60,000 | 24,000 | 11,000 | 9,500 |
| 14 | 9,500 | 11,700 | 16,400 | 24,300 | 11,000 | 10,100 | 19,000 | 37,000 | 50,100 | 22,900 | 10,800 | 9,500 |
| 15 | 9,090 | 11,700 | 16,000 | 23,400 | 10,600 | 10,600 | 22,600 | 39,000 | 44,800 | 22,900 | 10,800 | 9,290 |
| 16 | 9,090 | 12,800 | 14,500 | 22,300 | 10,600 | 9,920 | 24,900 | 40,000 | 46,000 | 24,300 | 10,600 | 8,690 |
| 17 | 9,090 | 13,500 | 15,000 | 21,200 | 11,400 | 9,090 | 25,800 | 40,000 | 55,600 | 23,400 | 10,600 | 8,290 |
| 18 | 9,090 | 13,500 | 15,200 | 20,600 | 9,500 | 9,710 | 25,200 | 40,000 | 54,000 | 20,400 | 10,300 | 8,290 |
| 19 | 9,090 | 13,500 | 16,000 | 19,800 | 8,290 | 8,490 | 24,900 | 39,000 | 52,800 | 18,000 | 10,600 | 7,910 |
| 20 | 9,290 | 13,300 | 19,300 | 19,000 | 7,910 | 9,500 | 24,900 | 38,300 | 49,400 | 17,500 | 10,800 | 7,910 |
| 21 | 8,890 | 13,000 | 22,000 | 17,700 | 8,290 | 9,090 | 26,000 | 38,300 | 45,200 | 19,000 | 10,300 | 8,100 |
| 22 | 8,890 | 12,800 | 22,300 | 17,000 | 9,290 | 8,690 | 28,800 | 39,000 | 44,100 | 19,300 | 11,200 | 8,100 |
| 23 | 9,090 | 12,800 | 21,800 | 16,200 | 9,090 | 7,910 | 32,600 | 40,800 | 42,600 | 17,700 | 10,100 | 8,290 |
| 24 | 9,090 | 12,800 | 21,800 | 15,200 | 9,500 | 9,290 | 33,200 | 44,500 | 39,000 | 16,200 | 10,300 | 7,720 |
| 25 | 9,920 | 12,800 | 23,700 | 15,000 | 9,090 | 8,290 | 33,600 | 52,100 | 30,000 | 16,000 | 10,300 | 8,100 |
| 26 | 9,710 | 12,400 | 24,300 | 14,500 | 9,920 | 8,690 | 33,200 | 60,000 | 26,600 | 16,000 | 10,600 | 7,910 |
| 27 | 7,530 | 12,800 | 23,700 | 14,200 | 8,690 | 9,290 | 32,600 | 64,900 | 26,000 | 14,700 | 10,300 | 9,500 |
| 28 | 10,600 | 13,000 | 26,000 | 12,600 | 9,290 | 8,890 | 32,200 | 70,700 | 36,000 | 14,500 | 10,600 | 10,100 |
| 29 | 10,800 | 12,800 | 25,800 | 11,700 | - | 8,100 | 31,600 | 74,100 | 46,000 | 14,200 | 10,600 | 7,530 |
| 30 | 10,800 | 12,600 | 25,200 | 11,200 | - | 7,350 | 31,000 | 72,600 | 46,200 | 13,300 | 10,600 | 6,640 |
| 31 | 11,000 | - | 25,500 | 10,600 | - | 7,350 | - | 68,200 | - | 12,100 | 10,300 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|--------|----------------------|
| October..... | 288,420 | 11,000 | 7,530 | 9,304 | 572,100 |
| November..... | 356,100 | 13,500 | 10,100 | 11,870 | 706,300 |
| December..... | 591,500 | 26,000 | 12,600 | 19,080 | 1,175,000 |
| Calendar year 1941..... | 4,279,600 | 34,600 | 4,840 | 11,720 | 8,488,000 |
| January..... | 606,400 | 26,600 | 10,600 | 19,560 | 1,203,000 |
| February..... | 284,370 | 11,700 | 7,910 | 10,160 | 564,000 |
| March..... | 277,470 | 10,300 | 7,350 | 8,951 | 550,300 |
| April..... | 630,330 | 33,600 | 7,530 | 21,010 | 1,250,000 |
| May..... | 1,289,700 | 74,100 | 28,400 | 41,600 | 2,558,000 |
| June..... | 1,505,400 | 73,200 | 26,000 | 50,180 | 2,986,000 |
| July..... | 810,100 | 49,400 | 12,100 | 26,130 | 1,607,000 |
| August..... | 349,100 | 12,600 | 10,100 | 10,970 | 674,600 |
| September..... | 286,310 | 10,800 | 8,640 | 8,544 | 506,400 |
| Water year 1941-42..... | 7,236,200 | 74,100 | 6,640 | 19,830 | 14,350,000 |

a No gage-height record; discharge computed on basis of records for station near Plains.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Pend Oreille Lake at Hope, Idaho

Location.- Water-stage recorder, lat. 48°15', long. 116°18', in lot 2, sec. 35, T. 57 N., R. 1 E., at floating dock near Northern Pacific Railway station at Hope. Datum of gage is 2,000.00 feet above mean sea level (U. S. Coast and Geodetic Survey datum).

Drainage area.- 22,900 square miles.

Records available.- September 1921 to September 1942. March 1914 to September 1922 at site of Sandpoint.

Extremes.- Maximum elevation during year, 2,058.93 feet June 13; minimum, 2,047.82 feet Sept. 27.

1921-42: Maximum elevation, 2,068.78 feet June 21, 1933; minimum, 2,046.47 feet Feb. 17, 1936.

Maximum elevation known, 2,076.08 feet June 1894.

Remarks.- Considerable water diverted from tributaries of Clark Fork for irrigation.

Gage height, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 48.00 | 48.32 | 49.08 | 51.82 | 49.92 | 48.34 | 48.10 | 52.78 | 58.29 | 55.88 | 50.45 | 48.43 |
| 2 | 47.98 | 48.34 | 49.17 | 51.78 | 49.79 | 48.34 | 48.12 | 52.84 | 58.46 | 55.96 | 50.28 | 48.37 |
| 3 | 47.99 | 48.35 | 49.43 | 51.72 | 49.67 | 48.37 | 48.16 | 52.87 | 58.53 | 56.04 | 50.14 | 48.33 |
| 4 | 48.02 | 48.38 | 49.68 | 51.65 | 49.60 | 48.36 | 48.19 | 52.89 | 58.41 | 56.05 | 50.02 | 48.31 |
| 5 | 48.02 | 48.40 | 49.89 | 51.58 | 49.54 | 48.33 | 48.21 | 52.90 | 58.13 | 55.93 | 49.92 | 48.26 |
| 6 | 48.03 | 48.41 | 50.06 | 51.50 | 49.47 | 48.33 | 48.26 | 52.90 | 57.90 | 55.73 | 49.81 | 48.22 |
| 7 | 48.08 | 48.42 | 50.19 | 51.44 | 49.41 | 48.29 | 48.31 | 52.90 | 57.81 | 55.68 | 49.69 | 48.15 |
| 8 | 48.09 | 48.42 | 50.27 | 51.48 | 49.36 | 48.24 | 48.38 | 52.90 | 57.81 | 55.49 | 49.60 | 48.10 |
| 9 | 48.11 | 48.43 | 50.28 | 51.53 | 49.31 | 48.23 | 48.44 | 52.92 | 57.95 | 55.38 | 49.51 | 48.06 |
| 10 | 48.13 | 48.43 | 50.29 | 51.59 | 49.27 | 48.26 | 48.53 | 52.97 | 58.23 | 55.19 | 49.44 | 48.06 |
| 11 | 48.18 | 48.44 | 50.29 | 51.66 | 49.23 | 48.27 | 48.62 | 53.06 | 58.47 | 54.97 | 49.37 | 48.04 |
| 12 | 48.22 | 48.45 | 50.31 | 51.71 | 49.18 | 48.29 | 48.74 | 53.17 | 58.79 | 54.67 | 49.30 | 48.03 |
| 13 | 48.28 | 48.48 | 50.31 | 51.76 | 49.13 | 48.31 | 48.90 | 53.28 | 58.91 | 54.31 | 49.21 | 48.06 |
| 14 | 48.31 | 48.56 | 50.32 | 51.75 | 49.08 | 48.33 | 49.14 | 53.43 | 58.79 | 54.01 | 49.13 | 48.06 |
| 15 | 48.32 | 48.66 | 50.30 | 51.73 | 49.03 | 48.35 | 49.38 | 53.58 | 58.55 | 53.75 | 49.07 | 48.07 |
| 16 | 48.31 | 48.71 | 50.31 | 51.69 | 48.98 | 48.37 | 49.66 | 53.72 | 58.27 | 53.50 | 49.00 | 48.05 |
| 17 | 48.33 | 48.78 | 50.31 | 51.63 | 48.93 | 48.38 | 49.96 | 53.87 | 58.13 | 53.33 | 48.96 | 48.01 |
| 18 | 48.32 | 48.85 | 50.35 | 51.55 | 48.88 | 48.38 | 50.21 | 54.00 | 58.09 | 53.11 | 48.90 | 48.00 |
| 19 | 48.32 | 48.90 | 50.46 | 51.46 | 48.82 | 48.37 | 50.43 | 54.11 | 58.03 | 52.84 | 48.86 | 47.97 |
| 20 | 48.32 | 48.95 | 50.68 | 51.37 | 48.72 | 48.34 | 50.60 | 54.21 | 57.94 | 52.56 | 48.82 | 47.94 |
| 21 | 48.32 | 48.98 | 50.91 | 51.23 | 48.63 | 48.32 | 50.81 | 54.31 | 57.75 | 52.34 | 48.79 | 47.91 |
| 22 | 48.31 | 48.99 | 51.11 | 51.10 | 48.59 | 48.31 | 51.05 | 54.41 | 57.62 | 52.15 | 48.70 | 47.89 |
| 23 | 48.30 | 49.00 | 51.29 | 50.98 | 48.54 | 48.30 | 51.33 | 54.56 | 57.29 | 51.99 | 48.69 | 47.88 |
| 24 | 48.29 | 49.01 | 51.38 | 50.85 | 48.50 | 48.28 | 51.63 | 54.76 | 57.07 | 51.80 | 48.66 | 47.87 |
| 25 | 48.28 | 49.02 | 51.45 | 50.72 | 48.48 | 48.27 | 51.92 | 55.05 | 56.73 | 51.60 | 48.62 | 47.86 |
| 26 | 48.30 | 49.03 | 51.53 | 50.62 | 48.43 | 48.23 | 52.15 | 55.53 | 56.35 | 51.40 | 48.56 | 47.84 |
| 27 | 48.26 | 49.03 | 51.58 | 50.53 | 48.41 | 48.21 | 52.35 | 56.10 | 55.95 | 51.23 | 48.54 | 47.83 |
| 28 | 48.25 | 49.02 | 51.63 | 50.47 | 48.38 | 48.20 | 52.49 | 56.66 | 55.71 | 51.05 | 48.51 | 47.86 |
| 29 | 48.27 | 49.02 | 51.70 | 50.33 | - | 48.18 | 52.62 | 57.21 | 55.68 | 50.91 | 48.48 | 47.87 |
| 30 | 48.29 | 49.03 | 51.76 | 50.18 | - | 48.14 | 52.72 | 57.68 | 55.77 | 50.78 | 48.46 | 47.85 |
| 31 | 48.30 | - | 51.79 | 50.02 | - | 48.11 | - | 58.02 | - | 50.61 | 48.45 | - |

Note.- Add 2,000 feet to obtain elevation above mean sea level.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

PEND OREILLE RIVER BASIN

Pend Oreille River below Z Canyon, near Metaline Falls, Wash.

(International gaging station)

Location.— Water-stage recorder, lat. 48°59', long. 117°21', in lot 2, sec. 11, T. 40 N., R. 43 E., three-quarters of a mile downstream from Z Canyon, 1½ miles south of international boundary, 5 miles downstream from Slate Creek, and 10 miles downstream from Metaline Falls.

Drainage area.— 25,200 square miles.

Records available.— October 1922 to September 1942. November 1908 to September 1910 and October 1912 to September 1928, at site at Metaline Falls, 10 miles upstream, published as Clark Fork at Metaline Falls.

Average discharge.— 30 years (1912-42), 25,220 second-feet (adjusted for storage in Pend Oreille Lake).

Extremes.— Maximum discharge during year, 70,600 second-feet June 15 (gage height, 31.80 feet); minimum, 10,200 second-feet Sept. 29 (gage height, 12.27 feet).

1912-42: Maximum discharge, 139,000 second-feet June 16, 1913 (gage height, 41.2 feet, site and datum then in use); minimum, 2,500 second-feet Dec. 12, 1919 (gage height, -2.4 feet, site and datum then in use).

Remarks.— Records excellent except those for periods of no gage-height record, which are good. Many small diversions from upper tributaries for irrigation. Flow regulated by natural storage in Pend Oreille Lake and by artificial regulation on Flathead River.

Cooperation.— This is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|------|--------|------|--------|------|--------|
| 13.0 | 12,100 | 17.0 | 25,700 | 24.0 | 48,100 |
| 14.0 | 16,100 | 18.0 | 29,300 | 26.0 | 53,900 |
| 15.0 | 18,500 | 20.0 | 35,900 | 28.0 | 59,600 |
| 16.0 | 22,100 | 22.0 | 42,100 | 30.0 | 65,300 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|--------|
| 1 | 10,800 | 13,100 | 15,700 | 29,600 | 20,800 | 12,800 | 12,500 | 34,600 | 65,900 | 52,200 | a23,100 | 12,500 |
| 2 | 10,800 | 13,100 | 16,200 | 28,400 | 20,100 | 12,800 | 12,400 | 35,100 | 67,300 | 52,400 | a22,200 | 12,400 |
| 3 | 10,900 | 13,300 | 17,500 | 27,600 | 19,600 | 12,900 | 12,600 | 35,400 | 68,600 | 52,700 | 21,300 | 12,400 |
| 4 | 10,800 | 13,400 | 17,700 | 24,700 | 19,200 | 12,700 | 12,800 | 35,600 | 69,000 | 52,900 | 20,600 | 12,400 |
| 5 | 11,000 | 13,500 | 16,500 | 25,100 | 19,000 | 12,800 | 13,000 | 35,800 | 66,600 | 53,100 | 19,900 | 12,100 |
| 6 | 11,400 | 13,600 | 19,700 | 27,200 | 18,500 | 12,500 | 13,200 | 35,800 | 67,400 | 52,400 | 19,300 | 11,800 |
| 7 | 11,400 | 13,700 | 20,700 | 26,300 | 16,500 | 12,300 | 13,400 | 35,900 | 66,500 | 51,500 | 18,400 | 11,500 |
| 8 | 11,200 | 13,900 | 21,400 | 26,700 | 17,800 | 12,400 | 13,600 | 35,900 | 65,100 | 50,500 | 18,300 | 11,000 |
| 9 | 11,400 | 14,000 | 21,800 | 25,200 | 17,400 | 12,500 | 13,800 | 36,000 | 65,000 | 49,600 | 17,900 | 10,900 |
| 10 | 11,700 | 13,900 | 22,200 | 26,000 | 17,500 | 12,400 | 14,300 | 36,600 | 65,300 | 48,900 | 17,400 | 11,000 |
| 11 | 11,800 | 14,000 | 22,200 | 28,500 | 17,000 | 12,400 | 14,900 | 36,800 | 66,500 | 48,100 | 17,000 | 11,000 |
| 12 | 12,100 | 13,800 | 21,600 | 29,200 | 16,600 | 12,700 | 15,400 | 37,400 | 67,700 | 46,500 | 16,200 | 11,000 |
| 13 | 12,200 | 14,000 | 22,000 | 28,800 | 16,400 | 12,600 | 15,600 | 36,300 | 68,400 | 45,200 | 16,000 | 11,100 |
| 14 | 12,400 | 14,700 | 22,300 | 29,200 | 16,500 | 12,700 | 16,500 | 36,800 | 70,300 | 43,700 | 15,900 | 11,100 |
| 15 | 12,600 | 14,700 | 22,400 | 30,000 | 16,000 | 13,000 | 17,300 | 39,400 | 70,300 | 42,000 | 15,700 | 11,100 |
| 16 | 12,600 | 15,200 | 22,700 | 31,100 | 15,900 | 12,800 | 18,000 | 40,200 | 66,100 | 40,500 | 15,500 | 11,000 |
| 17 | 12,800 | 15,500 | 22,800 | 30,000 | 15,900 | 12,900 | 19,700 | 40,700 | 67,400 | 39,100 | 15,200 | 11,100 |
| 18 | 12,800 | 15,700 | 22,800 | 28,900 | 15,800 | 12,800 | 20,600 | 41,100 | 66,400 | 37,800 | 14,900 | 11,000 |
| 19 | 13,000 | 15,700 | 23,400 | 28,300 | 15,800 | 12,800 | 21,700 | 41,700 | 65,900 | 36,600 | 14,700 | 11,000 |
| 20 | 13,000 | 15,900 | 25,000 | 27,800 | 14,900 | 12,900 | 23,100 | 42,300 | 65,500 | 35,600 | 14,400 | 10,800 |
| 21 | 12,900 | 15,900 | 25,600 | 27,400 | 14,700 | 12,900 | 24,400 | 42,900 | 65,000 | 34,000 | 14,100 | 10,700 |
| 22 | 13,000 | 15,900 | 26,400 | 27,000 | 14,600 | 12,800 | 25,300 | 43,700 | 64,100 | 32,800 | 13,700 | 10,600 |
| 23 | 12,900 | 16,000 | 27,500 | 26,300 | 13,800 | 12,300 | 26,000 | 44,700 | 65,000 | 31,600 | 13,900 | 10,500 |
| 24 | 12,900 | 16,000 | 28,000 | 25,300 | 13,200 | 12,400 | 27,400 | 45,700 | 61,800 | 30,500 | 13,600 | 10,500 |
| 25 | 12,900 | 15,800 | 28,400 | 24,800 | 13,500 | 12,500 | 29,100 | 46,900 | 60,400 | 29,500 | 13,300 | 10,400 |
| 26 | 12,800 | 15,500 | 28,800 | 23,900 | 13,100 | 12,400 | 30,600 | 49,700 | 59,400 | 26,600 | 12,900 | 10,300 |
| 27 | 12,700 | 15,600 | 29,000 | 23,600 | 13,100 | 12,400 | 31,900 | 52,900 | 57,200 | 27,700 | 12,800 | 10,300 |
| 28 | 12,900 | 15,600 | 29,200 | 23,200 | 13,100 | 12,400 | 32,800 | 55,200 | 54,800 | a26,800 | 12,800 | 10,300 |
| 29 | 12,900 | 15,600 | 29,400 | 22,600 | - | 12,600 | 33,600 | 58,000 | 53,000 | a25,900 | 12,600 | 10,300 |
| 30 | 13,100 | 15,800 | 29,500 | 21,900 | - | 12,500 | 34,200 | 61,200 | 52,300 | a25,000 | 12,400 | 10,300 |
| 31 | 13,000 | - | 29,600 | 21,300 | - | 12,400 | - | 63,800 | - | a24,000 | 12,400 | - |

| Month | Observed | | | | Change in contents in Pend Oreille Lake (acre-feet) | Adjusted for change in reservoir contents | | | |
|--------------------|-----------------------------|--------------|--------|----------------------------|---|--|--------------------------|-----------------------|-------------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run-off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | Mean | Per square mile | |
| October..... | 13,100 | 10,800 | 12,220 | 751,500 | +26,040 | 777,500 | 12,640 | 0.502 | 0.58 |
| November..... | 16,000 | 13,100 | 14,750 | 677,500 | +61,950 | 939,400 | 15,790 | .627 | .70 |
| December..... | 29,600 | 15,700 | 23,560 | 1,449,000 | +238,180 | 1,687,000 | 27,440 | 1.09 | 1.25 |
| Calendar year 1941 | 32,000 | 7,880 | 15,690 | 11,360,000 | +547,170 | 11,710,000 | 16,170 | .642 | 8.71 |
| January..... | 31,100 | 21,300 | 26,650 | 1,639,000 | -153,410 | 1,486,000 | 24,170 | .959 | 1.11 |
| February..... | 20,800 | 13,100 | 16,310 | 905,900 | -149,000 | 756,900 | 15,630 | .541 | .56 |
| March..... | 13,000 | 12,300 | 12,620 | 776,100 | -13,680 | 762,400 | 12,400 | .492 | .57 |
| April..... | 54,200 | 12,400 | 20,320 | 1,209,000 | +597,720 | 1,607,000 | 27,010 | 1.07 | 1.20 |
| May..... | 63,800 | 34,600 | 42,530 | 2,616,000 | +474,960 | 3,090,000 | 50,250 | 1.99 | 2.30 |
| June..... | 70,300 | 52,300 | 64,510 | 3,838,000 | -203,720 | 3,634,000 | 61,070 | 2.42 | 2.70 |
| July..... | 53,100 | 24,000 | 40,250 | 2,475,000 | -455,530 | 2,019,000 | 32,840 | 1.30 | 1.50 |
| August..... | 23,100 | 12,400 | 16,080 | 988,600 | -184,820 | 803,800 | 13,070 | .519 | .60 |
| September..... | 12,500 | 10,300 | 11,070 | 658,900 | -50,450 | 608,400 | 10,220 | .406 | .45 |
| Water year 1941-42 | 70,300 | 10,300 | 25,120 | 18,180,000 | -11,760 | 18,170,000 | 25,100 | .996 | 13.53 |

a No gage-height records; discharge computed on basis of records for Columbia River at international boundary.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Smaller reservoirs in Pend Oreille River Basin, Mont.

Georgetown Lake on Flint Creek, 2 miles west of Southern Cross, completed in 1905 to store water for pumpage into Warm Springs Creek for use of reclamation works of Anaconda Copper Mining Co. at Anaconda, or for release through Flint Creek for power development, has usable capacity of 33,000 acre-feet. Records furnished by Montana Power Co.

East Fork of Rock Creek Reservoir on East Fork of Rock Creek, 14 miles southwest of Phillipsburg, completed in 1938 for irrigation in Flint Creek Valley, has usable capacity of 16,200 acre-feet. Records furnished by Montana State Water Conservation Board.

Nevada Creek Reservoir on Nevada Creek, 7 miles west of Finn, completed in 1938 for irrigation, has usable capacity of 12,600 acre-feet. Records furnished by Montana State Water Conservation Board.

West Fork of Bitterroot River Reservoir on West Fork of Bitterroot River, 7 miles upstream from Nez Perce Creek and 23 miles south of Darby, completed June 14, 1940, for irrigation, has usable capacity of 31,600 acre-feet. Records furnished by Montana State Water Conservation Board.

Revision: Figures of change in contents for September 1941 and water year 1940-41 have been revised to -16,000 acre-feet and +14,200 acre-feet, respectively, superseding figures published in Water-Supply Paper 932.

Como Lake on Rock Creek, 4 miles northwest of Darby, completed in 1909 for irrigation, has usable capacity of 34,800 acre-feet. Records furnished by Bitterroot Valley Irrigation Co.

Camas Reservoirs comprise a group of 4 reservoirs in the Little Bitterroot River Basin, which are operated for irrigation. Records furnished by Office of Indian Affairs.

Little Bitterroot Lake on Little Bitterroot River, 2 miles southwest of Marion, completed in 1918, has usable capacity of 18,000 acre-feet. Water level below outlet during year. Hubbart Reservoir on Little Bitterroot River, 9 miles northwest of Niaraada, completed in 1923, has usable capacity of 12,100 acre-feet. Upper Dry Fork Reservoir on Dry Fork Creek, 4 miles northwest of Lonepine, completed in 1940, has usable capacity of 2,700 acre-feet. Dry Fork Reservoir on Dry Fork Creek, 1 mile west of Lonepine, completed in 1934, has usable capacity of 4,000 acre-feet.

Mission Valley Reservoirs comprise a group of 8 reservoirs in area east of and tributary to Flathead River between Flathead Lake and Jocko River, which are operated for irrigation. Records furnished by Office of Indian Affairs. Twin Reservoir, fed entirely by canals, 4 miles southeast of Polson, completed in 1932, has usable capacity of 600 acre-feet. Pablo Reservoir, fed entirely by canals, 3 miles south of Polson, completed in 1934, has usable capacity of 25,000 acre-feet. Lower Crow Reservoir on Crow Creek, 6 miles west of Ronan, completed in 1933, has usable capacity of 10,350 acre-feet. Kicking Horse Reservoir, fed entirely by canals, 5 miles south of Ronan, completed in 1930, has usable capacity of 8,350 acre-feet. Ninepipe Reservoir, fed entirely by canals, 2 miles northeast of Charlo, completed in 1923, has usable capacity of 14,870 acre-feet. Mcdonald Reservoir on Post Creek, 9 miles east of Charlo, completed in 1920, has usable capacity of 8,225 acre-feet. Mission Reservoir on Mission Creek, 4 miles east of St. Ignatius, completed in 1935, has usable capacity of 7,250 acre-feet. Tabor Reservoir on Dry Creek, 8 miles southeast of St. Ignatius, completed in 1940, has usable capacity of 23,300 acre-feet.

Lower Jocko Lake on Jocko River, 15 miles east of Arlee, completed in 1937, has usable capacity of 7,600 acre-feet. Records furnished by Office of Indian Affairs.

Thompson Falls Reservoir on Clark Fork, at Thompson Falls, for power development, has usable capacity of 15,000 acre-feet. Records furnished by Montana Power Co.

Other reservoirs of small capacity, principally on tributaries of the Bitterroot River, are operated for irrigation.

Monthly change in contents, in acre-feet, water year October 1941 to September 1942

| Month | Georgetown Lake | East Fork of Rock Creek Reservoir | Nevada Creek Reservoir | West Fork of Bitterroot River Reservoir | Como Lake |
|-------------------------|-----------------|-----------------------------------|------------------------|---|-----------|
| October..... | -80 | +50 | +660 | -7,000 | +4,900 |
| November..... | +220 | +960 | +610 | -4,000 | +6,600 |
| December..... | +250 | -10 | +330 | 0 | +4,800 |
| Calendar year 1941..... | +3,040 | +8,990 | +450 | +5,000 | +13,000 |
| January..... | -170 | +1,740 | +50 | 0 | +300 |
| February..... | -220 | -860 | 0 | 0 | +1,900 |
| March..... | -470 | -1,110 | +1,370 | -2,000 | +2,000 |
| April..... | +1,060 | +230 | +5,580 | +29,000 | +4,500 |
| May..... | +3,590 | +2,420 | +1,520 | 0 | +7,900 |
| June..... | +2,430 | 0 | +540 | 0 | 0 |
| July..... | -740 | -520 | -440 | 0 | -12,300 |
| August..... | -120 | -3,060 | -1,470 | 0 | -18,500 |
| September..... | -90 | -2,130 | 0 | 0 | -4,000 |
| Water year 1941-42..... | +7,130 | -2,380 | +9,050 | +16,000 | -2,100 |

| Month | Camas Reservoirs | Mission Valley Reservoirs | Lower Jocko Lake | Thompson Falls Reservoir |
|-------------------------|------------------|---------------------------|------------------|--------------------------|
| October..... | +130 | +9,180 | 0 | +1,890 |
| November..... | +410 | +6,220 | 0 | +580 |
| December..... | +950 | +5,880 | 0 | -290 |
| Calendar year 1941..... | +1,210 | +14,440 | 0 | -140 |
| January..... | +70 | +1,730 | 0 | 0 |
| February..... | +120 | +2,060 | 0 | -290 |
| March..... | +1,060 | +4,740 | 0 | +720 |
| April..... | +3,650 | +15,380 | +640 | -1,280 |
| May..... | +1,720 | +27,240 | +2,540 | -4,900 |
| June..... | +1,700 | +3,030 | +300 | -4,540 |
| July..... | -2,820 | -15,570 | -1,260 | +11,010 |
| August..... | -2,560 | -39,020 | -1,130 | -2,380 |
| September..... | -660 | -22,970 | -890 | -3,430 |
| Water year 1941-42..... | +3,760 | -2,110 | +210 | -2,910 |

† Interpolated on basis of weekly readings.

‡ Interpolated between Nov. 28 and Dec. 1.

Time basis: Mountain standard time to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Flint Creek near Southern Cross, Mont.

Location.- Staff gage and Cippoletti weir, lat. $46^{\circ}14'$, long. $113^{\circ}18'$, in NW $\frac{1}{4}$ sec. 36, T. 6 N., R. 14 W., half a mile downstream from power plant 2 miles downstream from Georgetown Lake, 3 miles northwest of Southern Cross, and 6 miles south of Philipsburg.

Records available.- October 1940 to September 1942.

Extremes.- Maximum discharge observed during year, 162 second-feet June 13 (gage height, 1.86 feet); minimum observed, 1.6 second-feet Nov. 16 (gage height, 0.13 foot).

1940-42: Maximum discharge observed, that of June 13, 1942; minimum observed, 1.4 second-feet Mar. 7 to Apr. 7 to Apr. 23, May 17-22, 1941 (gage height, 0.11 foot).

Remarks.- Records good. Gage read once daily. Flow regulated by Georgetown Lake (see preceding page).

Cooperation.- Gage-height record furnished by Montana Power Co., under general supervision of the Geological Survey, in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 30 | 30 | 28 | 29 | 31 | 31 | 31 | 33 | 136 | 31 | 79 | 28 |
| 2 | 30 | 30 | 28 | 29 | 31 | 31 | 32 | 33 | 105 | 04 | 79 | 28 |
| 3 | 30 | 30 | 28 | 30 | 31 | 31 | 32 | 34 | 57 | 97 | 60 | 28 |
| 4 | 30 | 30 | 28 | 30 | 32 | 31 | 32 | 34 | 56 | 97 | 34 | 28 |
| 5 | 30 | 30 | 28 | 30 | 32 | 31 | 32 | 34 | 36 | 97 | 33 | 28 |
| 6 | 30 | 30 | 28 | 30 | 32 | 31 | 33 | 34 | 35 | 97 | 33 | 28 |
| 7 | 30 | 30 | 28 | 30 | 32 | 31 | 33 | 33 | 34 | 97 | 32 | 28 |
| 8 | 30 | 30 | 28 | 30 | 32 | 31 | 33 | 33 | 51 | 97 | 31 | 28 |
| 9 | 30 | 30 | 28 | 30 | 32 | 31 | 33 | 33 | 126 | 37 | 31 | 28 |
| 10 | 30 | 30 | 28 | 30 | 32 | 31 | 33 | 34 | 157 | 68 | 31 | 28 |
| 11 | 30 | 30 | 28 | 30 | 32 | 31 | 34 | 34 | 157 | 62 | 31 | 28 |
| 12 | 30 | 30 | 28 | 30 | 32 | 31 | 35 | 34 | 160 | 62 | 31 | 28 |
| 13 | 30 | 30 | 28 | 30 | 31 | 31 | 36 | 34 | 162 | 62 | 31 | 28 |
| 14 | 30 | 30 | 28 | 30 | 31 | 31 | 36 | 35 | 161 | 62 | 31 | 28 |
| 15 | 30 | 30 | 28 | 30 | 31 | 31 | 37 | 35 | 160 | 62 | 31 | 28 |
| 16 | 30 | 18 | 28 | 30 | 31 | 31 | 37 | 35 | 160 | 62 | 31 | 28 |
| 17 | 30 | 29 | 28 | 30 | 31 | 31 | 37 | 36 | 158 | 48 | 31 | 28 |
| 18 | 30 | 29 | 28 | 30 | 31 | 31 | 37 | 35 | 157 | 32 | 31 | 28 |
| 19 | 30 | 29 | 28 | 31 | 31 | 31 | 37 | 36 | 160 | 32 | 31 | 28 |
| 20 | 30 | 29 | 28 | 31 | 31 | 31 | 37 | 36 | 158 | 31 | 31 | 28 |
| 21 | 30 | 29 | 28 | 31 | 31 | 31 | 36 | 40 | 157 | 31 | 30 | 28 |
| 22 | 30 | 28 | 28 | 31 | 31 | 31 | 36 | 40 | 155 | 31 | 30 | 28 |
| 23 | 30 | 28 | 28 | 31 | 31 | 31 | 36 | 40 | 128 | 31 | 30 | 28 |
| 24 | 30 | 28 | 28 | 31 | 31 | 31 | 36 | 39 | 96 | 31 | 30 | 28 |
| 25 | 30 | 28 | 28 | 31 | 31 | 31 | 36 | 39 | 36 | 31 | 30 | 27 |
| 26 | 30 | 28 | 29 | 31 | 31 | 31 | 34 | 47 | 32 | 31 | 30 | 27 |
| 27 | 30 | 28 | 29 | 31 | 31 | 31 | 34 | 48 | 32 | 46 | 30 | 27 |
| 28 | 30 | 28 | 29 | 31 | 31 | 31 | 34 | 50 | 31 | 79 | 30 | 27 |
| 29 | 30 | 28 | 29 | 31 | - | 31 | 33 | 79 | 31 | 79 | 29 | 27 |
| 30 | 30 | 28 | 29 | 31 | - | 31 | 33 | 115 | 31 | 79 | 29 | 27 |
| 31 | 30 | - | 29 | 31 | - | 31 | - | 135 | - | 79 | 29 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 930 | 30 | 30.0 | 30.0 | 1,840 | | |
| November..... | | | | | | 865 | 30 | 18 | 28.8 | 1,720 | | |
| December..... | | | | | | 874 | 29 | 28 | 28.2 | 1,730 | | |
| Calendar year 1941..... | | | | | | 7,655.6 | 31 | 1.4 | 21.0 | 15,210 | | |
| January..... | | | | | | 941 | 31 | 29 | 30.4 | 1,870 | | |
| February..... | | | | | | 877 | 32 | 31 | 31.3 | 1,740 | | |
| March..... | | | | | | 961 | 31 | 31 | 31.0 | 1,910 | | |
| April..... | | | | | | 1,034 | 37 | 31 | 34.5 | 2,050 | | |
| May..... | | | | | | 1,356 | 136 | 33 | 43.7 | 2,690 | | |
| June..... | | | | | | 3,094 | 162 | 31 | 103 | 6,140 | | |
| July..... | | | | | | 1,695 | 97 | 31 | 61.1 | 3,760 | | |
| August..... | | | | | | 1,080 | 79 | 29 | 34.8 | 2,140 | | |
| September..... | | | | | | 834 | 28 | 27 | 27.8 | 1,650 | | |
| Water year 1941-42..... | | | | | | 14,741 | 162 | 18 | 40.4 | 29,240 | | |

Note.- After Dec. 7 gage read about every other day or oftener during changing stage; discharge interpolated on days of no gage-height record.

Time basis. Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Flint Creek at Maxville, Mont.

Location.- Water-stage recorder, lat. 46°28'00", long. 113°14'30", in NW 1/4 sec. 9, T. 2 N., R. 13 W., 0.4 mile west of Maxville and 1 mile above Boulder Creek.

Records available.- August 1941 to September 1942. April 1939 to September 1941 at site half a mile upstream (records not equivalent).

Extremes.- Maximum discharge during year, 820 second-feet May 27 (gage height, 5.10 feet); minimum, 36 second-feet Dec. 27 (gage height, 1.54 feet), but may have been less during period of ice effect.

1941-42: Maximum discharge, that of May 27, 1942; minimum, that of Dec. 27, 1941.

Remarks.- Records good. Gage read once daily. Many diversions above and below station for irrigation. During irrigation season flow is supplemented by water from East Fork of Rock Creek which is diverted in sec. 5, T. 4 N., R. 14 W., 500 feet below Rock Creek Dam, through a canal into Trout Creek, thence into Flint Creek. Some additional regulation by Georgetown Lake.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|------|---------|---------|------|----------------------|------|------|-------|
| 1 | 102 | 78 | *74 | | 157 | 66 | 136 | 106 | 334 | 208 | 124 | 68 |
| 2 | 102 | 75 | 75 | | 69 | 68 | 175 | 123 | 312 | 179 | 134 | 65 |
| 3 | 101 | 75 | 88 | b40 | 70 | 71 | 174 | 133 | 312 | 179 | 140 | 67 |
| 4 | 116 | 79 | 80 | | 69 | *67 | 229 | 124 | 358 | 168 | 129 | 68 |
| 5 | 117 | 75 | 75 | | 69 | 67 | 290 | 108 | 248 | 164 | 121 | 65 |
| 6 | 112 | 177 | 75 | b40 | *64 | 67 | 177 | 104 | 412 | 154 | 116 | 68 |
| 7 | 110 | 74 | 75 | b40 | 68 | 68 | 194 | 101 | 456 | 139 | 115 | 67 |
| 8 | 108 | 75 | 71 | b48 | 69 | 69 | 200 | 102 | 508 | 131 | 112 | 66 |
| 9 | 107 | 75 | 75 | b55 | 69 | 74 | 170 | 103 | 544 | 118 | 124 | 66 |
| 10 | 104 | 73 | 73 | 62 | b68 | 79 | 212 | 128 | 526 | 103 | 116 | 66 |
| 11 | 101 | 74 | 73 | 70 | 68 | 88 | 228 | 166 | 508 | 100 | 113 | 68 |
| 12 | 99 | 74 | 76 | 77 | 67 | 87 | 264 | 187 | 428 | 94 | 100 | 67 |
| 13 | 99 | 75 | 70 | 76 | 67 | 84 | 262 | 218 | 384 | 89 | 97 | 69 |
| 14 | 97 | 87 | 73 | 71 | 66 | 79 | 228 | 197 | 384 | 89 | 92 | 77 |
| 15 | 97 | 91 | 72 | 70 | 67 | 73 | 224 | 191 | 397 | 86 | 91 | 76 |
| 16 | 96 | 89 | 73 | 63 | 153 | 71 | 186 | 180 | 426 | 85 | 88 | 74 |
| 17 | 94 | 80 | 74 | 67 | b50 | 70 | 173 | 168 | 397 | 91 | 80 | 79 |
| 18 | 94 | 82 | 71 | 66 | b55 | 68 | 170 | 162 | 370 | 89 | 74 | 88 |
| 19 | 94 | 79 | 71 | b62 | b65 | 67 | 153 | 157 | 412 | 82 | 70 | 80 |
| 20 | 94 | 176 | 94 | b60 | 72 | 67 | 149 | 166 | 384 | 84 | 68 | 76 |
| 21 | 93 | 175 | 91 | b60 | 65 | 67 | 159 | 173 | 334 | 79 | 60 | 73 |
| 22 | 93 | 167 | 71 | b68 | 65 | 68 | 163 | 198 | 312 | 72 | 57 | 72 |
| 23 | 90 | 163 | 73 | b57 | b64 | 74 | 174 | 245 | 301 | 69 | 57 | 71 |
| 24 | 88 | 176 | 75 | b61 | 54 | 73 | 161 | 282 | 282 | 69 | 63 | 73 |
| 25 | 85 | 92 | 71 | 69 | b64 | 70 | 139 | 313 | 259 | 73 | 62 | 74 |
| 26 | 84 | 86 | 50 | 70 | b65 | 69 | 128 | 455 | 282 | 75 | 65 | 71 |
| 27 | 82 | 77 | 46 | 71 | 67 | 69 | 123 | 608 | 312 | 79 | 70 | 72 |
| 28 | 82 | 75 | b45 | 71 | 65 | 72 | 119 | 426 | 264 | 86 | 80 | 69 |
| 29 | 76 | 75 | b44 | 71 | - | 75 | 124 | 370 | 239 | 106 | 74 | 68 |
| 30 | 74 | 74 | b42 | b68 | - | 88 | 117 | 358 | 215 | 113 | 68 | 70 |
| 31 | 75 | - | b40 | b55 | - | 104 | - | 358 | - | 120 | 69 | - |
| Month | | | | Second-foot-days | | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | 2,966 | | 117 | 74 | 95.7 | 5,880 | | | |
| November..... | | | | 2,323 | | 92 | 63 | 77.4 | 4,810 | | | |
| December..... | | | | 2,156 | | 94 | 40 | 69.5 | 4,280 | | | |
| Calendar year | | | | - | | - | - | - | - | | | |
| January..... | | | | 1,642 | | 77 | - | 59.4 | 3,650 | | | |
| February..... | | | | 1,809 | | 72 | 50 | 64.6 | 3,590 | | | |
| March..... | | | | 2,276 | | 104 | 66 | 73.4 | 4,510 | | | |
| April..... | | | | 5,410 | | 290 | 117 | 180 | 10,730 | | | |
| May..... | | | | 6,687 | | 699 | 101 | 216 | 15,280 | | | |
| June..... | | | | 11,088 | | 844 | 215 | 370 | 21,990 | | | |
| July..... | | | | 5,372 | | 908 | 69 | 109 | 6,690 | | | |
| August..... | | | | 2,630 | | 140 | 57 | 91.3 | 5,610 | | | |
| September..... | | | | 2,131 | | 88 | 65 | 71.0 | 4,230 | | | |
| Water year 1941-42..... | | | | 44,900 | | 606 | - | 123 | 89,080 | | | |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

c Computed from partly estimated gage-height record.

d Computed from staff-gage readings.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Trout Creek near Philipsburg, Mont.

Location.- Wire-weight gage, lat. 46°16'55", long. 113°20'25", in NW¼ sec. 15, T. 6 N., R. 14 W., 300 feet upstream from mouth and 4½ miles south of Philipsburg.

Records available.- May 1939 to September 1942 (irrigation seasons only).

Extremes.- Maximum discharge observed during period, 135 second-feet May 26 (gage height, 2.60 feet), from rating curve extended above 70 second-feet; minimum observed, 18 second-feet Oct. 30.

1939-42: Maximum discharge observed, that of May 26, 1942; maximum gage height observed, 2.75 feet Aug. 13, 1941; minimum discharge observed, 3.6 second-feet May 26-29, June 2, 1940.

Remarks.- Records fair. Gage read once daily. Many diversions above station for irrigation. At times during irrigation season flow is supplemented by water from East Fork of Rock Creek which is diverted in sec. 5, T. 4 N., R. 14 W., 500 feet below Rock Creek Dam, through a canal into Trout Creek.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|-------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 33 | †17.5 | | | | | | - | 52 | 53 | 60 | 46 |
| 2 | 32 | | | | | | - | 49 | 51 | 64 | 44 | |
| 3 | 32 | | | | | | - | 56 | 50 | 65 | 44 | |
| 4 | 38 | | | | | | - | 64 | 46 | 70 | 45 | |
| 5 | 33 | | | | | | - | 68 | 43 | 70 | 44 | |
| 6 | 33 | | | | | | - | 62 | 37 | 70 | 44 | |
| 7 | 33 | | | | | | - | 77 | 37 | 70 | 43 | |
| 8 | 33 | | | | | | - | 67 | 37 | 70 | 43 | |
| 9 | 33 | | | | | | - | 69 | 35 | 70 | 46 | |
| 10 | a52 | | | | | | - | 68 | 34 | 75 | 40 | |
| 11 | 32 | | | | | - | 63 | 31 | 70 | 40 | | |
| 12 | 31 | | | | | 39 | 59 | 30 | 70 | 41 | | |
| 13 | 30 | | | | | 41 | 59 | 30 | 65 | 41 | | |
| 14 | 30 | | | | | 58 | 57 | 30 | 60 | 43 | | |
| 15 | 30 | | | | | 48 | 55 | 30 | 59 | 44 | | |
| 16 | 30 | | | | | 41 | 60 | 31 | 59 | 44 | | |
| 17 | 29 | | | | | 39 | 56 | 32 | 59 | 47 | | |
| 18 | 29 | | | | | 44 | 61 | 32 | 53 | 39 | | |
| 19 | 29 | | | | | 40 | 64 | 31 | a52 | 39 | | |
| 20 | 29 | | | | | 44 | 55 | 37 | 51 | 38 | | |
| 21 | 29 | | | | | 44 | 59 | 34 | 51 | 40 | | |
| 22 | 29 | | | | | 46 | 58 | 28 | 50 | 40 | | |
| 23 | 28 | | | | | 44 | 66 | 27 | 54 | 40 | | |
| 24 | 24 | | | | | 46 | 64 | 28 | 57 | 40 | | |
| 25 | 24 | | | | | 46 | 57 | 37 | 55 | 41 | | |
| 26 | 24 | | | | | 135 | 57 | 44 | 60 | 38 | | |
| 27 | 23 | | | | | 60 | 66 | 50 | 60 | 36 | | |
| 28 | 22 | | | | | 63 | 62 | 53 | 56 | 36 | | |
| 29 | 20 | | | | | 52 | 58 | 59 | 53 | 36 | | |
| 30 | 18 | | | | | 50 | 52 | 68 | 49 | 36 | | |
| 31 | 19 | | | | | 67 | - | 60 | 49 | - | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 891 | 38 | 18 | 28.7 | 1,770 | | |
| November..... | | | | | | - | - | - | - | - | | |
| December..... | | | | | | - | - | - | - | - | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | - | - | - | - | - | | |
| February..... | | | | | | - | - | - | - | - | | |
| March..... | | | | | | - | - | - | - | - | | |
| April..... | | | | | | - | - | - | - | - | | |
| May 12-31..... | | | | | | 1,047 | 135 | 39 | 52.4 | 2,080 | | |
| June..... | | | | | | 1,850 | 87 | 49 | 61.7 | 3,670 | | |
| July..... | | | | | | 1,215 | 60 | 27 | 39.2 | 2,410 | | |
| August..... | | | | | | 1,876 | 75 | 49 | 60.5 | 3,720 | | |
| September..... | | | | | | 1,238 | 47 | 36 | 41.3 | 2,460 | | |
| Water year | | | | | | - | - | - | - | - | | |

† Result of discharge measurement

a No gage-height record; discharge interpolated.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Marshall Creek near Philipsburg, Mont.

Location.- Staff gage, lat. 46°22', long. 113°20', in NE¼NE¼ sec. 15, T. 7 N., R. 14 W., three-quarters of a mile upstream from mouth and 2½ miles northwest of Philipsburg. Prior to May 31, wire-weight gage at site half a mile downstream.

Records available.- June to September 1942. April 1939 to May 1942 (irrigation seasons only) at site half a mile downstream (records not equivalent).

Extremes.- Maximum discharge observed during period June to September, 43 second-feet June 9, 10; maximum gage height observed, 2.00 feet June 10; minimum discharge observed, 0.9 second-foot Aug. 13, 14.

Remarks.- Records fair. Gage read once daily. Small diversions above station for irrigation. At times during irrigation season flow is supplemented by water from East Fork of Rock Creek which is diverted in sec. 5, T. 4 N., R. 14 W., 500 feet below Rock Creek Dam through a canal into Trout Creek, thence into Marshall Creek.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 1.2 | | | | | | | - | 24 | 8.6 | 3.2 | 1.4 |
| 2 | 1.2 | | | | | | | - | 19 | 8.0 | 3.6 | 1.4 |
| 3 | 1.2 | | | | | | | - | 24 | 7.6 | 3.2 | 1.4 |
| 4 | 1.2 | | | | | | | - | 27 | 5.3 | 3.2 | 1.1 |
| 5 | 1.2 | | | | | | | - | 30 | 4.6 | 2.6 | 1.1 |
| 6 | 1.0 | †1.4 | | | | | | - | 33 | 6.6 | 2.8 | 1.1 |
| 7 | 1.2 | | | | | | | - | 38 | 3.9 | 2.2 | 1.0 |
| 8 | 1.2 | | | | | | | - | 36 | 3.6 | 1.4 | 1.4 |
| 9 | 1.2 | | | | | | | - | 43 | 3.4 | 1.4 | 1.1 |
| 10 | 1.2 | | | | | | | - | 43 | 2.8 | 1.2 | 3.2 |
| 11 | 1.2 | | | | | | | - | 39 | 3.4 | 1.1 | 3.6 |
| 12 | 1.4 | | | | | | | 20 | 34 | 2.6 | 1.1 | 3.9 |
| 13 | 1.4 | | | | | | | 27 | 32 | 2.5 | .9 | 3.9 |
| 14 | 1.1 | | | | | | | a32 | 27 | 2.3 | .9 | 5.3 |
| 15 | 1.1 | | | | | | | 36 | 22 | 2.2 | 1.4 | 5.7 |
| 16 | 1.2 | | | | | | | a34 | 22 | 2.2 | 1.4 | 5.7 |
| 17 | 1.2 | | | | | | | a32 | 16 | 2.8 | 1.2 | 6.2 |
| 18 | 1.0 | | | | | | | 29 | 13 | 2.1 | 3.1 | 6.8 |
| 19 | 1.2 | | | | | | | a27 | 15 | 1.8 | a2.8 | 6.8 |
| 20 | 1.0 | | | | | | | 25 | 12 | 1.9 | 2.5 | 6.2 |
| 21 | 1.0 | | | | | | | 27 | 11 | 1.5 | 1.1 | 5.3 |
| 22 | 1.0 | | | | | | | 29 | 12 | 1.1 | 1.0 | 4.3 |
| 23 | 1.1 | | | | | | | a28 | 12 | 1.4 | 1.0 | 4.3 |
| 24 | 1.1 | | | | | | | a26 | 11 | 2.3 | 1.0 | 5.5 |
| 25 | 1.1 | | | | | | | 24 | 9.3 | 2.2 | 1.0 | 5.9 |
| 26 | 1.1 | | | | | | | a28 | 19 | 2.3 | 1.0 | 5.5 |
| 27 | 1.0 | | | | | | | 33 | 12 | 2.2 | 1.0 | 5.3 |
| 28 | 1.0 | | | | | | | a33 | 11 | 1.8 | 1.1 | 4.6 |
| 29 | 1.0 | | | | | | | 33 | 9.7 | 2.5 | 1.1 | 4.4 |
| 30 | 1.0 | | | | | | | a30 | 9.1 | 2.3 | 1.1 | 6.0 |
| 31 | 1.0 | | | | | | | 27 | - | 2.8 | 1.1 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 35.0 | 1.4 | 1.0 | 1.13 | 69 | | |
| November..... | | | | | | - | - | - | - | - | | |
| December..... | | | | | | - | - | - | - | - | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | - | - | - | - | - | | |
| February..... | | | | | | - | - | - | - | - | | |
| March..... | | | | | | - | - | - | - | - | | |
| April..... | | | | | | - | - | - | - | - | | |
| May 12-31..... | | | | | | 580 | 36 | 20 | 29.0 | 1,150 | | |
| June..... | | | | | | 665.1 | 43 | 9.1 | 22.2 | 1,320 | | |
| July..... | | | | | | 100.6 | 8.6 | 1.1 | 3.25 | 200 | | |
| August..... | | | | | | 52.7 | 3.6 | .9 | 1.70 | 105 | | |
| September..... | | | | | | 119.4 | 6.6 | 1.0 | 3.98 | 237 | | |
| Water year | | | | | | - | - | - | - | - | | |

† Result of discharge measurement.

a No gage-height record; discharge interpolated.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Boulder Creek at Maxville, Mont.

Location.- Water-stage recorder, lat. 46°28'30", long. 113°14'00", in SE $\frac{1}{4}$ sec. 4, T. 8 N., R. 13 W., an eighth of a mile upstream from mouth and three-quarters of a mile north of Maxville.

Records available.- April 1939 to September 1942.

Extremes.- Maximum discharge during year, 650 second-feet May 26 (gage height, 4.04 feet); minimum, 5.6 second-feet Feb. 22 (gage height, 0.97 foot).
1939-42: Maximum discharge, that of May 26, 1942; minimum observed, 5.0 second-feet Sept. 8-17, 1940.

Remarks.- Records good except those for periods of ice effect, which are poor. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 33 | 27 | *24 | b10 | 22 | 18 | 18 | 60 | 188 | 155 | 33 | 18 |
| 2 | 32 | 25 | 26 | b10 | 22 | 18 | 18 | 62 | 191 | 147 | 33 | 18 |
| 3 | 32 | 24 | 38 | b10 | 22 | 17 | 17 | 60 | 253 | 136 | 33 | 16 |
| 4 | 41 | 25 | 35 | b10 | 22 | 17 | 18 | 59 | 306 | 130 | 31 | 16 |
| 5 | 40 | 24 | 32 | b10 | 20 | *17 | 18 | 56 | 325 | 125 | 35 | 18 |
| 6 | 37 | 24 | 32 | b13 | *19 | 17 | 18 | 56 | 312 | 116 | 36 | 16 |
| 7 | 36 | *22 | 32 | b16 | 18 | 17 | 19 | 62 | 443 | 108 | 35 | 16 |
| 8 | 33 | 22 | b30 | b18 | 18 | 17 | 20 | 68 | 407 | 99 | 32 | 16 |
| 9 | 32 | 22 | b33 | b20 | 18 | 17 | 22 | 81 | 373 | 88 | 32 | 16 |
| 10 | 32 | 21 | 32 | b24 | 20 | 16 | 27 | 108 | 340 | 83 | 28 | 12 |
| 11 | 32 | 21 | b29 | b31 | 19 | 16 | 33 | 102 | 262 | 79 | 23 | 10 |
| 12 | 32 | 21 | b33 | b29 | 18 | 16 | 44 | 101 | 218 | 72 | 22 | 9.8 |
| 13 | 32 | 22 | b28 | 28 | 19 | 16 | 52 | 95 | 206 | 67 | 21 | 9.4 |
| 14 | 32 | 26 | b30 | 28 | 20 | 16 | 62 | 92 | 213 | 82 | 20 | 11 |
| 15 | 32 | 29 | 28 | 28 | 20 | 16 | 61 | 88 | 245 | 59 | f20 | 15 |
| 16 | 33 | 33 | 27 | 28 | 18 | 18 | 57 | 82 | 232 | 57 | f21 | 18 |
| 17 | 33 | 30 | 26 | 27 | 18 | 16 | 58 | 80 | 186 | 56 | f16 | 19 |
| 18 | 33 | 27 | 25 | 22 | 17 | 15 | 57 | 76 | 191 | 66 | 16 | 20 |
| 19 | 32 | 27 | 25 | 22 | b15 | 16 | 57 | 76 | 206 | 58 | 15 | 20 |
| 20 | 32 | b26 | 30 | b20 | b14 | 17 | 62 | 84 | 175 | 57 | 14 | 20 |
| 21 | 31 | b25 | 29 | b19 | b13 | 16 | 65 | 117 | 160 | 50 | 14 | 18 |
| 22 | 30 | b23 | 26 | b18 | b13 | 16 | 116 | 162 | 145 | 45 | 14 | 18 |
| 23 | 30 | b21 | 26 | b18 | b14 | 16 | 101 | 275 | 143 | 44 | 13 | 17 |
| 24 | 30 | 27 | b24 | 23 | b20 | 15 | 88 | 334 | 141 | 40 | 14 | 16 |
| 25 | 30 | 30 | b22 | 23 | 24 | 16 | 94 | 350 | 141 | 38 | 13 | 15 |
| 26 | 30 | 29 | b17 | 22 | 25 | 17 | 75 | 530 | 186 | 37 | 12 | 15 |
| 27 | 29 | 29 | b12 | 22 | 25 | 18 | 69 | 411 | 182 | 36 | 13 | 14 |
| 28 | 29 | 27 | b10 | 22 | 20 | 19 | 64 | 318 | 170 | 34 | 14 | 14 |
| 29 | 28 | 26 | b10 | 22 | - | 20 | 62 | 265 | 160 | 35 | 14 | 14 |
| 30 | 27 | 27 | b10 | 22 | - | 16 | 59 | 226 | 153 | 33 | 13 | 12 |
| 31 | 27 | - | b10 | 23 | - | 17 | - | 200 | - | 35 | 14 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 992 | 41 | 27 | 32.0 | 1,970 | | |
| November..... | | | | | | 764 | 33 | 21 | 25.5 | 1,520 | | |
| December..... | | | | | | 791 | 38 | 10 | 25.5 | 1,570 | | |
| Calendar year | | | | | | - | - | - | - | - | | |
| January..... | | | | | | 638 | 31 | 10 | 20.6 | 1,270 | | |
| February..... | | | | | | 533 | 25 | 13 | 19.0 | 1,080 | | |
| March..... | | | | | | 519 | 20 | 15 | 16.7 | 1,030 | | |
| April..... | | | | | | 1,540 | 116 | 17 | 51.3 | 3,050 | | |
| May..... | | | | | | 4,766 | 530 | 56 | 153 | 9,430 | | |
| June..... | | | | | | 6,853 | 443 | 141 | 228 | 13,590 | | |
| July..... | | | | | | 2,252 | 155 | 33 | 72.0 | 4,430 | | |
| August..... | | | | | | 662 | 38 | 12 | 21.4 | 1,310 | | |
| September..... | | | | | | 465.2 | 20 | 9.4 | 15.5 | 923 | | |
| Water year 1941-42..... | | | | | | 20,745.2 | 530 | 9.4 | 56.8 | 41,160 | | |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

f Computed on basis of partly estimated gage-height record.

Note.- Discharge computed from staff-gage readings Nov. 24-30, Dec. 31 to Feb. 4.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Middle Fork of Rock Creek near Philipsburg, Mont.

Location.- Staff gage, lat. 46°11', long. 113°30', in NE¼ sec. 17, T. 5 N., R. 15 W., half a mile upstream from East Fork, 2½ miles upstream from West Fork, and 15 miles southwest of Philipsburg. Prior to May 11, 1942, wire-weight gage at site 1,000 feet upstream at different datum.

Records available.- September 1937 to September 1942.

Extremes.- Maximum discharge observed during year, 1,160 second-feet May 26 (gage height, 5.30 feet), from rating curve extended above 600 second-feet; minimum daily discharge, 21 second-feet Jan. 3.
1937-42: Maximum discharge observed, that of May 26, 1942; minimum observed, 9 second-feet Dec. 12, 1938 (gage height, 0.73 foot), but may have been less during periods of ice effect.

Remarks.- Records fair except those for periods of ice effect, which are poor. Gage read twice daily. A few small diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|------|-------|
| 1 | 60 | 53 | 55 | 23 | 40 | 38 | 45 | 199 | 438 | 330 | 109 | 48 |
| 2 | 60 | 52 | *58 | 22 | 42 | 39 | 44 | 187 | 438 | 330 | 104 | 50 |
| 3 | 58 | 52 | 90 | 21 | 43 | 39 | *47 | 187 | 555 | 330 | 100 | 50 |
| 4 | 56 | 55 | 75 | 22 | 44 | 38 | 63 | 175 | 688 | 330 | 95 | 48 |
| 5 | 55 | 52 | 63 | 22 | *46 | *40 | 63 | 175 | 770 | 330 | 91 | 48 |
| 6 | 64 | *54 | 76 | 25 | 44 | 40 | 51 | 164 | 715 | 330 | 97 | 45 |
| 7 | 60 | 53 | 82 | | 42 | 40 | 55 | 164 | 770 | 330 | 87 | 48 |
| 8 | 53 | 48 | 85 | | 39 | 40 | 59 | 187 | 830 | 314 | 92 | 46 |
| 9 | 61 | 47 | 87 | | 35 | 40 | 61 | 175 | 830 | 278 | 30 | 46 |
| 10 | 51 | 48 | 88 | | 32 | 40 | 72 | 225 | 830 | 244 | 76 | 48 |
| 11 | 61 | 46 | 89 | 35 | 30 | 40 | 92 | 243 | 715 | 244 | 74 | 48 |
| 12 | 61 | 47 | 83 | | 29 | 41 | 122 | 278 | 605 | 212 | 74 | 48 |
| 13 | 63 | 53 | 87 | | 28 | 42 | 142 | 278 | 530 | 197 | 70 | 46 |
| 14 | 60 | 76 | 84 | | 27 | 40 | 142 | 261 | 482 | 194 | 67 | 50 |
| 15 | 60 | 73 | 80 | | 25 | 37 | 153 | 261 | 482 | 188 | 66 | 50 |
| 16 | 59 | 85 | 77 | 30 | 23 | 35 | 164 | 261 | 482 | 174 | 61 | 50 |
| 17 | 60 | 75 | 72 | | 22 | 33 | 164 | 244 | 438 | 165 | 61 | 48 |
| 18 | 58 | 66 | 63 | | 22 | 30 | 153 | 228 | 415 | 160 | 58 | 45 |
| 19 | 58 | 57 | 64 | | 23 | 28 | 164 | 225 | 415 | 154 | 58 | 46 |
| 20 | 58 | 51 | 69 | | 24 | 29 | 175 | 251 | 392 | 149 | 54 | 46 |
| 21 | 58 | 42 | 65 | 25 | 25 | 31 | 212 | 295 | 350 | 146 | 52 | 45 |
| 22 | 57 | 33 | 48 | | 27 | 35 | 268 | 392 | 330 | 141 | 51 | 44 |
| 23 | 55 | 30 | 47 | | 28 | 39 | 268 | 565 | 312 | 134 | 51 | 44 |
| 24 | 55 | 31 | 45 | | 29 | 42 | 253 | 688 | 312 | 121 | 48 | 44 |
| 25 | 55 | 34 | 41 | | 30 | 40 | 253 | 770 | 330 | 116 | 48 | 44 |
| 26 | 54 | 38 | 38 | 30 | 32 | 44 | 225 | 1,160 | 392 | 116 | 48 | 44 |
| 27 | 54 | 42 | 35 | | 35 | 45 | 212 | 955 | 370 | 111 | 52 | 42 |
| 28 | 53 | 45 | 32 | | 37 | 38 | 212 | 770 | 330 | 107 | 54 | 44 |
| 29 | 55 | 48 | 28 | | - | 37 | 199 | 660 | 312 | 109 | 54 | 44 |
| 30 | 48 | 52 | 27 | | - | 34 | 199 | 530 | 312 | 109 | 51 | 40 |
| 31 | 52 | - | 24 | - | - | 44 | - | 482 | - | 121 | 51 | - |
| Month | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | 1,810 | 66 | 48 | 58.4 | 3,590 | | | |
| November..... | | | | | 1,538 | 85 | 30 | 51.3 | 3,050 | | | |
| December..... | | | | | 1,960 | 90 | 24 | 63.2 | 3,890 | | | |
| Calendar year 1941..... | | | | | 31,256 | 420 | 14 | 85.6 | 61,990 | | | |
| January..... | | | | | 865 | - | 21 | 27.9 | 1,780 | | | |
| February..... | | | | | 903 | 46 | 22 | 32.2 | 1,790 | | | |
| March..... | | | | | 1,178 | 45 | 28 | 38.0 | 2,340 | | | |
| April..... | | | | | 4,332 | 268 | 44 | 144 | 8,590 | | | |
| May..... | | | | | 11,638 | 1,160 | 164 | 375 | 23,080 | | | |
| June..... | | | | | 15,170 | 830 | 312 | 506 | 30,090 | | | |
| July..... | | | | | 6,312 | 330 | 107 | 204 | 12,520 | | | |
| August..... | | | | | 2,111 | 109 | 46 | 68.1 | 4,190 | | | |
| September..... | | | | | 1,384 | 50 | 40 | 46.1 | 2,750 | | | |
| Water year 1941-42..... | | | | | 49,201 | 1,160 | 21 | 135 | 97,500 | | | |

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 21-30, Dec. 8-16, 23, 24, Dec. 26 to Mar. 23.
Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.
To convert war time to standard time, subtract 1 hour.

East Fork of Rock Creek near Philipsburg, Mont.

Location.- Staff gage, lat. 46°08'10", long. 113°23'10", in NW¼ sec. 5, T. 4 N., R. 14 W., 200 feet upstream from Flint Creek canal, 1,000 feet (revised) downstream from Rock Creek Dam, 3 miles upstream from Meadow Creek, and 14 miles southwest of Philipsburg.

Records available.- June 1935 to September 1942.

Extremes.- Maximum discharge observed during year, 358 second-feet June 10 (gage height, 2.94 feet), from rating curve extended above 200 second-feet; minimum observed, 5.6 second-feet (regulated) Dec. 2, 13.

1935-42: Maximum discharge observed, that of June 10, 1942; minimum observed, 2.0 second-feet (regulated) Sept. 30, 1940.

Remarks.- Records fair except those prior to May 26, which are poor. Flow regulated by Rock Creek Reservoir (see p. 123). Gage read about once weekly prior to May 26, and once daily thereafter.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | | | a5.6 | | | | | 21 | 187 | 194 | 109 | 83 |
| 2 | | | 5.6 | | | | | | 187 | 287 | 109 | 83 |
| 3 | | a13 | | a6.7 | a30 | a32 | a34 | | 192 | 278 | 109 | 83 |
| 4 | | | | | | | 33 | a21 | 192 | 278 | 109 | 83 |
| 5 | a29 | a11 | | | 31 | 32 | | | 204 | 267 | 109 | 81 |
| 6 | | | | 6.7 | a29 | | a28 | a30 | 217 | 246 | 109 | 81 |
| 7 | | | | | 27 | | | 33 | 230 | 246 | 109 | 81 |
| 8 | 29 | | a5.6 | | | | | | 287 | 246 | 109 | 80 |
| 9 | | | | | a30 | a32 | 22 | | 319 | 194 | 109 | 79 |
| 10 | | | | a6.7 | | | | | 358 | 178 | 94 | 80 |
| 11 | | | | | 32 | | | | 356 | 157 | 94 | 80 |
| 12 | | | | | | | | | 347 | 148 | 94 | 79 |
| 13 | | a11 | 5.6 | | | 32 | a22 | a30 | 194 | 132 | 94 | 79 |
| 14 | | | | 6.7 | | | | | 176 | 124 | 94 | 79 |
| 15 | | | | | | | | | 184 | 116 | 94 | 79 |
| 16 | a29 | | a5.8 | | a32 | a32 | | | 166 | 109 | 94 | 79 |
| 17 | | | | | | | | | 175 | 109 | 94 | 57 |
| 18 | | | | | | | 23 | | 175 | 102 | 94 | 57 |
| 19 | | | 6.1 | a7.2 | | 32 | | | 188 | 102 | 94 | 57 |
| 20 | | a9 | | | 32 | | | | 148 | 88 | 94 | 57 |
| 21 | | | | | | | a22 | 26 | 140 | 86 | 94 | 57 |
| 22 | | | a6.1 | | | | | | 124 | 102 | 95 | 56 |
| 23 | | | | 7.8 | | a32 | a34 | | 124 | 102 | 102 | 56 |
| 24 | | | | | a32 | | 21 | a26 | 124 | 102 | 102 | 56 |
| 25 | a20 | | | | | | | | 124 | 109 | 102 | 56 |
| 26 | | a6 | | a6 | | | | | | | | |
| 27 | | | 6.1 | | | | | 43 | 140 | 109 | 102 | 56 |
| 28 | | | | | 32 | | a21 | 96 | 140 | 116 | 102 | 55 |
| 29 | a13 | | a6.4 | | a32 | 35 | | 284 | 157 | 116 | 102 | 55 |
| 30 | | | | | - | | | 242 | 157 | 116 | 84 | 55 |
| 31 | | - | 6.7 | | - | a34 | - | 167 | 166 | 116 | 84 | 32 |
| | | | a6.7 | 19 | - | | | 167 | - | 109 | 84 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 783 | - | - | 25.3 | 1,550 |
| November..... | 286 | - | - | 9.53 | 567 |
| December..... | 185.2 | - | - | 5.91 | 363 |
| Calendar year 1941..... | 8,561.1 | 78 | 5.3 | 23.5 | 16,970 |
| January..... | 234.2 | - | - | 7.55 | 465 |
| February..... | 873 | - | - | 31.2 | 1,730 |
| March..... | 1,017 | - | - | 32.8 | 2,020 |
| April..... | 725 | - | - | 24.2 | 1,440 |
| May..... | 1,647 | 254 | - | 53.1 | 5,270 |
| June..... | 5,775 | 358 | 124 | 192 | 11,450 |
| July..... | 4,761 | 278 | 86 | 154 | 9,440 |
| August..... | 3,066 | 109 | 84 | 98.9 | 6,080 |
| September..... | 2,061 | 83 | 32 | 66.4 | 4,070 |
| Water year 1941-42..... | 21,401.4 | 358 | - | 58.6 | 42,440 |

a No gage-height record; discharge computed on basis of readings on weir gage just below dam and inflow between gages, or interpolated.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Blackfoot River near Helmville, Mont.

Location.- Water-stage recorder, lat. 46°56', long. 112°57', in NW¼ sec. 25, T. 14 N., R. 11 W., 2 miles downstream from Arrastre Creek and 5 miles northeast of Helmville.
Datum of gage is 4,301.29 feet above mean sea level, datum of 1929 (levels by Corps of Engineers, U. S. Army).

Drainage area.- 481 square miles.

Records available.- September 1940 to September 1942.

Extremes.- Maximum discharge during year, 1,340 second-feet May 27 (gage height, 4.70 feet); minimum daily, 80 second-feet Jan. 3.

1940-42: Maximum discharge, that of May 27, 1942; minimum, 70 second-feet about May 22, 1942 (gage height, 1.27 feet, from recorded range in stage during period of faulty recorder operation).

Remarks.- Records good except those for periods of ice effect, which are fair. Several small diversions above station for irrigation. Flow includes natural overflow channel on left bank, but does not include unnamed diversions past station. For periodic measurements or estimates of these diversions see note below.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 120 | 109 | 99 | b83 | 95 | b104 | 100 | 276 | 840 | 415 | 209 | 127 |
| 2 | 120 | 107 | 99 | b81 | 93 | 103 | 101 | 273 | 818 | 392 | 201 | 125 |
| 3 | 122 | 100 | 102 | b80 | 93 | 100 | 103 | 282 | 840 | 367 | 198 | 123 |
| 4 | 129 | 100 | 102 | b83 | 93 | 95 | 103 | 276 | 885 | 357 | 193 | 121 |
| 5 | 124 | 100 | *97 | b87 | 93 | 95 | 103 | 273 | 960 | 351 | 209 | 119 |
| 6 | 122 | 99 | 96 | b93 | 93 | 95 | 105 | 270 | 950 | 341 | 201 | 117 |
| 7 | 124 | 102 | 96 | b99 | 93 | 93 | 100 | 264 | 1,080 | 332 | 195 | 116 |
| 8 | 122 | 103 | 95 | b103 | 93 | 93 | 100 | 264 | 1,180 | 332 | 188 | 116 |
| 9 | 122 | 104 | b96 | b107 | *93 | *97 | 100 | 273 | 1,210 | 322 | 182 | 114 |
| 10 | 120 | 104 | b96 | b110 | 92 | 103 | 101 | 292 | 1,180 | 313 | 180 | 116 |
| 11 | 117 | 103 | 97 | b110 | 92 | 112 | 103 | 341 | 1,060 | 319 | 175 | 116 |
| 12 | 112 | 104 | 97 | b109 | 92 | 112 | 110 | 405 | 960 | 307 | 170 | 116 |
| 13 | 115 | 104 | b97 | b107 | 92 | 112 | 110 | 503 | 885 | 298 | 165 | 116 |
| 14 | 117 | 106 | b97 | b103 | 92 | 107 | 114 | 522 | 818 | 282 | 165 | 117 |
| 15 | 115 | 110 | b97 | b100 | 92 | 101 | 117 | 522 | 795 | 273 | 163 | 121 |
| 16 | 115 | 112 | 97 | b103 | b90 | 98 | 114 | 522 | 795 | 264 | 160 | 121 |
| 17 | 113 | 113 | 100 | b105 | b86 | 95 | 112 | 503 | 728 | 256 | 156 | 125 |
| 18 | 113 | 112 | 99 | b104 | b84 | 93 | 112 | 487 | 682 | 261 | 151 | 134 |
| 19 | 110 | 112 | 99 | b101 | b86 | 92 | 110 | 469 | 660 | 261 | 151 | 132 |
| 20 | 102 | 110 | 102 | b97 | b90 | 90 | 110 | 452 | 620 | 252 | 147 | 127 |
| 21 | 102 | 110 | 104 | b95 | b89 | 90 | 112 | 469 | 580 | 249 | 144 | 123 |
| 22 | 100 | b110 | 103 | b96 | b88 | 92 | 127 | 503 | 540 | 240 | 142 | 123 |
| 23 | 100 | b107 | 100 | b99 | b87 | 93 | 276 | 620 | 522 | 237 | 140 | 126 |
| 24 | 100 | b105 | 102 | b101 | b87 | 93 | 336 | 840 | 487 | 229 | 142 | 123 |
| 25 | 100 | 103 | 100 | b102 | b88 | 93 | 338 | 1,040 | 487 | 223 | 138 | 119 |
| 26 | 102 | 102 | b98 | 99 | b93 | 92 | 329 | 1,160 | 503 | 220 | 136 | 119 |
| 27 | 102 | 102 | b96 | 95 | b98 | 92 | 313 | 1,320 | 503 | 220 | 140 | 117 |
| 28 | 103 | 100 | b94 | 95 | b102 | 92 | 307 | 1,240 | 487 | 217 | 144 | 112 |
| 29 | 104 | 100 | b91 | 93 | - | 92 | 295 | 1,080 | 452 | 214 | 142 | 114 |
| 30 | 106 | 100 | b88 | 93 | - | 93 | 282 | 1,010 | 432 | 209 | 142 | 114 |
| 31 | 107 | - | b86 | 95 | - | 97 | - | 93E | - | 212 | 142 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 3,480 | 129 | 100 | 112 | 6,900 | | |
| November..... | | | | | | 3,153 | 113 | 99 | 105 | 6,250 | | |
| December..... | | | | | | 3,022 | 104 | 86 | 97.5 | 5,990 | | |
| Calendar year 1941 | | | | | | 42,261 | 415 | - | 116 | 83,810 | | |
| January..... | | | | | | 3,028 | 110 | 80 | 97.7 | 6,010 | | |
| February..... | | | | | | 2,559 | 102 | 84 | 91.4 | 5,080 | | |
| March..... | | | | | | 3,009 | 112 | 90 | 97.1 | 5,970 | | |
| April..... | | | | | | 4,842 | 336 | 100 | 161 | 9,600 | | |
| May..... | | | | | | 17,866 | 1,320 | 264 | 571 | 35,080 | | |
| June..... | | | | | | 22,939 | 1,210 | 432 | 765 | 45,500 | | |
| July..... | | | | | | 8,767 | 415 | 209 | 283 | 17,390 | | |
| August..... | | | | | | 5,111 | 209 | 136 | 165 | 10,140 | | |
| September..... | | | | | | 3,608 | 134 | 112 | 120 | 7,160 | | |
| Water year 1941-42 | | | | | | 81,204 | 1,320 | 80 | 222 | 161,100 | | |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Notes.- Flow in small diversions above station, which carry water around gage, was measured as 10 second-feet Nov. 3; 4 second-feet (estimated) Feb. 9; 3.9 second-feet Mar. 9; 1 second-foot (estimated) Apr. 5; 29.4 second-feet May 13; 30.1 second-feet May 27; 29.0 second-feet July 13; 3.6 second-feet Aug. 23; 9.6 second-feet Sept. 13.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Blackfoot River near Ovando, Mont.

Location.- Water-stage recorder, lat. 47°01', long. 113°07', in SE1/4 sec. 34, T. 15 N., R. 13 W., a quarter of a mile upstream from Monture Creek and 5 miles west of Ovando. Datum of gage is 3,917.27 feet above mean sea level, datum of 1929 (Corps of Engineers, U. S. Army, bench mark).

Drainage area.- 1,280 square miles.

Records available.- September 1940 to September 1942.

Extremes.- Maximum discharge during year, 4,150 second-feet May 26 (gage height, 5.16 feet); minimum, 149 second-feet Feb. 17 (gage height, 1.52 feet).
1940-42: Maximum discharge, that of May 26, 1942; minimum, that of Feb. 17, 1942. Floodmarks indicate stage of 10 feet reached in recent years.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 266 | 250 | 253 | 178 | 212 | 237 | 427 | 708 | 2,090 | 1,180 | 449 | 309 |
| 2 | 266 | 250 | 253 | 175 | 220 | 239 | 465 | 708 | 1,950 | 1,050 | 438 | 301 |
| 3 | 269 | 247 | 262 | 179 | 228 | 240 | 453 | 699 | 2,020 | 965 | 427 | 285 |
| 4 | 279 | 245 | 280 | 182 | 233 | 237 | 438 | 688 | 2,320 | 929 | 428 | 290 |
| 5 | 282 | 245 | *297 | 188 | 239 | 232 | 397 | 658 | 2,650 | 887 | 449 | 282 |
| 6 | 279 | 242 | 266 | 195 | 238 | 227 | 397 | 642 | 2,550 | 866 | 454 | 276 |
| 7 | 279 | 240 | 290 | 203 | 233 | 220 | 354 | 635 | 2,800 | 816 | 438 | 276 |
| 8 | 276 | 240 | 266 | 210 | 227 | 217 | 320 | 658 | 3,060 | 836 | 427 | 279 |
| 9 | 272 | 240 | 242 | 220 | *222 | *227 | 329 | 899 | 2,970 | 788 | 406 | 276 |
| 10 | 272 | 240 | 255 | 230 | 234 | 266 | 320 | 887 | 2,880 | 769 | 401 | 282 |
| 11 | 269 | 242 | 232 | 235 | 220 | 329 | 354 | 1,080 | 2,550 | 760 | 392 | 282 |
| 12 | 266 | 245 | 230 | 235 | 222 | 449 | 422 | 1,190 | 2,320 | 750 | 382 | 279 |
| 13 | 260 | 247 | 233 | 228 | 222 | 397 | 507 | 1,280 | 2,090 | 724 | 377 | 276 |
| 14 | 263 | 265 | 243 | 225 | 224 | 333 | 501 | 1,300 | 1,950 | 682 | 377 | 279 |
| 15 | 263 | 262 | 253 | 220 | 220 | 290 | 507 | 1,510 | 1,880 | 650 | 373 | 282 |
| 16 | 260 | 301 | 276 | 222 | 220 | 276 | 477 | 1,250 | 1,950 | 620 | 368 | 279 |
| 17 | 260 | 297 | 272 | 225 | 194 | 258 | 471 | 1,180 | 1,810 | 605 | 359 | 286 |
| 18 | 260 | 286 | 276 | 225 | 197 | 245 | 495 | 1,120 | 1,670 | 590 | 354 | 286 |
| 19 | 260 | 279 | 279 | 222 | 197 | 237 | 507 | 1,070 | 1,590 | 577 | 342 | 293 |
| 20 | 256 | a270 | 290 | 215 | 210 | 232 | 564 | 1,060 | 1,510 | 570 | 324 | 290 |
| 21 | 245 | a250 | 293 | 210 | 206 | 237 | 742 | 1,080 | 1,420 | 551 | 312 | 286 |
| 22 | 242 | a230 | 290 | 205 | 200 | 245 | 1,030 | 1,260 | 1,340 | 538 | 305 | 286 |
| 23 | 243 | a280 | 276 | 200 | 198 | 272 | 983 | 1,950 | 1,260 | 519 | 301 | 290 |
| 24 | 242 | a250 | 272 | 205 | 201 | 266 | 983 | 2,260 | 1,200 | 513 | 305 | 290 |
| 25 | 242 | 279 | 260 | 212 | 210 | 279 | 981 | 3,060 | 1,160 | 495 | 309 | 286 |
| 26 | 242 | 266 | 229 | 220 | 220 | 260 | 876 | 3,730 | 1,280 | 477 | 309 | 282 |
| 27 | 242 | 260 | 213 | 223 | 227 | 260 | 816 | 3,940 | 1,320 | 471 | 309 | 282 |
| 28 | 245 | 250 | 208 | 220 | 234 | 253 | 778 | 3,540 | 1,260 | 460 | 312 | 279 |
| 29 | 247 | 250 | 200 | 215 | - | 266 | 750 | 2,800 | 1,200 | 454 | 312 | 276 |
| 30 | 245 | 250 | 192 | 208 | - | 290 | 716 | 2,470 | 1,140 | 449 | 309 | 276 |
| 31 | 250 | - | 185 | 207 | - | 333 | - | 2,240 | - | 449 | 316 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 8,041 | 282 | 242 | 259 | 15,950 |
| November..... | 7,646 | 301 | 280 | 255 | 15,170 |
| December..... | 7,926 | 320 | 185 | 256 | 15,720 |
| Calendar year 1941..... | 117,290 | 1,320 | - | 321 | 232,600 |
| January..... | 6,537 | 255 | 175 | 211 | 12,970 |
| February..... | 6,098 | 239 | 187 | 218 | 12,100 |
| March..... | 8,377 | 449 | 217 | 270 | 16,680 |
| April..... | 17,370 | 1,030 | 320 | 579 | 34,450 |
| May..... | 47,546 | 3,940 | 635 | 1,534 | 94,510 |
| June..... | 57,170 | 3,060 | 1,140 | 1,906 | 113,400 |
| July..... | 20,938 | 1,120 | 449 | 675 | 41,530 |
| August..... | 11,358 | 454 | 301 | 366 | 23,630 |
| September..... | 8,599 | 309 | 276 | 284 | 16,920 |
| Water year 1941-42..... | 207,536 | 3,940 | 175 | 569 | 411,700 |

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for stations near Bonner and near Helmsville.

Note.- Stage-discharge relation affected by ice Dec. 10-14, Dec. 27 to Feb. 7, Feb. 18 to Mar. 5 (no gage-height record Jan. 3-7).

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Blackfoot River near Bonner, Mont.

Location.- Staff gage, lat. 46°54', long. 113°47', in SW 1/4 sec. 8, T. 13 N., R. 17 W., 4 miles northeast of Bonner, 6 miles downstream from Union Creek, and 6 miles upstream from mouth.

Drainage area.- 2,280 square miles.

Records available.- October 1939 to September 1942. July 1898 to October 1905 at mouth, half a mile west of Bonner; records not equivalent.

Extremes.- Maximum discharge observed during year, 6,900 second-feet May 26, 27; maximum gage height observed, 6.99 feet May 26; minimum daily discharge, 320 second-feet Jan. 1, 2.
1939-42: Maximum discharge observed, that of May 26, 27, 1942; maximum gage height observed, that of May 26, 1942; minimum daily discharge, 220 second-feet Jan. 19, 1940; minimum gage height observed, 0.47 foot Dec. 12, 1940.

Remarks.- Records good except those for periods of ice effect, which are fair. Gage read once daily. Many diversions above station for irrigation.

Rating tables, water year 1941-42 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Mar. 7 | | Mar. 8 to Sept. 30 | | | |
|---------------------|-----|--------------------|-----|-----|-------|
| 0.7 | 330 | 0.9 | 415 | 2.3 | 1,210 |
| 1.0 | 440 | 1.3 | 595 | 3.0 | 1,740 |
| 1.3 | 585 | 1.7 | 815 | 4.0 | 2,730 |
| | | | | 5.0 | 3,970 |
| | | | | 6.0 | 5,370 |
| | | | | 7.0 | 6,900 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 382 | 410 | 440 | 390 | 410 | 410 | 672 | 1,740 | 3,330 | 2,090 | 755 | 500 |
| 2 | 382 | 410 | 462 | 390 | 410 | 410 | 755 | 1,740 | 3,710 | 2,000 | 755 | 500 |
| 3 | 400 | 420 | 462 | 330 | 410 | 410 | 755 | 1,680 | 3,710 | 1,820 | 755 | 500 |
| 4 | 420 | 420 | 530 | 340 | 410 | 410 | 755 | 1,580 | 4,230 | 1,740 | 755 | 500 |
| 5 | 440 | 420 | 485 | 350 | 410 | 410 | 755 | 1,680 | 4,510 | 1,660 | 815 | 478 |
| 6 | 440 | 420 | 470 | 360 | 410 | 440 | 755 | 1,500 | 4,850 | 1,580 | 815 | 455 |
| 7 | 440 | 420 | 480 | 370 | 410 | 500 | 700 | 1,480 | 4,790 | 1,580 | 755 | 455 |
| 8 | 420 | 420 | 440 | 390 | 410 | 595 | 672 | 1,500 | 5,070 | 1,580 | 755 | 455 |
| 9 | 420 | 420 | 430 | 400 | 410 | 595 | 672 | 1,580 | 4,790 | 1,420 | 700 | 478 |
| 10 | 420 | 420 | 430 | 410 | 410 | 620 | 700 | 1,910 | 4,650 | 1,350 | 700 | 500 |
| 11 | 400 | 420 | 430 | 420 | 410 | 700 | 815 | 2,190 | 4,230 | 1,350 | 672 | 478 |
| 12 | 400 | 420 | 430 | 420 | 410 | 672 | 1,500 | 2,290 | 4,100 | 1,350 | 645 | 455 |
| 13 | 420 | 420 | 440 | 430 | 410 | 620 | 1,420 | 2,400 | 3,210 | 1,280 | 645 | 455 |
| 14 | 400 | 462 | 460 | 430 | 410 | 620 | 1,500 | 2,400 | 3,210 | 1,210 | 620 | 455 |
| 15 | 400 | 535 | 470 | 430 | 400 | 545 | 1,580 | 2,510 | 3,210 | 1,210 | 620 | 455 |
| 16 | 420 | 560 | 480 | 430 | 400 | 522 | 1,680 | 2,290 | 3,330 | 1,140 | 620 | 455 |
| 17 | 420 | 560 | 500 | 420 | 390 | 478 | 1,740 | 2,190 | 3,090 | 1,140 | 595 | 478 |
| 18 | 420 | 535 | 510 | 410 | 390 | 455 | 1,740 | 2,090 | 2,970 | 1,140 | 595 | 455 |
| 19 | 420 | 510 | 535 | 410 | 390 | 455 | 1,740 | 2,000 | 2,730 | 1,070 | 570 | 455 |
| 20 | 420 | 485 | 560 | 400 | 390 | 435 | 2,090 | 2,000 | 2,620 | 1,070 | 545 | 455 |
| 21 | 400 | 456 | 560 | 400 | 390 | 435 | 2,190 | 2,000 | 2,510 | 1,000 | 545 | 478 |
| 22 | 420 | 428 | 550 | 400 | 390 | 478 | 2,730 | 3,210 | 2,400 | 940 | 522 | 455 |
| 23 | 400 | 400 | 535 | 400 | 400 | 500 | 2,620 | 3,580 | 2,290 | 940 | 522 | 455 |
| 24 | 400 | 510 | 510 | 400 | 400 | 500 | 2,510 | 5,220 | 2,090 | 940 | 522 | 455 |
| 25 | 400 | 485 | 462 | 400 | 400 | 500 | 2,290 | 5,370 | 2,290 | 875 | 500 | 455 |
| 26 | 400 | 462 | 400 | 400 | 400 | 478 | 2,190 | 6,900 | 2,400 | 875 | 500 | 455 |
| 27 | 400 | 462 | 382 | 400 | 400 | 455 | 2,090 | 6,900 | 2,510 | 815 | 500 | 455 |
| 28 | 400 | 462 | 350 | 400 | 410 | 478 | 2,000 | 6,120 | 2,400 | 815 | 500 | 455 |
| 29 | 420 | 462 | 350 | 410 | - | 500 | 1,910 | 5,220 | 2,510 | 815 | 500 | 435 |
| 30 | 420 | 462 | 340 | 410 | - | 522 | 1,740 | 4,790 | 2,090 | 815 | 500 | 435 |
| 31 | 400 | - | 330 | 410 | - | 522 | - | 4,230 | - | 815 | 522 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 12,744 | 440 | 382 | 411 | 25,280 |
| November..... | 13,875 | 560 | 400 | 456 | 27,130 |
| December..... | 14,203 | 560 | 330 | 458 | 28,170 |
| Calendar year 1941..... | 206,552 | 1,940 | 295 | 566 | 409,700 |
| January..... | 12,120 | 430 | 320 | 394 | 24,240 |
| February..... | 11,290 | 410 | 390 | 403 | 22,390 |
| March..... | 15,670 | 700 | 410 | 505 | 31,080 |
| April..... | 45,246 | 2,730 | 672 | 1,508 | 89,740 |
| May..... | 92,110 | 6,900 | 1,420 | 2,971 | 182,700 |
| June..... | 99,530 | 5,070 | 2,090 | 3,321 | 197,600 |
| July..... | 38,425 | 2,090 | 815 | 1,240 | 76,210 |
| August..... | 19,390 | 815 | 500 | 622 | 38,380 |
| September..... | 13,950 | 500 | 435 | 465 | 27,870 |
| Water year 1941-42..... | 388,484 | 6,900 | 320 | 1,064 | 770,500 |

* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated.

Note.- Stage-discharge relation affected by ice Dec. 4-18, Dec. 28 to Mar. 7.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Nevada Creek above reservoir, near Finn, Mont.

Location.- Water-stage recorder, lat. 46°47', long. 112°46', in sec. 20, T. 12 N., R. 9 W., 2 miles upstream from Buffalo Creek and 3 miles west of Finn. Prior to Apr. 30, 1942, wire-weight gage at site an eighth of a mile upstream at different datum.

Drainage area.- 128 square miles.

Records available.- April 1939 to September 1942. May 1934 to February 1939 at site 3 miles downstream.

Extremes.- Maximum discharge observed during year, 320 second-feet June 7 (gage height, 3.64 feet); minimum not determined, occurred during period of ice effect.
1939-42: Maximum discharge observed, 320 second-feet Mar. 21, 1940, June 7, 1942; minimum observed, 2.5 second-feet Sept. 12, 1940, July 23, 1941.

Remarks.- Records good except those prior to Apr. 30, which are poor. Several small diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|-----------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 10 | a9 | 10 | | a8 | b7 | b120 | 39 | 97 | 24 | 17 | 6.8 |
| 2 | a11 | 10 | 14 | | | | b200 | 41 | 81 | 22 | 16 | 5.9 |
| 3 | a12 | 9.0 | a13 | | | | b100 | 39 | 95 | 22 | 15 | 5.9 |
| 4 | 13 | 12 | a13 | | | | b100 | 36 | 125 | 20 | 13 | 5.6 |
| 5 | a12 | 10 | 12 | | | | a88 | 31 | 115 | 22 | 15 | 4.7 |
| 6 | 10 | a11 | 6.6 | | *b8 b8 | *b8 | *75 | 30 | 97 | 20 | 14 | 4.7 |
| 7 | 10 | a11 | | | | | 53 | 28 | 173 | 22 | 13 | 4.5 |
| 8 | 9.5 | 12 | | | | | 53 | a30 | 115 | 23 | 12 | 4.5 |
| 9 | 9.5 | a12 | | | | | 53 | b31 | 118 | 20 | 11 | 4.1 |
| 10 | 9.0 | a11 | | | | | 61 | a32 | 104 | 18 | 10 | 4.3 |
| 11 | a8 | a10 | a8 | a5 | b7 | 68 | a42 | 91 | 19 | 9.9 | 4.5 | |
| 12 | a8 | 10 | | | | 69 | a64 | 66 | 18 | 9.9 | 4.5 | |
| 13 | a8 | a10 | | | | 67 | 66 | 75 | 17 | 10 | 4.7 | |
| 14 | 7.6 | a16 | | | | 74 | 55 | 66 | 16 | 10 | 5.1 | |
| 15 | 8.5 | 16 | | | | 64 | 52 | 76 | 15 | 10 | 4.9 | |
| 16 | 8.5 | 16 | | | | 58 | 48 | 73 | 14 | 9.9 | 4.7 | |
| 17 | 8.5 | 14 | | | | 46 | 43 | 57 | 14 | 9.5 | 5.4 | |
| 18 | a8 | a13 | | | | 46 | 39 | 53 | 17 | 9.2 | 5.6 | |
| 19 | a8 | a12 | | | | a47 | 37 | 63 | 15 | 8.9 | 4.9 | |
| 20 | 7.6 | 10 | | | | *144 | 48 | 36 | 48 | 14 | 8.6 | 4.9 |
| 21 | 6.5 | a12 | 75 | | b15 | 63 | 38 | 44 | 14 | 8.3 | 4.9 | |
| 22 | 6.5 | | 23 | | | 80 | 46 | 40 | 14 | 8.6 | 4.9 | |
| 23 | | | 16 | | | 76 | 70 | 35 | 14 | 8.6 | 4.9 | |
| 24 | | | | | | 69 | a114 | 32 | 14 | 8.3 | 4.9 | |
| 25 | | | a10 | | | 62 | a142 | 31 | 14 | 7.9 | 4.9 | |
| 26 | a8 | 14 | a5 | | - | 20 | a57 | 199 | 46 | 14 | 7.9 | 4.9 |
| 27 | | 14 | | | | 22 | 52 | 212 | 40 | 14 | 8.3 | 4.9 |
| 28 | | 11 | | | | b30 | 47 | 206 | 41 | 13 | 7.3 | 4.9 |
| 29 | | a10 | | | | b40 | 44 | 157 | 33 | 18 | 6.8 | 4.9 |
| 30 | 7.6 | a10 | | | | b60 | 41 | 134 | 28 | 16 | 6.6 | 4.9 |
| 31 | 7.6 | - | | | - | b100 | - | 118 | - | 17 | 7.1 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 274.9 | 13 | 7.6 | 8.87 | 545 | | |
| November..... | | | | | | 355.0 | 18 | 9.0 | 11.8 | 704 | | |
| December..... | | | | | | 508.6 | 144 | - | 16.4 | 1,010 | | |
| Calendar year 1941..... | | | | | | 5,000.7 | 150 | 2.5 | 13.7 | 9,920 | | |
| January..... | | | | | | 155 | - | - | 5 | 307 | | |
| February..... | | | | | | 182 | - | - | 6.5 | 361 | | |
| March..... | | | | | | 523 | 100 | - | 16.9 | 1,040 | | |
| April..... | | | | | | 2,081 | 200 | 41 | 69.4 | 4,130 | | |
| May..... | | | | | | 2,255 | 212 | 28 | 72.7 | 4,470 | | |
| June..... | | | | | | 2,178 | 173 | 28 | 72.6 | 4,320 | | |
| July..... | | | | | | 534 | 24 | 13 | 17.2 | 1,060 | | |
| August..... | | | | | | 317.6 | 17 | 6.6 | 10.2 | 630 | | |
| September..... | | | | | | 149.2 | 6.8 | 4.1 | 4.97 | 296 | | |
| Water year 1941-42..... | | | | | | 9,513.3 | 212 | - | 26.1 | 18,870 | | |

* Winter discharge measurement made on this day.

a No gage-height record; prior to Apr. 30, discharge interpolated or computed on basis of weather records and records for Blackfoot River near Helmville; after Apr. 30, discharge interpolated or computed on basis of gage readings at former site.

b Stage-discharge relation affected by ice.

c Computed from staff-gage reading.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

West Fork of Bitterroot River near Conner, Mont.

Location.- Water-stage recorder, lat. 45°44', long. 114°17', in NE¼NW¼ sec. 26, T. 1 S., R. 22 W., half a mile below West Fork Dam, 6 miles upstream from Nez Perce Creek, and 16 miles southwest of Conner.

Records available.- April 1941 to September 1942.

Extremes.- Maximum discharge during year, 2,490 second-feet May 26 (gage height, 5.10 feet); minimum, 1.1 second-feet (regulated) Sept. 13.

1941-42: Maximum discharge, that of May 26, 1942; minimum, that of Sept. 13, 1942.

Remarks.- Records good except those for periods of no gage-height record, which are poor. Flow regulated by West Fork of Bitterroot River Reservoir (see p. 123). Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | |
|-------------------------|------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|-----|
| 1 | | 193 | 168 | a50 | a85 | 84 | 7.7 | 517 | 1,120 | 605 | 172 | 90 | |
| 2 | 331 | 326 | 168 | | | 86 | 7.7 | 500 | 1,040 | 583 | 181 | 90 | |
| 3 | 326 | 152 | 165 | | | 88 | 7.7 | 455 | 1,050 | 556 | 157 | 88 | |
| 4 | 326 | 272 | 165 | | | 91 | 7.7 | 450 | 1,250 | 528 | 154 | 85 | |
| 5 | 322 | 201 | 165 | | | 88 | 7.7 | 440 | 1,430 | 500 | 140 | 85 | |
| 6 | 352 | 1.7 | 165 | a50 | 88 | 91 | 7.7 | 425 | 1,530 | 480 | 137 | 79 | |
| 7 | 420 | 1.7 | 165 | | | 91 | 7.7 | 430 | 1,630 | 460 | 134 | 79 | |
| 8 | 435 | 1.7 | 165 | | | 91 | 7.7 | 455 | 1,580 | 435 | 131 | 77 | |
| 9 | 475 | 1.7 | 162 | | | 91 | 7.7 | 500 | 1,630 | 405 | 128 | 85 | |
| 10 | 470 | 1.7 | 162 | | | 91 | 7.7 | 616 | 1,630 | 382 | 121 | 105 | |
| 11 | 401 | 1.7 | 162 | a50 | 81 | 81 | 6.0 | 678 | 1,480 | 368 | 118 | 105 | |
| 12 | 236 | 1.7 | 162 | | | 91 | 7.7 | 4.3 | 696 | 1,250 | 346 | 113 | 95 |
| 13 | 236 | 1.7 | 162 | | | 91 | 7.7 | 4.3 | 684 | 1,120 | 337 | 108 | 157 |
| 14 | 199 | 1.7 | 162 | | | 91 | 8.1 | 4.3 | 678 | 1,080 | 319 | 108 | 27 |
| 15 | 185 | 2.0 | 159 | | | 91 | 96 | 4.3 | 684 | 1,080 | 302 | 108 | 63 |
| 16 | 344 | 2.0 | 159 | a70 | a90 | 101 | 6.6 | 678 | 1,080 | 293 | 105 | 74 | |
| 17 | 359 | 2.0 | 159 | | | 101 | 8.9 | 672 | 1,000 | 285 | 102 | 83 | |
| 18 | 502 | 166 | 153 | | | 101 | 8.9 | 644 | 944 | 272 | 95 | 85 | |
| 19 | 165 | 515 | 140 | | | 101 | 9.4 | 627 | 936 | 264 | 92 | 90 | |
| 20 | 159 | 505 | 140 | | | 101 | 15 | 627 | 878 | 252 | 92 | 95 | |
| 21 | 159 | 500 | 140 | a80 | 84 | 98 | 9.0 | 678 | 836 | 240 | 90 | 92 | |
| 22 | 159 | 490 | 140 | | | 98 | 8.9 | 822 | 780 | 232 | 90 | 90 | |
| 23 | 159 | 475 | 140 | | | 98 | 220 | 1,160 | 756 | 220 | 92 | 86 | |
| 24 | 119 | 470 | 140 | | | 98 | 472 | 1,630 | 738 | 213 | 100 | 85 | |
| 25 | 243 | 455 | 140 | | | 98 | 778 | 1,750 | 732 | 201 | 95 | 85 | |
| 26 | 239 | 370 | 131 | a85 | 86 | 98 | 794 | 2,270 | 738 | 197 | 92 | 83 | |
| 27 | 224 | 311 | 98 | | | 84 | 98 | 787 | 2,270 | 702 | 194 | 95 | 81 |
| 28 | 185 | 210 | 58 | | | 84 | 96 | 449 | 1,940 | 684 | 190 | 102 | 81 |
| 29 | 6.1 | 168 | 55 | | | - | 96 | 233 | 1,630 | 666 | 186 | 105 | 85 |
| 30 | 6.1 | 168 | 52 | | | - | 33 | 512 | 1,430 | 622 | 179 | 100 | 92 |
| 31 | 6.1 | - | 50 | | | - | 7.7 | - | 1,250 | - | 175 | 97 | - |
| | | | | | | - | - | - | - | - | - | - | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | | |
| October..... | | | | | | 7,698.3 | 475 | 6.1 | 248 | 15,270 | | | |
| November..... | | | | | | 5,968.3 | 515 | 1.7 | 199 | 11,840 | | | |
| December..... | | | | | | 4,352 | 168 | 50 | 140 | 8,630 | | | |
| Calendar year | | | | | | - | - | - | - | - | | | |
| January..... | | | | | | 2,060 | - | - | 66.5 | 4,090 | | | |
| February..... | | | | | | 2,447 | - | - | 87.4 | 4,850 | | | |
| March..... | | | | | | 2,725.7 | 101 | 7.7 | 87.9 | 5,410 | | | |
| April..... | | | | | | 4,411.8 | 794 | 4.3 | 147 | 8,750 | | | |
| May..... | | | | | | 28,326 | 2,270 | 425 | 914 | 56,180 | | | |
| June..... | | | | | | 32,022 | 1,630 | 622 | 1,067 | 63,510 | | | |
| July..... | | | | | | 10,199 | 605 | 175 | 329 | 20,230 | | | |
| August..... | | | | | | 3,534 | 172 | 90 | 114 | 7,010 | | | |
| September..... | | | | | | 2,596 | 157 | 27 | 86.5 | 5,150 | | | |
| Water year 1941-42..... | | | | | | 106,340.1 | 2,270 | 1.7 | 291 | 210,900 | | | |

a No gage-height record; discharge computed on basis of one discharge measurement, weather records, and records for other stations on Bitterroot River.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

PEND OREILLE RIVER BASIN

Bitterroot River near Darby, Mont.

Location.- Water-stage recorder, lat. 45°59', long. 114°09', in NE¼ sec. 36, T. 3 N., R. 21 W., just below bridge on U. S. Highway 93, a quarter of a mile downstream from Chaffin Creek, and 4 miles southeast of Darby.

Drainage area.- 1,050 square miles.

Records available.- April 1937 to September 1942.

Extremes.- Maximum discharge during year, 5,930 second-feet May 26 (gage height, 6.23 feet); minimum daily, 170 second-feet Jan. 5.
1937-42: Maximum discharge, that of May 26, 1942; maximum gage height, 6.51 feet May 29, 1938; minimum discharge observed, 71 second-feet Feb. 9, 1939 (stage-discharge relation affected by ice).

Remarks.- Records excellent above 1,000 second-feet and good below, except those for periods of ice effect, which are fair. Flow partly regulated by West Fork of Bitterroot River Reservoir (see p. 123). Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 532 | 267 | 483 | 175 | 285 | 250 | 323 | 1,300 | 3,140 | 2,020 | 424 | 242 |
| 2 | 811 | 513 | 495 | 190 | 285 | *262 | 333 | 1,300 | 2,980 | 1,960 | 407 | 234 |
| 3 | 804 | 501 | 632 | 195 | 280 | 258 | 348 | 1,210 | 3,380 | 1,840 | 396 | 230 |
| 4 | 688 | 414 | 625 | 180 | 285 | 262 | 569 | 1,170 | 4,240 | 1,670 | 391 | 230 |
| 5 | 751 | 611 | 525 | 170 | 280 | 254 | 430 | 1,130 | 4,420 | 1,620 | 369 | 222 |
| 6 | 695 | 338 | 519 | 200 | 267 | 246 | 485 | 1,100 | 4,420 | 1,560 | 358 | 218 |
| 7 | 772 | 290 | 551 | 195 | *272 | 246 | 507 | 1,120 | 4,900 | 1,450 | 343 | 211 |
| 8 | 772 | 267 | 453 | 220 | 272 | 250 | 538 | 1,260 | 4,800 | 1,410 | 328 | 208 |
| 9 | 816 | 262 | 436 | 205 | 267 | 280 | 570 | 1,500 | 5,000 | 1,270 | 323 | 211 |
| 10 | 900 | 250 | 471 | 235 | 262 | 343 | 688 | 1,900 | 4,710 | 1,150 | 308 | 238 |
| 11 | 796 | 258 | 436 | 250 | 267 | 358 | 864 | 1,960 | 4,060 | 1,110 | 294 | 266 |
| 12 | 590 | 254 | 436 | 255 | 267 | 343 | 1,140 | 1,960 | 3,630 | 1,030 | 280 | 280 |
| 13 | 551 | 258 | 459 | 255 | 264 | 313 | 1,450 | 1,900 | 3,220 | 944 | 272 | 308 |
| 14 | 538 | 358 | 489 | 240 | 250 | 303 | 1,500 | 1,840 | 3,220 | 904 | 267 | 214 |
| 15 | 448 | 558 | 489 | 235 | 262 | 290 | 1,430 | 1,960 | 3,300 | 866 | 262 | 214 |
| 16 | 632 | 744 | 495 | 230 | 225 | 280 | 1,210 | 1,900 | 3,300 | 824 | 258 | 218 |
| 17 | 646 | 625 | 489 | 230 | 190 | 290 | 1,160 | 1,840 | 2,900 | 736 | 242 | 222 |
| 18 | 597 | 551 | 465 | 235 | 155 | 280 | 1,080 | 1,780 | 2,680 | 758 | 234 | 230 |
| 19 | 489 | 944 | 459 | 235 | 200 | 267 | 1,000 | 1,670 | 2,680 | 725 | 218 | 234 |
| 20 | 477 | 888 | 501 | 230 | 220 | 258 | 1,090 | 1,670 | 2,400 | 698 | 211 | 234 |
| 21 | 459 | 904 | 513 | 230 | 210 | 272 | 1,440 | 2,020 | 2,270 | 667 | 208 | 226 |
| 22 | 448 | 840 | 465 | 260 | 195 | 276 | 1,780 | 2,680 | 2,140 | 639 | 208 | 222 |
| 23 | 436 | 772 | 453 | 270 | 180 | 265 | 1,720 | 2,970 | 2,080 | 597 | 208 | 218 |
| 24 | 402 | 845 | 459 | 276 | 155 | 276 | 1,780 | 2,400 | 2,140 | 568 | 218 | 218 |
| 25 | 453 | 872 | 402 | 276 | 195 | 258 | 1,960 | 2,510 | 2,140 | 513 | 222 | 211 |
| 26 | 489 | 793 | 265 | 262 | 190 | 258 | 1,960 | 2,570 | 2,340 | 501 | 226 | 211 |
| 27 | 483 | 639 | 245 | 267 | 200 | 262 | 1,780 | 2,510 | 2,140 | 477 | 234 | 208 |
| 28 | 430 | 597 | 255 | 276 | 220 | 258 | 1,620 | 2,500 | 2,020 | 465 | 254 | 208 |
| 29 | 280 | 495 | 265 | 272 | - | 272 | 1,610 | 2,430 | 2,020 | 465 | 272 | 208 |
| 30 | 246 | 489 | 285 | 260 | - | 394 | 1,270 | 2,900 | 2,020 | 459 | 262 | 218 |
| 31 | 238 | - | 270 | 260 | - | 267 | - | 2,390 | - | 448 | 260 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 17,159 | 816 | 238 | 554 | 34,030 |
| November..... | 16,400 | 944 | 250 | 547 | 32,530 |
| December..... | 13,785 | 632 | 245 | 445 | 27,340 |
| Calendar year 1941..... | 201,420 | 2,300 | 94 | 552 | 399,500 |
| January..... | 7,269 | 278 | 170 | 234 | 14,420 |
| February..... | 6,650 | 285 | 180 | 238 | 13,190 |
| March..... | 8,611 | 358 | 246 | 278 | 17,080 |
| April..... | 32,833 | 1,960 | 323 | 1,094 | 65,120 |
| May..... | 77,780 | 5,720 | 1,100 | 2,509 | 154,300 |
| June..... | 94,890 | 5,000 | 2,020 | 3,156 | 187,800 |
| July..... | 30,362 | 2,020 | 448 | 979 | 60,220 |
| August..... | 8,747 | 424 | 208 | 282 | 17,350 |
| September..... | 6,774 | 308 | 208 | 226 | 13,440 |
| Water year 1941-42..... | 321,060 | 5,720 | 170 | 880 | 636,800 |

* Winter discharge measurement made on this day.

f Computed from partly estimated gage-height record.

Note.- Stage-discharge relation affected by ice Dec. 26 to Jan. 23, Jan. 30, 31, Feb. 16-28.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

East Fork of Bitterroot River at Conner, Mont.

Location.- Wire-weight gage, lat. 45°56', long. 114°08', in SE $\frac{1}{4}$ sec. 7, T. 2 N., R. 20 W., below highway bridge at Conner, half a mile upstream from confluence with West Fork.

Drainage area.- 404 square miles.

Records available.- April 1937 to September 1942. September 1910 to September 1916 at site $\frac{1}{2}$ miles upstream.

Extremes.- Maximum discharge observed during year, 1,990 second-feet May 26 (gage height, 5.28 feet); minimum observed, 49 second-feet Aug. 24, 25 (gage height, 1.36 feet), but may have been less during period of ice effect.
1937-42: Maximum discharge observed, that of May 26, 1942; minimum observed, 1.4 second-feet Aug. 17, 1937.

Remarks.- Records fair except those for periods of ice effect, which are poor. Gage read twice daily. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 97 | 101 | 108 | | | 60 | 126 | 380 | 1,040 | 560 | 127 | 71 |
| 2 | 101 | 99 | 116 | | | 65 | 126 | 422 | 980 | 560 | 122 | 70 |
| 3 | 97 | 101 | *140 | | 95 | *75 | 121 | 380 | 1,240 | 512 | 120 | 65 |
| 4 | 116 | 110 | 140 | | | 80 | 137 | 360 | 1,360 | 490 | 114 | 65 |
| 5 | 158 | 114 | 99 | | | 90 | 155 | 360 | 1,500 | 445 | 118 | 65 |
| 6 | 140 | 114 | 108 | 55 | | 90 | 100 | 158 | 360 | 1,500 | 422 | 114 |
| 7 | 140 | 97 | 112 | | 95 | 114 | 153 | 380 | 1,640 | 400 | 110 | 55 |
| 8 | 142 | 89 | 121 | | 95 | 128 | 160 | 422 | 1,640 | 380 | 105 | 55 |
| 9 | 140 | 93 | 120 | | 95 | 144 | 163 | 490 | 1,640 | 360 | 99 | 55 |
| 10 | 155 | 84 | 120 | | 100 | 160 | 183 | 560 | 1,500 | 360 | 90 | 64 |
| 11 | 130 | 84 | 122 | | | 155 | 223 | 610 | 1,360 | 360 | 86 | 68 |
| 12 | 128 | 89 | 122 | | | 130 | 292 | 662 | 1,170 | 341 | 85 | 64 |
| 13 | 128 | 91 | 125 | | 100 | 108 | 350 | 610 | 1,100 | 322 | 81 | 62 |
| 14 | 123 | 130 | 125 | | | 97 | 415 | 635 | 1,040 | 304 | 79 | 62 |
| 15 | 123 | 180 | 130 | | | 89 | 438 | 635 | 1,040 | 304 | 76 | 68 |
| 16 | 119 | 214 | 135 | 85 | | 84 | 415 | 585 | 980 | 304 | 76 | 65 |
| 17 | 121 | 192 | 121 | | | 82 | 392 | 585 | 920 | 270 | 71 | 62 |
| 18 | 119 | 156 | 116 | | 80 | 86 | 370 | 580 | 860 | 270 | 68 | 67 |
| 19 | 114 | 135 | 116 | | | 82 | 350 | 490 | 860 | 253 | 64 | 64 |
| 20 | 119 | 110 | 121 | | | 82 | 392 | 512 | 800 | 238 | 59 | 64 |
| 21 | 119 | 116 | 150 | | | 86 | 485 | 585 | 745 | 238 | 56 | 62 |
| 22 | 114 | 106 | 112 | | | 86 | 670 | 745 | 690 | 208 | 54 | 59 |
| 23 | 114 | 80 | 108 | | | 86 | 662 | 1,170 | 662 | 193 | 54 | 62 |
| 24 | 112 | 110 | 110 | | | 80 | 610 | 1,500 | 635 | 162 | 50 | 61 |
| 25 | 110 | 137 | 95 | | 55 | 75 | 560 | 1,570 | 635 | 136 | 49 | 61 |
| 26 | 110 | 132 | 63 | 90 | | 72 | 512 | 1,920 | 690 | 127 | 57 | 61 |
| 27 | 104 | 130 | | | | 72 | 490 | 1,710 | 635 | 127 | 67 | 61 |
| 28 | 104 | 121 | | | | 68 | 445 | 1,500 | 610 | 125 | 71 | 59 |
| 29 | 108 | 112 | 65 | | | 68 | 422 | 1,360 | 635 | 136 | 79 | 59 |
| 30 | 97 | 110 | | | | 68 | 380 | 1,240 | 585 | 136 | 76 | 59 |
| 31 | 89 | - | | | | 99 | - | 1,100 | - | 134 | 76 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 3,671 | 158 | 89 | 118 | 7,280 | | |
| November..... | | | | | | 3,547 | 214 | 80 | 118 | 7,040 | | |
| December..... | | | | | | 3,360 | 140 | - | 108 | 6,660 | | |
| Calendar year 1941..... | | | | | | 49,318 | 692 | 21 | 135 | 97,820 | | |
| January..... | | | | | | 2,390 | - | - | 77.1 | 4,740 | | |
| February..... | | | | | | 2,290 | - | - | 81.8 | 4,540 | | |
| March..... | | | | | | 2,669 | 160 | 60 | 92.5 | 5,690 | | |
| April..... | | | | | | 10,555 | 670 | 121 | 345 | 20,540 | | |
| May..... | | | | | | 24,398 | 1,920 | 360 | 797 | 48,390 | | |
| June..... | | | | | | 30,692 | 1,640 | 585 | 1,023 | 60,690 | | |
| July..... | | | | | | 9,197 | 560 | 125 | 297 | 18,240 | | |
| August..... | | | | | | 2,555 | 127 | 49 | 82.4 | 5,070 | | |
| September..... | | | | | | 1,879 | 71 | 56 | 82.6 | 3,730 | | |
| Water year 1941-42..... | | | | | | 97,403 | 1,920 | - | 266 | 192,800 | | |

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 9-15, Dec. 27 to Mar. 9.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

PEND OREILLE RIVER BASIN

Blodgett Creek near Hamilton, Mont.

Location.- Wire-weight gage, lat. 46°17', long. 114°10', in sec. 12, T. 6 N., R. 21 W., at highway bridge $1\frac{1}{2}$ miles upstream from mouth and $2\frac{1}{2}$ miles north of Hamilton.

Drainage area.- 29.2 square miles.

Records available.- April 1936 to September 1942.

Extremes.- Maximum discharge observed during year, 678 second-feet May 26 (gage height, 3.56 feet); minimum observed, 0.6 second-foot Aug. 3, 9 (gage height, 0.58 foot).
1938-42: Maximum discharge observed, that of May 26, 1942; minimum observed, that of Aug. 3, 9, 1942.

Remarks.- Records good except those for periods of ice effect, which are fair. Gage read once daily. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 20 | 12 | 29 | b15 | 12 | 9.6 | 11 | 37 | 147 | 141 | 1.2 | 1.4 |
| 2 | 19 | 11 | 51 | | 14 | a9.8 | 12 | 35 | 158 | 143 | .8 | 1.1 |
| 3 | 15 | 15 | 91 | | 14 | *10 | 12 | 35 | 213 | 139 | .6 | 1.1 |
| 4 | 21 | 27 | 91 | | 13 | 10 | 12 | 29 | 460 | 118 | .7 | 1.4 |
| 5 | 50 | 22 | 68 | | 13 | 10 | 15 | 26 | 321 | 145 | .8 | 1.6 |
| 6 | 33 | 21 | 58 | | 13 | 9.6 | 16 | 26 | 250 | 120 | 1.2 | 1.5 |
| 7 | 30 | 18 | 51 | | 13 | 10 | 19 | 37 | 237 | 81 | .8 | 1.0 |
| 8 | 27 | 18 | 46 | | *13 | 10 | 25 | 57 | 277 | 64 | 1.0 | 1.0 |
| 9 | 23 | 16 | 42 | | 13 | 13 | 26 | 93 | 250 | 50 | .6 | 1.2 |
| 10 | 27 | 16 | 40 | | 13 | 15 | 45 | 98 | 250 | 38 | 1.0 | 1.9 |
| 11 | 31 | 16 | 38 | b10 | 12 | 15 | 92 | 101 | 179 | 34 | 1.8 | 2.2 |
| 12 | 29 | 22 | 34 | | 12 | 14 | 145 | 75 | 147 | 25 | .9 | 1.4 |
| 13 | 31 | 20 | 31 | | 12 | 12 | 177 | 61 | 130 | 15 | .8 | 2.2 |
| 14 | 31 | 22 | 29 | | 12 | 12 | 149 | 66 | 143 | 4.0 | .9 | 1.8 |
| 15 | 33 | 28 | 22 | | 12 | 12 | 141 | 68 | 158 | 6.1 | 1.8 | 1.9 |
| 16 | 33 | 38 | 28 | | 12 | 12 | 98 | 61 | 202 | 4.0 | .8 | 1.8 |
| 17 | 40 | 44 | 26 | | b11 | 11 | 92 | 55 | 134 | 5.3 | 1.8 | 1.6 |
| 18 | 33 | 51 | 24 | | b11 | 11 | 77 | 49 | 134 | 6.1 | 1.4 | 1.8 |
| 19 | 35 | 56 | 25 | | b11 | 9.6 | 72 | 47 | 130 | 5.3 | 1.8 | 1.6 |
| 20 | 30 | 49 | 26 | | b10 | 9.6 | 60 | 49 | 118 | 2.4 | 1.1 | 1.6 |
| 21 | 24 | 46 | 28 | | b10 | 10 | 145 | 126 | 90 | 1.4 | 1.8 | 1.6 |
| 22 | 18 | 49 | 29 | | b10 | 10 | 240 | 204 | 100 | 1.1 | 1.8 | 1.6 |
| 23 | 18 | 51 | 31 | | b10 | 11 | 130 | 369 | 107 | .9 | 1.6 | 1.8 |
| 24 | 17 | 53 | 33 | | b10 | 9.9 | 87 | 450 | 111 | 1.1 | 1.8 | 1.8 |
| 25 | 19 | 51 | 33 | | b10 | 10 | 77 | 330 | 115 | 1.1 | 1.4 | 1.8 |
| 26 | 18 | 44 | b33 | 8.9 | b10 | 16 | 63 | 678 | 190 | .9 | 1.2 | 1.1 |
| 27 | 18 | 38 | | 7.0 | b10 | 15 | 53 | 306 | 126 | 1.8 | 1.2 | 1.6 |
| 28 | 17 | 34 | | 8.3 | 10 | 18 | 44 | 225 | 104 | 1.4 | 1.7 | 1.8 |
| 29 | 15 | 33 | b25 | 16 | - | 14 | 40 | 179 | 126 | 1.6 | 1.2 | 1.6 |
| 30 | 13 | 31 | | 13 | - | 9.6 | 45 | 168 | 132 | 1.4 | 1.9 | 1.7 |
| 31 | | - | | 12 | - | 9.9 | - | 147 | - | 1.1 | 1.7 | - |
| | | | | | | | | | | | | |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 779 | 50 | 13 | 25.1 | 1,550 | | |
| November..... | | | | | | 952 | 56 | 11 | 31.7 | 1,890 | | |
| December..... | | | | | | 1,168 | 91 | - | 37.7 | 2,320 | | |
| Calendar year 1941..... | | | | | | 10,030 | 212 | - | 27.5 | 19,900 | | |
| January..... | | | | | | 340.2 | 16 | - | 11.0 | 676 | | |
| February..... | | | | | | 325 | 14 | 10 | 11.6 | 847 | | |
| March..... | | | | | | 358.6 | 18 | 9.6 | 11.6 | 711 | | |
| April..... | | | | | | 2,240 | 240 | 11 | 74.7 | 4,440 | | |
| May..... | | | | | | 4,292 | 678 | 26 | 138 | 8,510 | | |
| June..... | | | | | | 5,239 | 460 | 90 | 175 | 10,390 | | |
| July..... | | | | | | 1,156 | 143 | .9 | 37.3 | 2,290 | | |
| August..... | | | | | | 39.1 | 1.9 | .6 | 1.26 | 78 | | |
| September..... | | | | | | 47.5 | 2.2 | 1.0 | 1.58 | 94 | | |
| Water year 1941-42..... | | | | | | 16,937.4 | 678 | - | 46.4 | 33,600 | | |

* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Willow Creek at Anfinson Ranch, near Corvallis, Mont.

Location.- Staff gage, lat. 46°18', long. 114°01', in NW¼ sec. 7, T. 6 N., R. 19 W., at Anfinson Ranch, 5 miles southeast of Corvallis.

Drainage area.- 23.2 square miles.

Records available.- April 1938 to September 1942. April 1920 to May 1924 at site about 1 mile upstream; records not equivalent.

Extremes.- Maximum discharge observed during year, 125 second-feet June 9 (gage height, 2.50 feet); minimum observed, 0.6 second-foot July 26 to Aug. 8, Sept. 8-11 (gage height, 0.93 foot).

1938-42: Maximum discharge observed, that of June 9, 1942; minimum observed, 0.1 second-foot Sept. 11, 1938, Aug. 13 to Sept. 13, 1939.

Remarks.- Records fair except those for periods of ice effect, which are poor. Gage read once daily. Many diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 2.6 | 3.0 | 5.6 | | b5.0 | | 4.1 | 7.6 | 48 | 45 | 0.6 | 1.9 |
| 2 | 3.2 | 3.0 | 6.2 | | b5.0 | b4.0 | 4.1 | 7.0 | 52 | 41 | .6 | 1.8 |
| 3 | 3.2 | 3.0 | 6.5 | | b5.0 | | 4.6 | 7.0 | 61 | 35 | .6 | 1.8 |
| 4 | 4.3 | 3.0 | 6.7 | | b5.0 | *4.3 | 4.6 | 7.0 | 68 | 33 | .6 | 1.8 |
| 5 | 4.3 | 3.0 | 7.3 | | b5.1 | 4.6 | 5.4 | 7.0 | 92 | 30 | .6 | 1.8 |
| 6 | 4.1 | 3.0 | 7.3 | | b5.1 | 4.6 | 5.4 | 7.0 | 92 | 28 | .6 | 1.8 |
| 7 | 4.1 | 3.0 | 7.3 | | b5.1 | 4.6 | 5.6 | 7.0 | 110 | 26 | .6 | 1.8 |
| 8 | 3.9 | 3.0 | 5.6 | | *5.1 | 4.6 | 6.2 | 5.1 | 118 | 26 | .6 | .6 |
| 9 | 3.7 | 3.0 | 5.6 | | b5.1 | 4.6 | 6.7 | 5.1 | 125 | 25 | 1.1 | .6 |
| 10 | 3.5 | 3.0 | 5.6 | | b5.0 | 6.5 | 8.2 | 5.6 | 118 | 25 | 1.1 | .6 |
| 11 | 3.2 | 3.0 | 5.6 | | | 5.9 | 8.2 | 5.6 | 110 | 26 | 1.1 | .6 |
| 12 | 3.2 | 3.0 | 5.6 | | | 5.6 | 8.5 | 7.9 | 105 | 17 | 1.1 | .8 |
| 13 | 3.2 | 3.0 | 5.6 | | b5.0 | 5.1 | 8.2 | 7.3 | 90 | 17 | 1.1 | .6 |
| 14 | 3.2 | 3.5 | 5.6 | | | 5.1 | 10 | 7.0 | 82 | 17 | 1.1 | 3.7 |
| 15 | 3.0 | 4.1 | 5.6 | | | 5.1 | 8.5 | 7.0 | 96 | 17 | 1.1 | 6.2 |
| 16 | 3.0 | 3.5 | 5.6 | b5 | | 5.1 | 9.1 | 7.0 | 82 | 13 | 1.0 | 6.2 |
| 17 | 3.0 | 3.0 | 5.6 | | | 4.8 | 9.7 | 7.0 | 76 | 9.0 | 1.0 | 6.2 |
| 18 | 3.0 | 3.0 | 5.6 | | | 4.8 | 10 | 7.0 | 76 | 9.0 | 1.0 | 6.2 |
| 19 | 3.0 | 2.8 | 5.6 | | | 4.6 | 11 | 7.6 | 71 | 9.0 | 1.0 | 6.2 |
| 20 | 3.0 | 2.8 | 5.6 | | | 4.6 | 12 | 7.9 | 66 | 8.4 | 1.0 | 6.2 |
| 21 | 3.0 | 2.8 | 5.6 | | | 4.3 | 12 | 9.4 | 61 | 6.5 | 1.5 | 6.2 |
| 22 | 3.2 | 2.8 | 5.6 | | | 4.3 | 12 | 16 | 56 | 5.9 | dl.5 | 5.9 |
| 23 | 3.2 | 2.8 | 5.6 | | b4.0 | 4.3 | 11 | 17 | 41 | 5.6 | dl.5 | 5.9 |
| 24 | 3.2 | 2.8 | 5.6 | | | 4.1 | 11 | 22 | 35 | 5.6 | 1.6 | 5.6 |
| 25 | 3.0 | 2.8 | 5.6 | | | 4.1 | 11 | 36 | 41 | 5.6 | 1.6 | 5.4 |
| 26 | 3.0 | 3.2 | 5.6 | | | 3.9 | 8.2 | | 45 | .6 | 1.6 | 5.4 |
| 27 | 3.0 | 3.9 | 5.6 | | | 3.9 | 7.9 | 68 | 45 | .6 | 1.9 | 5.4 |
| 28 | 3.0 | 4.1 | b5.0 | | | 3.7 | 8.5 | 64 | 45 | .6 | 1.9 | 5.4 |
| 29 | 3.0 | 4.6 | b4.5 | | - | 3.7 | 7.9 | 56 | 47 | .6 | 1.9 | 2.2 |
| 30 | 3.0 | 5.1 | b4.0 | | - | 3.7 | 7.9 | 53 | 47 | .6 | 1.9 | 2.2 |
| 31 | 3.0 | - | b4.0 | | - | 3.7 | - | 48 | - | .6 | 1.9 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 101.3 | 4.3 | 2.6 | 3.27 | 201 | | |
| November..... | | | | | | 96.6 | 5.1 | 2.8 | 3.22 | 192 | | |
| December..... | | | | | | 176.4 | 7.3 | 4.0 | 5.69 | 350 | | |
| Calendar year 1941..... | | | | | | 1,255.1 | 16 | .3 | 3.44 | 2,490 | | |
| January..... | | | | | | 93 | - | - | 3 | 184 | | |
| February..... | | | | | | 127.6 | - | - | 4.55 | 253 | | |
| March..... | | | | | | 140.2 | 6.5 | 3.7 | 4.52 | 276 | | |
| April..... | | | | | | 247.5 | 12 | 4.1 | 8.25 | 431 | | |
| May..... | | | | | | 602.1 | 76 | 5.1 | 19.4 | 1,190 | | |
| June..... | | | | | | 2,189 | 125 | 35 | 73.0 | 4,340 | | |
| July..... | | | | | | 489.2 | 45 | .6 | 15.8 | 970 | | |
| August..... | | | | | | 36.3 | 1.9 | .6 | 1.17 | 72 | | |
| September..... | | | | | | 107.2 | 6.2 | .6 | 3.57 | 213 | | |
| Water year 1941-42..... | | | | | | 4,406.3 | 125 | - | 12.1 | 8,750 | | |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge interpolated.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

PEND OREILLE RIVER BASIN

Bear Creek near Victor, Mont.

Location.- Water-stage recorder, lat. 46°23', long. 114°13', in NE $\frac{1}{4}$ sec. 9, T. 7 N., R. 21 W., 5 miles southwest of Victor.

Drainage area.- 26.6 square miles.

Records available.- April 1938 to September 1942.

Extremes.- Maximum discharge during year, 524 second-feet May 24 (gage height, 3.70 feet), from rating curve extended above 200 second-feet by logarithmic plotting; minimum, 2.2 second-feet Sept. 28-30.

1938-42: Maximum discharge, 865 second-feet Apr. 18, 1938 (gage height, 3.45 feet, from graph based on gage readings); minimum observed, 1.1 second-feet Aug. 23, Sept. 9-12, 1940..

Remarks.- Records fair except those below 10 second-feet, which are poor. No diversion or regulation above gage.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|-------|------|-----|------|------|------|-------|
| 1 | 46 | 27 | 32 | | 14 | a8 | f18 | 77 | 150 | 183 | 16 | 4.4 |
| 2 | 46 | 26 | 45 | | 13 | a8 | f23 | 79 | 158 | 170 | 15 | 3.9 |
| 3 | 44 | 26 | 142 | | 13 | eb8.3 | f28 | 71 | 208 | 163 | 14 | 3.6 |
| 4 | 127 | 35 | *100 | | 12 | 8.6 | f32 | 67 | 324 | 161 | 13 | 3.9 |
| 5 | 94 | 37 | 78 | | 12 | 8.8 | 33 | 66 | 356 | 174 | 14 | 3.2 |
| 6 | 75 | 40 | 69 | | 12 | 8.8 | 35 | 69 | 274 | 146 | 12 | 3.2 |
| 7 | 67 | 35 | 63 | | 12 | 8.8 | 39 | 89 | 288 | 124 | 12 | 2.8 |
| 8 | 60 | 32 | 57 | | *12 | 8.8 | 43 | 124 | 268 | 110 | 11 | 2.8 |
| 9 | 55 | 31 | b62 | | 11 | 9.2 | 47 | 160 | 256 | 94 | 9.7 | 3.2 |
| 10 | 55 | 30 | 49 | | 10 | 11 | 71 | 198 | 230 | 82 | 8.8 | 5.0 |
| 11 | 56 | 29 | b44 | | 11 | 11 | 132 | 146 | 183 | 89 | 7.8 | 5.0 |
| 12 | 57 | 35 | b59 | | 10 | 11 | 206 | 124 | 155 | 73 | 7.4 | 4.2 |
| 13 | 54 | 39 | b57 | | 10 | 11 | 192 | 104 | 145 | 63 | 6.9 | 3.6 |
| 14 | 50 | 75 | b58 | b11 | 10 | 11 | 198 | 95 | 158 | 55 | 6.5 | 3.6 |
| 15 | 50 | 89 | 36 | | 9.2 | 10 | 162 | 94 | 220 | 53 | 6.0 | 3.6 |
| 16 | 53 | 107 | 37 | | | 10 | 129 | 84 | 210 | 53 | 5.3 | 3.6 |
| 17 | 57 | 84 | 35 | b15 | | 10 | 114 | 77 | 162 | 57 | 4.6 | 3.6 |
| 18 | 55 | 72 | 34 | 14 | b7 | a9 | 99 | 72 | 158 | 54 | 4.2 | 3.6 |
| 19 | 54 | 63 | 34 | 14 | | a9 | 94 | 68 | 151 | 45 | 4.2 | 3.6 |
| 20 | 55 | 56 | 49 | 14 | | a10 | 123 | 88 | 130 | 40 | 3.9 | 3.2 |
| 21 | 52 | 51 | 45 | 14 | | h12 | 202 | 181 | 117 | 35 | 3.9 | 2.8 |
| 22 | 48 | b45 | 40 | 15 | | 11 | 222 | 274 | 116 | 33 | 3.9 | 2.8 |
| 23 | 45 | b40 | 38 | 15 | b6 | 11 | 162 | 365 | 132 | 30 | 3.6 | 2.4 |
| 24 | 42 | b38 | 37 | 16 | | 11 | 129 | 382 | 137 | 28 | 4.2 | 2.4 |
| 25 | 39 | b36 | 35 | 17 | | 11 | 111 | 324 | 191 | 25 | 4.2 | 2.4 |
| 26 | 38 | 35 | b25 | 17 | a7 | 10 | 96 | 392 | 208 | 23 | 3.9 | 2.2 |
| 27 | 36 | 34 | b13 | 17 | | 10 | 86 | 288 | 170 | 24 | 3.9 | 2.2 |
| 28 | 35 | 32 | b13 | 17 | b6.3 | 10 | 79 | 208 | 191 | 21 | 5.3 | 2.2 |
| 29 | 33 | 31 | b14 | 16 | - | 11 | 74 | 185 | 191 | 19 | 5.0 | 2.2 |
| 30 | 30 | 32 | b15 | 15 | - | 12 | 70 | 160 | 191 | 17 | 4.2 | 2.2 |
| 31 | 28 | - | b12 | 14 | - | 15 | - | 146 | - | 17 | 4.2 | 2.2 |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 1,636 | 127 | 28 | 58.6 | 1.98 | 2.28 | 3,240 |
| November..... | 1,340 | 107 | 26 | 44.7 | 1.68 | 1.87 | 2,660 |
| December..... | 1,357 | 142 | 12 | 43.8 | 1.65 | 1.90 | 2,690 |
| Calendar year 1941..... | 18,603.7 | 462 | 4.8 | 51.0 | 1.92 | 25.98 | 36,900 |
| January..... | 365 | 17 | - | 11.8 | .444 | .51 | 724 |
| February..... | 289.5 | 14 | - | 9.27 | .348 | .36 | 515 |
| March..... | 314.5 | 15 | 8 | 10.1 | .380 | .44 | 624 |
| April..... | 3,055 | 228 | 13 | 102 | 3.83 | 4.27 | 6,060 |
| May..... | 4,826 | 392 | 64 | 168 | 5.96 | 6.78 | 9,570 |
| June..... | 5,803 | 356 | 116 | 193 | 7.26 | 8.10 | 11,610 |
| July..... | 2,254 | 183 | 17 | 72.7 | 2.73 | 3.15 | 4,470 |
| August..... | 228.6 | 16 | 5.6 | 7.37 | .277 | .32 | 453 |
| September..... | 97.6 | 5.0 | 2.2 | 3.25 | .122 | .14 | 194 |
| Water year 1941-42..... | 21,536.2 | 392 | 2.2 | 59.0 | 2.22 | 30.10 | 42,710 |

* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated or computed on basis of weather records.

b Stage-discharge relation affected by ice.

c Computed from partly estimated gage-height record.

d Computed from staff-gage reading.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Burnt Fork Creek near Stevensville, Mont.

Location.- Staff gage, lat. 46°28', long. 113°57', in SW $\frac{1}{4}$ sec 11, T. 8 N., R. 19 W., at highway bridge 8 miles southeast of Stevensville.

Drainage area.- 74 square miles.

Records available.- May 1920 to August 1924, April 1938 to September 1942.

Extremes.- Maximum discharge observed during year, 371 second-feet May 26 (gage height, 2.12 feet); minimum not determined, probably occurred during period of ice effect. 1920-24, 1938-42: Maximum discharge observed, 641 second-feet May 28, 1938 (gage height, 2.92 feet); minimum observed, 5.6 second-feet Jan. 18, 1940 (discharge measurement).

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Gage read once daily except Sundays and holidays. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1 | 19 | 13 | 22 | | a13 | a13 | 22 | 71 | 204 | 136 | 56 | 28 |
| 2 | 19 | a16 | 22 | | 18 | 15 | 21 | 77 | 198 | 134 | a53 | 27 |
| 3 | 19 | 16 | 40 | | 15 | 15 | 23 | a77 | 285 | 130 | 50 | 25 |
| 4 | 25 | 18 | a30 | | 17 | a17 | 24 | 77 | 289 | a124 | 48 | 24 |
| 5 | a24 | 16 | 31 | | 17 | 15 | a28 | 74 | 309 | a117 | 46 | 23 |
| 6 | 23 | 17 | 31 | b10 | a16 | 15 | 33 | 74 | 271 | 111 | 43 | a22 |
| 7 | 22 | 16 | a30 | | 16 | 15 | 33 | 75 | a300 | 99 | 40 | a22 |
| 8 | 21 | 13 | b25 | | a16 | a15 | 36 | 81 | 329 | 97 | 40 | 22 |
| 9 | 20 | a16 | b25 | | 16 | 15 | 36 | 86 | 329 | 91 | a39 | 23 |
| 10 | 20 | 16 | b24 | | b16 | 16 | 46 | a95 | 329 | 86 | 38 | 26 |
| 11 | 20 | a19 | b24 | | 16 | 16 | 64 | 104 | 289 | 94 | 40 | 18 |
| 12 | a20 | 22 | b24 | | 16 | 16 | a74 | 115 | 253 | 81 | 38 | 17 |
| 13 | 20 | 21 | b26 | b13 | 16 | 15 | 84 | 106 | 219 | 80 | 38 | a17 |
| 14 | 20 | 31 | a26 | | 16 | 15 | 92 | 113 | a219 | 75 | 36 | 17 |
| 15 | 20 | 29 | 28 | | a16 | a16 | 83 | 113 | 219 | 73 | 36 | 16 |
| 16 | 20 | a28 | 27 | | | 16 | 77 | 110 | 236 | 73 | a36 | 15 |
| 17 | 20 | 27 | 24 | | | 16 | 77 | a104 | 204 | 73 | 35 | 14 |
| 18 | 20 | 26 | 23 | b15 | b13 | 16 | 75 | 99 | 188 | 64 | 34 | 19 |
| 19 | a20 | 21 | 23 | | | 16 | a76 | 97 | 182 | a62 | 33 | 19 |
| 20 | 20 | a21 | 25 | | | b16 | 77 | 99 | 171 | 60 | 33 | a18 |
| 21 | 20 | b21 | 29 | | | 16 | 94 | 115 | a163 | 56 | 33 | 18 |
| 22 | 18 | b18 | 28 | b17 | | a16 | 123 | 150 | 185 | 52 | 33 | 18 |
| 23 | 18 | b17 | 28 | | | 16 | 104 | 219 | 150 | 50 | a36 | 16 |
| 24 | 18 | b18 | 29 | | | 16 | 99 | a236 | 141 | 49 | 38 | 17 |
| 25 | 18 | b20 | a27 | a18 | b13 | b17 | 95 | 253 | 141 | 48 | 35 | 15 |
| 26 | a18 | 23 | b21 | 18 | | b17 | a90 | 371 | 182 | a48 | 32 | 15 |
| 27 | 17 | 24 | b15 | 17 | | b18 | 86 | 329 | 155 | 48 | 32 | a14 |
| 28 | 16 | 22 | b11 | 18 | | b18 | 83 | 309 | a152 | 45 | 34 | 14 |
| 29 | 16 | 22 | b11 | 18 | - | a19 | 78 | 271 | 148 | 45 | 32 | 14 |
| 30 | 15 | a22 | b11 | 16 | - | a19 | 71 | 263 | 138 | 50 | a30 | 17 |
| 31 | 16 | - | b11 | b16 | - | 19 | - | a228 | - | 57 | 29 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 606 | 25 | 15 | 19.5 | 1,200 |
| November..... | 615 | 31 | 16 | 20.5 | 1,220 |
| December..... | 750 | 40 | 11 | 24.2 | 1,490 |
| Calendar year 1941..... | 9,503 | 119 | 8 | 26.0 | 18,840 |
| January..... | 428 | - | - | 13.8 | 849 |
| February..... | 415 | 10 | - | 14.8 | 823 |
| March..... | 502 | 19 | 15 | 18.2 | 996 |
| April..... | 2,004 | 123 | 21 | 66.8 | 3,970 |
| May..... | 4,561 | 371 | 71 | 147 | 9,060 |
| June..... | 6,506 | 329 | 138 | 217 | 12,900 |
| July..... | 2,408 | 136 | 45 | 77.7 | 4,720 |
| August..... | 1,175 | 56 | 29 | 37.9 | 2,330 |
| September..... | 567 | 28 | 14 | 18.9 | 1,120 |
| Water year 1941-42..... | 20,637 | 371 | - | 56.3 | 40,730 |

a Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated or computed on basis of weather records and records for nearby stations.

b Stage-discharge relation affected by ice.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Flathead River at Flathead, British Columbia

(International gaging station)

Location.— Staff gage, lat. 49°00', long. 114°29', at highway bridge 0.2 mile north of international boundary, 0.2 mile northwest of Flathead, British Columbia, and 7 miles northwest of Trail Creek, Mont.

Drainage area.— 450 square miles.

Records available.— March 1929 to September 1942 (except during winter).

Extremes.— Maximum discharge observed during period, 6,160 second-feet June 6 (gage height, 5.52 feet); minimum observed, 256 second-feet Sept. 12 (gage height, 1.34 feet); lower discharge may have occurred during winter, when no records were obtained. 1929-42: Maximum discharge observed, 10,600 second-feet June 17, 1933 (gage height, 6.90 feet); minimum observed, 65 second-feet Apr. 9, 1929; minimum gage height observed, 0.76 foot Apr. 9, 1929, Apr. 2, 3, 1937.

Remarks.— Records good. Gage read once daily.

Cooperation.— This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-------|-----|-------|-----|-------|
| 1.3 | 280 | 3.0 | 1,650 | 5.0 | 5,060 |
| 1.6 | 390 | 3.4 | 2,170 | 5.4 | 5,910 |
| 1.9 | 590 | 3.8 | 2,770 | 5.8 | 6,760 |
| 2.2 | 825 | 4.2 | 3,450 | | |
| 2.6 | 1,190 | 4.6 | 4,220 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 562 | 414 | | | | | 310 | 1,800 | 2,560 | 2,470 | 729 | 342 |
| 2 | 548 | 402 | | | | | 320 | 1,870 | 2,620 | 2,140 | 715 | 350 |
| 3 | 562 | 402 | | | | | 320 | 1,850 | 2,770 | 2,030 | 685 | 320 |
| 4 | 620 | 402 | | | | | 330 | 1,810 | 1,870 | 1,870 | 635 | 310 |
| 5 | 590 | 414 | | | | | 330 | 1,370 | 4,220 | 1,720 | 620 | 300 |
| 6 | | 562 | 402 | | | | 354 | 1,390 | 6,160 | 1,650 | 590 | 290 |
| 7 | | 562 | 378 | | | | 390 | 2,060 | 5,010 | 1,480 | 576 | 280 |
| 8 | | 534 | 366 | | | | 1,130 | 2,470 | 4,380 | 1,410 | 548 | 272 |
| 9 | | 520 | 330 | | | | 1,280 | 2,830 | 3,590 | 1,340 | 520 | 272 |
| 10 | | 520 | 320 | | | | 1,670 | 3,030 | 3,310 | 1,280 | 506 | 264 |
| 11 | | 590 | 310 | | | | 2,030 | 3,490 | 2,830 | 1,230 | 492 | 264 |
| 12 | | 665 | 330 | | | | 2,620 | 3,630 | 2,320 | 1,190 | 492 | 256 |
| 13 | | 893 | 402 | | | | 1,720 | 3,100 | 2,290 | 1,090 | 478 | 272 |
| 14 | | 825 | 520 | | | | 1,580 | 2,930 | 2,260 | 1,050 | 450 | 280 |
| 15 | | 777 | 534 | | | | 1,480 | 2,770 | 2,230 | 982 | 438 | 310 |
| 16 | | 745 | 492 | | | | 1,340 | 2,930 | 2,090 | 1,000 | 426 | 366 |
| 17 | | 809 | 450 | | | | 1,340 | 2,500 | 1,980 | 1,080 | 414 | 438 |
| 18 | | 777 | 426 | | | | 1,320 | 2,250 | 1,850 | 1,130 | 390 | 426 |
| 19 | | 713 | 414 | | | | 1,410 | 2,410 | 1,750 | 1,070 | 378 | 414 |
| 20 | | 729 | 390 | | | | 1,650 | 3,560 | 1,700 | 964 | 366 | 414 |
| 21 | | 745 | 354 | | | | 2,440 | 3,630 | 1,670 | 893 | 366 | 402 |
| 22 | | 697 | 330 | | | | 3,780 | 4,590 | 1,650 | 825 | 354 | 402 |
| 23 | | 650 | - | | | | 2,620 | 6,120 | 1,650 | 809 | 342 | 390 |
| 24 | | 605 | - | | | | 2,170 | 5,950 | 1,530 | 761 | 342 | 373 |
| 25 | | 576 | - | | | | 1,770 | 5,870 | 1,770 | 729 | 354 | 402 |
| 26 | | 548 | - | | | | 1,650 | 5,080 | 1,980 | 777 | 366 | 402 |
| 27 | | 534 | - | | | | 1,510 | 5,910 | 2,410 | 729 | 354 | 390 |
| 28 | | 506 | - | | | | 1,410 | 5,050 | 3,450 | 713 | 354 | 390 |
| 29 | | 478 | - | | | | 1,390 | 3,450 | 3,070 | 681 | 354 | 378 |
| 30 | | 450 | - | | | | 1,370 | 2,830 | 2,710 | 697 | 366 | 372 |
| 31 | | 426 | - | | | | | 2,680 | - | 713 | 366 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|--------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 19,318 | 893 | 426 | 623 | 1.38 | 1.60 | 38,320 |
| November 1-22..... | 8,782 | 534 | 310 | 399 | .89 | .73 | 17,420 |
| December..... | - | - | - | - | - | - | - |
| Calendar year..... | - | - | - | - | - | - | - |
| January..... | - | - | - | - | - | - | - |
| February..... | - | - | - | - | - | - | - |
| March..... | - | - | - | - | - | - | - |
| April..... | 43,054 | 3,780 | 310 | 1,430 | 3.18 | 3.56 | 85,360 |
| May..... | 104,300 | 6,120 | 1,370 | 3,360 | 7.47 | 8.61 | 206,900 |
| June..... | 80,910 | 6,160 | 1,530 | 2,700 | 6.00 | 6.69 | 160,500 |
| July..... | 36,443 | 2,470 | 681 | 1,180 | 2.62 | 3.02 | 72,280 |
| August..... | 14,344 | 729 | 342 | 463 | 1.03 | 1.19 | 28,450 |
| September..... | 10,326 | 438 | 256 | 344 | .76 | .65 | 20,450 |
| Water year..... | - | - | - | - | - | - | - |

a No gage-height record; discharge interpolated.

a Gage reading not representative of average for day; discharge interpolated.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Flathead River near Columbia Falls, Mont.

Location.- Water-stage recorder, lat. 48°29', long. 114°05', in NW¼ sec. 7, T. 31 N., R. 19 W., three-quarters of a mile upstream from Middle Fork and 10 miles northeast of Columbia Falls.

Drainage area.- 1,620 square miles.

Records available.- September 1910 to September 1917, April 1929 to September 1942.

Average discharge.- 14 years (1910-17, 1935-42), 2,746 second-feet.

Extremes.- Maximum discharge during year, 18,000 second-feet May 27 (gage height, 9.57 feet); minimum, 363 second-feet Feb. 18 (gage height, 1.31 feet).

1910-17, 1929-42: Maximum discharge, 29,500 second-feet June 20, 1916 (gage height, 9.8 feet, site and datum then in use); minimum, 323 second-feet Feb. 9, 1939 (stage-discharge relation affected by ice).

Remarks.- Records good except those for period of ice effect, which are fair. No diversion or regulation.

Rating tables, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 21

Apr. 22 to Sept. 30

| | | | | | | | | | | | |
|-----|-------|-----|-------|-----|-------|-----|-------|-----|--------|-----|--------|
| 1.5 | 360 | 3.0 | 1,430 | 5.0 | 4,090 | 2.4 | 955 | 5.0 | 4,170 | 9.0 | 15,600 |
| 1.6 | 460 | 3.5 | 1,910 | 5.5 | 5,100 | 3.0 | 1,430 | 6.0 | 6,300 | 9.5 | 17,600 |
| 2.0 | 870 | 4.0 | 2,600 | | | 3.5 | 1,490 | 7.0 | 8,910 | | |
| 2.5 | 1,030 | 4.5 | 3,220 | | | 4.0 | 2,580 | 8.0 | 12,100 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|--------|------|------|-------|--------|--------|-------|-------|-------|
| 1 | 1,860 | 1,300 | 1,100 | 1,070 | 810 | 628 | 599 | 3,990 | 6,630 | 9,500 | 2,580 | 1,220 |
| 2 | 1,860 | 1,260 | 1,300 | bl,150 | 838 | 640 | 658 | 4,350 | 8,350 | 8,910 | 2,580 | 1,180 |
| 3 | 1,810 | 1,260 | 3,220 | bl,100 | 817 | 646 | 754 | 4,540 | 8,630 | 8,630 | 2,440 | 1,100 |
| 4 | 1,860 | 1,300 | *5,320 | bl,100 | 845 | 628 | 859 | 4,350 | 9,500 | 6,060 | 2,310 | 1,070 |
| 5 | 1,910 | 1,260 | 4,480 | 9950 | 845 | 616 | 992 | 3,990 | 10,700 | 7,550 | 2,240 | 1,070 |
| 6 | 1,860 | 1,260 | 3,610 | bl,000 | 810 | 610 | 1,100 | 3,880 | 13,400 | 7,040 | 2,240 | 1,030 |
| 7 | 1,810 | 1,220 | 5,300 | 9900 | 759 | 582 | 1,140 | 3,880 | 14,900 | 6,540 | 2,180 | 992 |
| 8 | 1,810 | 1,140 | 2,910 | 9900 | 754 | 594 | 1,180 | 4,260 | 13,800 | 6,300 | 2,060 | 992 |
| 9 | 1,710 | 1,100 | 2,630 | 9900 | 705 | 622 | 1,260 | 5,260 | 12,800 | 6,700 | 2,000 | 955 |
| 10 | 1,660 | 1,070 | 2,370 | bl,060 | 652 | 658 | 1,340 | 7,290 | 11,400 | 5,370 | 1,940 | 992 |
| 11 | 1,660 | 1,070 | 2,130 | bl,100 | 705 | 634 | 1,710 | 10,700 | 10,100 | 5,150 | 1,830 | 1,030 |
| 12 | 1,660 | 1,070 | 2,060 | bl,200 | 705 | 610 | 2,440 | 10,400 | 8,910 | 5,040 | 1,780 | 992 |
| 13 | 1,810 | 1,100 | 1,960 | bl,160 | 670 | 594 | 3,380 | 10,100 | 7,810 | 4,740 | 1,780 | 992 |
| 14 | 1,960 | 1,430 | 1,860 | bl,100 | 658 | 582 | 4,000 | 9,500 | 7,290 | 4,260 | 1,720 | 992 |
| 15 | 1,960 | 1,710 | 1,960 | bl,060 | 684 | 582 | 4,180 | 9,200 | 7,650 | 3,990 | 1,620 | 1,070 |
| 16 | 1,810 | 1,710 | 1,860 | bl,060 | 622 | 572 | 3,720 | 7,810 | 8,350 | 3,900 | 1,570 | 1,070 |
| 17 | 1,860 | 1,660 | 1,910 | bl,060 | 424 | 566 | 3,460 | 7,040 | 7,810 | 3,990 | 1,520 | 1,220 |
| 18 | 1,860 | 1,520 | 1,810 | bl,060 | 420 | 566 | 3,460 | 6,300 | 6,790 | 3,990 | 1,480 | 1,260 |
| 19 | 1,810 | 1,480 | 1,910 | bl,060 | 505 | 555 | 3,460 | 5,940 | 6,540 | 3,990 | 1,430 | 1,220 |
| 20 | 1,810 | 1,380 | 2,500 | bl,000 | 572 | 540 | 3,810 | 6,060 | 6,060 | 3,740 | 1,380 | 1,180 |
| 21 | 1,760 | 1,340 | 2,700 | 9950 | 622 | 540 | 4,990 | 6,790 | 5,700 | 3,490 | 1,340 | 1,180 |
| 22 | 1,710 | 1,140 | 2,500 | 918 | 610 | 555 | 7,810 | 8,630 | 5,690 | 3,250 | 1,340 | 1,220 |
| 23 | 1,660 | 1,100 | 2,310 | 859 | 530 | 545 | 9,200 | 12,100 | 5,260 | 3,170 | 1,300 | 1,260 |
| 24 | 1,610 | 1,180 | 2,130 | 992 | 566 | 540 | 7,560 | 14,500 | 5,150 | 3,100 | 1,300 | 1,260 |
| 25 | 1,610 | 1,260 | 1,910 | 992 | 604 | 525 | 6,300 | 14,900 | 5,370 | 3,020 | 1,260 | 1,260 |
| 26 | 1,560 | 1,220 | 1,520 | 955 | 622 | 515 | 5,480 | 16,000 | 6,060 | 2,940 | 1,220 | 1,260 |
| 27 | 1,520 | 1,180 | 1,300 | 955 | 610 | 500 | 4,940 | 17,600 | 7,290 | 2,870 | 1,260 | 1,220 |
| 28 | 1,480 | 1,140 | 1,260 | 955 | 622 | 505 | 4,440 | 15,800 | 9,500 | 2,720 | 1,220 | 1,180 |
| 29 | 1,430 | 1,100 | 1,430 | 932 | - | 510 | 1,170 | 13,100 | 10,100 | 2,720 | 1,180 | 1,140 |
| 30 | 1,340 | 1,100 | 1,560 | 866 | - | 525 | 3,990 | 10,700 | 9,900 | 2,580 | 1,180 | 1,140 |
| 31 | 1,300 | - | 1,380 | 845 | - | 555 | - | 9,500 | - | 2,580 | 1,260 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 53,230 | 1,960 | 1,300 | 1,717 | 1.06 | 1.22 | 105,600 |
| November..... | 38,060 | 1,710 | 1,070 | 1,269 | .783 | .87 | 75,490 |
| December..... | 70,320 | 5,320 | 1,100 | 2,268 | 1.40 | 1.61 | 139,500 |
| Calendar year 1941..... | 685,448 | 8,010 | 385 | 1,878 | 1.16 | 15.71 | 1,360,000 |
| January..... | 31,139 | 1,800 | 845 | 1,004 | .680 | .71 | 61,760 |
| February..... | 18,616 | 845 | 480 | 865 | .410 | .43 | 36,920 |
| March..... | 17,840 | 658 | 500 | 675 | .355 | .41 | 35,390 |
| April..... | 102,872 | 9,200 | 599 | 3,409 | 2.10 | 2.34 | 202,900 |
| May..... | 268,140 | 17,600 | 3,820 | 8,650 | 5.34 | 6.16 | 531,800 |
| June..... | 258,140 | 14,900 | 5,150 | 8,638 | 5.33 | 5.95 | 514,000 |
| July..... | 148,850 | 9,500 | 2,580 | 4,802 | 2.96 | 3.41 | 295,800 |
| August..... | 52,540 | 2,580 | 1,180 | 1,695 | 1.05 | 1.21 | 104,800 |
| September..... | 33,747 | 1,260 | 955 | 1,125 | .694 | .77 | 66,940 |
| Water year 1941-42..... | 1,093,894 | 17,600 | 420 | 2,997 | 1.85 | 25.09 | 2,170,000 |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Flathead River at Columbia Falls, Mont.

Location.— Water-stage recorder, lat. 48°22', long. 114°11', in SW $\frac{1}{4}$ sec. 17, T. 30 N., R. 20 W., 200 feet downstream from highway bridge at Columbia Falls and 5 miles downstream from South Fork. Datum of gage is 2,978.00 feet above mean sea level, datum of 1929 (levels by Corps of Engineers, U. S. Army).

Drainage area.— 4,440 square miles.

Records available.— May 1922 to September 1923 (fragmentary), June 1928 to September 1942.

Average discharge.— 14 years (1928-42), 8,546 second-feet.

Extremes.— Maximum discharge during year, 56,300 second-feet May 27 (gage height, 13.91 feet); minimum, 1,280 second-feet Feb. 18 (gage height, 0.57 foot).

1922-23, 1928-42: Maximum discharge, 102,000 second-feet June 1, 1923 (gage height, 17.3 feet); minimum, 798 second-feet Dec. 8, 1929 (gage height, -0.06 foot).

Maximum stage known, 22.7 feet in June 1894, from floodmarks (discharge, about 150,000 second-feet, from rating curve extended above 80,000 second-feet by logarithmic plotting).

Remarks.— Records good except those for periods of ice effect, which are fair. No diversion.

Rating table, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-------|-----|--------|------|--------|
| 0.8 | 1,480 | 5.0 | 9,560 | 10.0 | 31,100 |
| 1.2 | 1,900 | 6.0 | 13,000 | 12.0 | 43,700 |
| 2.0 | 2,970 | 7.0 | 16,800 | 14.0 | 57,000 |
| 3.0 | 4,630 | 8.0 | 21,100 | | |
| 4.0 | 6,720 | 9.0 | 25,900 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|--------|-------|-------|--------|--------|---------|--------|-------|-------|
| 1 | 4,820 | 3,510 | 3,430 | 3,430 | 2,700 | 2,800 | 2,200 | 13,000 | 34,400 | 23,900 | 6,030 | 2,900 |
| 2 | 5,210 | 3,430 | 3,780 | 3,510 | 2,700 | 2,800 | 2,680 | 14,100 | 23,900 | 23,500 | 5,890 | 2,780 |
| 3 | 5,010 | 3,350 | 11,400 | 3,400 | 2,800 | 2,800 | 2,970 | 14,800 | 24,400 | 22,500 | 5,610 | 2,680 |
| 4 | 5,820 | 3,430 | 19,700 | 3,400 | 2,800 | 2,200 | 3,200 | 13,700 | 26,900 | 21,600 | 5,410 | 2,610 |
| 5 | 6,030 | 3,430 | 15,500 | 3,300 | 2,700 | 2,140 | 3,590 | 12,600 | 36,900 | 20,200 | 5,210 | 2,540 |
| 6 | | | | | | | | | | | | |
| 7 | 5,810 | 3,270 | 11,200 | 3,100 | 2,600 | 1,960 | 4,170 | 12,300 | h37,700 | 19,500 | 6,210 | 2,470 |
| 8 | 5,410 | 3,120 | 9,890 | 3,100 | 2,400 | 1,840 | 4,260 | 12,300 | h41,900 | 17,500 | 5,010 | 2,400 |
| 9 | 5,210 | 3,040 | 8,610 | 3,100 | 2,300 | 1,790 | 4,380 | 13,700 | h41,800 | 16,400 | 5,010 | 2,340 |
| 10 | 5,010 | 2,900 | 7,740 | 3,400 | 2,200 | 1,790 | 4,630 | 17,200 | h37,700 | 16,200 | 4,780 | 2,340 |
| 11 | | | | | | 1,960 | 5,210 | 12,300 | h44,100 | 14,100 | 4,680 | 2,340 |
| 12 | 4,820 | 2,820 | 6,960 | 3,700 | 2,100 | 1,900 | 6,960 | 31,100 | h30,000 | 13,700 | 4,440 | 2,540 |
| 13 | 4,820 | 2,900 | 6,720 | 44,000 | 2,100 | 1,840 | 12,300 | 28,900 | h25,900 | 13,700 | 4,360 | 2,470 |
| 14 | 5,010 | 2,970 | 6,030 | 4,100 | 2,000 | 1,790 | 16,400 | 27,400 | h23,000 | 12,600 | 4,280 | 2,400 |
| 15 | 5,010 | 3,670 | 5,610 | 3,800 | 2,020 | 1,740 | 18,400 | 25,400 | h22,500 | 11,200 | 4,170 | 2,540 |
| 16 | 5,010 | 4,630 | 5,610 | 3,600 | 2,020 | 1,680 | 20,800 | 24,900 | h22,000 | 10,600 | 4,000 | 2,610 |
| 17 | | | | | | | | | | | | |
| 18 | 4,820 | 5,010 | 5,610 | 3,300 | 1,900 | 1,680 | 18,000 | 22,000 | h23,500 | 10,600 | 3,830 | 2,680 |
| 19 | 5,010 | 5,010 | 5,820 | 3,400 | 1,680 | 1,680 | 16,000 | 20,200 | h24,900 | 10,800 | 3,780 | 3,040 |
| 20 | 5,010 | 4,630 | 5,410 | 3,400 | 1,490 | 1,650 | 14,800 | 18,400 | h22,000 | 10,200 | 3,590 | 3,120 |
| 21 | 5,010 | 4,440 | 5,610 | 3,500 | 1,740 | 1,630 | 14,800 | 17,200 | h21,100 | 9,990 | 3,610 | 3,040 |
| 22 | 5,010 | 4,170 | 6,960 | 3,400 | 1,960 | 1,600 | 15,200 | 17,200 | h19,700 | 9,240 | 3,430 | 2,900 |
| 23 | 4,820 | 4,000 | 8,020 | 3,200 | 1,960 | 1,580 | 19,300 | 18,900 | h18,400 | 8,610 | 3,350 | 2,900 |
| 24 | 4,820 | 3,590 | 7,470 | 3,000 | 1,900 | 1,630 | 28,500 | 23,900 | h17,200 | 8,310 | 3,270 | 2,970 |
| 25 | 4,830 | 3,350 | 6,960 | 3,000 | 1,800 | 1,680 | 30,800 | 34,100 | h16,400 | 8,020 | 3,200 | 2,970 |
| 26 | 4,640 | 3,430 | 6,430 | 3,000 | 1,600 | 1,630 | 24,900 | 48,500 | h15,400 | 7,740 | 3,120 | 2,970 |
| 27 | 4,440 | 3,670 | 6,030 | 3,100 | 1,900 | 1,610 | 21,100 | 47,200 | h14,400 | 7,210 | 3,040 | 2,970 |
| 28 | | | | | | | | | | | | |
| 29 | 4,280 | 3,750 | 5,210 | 3,200 | 2,000 | 1,590 | 18,400 | 50,000 | h18,900 | 7,210 | 2,970 | 2,900 |
| 30 | 4,170 | 3,690 | 4,540 | 3,200 | 2,100 | 1,580 | 16,400 | 54,200 | h21,100 | 6,960 | 2,970 | 2,900 |
| 31 | 4,000 | 3,430 | 4,350 | 3,100 | 2,200 | 1,560 | 14,800 | 44,500 | h23,500 | 6,720 | 2,900 | 2,750 |
| 1 | 3,910 | 3,350 | 4,720 | 3,000 | - | 1,580 | 13,700 | 35,900 | h23,900 | 6,480 | 2,820 | 2,680 |
| 2 | 3,750 | 3,350 | 4,680 | 2,900 | - | 1,650 | 13,000 | 30,000 | h24,400 | 6,260 | 2,820 | 2,610 |
| 3 | 3,590 | - | 4,170 | 2,800 | - | 1,640 | - | 28,400 | - | 6,030 | 2,970 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|--------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 150,410 | 6,030 | 3,590 | 4,852 | 1.09 | 1.26 | 298,300 |
| November..... | 108,590 | 5,010 | 2,680 | 3,620 | .815 | .91 | 215,400 |
| December..... | 227,430 | 19,700 | 3,430 | 7,335 | 1.68 | 1.90 | 451,100 |
| Calendar year 1941..... | 2,083,930 | 25,900 | 1,150 | 5,709 | 1.29 | 17.46 | 4,133,000 |
| January..... | 102,540 | 4,100 | 2,800 | 3,308 | .745 | .86 | 205,400 |
| February..... | 60,370 | 2,800 | 1,490 | 2,156 | .436 | .51 | 119,700 |
| March..... | 55,440 | 2,300 | 1,550 | 1,788 | .403 | .46 | 100,000 |
| April..... | 391,120 | 30,800 | 2,200 | 13,040 | 2.94 | 3.28 | 775,800 |
| May..... | 791,600 | 54,200 | 12,300 | 25,540 | 5.76 | 6.63 | 1,670,000 |
| June..... | 766,400 | 41,900 | 15,400 | 26,210 | 5.68 | 6.54 | 1,500,000 |
| July..... | 356,170 | 25,900 | 6,030 | 12,460 | 2.61 | 3.24 | 766,000 |
| August..... | 125,420 | 8,030 | 2,820 | 4,046 | .911 | 1.05 | 248,800 |
| September..... | 81,330 | 3,120 | 2,340 | 2,711 | .611 | .68 | 161,300 |
| Water year 1941-42..... | 3,236,320 | 54,200 | 1,490 | 8,868 | 2.00 | 27.12 | 6,420,000 |

* Winter discharge measurement made on this day.

h Computed from staff-gage readings.

Note.— Stage-discharge relation affected by ice Jan. 3 to Feb. 13, Feb. 22 to Mar. 4.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Flathead River near Kalispell, Mont.

Location.- Chain gage, lat. 48°13', long. 114°15', in NE¼ sec. 10, T. 28 N., R. 21 W., at highway bridge 3 miles east of Kalispell. Datum of gage is at mean sea level (Somers datum).

Records available.- May 1928 to September 1942.

Extremes.- Maximum elevation observed during year, 2,911.28 feet May 27; minimum observed, 2,900.43 feet Feb. 19.
1928-42: Maximum elevation observed, 2,913.95 feet May 27, 1928; minimum observed, 2,899.75 feet Dec. 17, 1940.

Remarks.- Records fragmentary but reliable. They were collected for profile study of Flathead River above Flathead Lake. Gage read once daily.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|------|------|------|-------|
| 1 | 2.52 | 1.86 | 1.82 | - | 1.39 | 0.75 | 0.98 | 5.40 | 7.92 | 7.68 | - | - |
| 2 | 2.72 | 1.82 | 1.86 | 6.85 | 1.33 | - | - | - | 7.88 | 7.55 | 3.05 | 1.45 |
| 3 | 2.96 | 1.76 | - | 6.79 | 1.33 | .81 | 1.38 | 5.77 | 7.82 | - | - | 1.37 |
| 4 | - | - | 7.08 | 6.75 | 1.33 | .83 | 1.70 | 5.44 | - | 7.21 | 2.85 | 1.31 |
| 5 | 3.14 | 1.78 | 6.32 | - | - | .81 | - | 5.39 | 8.77 | 7.11 | 2.81 | 1.27 |
| 6 | - | 1.76 | 5.54 | 6.37 | 1.27 | .79 | 2.24 | 5.42 | 9.34 | 6.91 | 2.81 | 1.25 |
| 7 | 2.96 | 1.74 | 5.08 | 6.26 | 1.25 | - | 2.30 | - | 9.97 | - | 2.67 | 1.21 |
| 8 | 2.86 | 1.66 | 4.64 | 5.93 | 1.23 | .79 | 2.36 | 5.47 | 9.96 | 6.38 | - | 1.19 |
| 9 | 2.74 | - | - | 5.76 | - | .85 | - | 6.17 | - | 6.05 | 2.51 | 1.16 |
| 10 | 2.64 | 1.54 | 3.97 | 4.91 | 1.03 | .93 | 2.74 | - | 9.17 | 5.79 | 2.45 | - |
| 11 | - | 1.62 | - | 5.11 | 1.03 | .97 | 3.32 | 8.52 | 8.70 | - | 2.35 | 1.25 |
| 12 | 2.62 | 1.60 | 3.45 | 5.41 | 1.03 | - | 4.24 | - | - | 5.73 | - | 1.23 |
| 13 | - | - | - | 5.21 | 1.05 | .87 | - | 8.17 | 7.66 | 5.63 | 2.27 | 1.23 |
| 14 | 2.70 | 1.80 | 3.00 | 5.03 | .99 | - | 6.42 | 8.04 | 7.66 | 5.45 | 2.19 | 1.23 |
| 15 | 2.68 | 2.02 | 3.00 | - | - | .77 | 7.27 | 7.84 | - | 5.11 | 2.13 | - |
| 16 | 2.64 | 2.64 | 3.00 | 3.81 | .83 | .75 | 6.77 | 7.47 | 7.82 | 4.73 | 2.05 | 1.47 |
| 17 | 2.60 | - | 3.06 | - | .71 | .73 | 6.44 | - | 7.92 | - | 2.03 | 1.53 |
| 18 | - | 2.54 | - | 3.86 | .69 | .71 | 6.02 | 6.77 | - | 7.45 | 1.89 | 1.53 |
| 19 | 2.62 | 2.42 | 2.90 | - | .44 | - | 6.48 | - | 7.50 | 7.58 | - | - |
| 20 | - | 2.26 | - | 3.46 | .59 | .69 | 6.40 | - | 7.04 | - | 1.81 | 1.49 |
| 21 | 2.58 | - | 2.90 | 3.39 | - | - | 6.70 | 6.62 | 6.90 | 4.16 | 1.75 | 1.47 |
| 22 | 2.52 | 1.96 | 2.82 | 2.33 | .75 | .65 | 8.14 | 7.86 | 6.62 | 4.05 | - | 1.47 |
| 23 | 2.48 | 1.78 | 2.94 | - | .75 | .69 | 8.88 | 8.54 | 6.44 | 3.87 | 1.69 | 1.47 |
| 24 | 2.44 | 1.73 | 3.46 | 1.93 | .79 | .69 | 7.97 | 9.62 | 6.40 | 3.76 | 1.65 | - |
| 25 | - | 1.86 | - | 2.15 | .79 | .67 | 7.32 | 10.12 | 6.84 | 3.65 | 1.61 | 1.47 |
| 26 | 2.30 | 2.06 | 2.78 | 2.07 | .77 | .63 | - | 10.07 | 6.86 | - | 1.57 | 1.47 |
| 27 | 2.24 | - | - | 1.97 | .77 | .63 | 6.44 | 11.28 | - | 3.57 | 1.53 | - |
| 28 | 2.18 | 1.90 | 2.44 | 1.81 | .77 | - | 6.07 | 10.52 | 7.57 | 3.37 | 1.51 | 1.45 |
| 29 | 2.12 | 1.86 | 5.05 | 1.82 | - | .63 | 5.77 | 9.46 | 7.60 | 3.31 | 1.49 | 1.39 |
| 30 | 2.02 | 1.78 | 8.60 | 1.49 | - | .65 | 5.58 | 8.84 | 7.66 | 3.21 | 1.45 | 1.33 |
| 31 | 1.90 | - | 7.25 | - | - | .79 | - | - | - | 5.15 | 1.57 | - |

Notes.- Add 2,900 feet to obtain elevation above mean sea level (Somers datum).

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Flathead River at Demersville, near Kalispell, Mont.

Location.- Wire-weight gage, lat. 48°10', long. 114°16', in NE¼ sec. 28, T. 28 N., R. 21 W., at Demersville, 3 miles south of Kalispell. Datum of gage is at mean sea level (Somers datum).

Records available.- April 1909 to July 1912, April 1928 to September 1942.

Extremes.- Maximum elevation observed during year, 2,897.73 feet May 27; minimum observed, 2,883.17 feet Mar. 20 to Apr. 6.
1909-12, 1928-42: Maximum elevation observed, 2,904.94 feet June 17, 1933; minimum observed, 2,881.86 feet Dec. 18-26, 1936.

Remarks.- Records reliable. They were collected for profile study of Flathead River above Flathead Lake. Gage read once or twice daily. Since April 1938 elevation of water surface has been subject to regulation by Kerr Dam, below outlet of Flathead Lake.

PEND OREILLE RIVER BASIN

Elevation, in feet, of Flathead River at Demersville, near Kalispell, Mont.,
water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 91.64 | 92.15 | 91.16 | 89.55 | 84.62 | 83.36 | 83.17 | 87.90 | 92.81 | 94.64 | 93.09 | 91.88 |
| 2 | 91.70 | 92.02 | 91.22 | 89.35 | 84.54 | 83.36 | 83.17 | 88.10 | 92.59 | 94.54 | 93.09 | 91.84 |
| 3 | 91.64 | 91.99 | 91.52 | 89.11 | 84.54 | 83.36 | 83.17 | 88.26 | 92.59 | 94.40 | 93.07 | 91.88 |
| 4 | 91.76 | 91.96 | 92.58 | 88.95 | 84.46 | 83.28 | 83.17 | 88.14 | 93.26 | 94.34 | 93.05 | 91.84 |
| 5 | 91.80 | 91.98 | 92.33 | 88.73 | 84.46 | 83.28 | 83.17 | 87.94 | 94.29 | 94.28 | 93.09 | 91.80 |
| 6 | 91.90 | 91.92 | 92.28 | 88.43 | 84.40 | 83.28 | 83.17 | 87.76 | 95.33 | 94.08 | 93.03 | 91.57 |
| 7 | 91.98 | 91.84 | 92.14 | 88.19 | 84.38 | 83.28 | 83.21 | 87.70 | 96.22 | 93.82 | 93.01 | 91.71 |
| 8 | 91.96 | 91.80 | 92.10 | 87.85 | 84.30 | 83.28 | 83.21 | 87.90 | 96.42 | 93.72 | 92.99 | 91.67 |
| 9 | 91.98 | 91.76 | 92.08 | 87.53 | 84.22 | 83.28 | 83.23 | 88.36 | 96.15 | 93.56 | 92.99 | 91.63 |
| 10 | 91.94 | 91.72 | 91.98 | 87.35 | 84.14 | 83.24 | 83.47 | 89.70 | 95.61 | 93.40 | 92.97 | 91.61 |
| 11 | 91.94 | 91.68 | 91.96 | 87.07 | 84.08 | 83.24 | 83.77 | 91.68 | 95.09 | 93.38 | 92.98 | 91.55 |
| 12 | 92.00 | 91.64 | 91.90 | 86.97 | 84.08 | 83.24 | 84.85 | 91.76 | 94.39 | 93.54 | 93.00 | 91.55 |
| 13 | 92.00 | 91.62 | 91.84 | 86.77 | 84.08 | 83.22 | 86.43 | 91.60 | 93.99 | 93.40 | 92.92 | 91.53 |
| 14 | 92.04 | 91.68 | 91.82 | 86.55 | 84.02 | 83.22 | 87.19 | 91.22 | 93.83 | 93.32 | 92.84 | 91.49 |
| 15 | 92.04 | 91.62 | 91.80 | 86.27 | 83.86 | 83.22 | 88.27 | 91.25 | 94.01 | 93.20 | 92.82 | 91.47 |
| 16 | 92.06 | 91.68 | 91.79 | 86.13 | 83.84 | 83.21 | 88.23 | 90.92 | 94.46 | 93.21 | 92.80 | 91.41 |
| 17 | 92.08 | 91.66 | 91.85 | 85.99 | 83.74 | 83.21 | 87.51 | 90.40 | 94.37 | 93.25 | 92.76 | 91.31 |
| 18 | 92.12 | 91.62 | 91.81 | 85.75 | 83.68 | 83.21 | 87.33 | 90.20 | 94.05 | 93.29 | 92.70 | 91.33 |
| 19 | 92.14 | 91.60 | 91.79 | 85.63 | 83.61 | 83.21 | 87.23 | 89.80 | 93.65 | 93.27 | 92.66 | 91.56 |
| 20 | 92.18 | 91.60 | 91.71 | 85.51 | 83.54 | 83.17 | 87.27 | 89.64 | 93.69 | 93.17 | 92.68 | 91.33 |
| 21 | 92.20 | 91.62 | 91.75 | 85.35 | 83.48 | 83.17 | 88.03 | 89.62 | 93.50 | 93.17 | 92.64 | 91.31 |
| 22 | 92.22 | 91.66 | 91.71 | 85.15 | 83.36 | 83.17 | 89.53 | 90.70 | 93.58 | 93.13 | 92.60 | 91.29 |
| 23 | 92.24 | 91.62 | 91.63 | 85.05 | 83.36 | 83.17 | 91.71 | 92.12 | 93.20 | 93.07 | 92.42 | 91.27 |
| 24 | 92.26 | 91.46 | 91.43 | 84.95 | 83.36 | 83.17 | 90.71 | 95.00 | 93.24 | 93.07 | 92.36 | 91.25 |
| 25 | 92.26 | 91.48 | 91.27 | 84.87 | 83.36 | 83.19 | 89.81 | 95.87 | 93.58 | 93.05 | 92.32 | 91.25 |
| 26 | 92.24 | 91.44 | 91.09 | 84.81 | 83.36 | 83.17 | 89.27 | 96.04 | 93.54 | 93.01 | 92.30 | 91.23 |
| 27 | 92.24 | 91.34 | 90.81 | 84.79 | 83.36 | 83.17 | 88.81 | 97.49 | 94.33 | 93.05 | 92.22 | 91.21 |
| 28 | 92.20 | 91.24 | 90.51 | 84.75 | 83.36 | 83.17 | 88.48 | 96.50 | 94.65 | 93.07 | 92.10 | 91.19 |
| 29 | 92.16 | 91.24 | 90.31 | 84.75 | - | 83.17 | 88.22 | 94.84 | 94.70 | 93.03 | 92.00 | 91.17 |
| 30 | 92.12 | 91.28 | 90.15 | 84.67 | - | 83.17 | 88.00 | 94.01 | 94.70 | 93.03 | 91.94 | 91.17 |
| 31 | 92.10 | - | 89.81 | 84.66 | - | 83.17 | - | 93.27 | - | 93.07 | 91.92 | - |

Note.- Add 2,800 feet to obtain elevation above mean sea level (Somers datum).

Flathead River at Damon Ranch, near Kalispell, Mont.

Location.- Wire-weight gage, lat. 48°09', long. 114°08', in NW¼ sec. 32, T. 28 N., R. 20 W., at Damon Ranch, 7 miles southeast of Kalispell. Datum of gage is mean sea level (Somers datum).

Records available.- April 1909 to July 1912, May 1928 to September 1942.

Extremes.- Maximum elevation observed during year, 2,893.94 feet May 27, June 8; minimum observed, 2,882.49 feet Mar. 30.

1909-12, 1928-42: Maximum elevation observed, 2,900.94 feet June 17, 1933; minimum observed, 2,881.55 feet Jan. 27-31, 1937.

Remarks.- Records reliable. They are collected for profile study of Flathead River above Flathead Lake. Gage read twice daily. Since April 1938 elevation of water surface has been subject to regulation by Kerr Dam, below outlet of Flathead Lake.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 91.65 | 92.00 | 91.13 | - | 84.49 | 83.11 | 82.55 | 86.97 | 91.11 | 93.56 | 92.96 | 91.88 |
| 2 | 91.67 | 91.99 | 91.16 | 89.19 | 84.46 | 83.11 | 82.61 | 87.11 | 90.96 | 93.45 | 92.95 | 91.82 |
| 3 | 91.80 | 91.96 | 91.22 | 88.97 | 84.46 | 83.08 | 82.60 | 87.15 | 91.12 | 93.39 | 92.95 | 91.76 |
| 4 | 91.75 | 91.91 | 91.81 | 88.77 | 84.42 | 83.05 | 82.61 | 87.04 | 91.69 | 93.40 | 92.96 | 91.78 |
| 5 | 91.75 | 91.82 | 91.76 | 88.55 | 84.42 | 83.00 | 82.68 | 86.99 | 92.81 | 93.36 | 92.96 | 91.76 |
| 6 | 91.84 | 91.77 | 91.83 | 88.36 | 84.40 | 83.02 | 82.79 | 86.90 | 92.96 | 93.29 | 92.96 | 91.76 |
| 7 | 91.81 | 91.78 | 91.83 | 88.01 | 84.31 | 83.00 | 82.87 | 86.81 | 93.65 | 93.17 | 92.94 | 91.72 |
| 8 | 91.90 | 91.72 | 91.83 | 87.77 | 84.22 | 82.93 | 82.90 | 86.92 | 93.91 | 93.04 | 92.95 | 91.65 |
| 9 | 91.92 | 91.68 | 91.81 | 87.50 | 84.15 | 82.95 | 82.97 | 87.25 | 93.84 | 92.96 | 92.94 | 91.63 |
| 10 | 91.93 | 91.68 | 91.79 | 87.28 | 84.09 | 82.95 | 83.17 | 88.15 | 93.63 | 92.89 | 92.92 | 91.63 |
| 11 | 91.91 | 91.62 | 91.77 | 87.02 | 84.05 | 82.95 | 83.73 | 89.23 | 93.33 | 93.02 | 92.90 | 91.55 |
| 12 | 91.95 | 91.62 | 91.74 | 86.72 | 84.00 | 82.95 | 83.73 | 89.23 | 93.33 | 93.04 | 92.87 | 91.55 |
| 13 | 91.97 | 91.68 | 91.71 | 86.41 | 83.98 | 82.84 | 84.85 | 89.26 | 92.84 | 93.00 | 92.82 | 91.49 |
| 14 | 91.98 | 91.58 | 91.71 | 86.32 | 83.94 | 82.81 | 85.45 | 89.18 | 92.76 | 92.99 | 92.77 | 91.43 |
| 15 | 91.98 | 91.58 | 91.71 | 86.20 | 83.84 | 82.79 | 86.08 | 89.23 | 92.95 | 92.95 | 92.74 | 91.41 |
| 16 | 92.02 | 91.58 | 91.72 | 86.01 | 83.84 | 82.81 | 86.01 | 89.05 | 93.12 | 93.01 | 92.69 | 91.35 |
| 17 | 92.04 | 91.58 | 91.67 | 85.77 | 83.84 | 82.84 | 85.83 | 88.89 | 93.12 | 93.02 | 92.62 | 91.31 |
| 18 | 92.06 | 91.56 | 91.70 | 85.59 | 83.62 | 82.77 | 85.79 | 88.64 | 92.93 | 92.97 | 92.63 | 91.31 |
| 19 | 92.08 | 91.53 | 91.71 | 85.49 | 83.50 | 82.71 | 85.78 | 88.49 | 92.94 | 93.00 | 92.60 | 91.34 |
| 20 | 92.12 | 91.48 | 91.63 | 85.37 | 83.51 | 82.73 | 85.93 | 88.45 | 92.74 | 92.94 | 92.58 | 91.29 |
| 21 | 92.14 | 91.48 | 91.55 | 85.18 | 83.46 | 82.70 | 86.49 | 88.52 | 92.66 | 92.95 | 92.54 | 91.32 |
| 22 | 92.18 | 91.46 | 91.49 | 84.98 | 83.40 | 82.61 | 87.81 | 88.84 | 92.69 | 92.94 | 92.43 | 91.27 |
| 23 | 92.20 | 91.44 | 91.44 | 84.91 | 83.35 | 82.68 | 88.67 | 89.97 | 92.66 | 92.95 | 92.39 | 91.26 |
| 24 | 92.21 | 91.42 | 91.31 | 84.79 | 83.32 | 82.60 | 86.18 | 91.47 | 92.61 | 92.90 | 92.34 | 91.25 |
| 25 | 92.21 | 91.40 | - | 84.68 | 83.28 | 82.61 | 87.79 | 92.18 | 92.80 | 92.92 | 92.24 | 91.23 |
| 26 | 92.19 | 91.34 | - | 84.60 | 83.22 | 82.59 | 87.55 | 92.38 | 93.23 | 92.94 | 92.19 | 91.20 |
| 27 | 92.15 | 91.30 | - | 84.60 | 83.19 | 82.54 | 87.41 | 93.72 | 93.36 | 92.95 | 92.12 | 91.20 |
| 28 | 92.13 | 91.20 | - | 84.60 | 83.19 | 82.56 | 87.21 | 93.06 | 93.52 | 92.94 | 92.08 | 91.13 |
| 29 | 92.11 | 91.15 | - | 84.60 | - | 82.51 | 87.11 | 92.21 | 93.65 | 92.94 | 91.99 | 91.12 |
| 30 | 92.05 | 91.16 | - | 84.58 | - | 82.51 | 86.99 | 91.76 | 93.62 | 92.94 | 91.93 | 91.10 |
| 31 | 92.02 | - | - | 84.52 | - | 82.51 | - | 91.36 | - | 92.97 | 91.90 | - |

Note.- Add 2,800 feet to obtain elevation above mean sea level (Somers datum). During winter period readings occasionally made to ice surface and do not indicate water surface.
Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.
To convert war time to standard time, subtract 1 hour.

Flathead River at Therriault Ferry, near Kalispell, Mont.

Location.— Staff gage, lat. 48°08', long. 114°09', in NW¼ sec. 4 T. 27 N., R. 20 W., at Therriault Ferry, 9 miles southeast of Kalispell. Datum of gage is at mean sea level (Somers datum).

Records available.— October 1934 to September 1942.

Extremes.— Maximum elevation observed during year, 2,893.17 feet June 28; minimum observed, 2,882.49 feet Mar. 28-31.

1934-42: Maximum elevation observed, 2,894.23 feet May 16, 1936; minimum observed, 2,881.28 feet Jan. 21-23, 1937.

Remarks.— Records reliable. They are collected for profile study of Flathead River above Flathead Lake. Gage read twice daily. Since April 1938 elevation of water surface has been subject to regulation by Kerr Dam, below outlet of Flathead Lake.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 91.59 | 92.01 | 91.08 | 89.38 | 84.46 | 83.08 | 82.52 | 86.62 | 90.38 | 93.02 | 92.91 | 91.80 |
| 2 | 91.63 | 92.00 | 91.07 | 89.18 | 84.39 | 83.04 | 82.54 | 86.71 | 90.26 | 92.97 | 92.90 | 91.76 |
| 3 | 91.70 | 91.92 | 91.17 | 88.99 | 84.40 | 83.02 | 82.51 | 86.71 | 90.42 | 92.99 | 92.89 | 91.72 |
| 4 | 91.70 | 91.89 | 91.47 | 88.76 | 84.37 | 83.00 | 82.54 | 86.71 | 90.78 | 93.01 | 92.92 | 91.69 |
| 5 | 91.70 | 91.88 | 91.55 | 88.65 | 84.33 | 82.96 | 82.60 | 86.62 | 91.25 | 93.01 | 92.93 | 91.72 |
| 6 | 91.90 | 91.80 | 91.62 | 88.28 | 84.25 | 82.94 | 82.69 | 86.57 | 91.85 | 92.98 | 92.91 | 91.70 |
| 7 | 91.83 | 91.77 | 91.70 | 88.06 | 84.22 | 82.90 | 82.78 | 86.54 | 92.35 | 92.87 | 92.90 | 91.66 |
| 8 | 91.85 | 91.74 | 91.73 | 87.76 | 84.17 | 82.90 | 82.81 | 86.55 | 92.64 | 92.79 | 92.89 | 91.62 |
| 9 | 91.87 | 91.68 | 91.74 | 87.49 | 84.11 | 82.92 | 82.84 | 86.71 | 92.71 | 92.72 | 92.88 | 91.58 |
| 10 | 91.85 | 91.64 | 91.75 | 87.24 | 84.04 | 82.88 | 82.99 | 87.23 | 92.64 | 92.69 | 92.86 | 91.54 |
| 11 | 91.87 | 91.61 | 91.74 | 86.95 | 84.00 | 82.83 | 83.16 | 87.95 | 92.44 | 92.80 | 92.66 | 91.50 |
| 12 | 91.89 | 91.59 | 91.72 | 86.75 | 83.96 | 82.84 | 83.60 | 88.14 | 92.29 | 92.80 | 92.85 | 91.46 |
| 13 | 91.92 | 91.56 | 91.68 | 86.55 | 83.89 | 82.80 | 84.12 | 88.16 | 92.25 | 92.81 | 92.77 | 91.42 |
| 14 | 91.95 | 91.56 | 91.65 | 86.32 | 83.84 | 82.80 | 84.67 | 89.22 | 92.34 | 92.80 | 92.72 | 91.38 |
| 15 | 91.97 | 91.61 | 91.63 | 86.13 | 83.79 | 82.82 | 85.13 | 88.23 | 92.45 | 92.78 | 92.69 | 91.38 |
| 16 | 91.99 | 91.64 | 91.66 | 85.96 | 83.71 | 82.79 | 85.17 | 88.18 | 92.56 | 92.82 | 92.66 | 91.34 |
| 17 | 92.01 | 91.63 | 91.68 | 85.77 | 83.64 | 82.81 | 85.12 | 88.11 | 92.53 | 92.86 | 92.63 | 91.28 |
| 18 | 92.02 | 91.52 | 91.64 | 85.61 | 83.60 | 82.79 | 85.19 | 88.01 | 92.43 | 92.88 | 92.60 | 91.25 |
| 19 | 92.04 | 91.49 | 91.60 | 85.44 | 83.56 | 82.71 | 85.20 | 87.91 | 92.38 | 92.85 | 92.56 | 91.23 |
| 20 | 92.08 | 91.48 | 91.55 | 85.29 | 83.50 | 82.71 | 85.30 | 87.87 | 92.32 | 92.83 | 92.52 | 91.21 |
| 21 | 92.12 | 91.43 | 91.50 | 85.14 | 83.43 | 82.66 | 85.74 | 87.89 | 92.28 | 92.83 | 92.49 | 91.19 |
| 22 | 92.14 | 91.41 | 91.46 | 85.05 | 83.36 | 82.68 | 86.61 | 88.11 | 92.24 | 92.85 | 92.39 | 91.19 |
| 23 | 92.16 | 91.40 | 91.37 | 84.91 | 83.30 | 82.64 | 87.29 | 88.72 | 92.24 | 92.83 | 92.33 | 91.21 |
| 24 | 92.18 | 91.37 | 91.23 | 84.84 | 83.26 | 82.61 | 87.10 | 89.63 | 92.35 | 92.81 | 92.30 | 91.20 |
| 25 | 92.18 | 91.38 | 91.07 | 84.72 | 83.23 | 82.58 | 86.95 | 90.33 | 92.56 | 92.79 | 92.22 | 91.19 |
| 26 | 92.17 | 91.34 | 90.85 | 84.64 | 83.19 | 82.56 | 86.82 | 90.60 | 92.65 | 92.82 | 92.14 | 91.18 |
| 27 | 92.14 | 91.25 | 90.59 | 84.62 | 83.15 | 82.52 | 86.79 | 91.49 | 93.04 | 92.84 | 92.09 | 91.12 |
| 28 | 92.10 | 91.18 | 90.31 | 84.59 | 83.12 | 82.49 | 86.73 | 91.35 | 93.16 | 92.86 | 92.04 | 91.11 |
| 29 | 92.06 | 91.14 | 90.07 | 84.56 | - | 82.49 | 86.68 | 91.00 | 93.15 | 92.85 | 91.93 | 91.10 |
| 30 | 92.03 | 91.12 | 89.89 | 84.52 | - | 82.49 | 86.63 | 90.78 | 93.12 | 92.87 | 91.93 | 91.10 |
| 31 | 92.02 | - | 89.60 | 84.49 | - | 82.49 | - | 90.54 | - | 92.89 | 91.84 | - |

Note.— Add 2,800 feet to obtain elevation above mean sea level (Somers datum).

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

PEND OREILLE RIVER BASIN

Flathead River near Holt, Mont.

Location.— Staff gage, lat. 48°06', long. 114°06', in NE¼ sec. 22, T. 27 N., R. 20 W., at Keller Ranch, 0.7 mile upstream from Holt. Datum of gage is at mean sea level (Somers datum).

Records available.— April 1909 to July 1912, June 1928 to September 1937, October 1939 to September 1942.

Extremes.— Maximum elevation observed during year, 2,892.92 feet June 28; minimum observed, 2,882.44 feet Mar. 30.
1909-12, 1928-37, 1939-42; Maximum elevation, 2,897.35 feet May 29, 30, 1928, from floodmark; minimum observed, 2,881.24 feet Jan. 25-28, 1930.

Remarks.— Records reliable. They are collected for profile study of Flathead River above Flathead Lake. Since April 1938, elevation of water surface has been subject to regulation by Kerr Dam, below outlet of Flathead Lake.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 91.59 | 92.03 | 91.09 | 89.37 | - | - | 82.50 | - | 90.06 | - | 92.87 | - |
| 2 | 91.60 | - | - | 89.25 | 84.39 | 82.99 | 82.51 | 86.43 | 89.94 | 92.72 | 92.87 | 91.77 |
| 3 | - | 91.93 | - | 89.03 | 84.29 | 82.99 | 82.47 | 86.45 | 90.00 | 92.68 | - | - |
| 4 | 91.63 | 91.89 | 91.29 | 88.89 | 84.25 | 83.01 | 82.46 | 86.41 | 90.38 | 92.78 | - | 91.72 |
| 5 | 91.65 | 91.85 | 91.48 | - | 84.23 | 82.95 | - | 86.37 | 90.72 | 92.84 | 92.85 | - |
| 6 | 91.79 | - | - | - | 84.19 | 82.89 | 82.58 | 86.35 | 91.10 | 92.90 | - | - |
| 7 | - | 91.79 | 91.65 | - | 84.15 | 82.91 | 82.66 | 86.41 | 91.56 | 92.72 | - | - |
| 8 | 91.63 | - | 91.75 | 87.89 | - | 82.87 | 82.72 | 86.43 | 91.90 | 92.64 | 92.87 | - |
| 9 | 91.85 | 91.69 | - | 87.63 | 83.99 | 82.87 | 82.73 | 86.45 | 92.04 | 92.62 | - | 91.55 |
| 10 | - | 91.65 | 91.73 | 87.22 | 83.95 | 82.82 | 82.84 | 86.49 | 92.13 | 92.58 | 92.85 | - |
| 11 | 91.86 | 91.61 | - | 86.90 | - | 82.79 | 82.95 | 87.17 | 92.06 | - | 92.83 | 91.50 |
| 12 | 91.91 | 91.57 | 91.65 | 86.70 | 83.85 | - | - | 87.37 | 91.91 | 92.74 | - | 91.45 |
| 13 | - | - | - | - | 83.81 | 82.77 | 83.55 | 87.37 | 91.94 | 92.76 | - | - |
| 14 | 91.95 | - | - | 86.26 | 83.75 | 82.75 | 84.07 | 87.63 | 92.06 | 92.74 | 92.73 | 91.39 |
| 15 | 91.96 | 91.53 | 91.63 | 86.02 | 83.69 | - | 84.47 | 87.67 | 92.16 | 92.70 | 92.69 | - |
| 16 | 91.95 | 91.53 | 91.61 | - | 83.65 | 82.75 | 84.59 | 87.73 | 92.26 | - | 92.67 | 91.31 |
| 17 | 91.99 | 91.53 | 91.61 | 85.70 | 83.63 | 82.74 | 84.65 | 87.69 | 92.24 | 92.75 | - | - |
| 18 | 92.02 | 91.61 | 91.57 | 85.54 | - | 82.70 | 84.75 | 87.65 | 92.20 | 92.83 | - | 91.33 |
| 19 | - | 91.47 | 91.55 | 85.36 | 83.51 | 82.68 | 84.83 | 87.59 | 92.14 | - | 92.57 | - |
| 20 | 92.07 | 91.45 | 91.51 | 85.20 | - | 82.66 | 84.93 | 87.57 | 92.14 | 92.81 | - | 91.35 |
| 21 | 92.11 | 91.43 | 91.45 | 85.12 | 83.37 | 82.64 | 85.15 | 87.57 | 92.12 | 92.81 | - | - |
| 22 | 92.13 | 91.39 | 91.33 | 84.96 | 83.33 | 82.62 | 85.67 | 87.61 | 92.06 | 92.79 | - | - |
| 23 | 92.15 | 91.35 | - | 84.86 | 83.29 | 82.60 | 86.37 | - | 92.05 | 92.81 | - | 91.22 |
| 24 | 92.18 | 91.33 | 91.21 | - | 83.25 | 82.58 | 86.43 | 86.06 | 92.22 | 92.81 | 92.27 | - |
| 25 | 92.21 | 91.31 | 91.06 | 84.68 | 83.19 | 82.56 | 86.43 | 89.20 | 92.38 | 92.77 | 92.23 | 91.16 |
| 26 | 92.18 | - | 90.87 | 84.58 | - | 82.53 | 86.45 | 89.52 | 92.70 | - | - | - |
| 27 | 92.15 | 91.23 | 90.65 | 84.54 | 83.13 | 82.52 | 86.43 | 90.26 | 92.68 | 92.81 | 92.09 | - |
| 28 | 92.11 | 91.15 | 90.37 | - | 83.09 | - | 82.45 | 86.43 | 90.36 | 92.79 | - | 91.13 |
| 29 | 92.07 | 91.13 | 90.15 | - | - | 82.46 | 86.43 | 90.26 | 92.90 | 92.82 | - | 91.07 |
| 30 | 92.05 | 91.11 | 89.95 | 84.46 | - | 82.44 | 86.41 | 90.20 | 92.88 | 92.85 | - | 91.07 |
| 31 | - | - | 89.61 | 84.42 | - | - | - | 90.08 | - | - | 91.83 | - |

Note.— Add 2,800 feet to obtain elevation above mean sea level (Somers datum).

Time basis. Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Flathead Lake at Somers, Mont.

Location.— Water-stage recorder, lat. 48°04', long. 114°13', in NE¼ sec. 26, T. 27 N., R. 21 W., at steamboat dock at Somers. Datum of gage is at mean sea level (Somers datum).

Records available.— April 1922 to September 1942.

Extremes.— Maximum elevation during year 2,893.09 feet (regulated) Aug. 5; minimum, 2,882.36 feet (regulated) Apr. 1, 6.
1922-42: Maximum elevation, 2,896.26 feet June 19, 1933; minimum, 2,881.07 feet Dec. 5, 1936.

Remarks.— Since April 1938 lake elevation has been subject to regulation by Kerr Dam, 4 miles below outlet. Slight diversion and regulation above Flathead Lake.

Capacity table (elevation, in feet, and usable contents, in acre-feet)
(Computed by The Montana Power Co. from maps made by Geological Survey.)

| | | | | | | | |
|-------|---------|-------|-----------|-------|-----------|-------|-----------|
| 2,878 | 0 | 2,884 | 690,700 | 2,890 | 1,417,000 | 2,896 | 2,174,000 |
| 2,879 | 111,800 | 2,885 | 810,100 | 2,891 | 1,541,000 | 2,897 | 2,504,000 |
| 2,880 | 224,700 | 2,886 | 930,300 | 2,892 | 1,665,000 | 2,898 | 2,434,000 |
| 2,881 | 338,900 | 2,887 | 1,081,000 | 2,893 | 1,791,000 | 2,899 | 2,666,000 |
| 2,882 | 454,900 | 2,888 | 1,172,000 | 2,894 | 1,917,000 | 2,900 | 2,699,000 |
| 2,883 | 572,500 | 2,889 | 1,294,000 | 2,895 | 2,045,000 | | |

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 91.50 | 91.94 | 91.01 | b89.39 | 84.57 | 82.97 | 82.41 | 86.16 | 89.64 | 92.56 | 92.84 | 91.75 |
| 2 | 91.53 | 91.90 | 91.02 | b89.10 | 84.51 | 82.94 | 82.42 | 86.20 | 89.59 | 92.49 | 92.84 | 91.71 |
| 3 | 91.58 | 91.87 | 91.04 | b88.91 | 84.29 | 82.92 | 82.42 | 86.17 | 89.74 | 92.49 | 92.83 | 91.68 |
| 4 | 91.57 | 91.84 | 91.15 | b88.75 | 84.26 | 82.88 | 82.43 | 86.15 | 90.01 | 92.58 | 92.84 | 91.68 |
| 5 | 91.60 | 91.81 | 91.33 | b88.47 | 84.22 | 82.86 | 82.43 | 86.16 | 90.32 | 92.55 | 92.86 | 91.68 |
| 6 | | | | | | | | | | | | |
| 8 | 91.68 | 91.76 | 91.49 | b88.27 | 84.16 | 82.86 | 82.51 | 86.13 | 90.64 | 92.62 | 92.84 | 91.66 |
| 7 | 91.72 | 91.72 | 91.57 | b88.02 | 84.11 | 82.83 | 82.59 | 86.10 | 91.03 | 92.56 | 92.83 | 91.62 |
| 8 | 91.75 | 91.68 | 91.53 | b87.72 | 84.07 | 82.80 | 82.54 | 86.07 | 91.28 | 92.50 | 92.83 | 91.67 |
| 9 | 91.77 | 91.64 | 91.67 | b87.41 | 84.01 | 82.82 | 82.58 | 86.06 | 91.49 | 92.47 | 92.80 | 91.55 |
| 10 | 91.78 | 91.60 | 91.67 | 87.14 | 83.97 | 82.78 | 82.78 | 86.19 | 91.60 | 92.47 | 92.79 | 91.52 |
| 11 | 91.79 | 91.65 | 91.65 | 86.89 | 83.92 | 82.76 | 82.87 | 86.41 | 91.57 | 92.59 | 92.78 | 91.46 |
| 12 | 91.82 | 91.62 | 91.61 | 86.67 | 83.87 | 82.76 | 83.00 | 86.65 | 91.68 | 92.55 | 92.76 | 91.39 |
| 13 | 91.84 | 91.60 | 91.68 | 86.44 | 83.83 | 82.72 | 83.19 | 86.85 | 91.69 | 92.66 | 92.70 | 91.37 |
| 14 | 91.86 | 91.62 | 91.66 | 86.23 | 83.77 | 82.70 | 83.50 | 87.03 | 91.84 | 92.66 | 92.66 | 91.34 |
| 15 | 91.88 | 91.47 | 91.66 | 86.04 | 83.72 | 82.74 | 83.76 | 87.13 | 91.98 | 92.63 | 92.64 | 91.31 |
| 16 | 91.90 | 91.48 | 91.66 | 85.86 | 83.63 | 82.72 | 83.99 | 87.25 | 91.96 | 92.66 | 92.62 | 91.26 |
| 17 | 91.93 | 91.47 | 91.58 | 85.68 | 83.60 | 82.71 | 84.25 | 87.31 | 91.95 | 92.70 | 92.69 | 91.21 |
| 18 | 91.95 | 91.46 | 91.57 | 85.51 | 83.53 | 82.67 | 84.38 | 87.31 | 91.95 | 92.75 | 92.65 | 91.21 |
| 19 | 91.98 | 91.46 | 91.53 | 85.35 | 83.47 | 82.65 | 84.51 | 87.31 | 91.93 | 92.76 | 92.62 | 91.22 |
| 20 | 92.01 | 91.45 | 91.44 | 85.20 | 83.38 | 82.65 | 84.64 | 87.29 | 91.93 | 92.74 | 92.48 | 91.20 |
| 21 | 92.04 | 91.38 | 91.38 | 85.07 | 83.30 | 82.61 | 84.79 | 87.25 | 91.94 | 92.73 | 92.44 | 91.17 |
| 22 | 92.07 | b81.56 | 91.54 | 84.95 | 83.27 | 82.60 | 85.06 | 87.25 | 91.92 | 92.76 | 92.34 | 91.15 |
| 23 | 92.09 | b81.34 | 91.53 | 84.82 | 83.22 | 82.56 | 85.38 | 87.35 | 91.92 | 92.76 | 92.29 | 91.15 |
| 24 | 92.11 | 91.33 | 91.14 | 84.71 | 83.18 | 82.54 | 85.68 | 87.62 | 92.06 | 92.75 | 92.29 | 91.13 |
| 25 | 92.12 | 91.29 | 91.00 | 84.62 | 83.13 | 82.53 | 85.89 | 88.02 | 92.26 | 92.70 | 92.18 | 91.11 |
| 26 | 92.11 | 91.24 | 90.84 | 84.53 | 83.09 | 82.48 | 86.03 | 88.50 | 92.55 | 92.71 | 92.09 | 91.10 |
| 27 | 92.08 | 91.17 | 90.59 | 84.49 | 83.06 | 82.45 | 86.12 | 88.91 | 92.57 | 92.74 | 92.05 | 91.09 |
| 28 | 92.03 | 91.13 | 90.54 | 84.47 | 83.02 | 82.42 | 86.15 | 89.32 | 92.72 | 92.76 | 91.98 | 91.07 |
| 29 | 92.02 | 91.09 | 90.10 | 84.45 | - | 82.42 | 86.16 | 89.54 | 92.57 | 92.77 | 91.90 | 91.03 |
| 30 | 91.98 | - | 89.61 | 84.42 | - | 82.41 | 86.15 | 89.65 | 92.63 | 92.79 | 91.84 | 91.02 |
| 31 | 91.95 | - | 89.59 | 84.38 | - | 82.40 | - | 89.68 | - | 92.82 | 91.80 | - |

b Staff gage reading.

Note.— Add 2,800 feet to obtain elevation above mean sea level (Somers datum).

Monthly elevation and contents, water year October 1941 to September 1942

| Month | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30..... | 2,891.49 | 1,602,000 | - |
| Oct. 31..... | 2,891.94 | 1,658,000 | +56,000 |
| Nov. 31..... | 2,891.06 | 1,547,000 | -111,000 |
| Dec. 31..... | 2,889.47 | 1,352,000 | -195,000 |
| Calendar year 1941..... | - | - | +303,000 |
| Jan. 31..... | 2,884.37 | 734,900 | -817,100 |
| Feb. 28..... | 2,883.00 | 672,300 | -162,600 |
| Mar. 31..... | 2,882.41 | 603,000 | -69,300 |
| Apr. 30..... | 2,885.17 | 960,900 | +447,900 |
| May 31..... | 2,889.64 | 1,373,000 | +422,200 |
| June 30..... | 2,892.59 | 1,739,000 | +366,000 |
| July 31..... | 2,892.82 | 1,768,000 | +29,000 |
| Aug. 31..... | 2,891.78 | 1,638,000 | -130,000 |
| Sept. 30..... | 2,891.01 | 1,542,000 | -96,000 |
| Water year 1941-42..... | - | - | -60,000 |

Note.— Elevations are average of daily means of the last two days of each month and the first two days of the following month.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Flathead River near Polson, Mont.

Location.- Water-stage recorder, lat. 47°41', long. 114°15', in NW 1/4 sec. 11, T. 22 N., R. 21 W., half a mile downstream from Kerr Dam and 6 miles downstream from Polson.
Prior to Oct. 1 at site 6 miles downstream at different datum.
Drainage area.- 6,990 square miles.
Records available.- July 1907 to September 1942.
Average discharge.- 35 years, 11,150 second-feet.
Extremes.- Maximum discharge during year, 53,500 second-feet June 10 (gage height, 16.20 feet); minimum, 330 second-feet (regulated) Mar. 8, Apr. 13 (gage height, 0.00 foot, from partly estimated gage-height record); minimum daily, 1,910 second-feet Apr. 5, 1907-42: Maximum discharge, 82,100 second-feet May 28, '30, 1928 (gage height, 17.1 feet, site and datum then in use); minimum, probably less than 5 second-feet Apr. 13, 1938 (caused by power regulation); minimum daily, 32 second-feet Apr. 12, 1938.
Remarks.- Records excellent except those for periods of fragmentary gage-height record, which are good. Several small diversions from tributaries above Flathead Lake. Flow regulated since April 1938 by Kerr Dam, 4 miles below Flathead Lake.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-------|-----|--------|------|--------|
| 2.0 | 1,830 | 5.0 | 6,520 | 10.0 | 22,000 |
| 2.5 | 2,350 | 6.0 | 8,800 | 11.0 | 26,200 |
| 3.0 | 2,990 | 7.0 | 11,600 | 13.0 | 35,700 |
| 3.5 | 3,720 | 8.0 | 14,700 | 15.0 | 46,400 |
| 4.0 | 4,580 | 9.0 | 18,200 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|---------|-------|-------|--------|--------|--------|---------|-------|-------|
| 1 | 4,220 | 6,310 | 6,940 | 118,600 | 5,710 | 4,950 | 3,140 | 16,700 | 54,700 | 33,200 | 6,730 | 6,060 |
| 2 | 4,140 | 6,520 | 6,940 | 118,200 | 5,520 | 4,150 | 3,150 | 16,700 | 27,800 | 30,900 | 7,600 | 4,220 |
| 3 | 4,140 | 5,800 | 6,940 | 117,400 | 5,520 | 4,480 | 2,490 | 16,700 | 16,400 | 23,500 | 6,940 | 4,140 |
| 4 | 4,140 | 6,310 | 7,160 | 117,100 | 5,710 | 3,780 | 2,700 | 17,100 | 16,700 | 19,300 | 6,520 | 4,220 |
| 5 | 4,140 | 6,310 | 7,160 | 117,100 | 6,520 | 3,030 | 1,910 | 16,700 | 17,100 | 23,500 | 6,290 | 4,140 |
| 6 | 4,140 | 6,310 | 7,160 | 21,100 | 6,520 | 3,620 | 2,910 | 16,700 | 20,800 | 26,200 | 6,520 | 4,060 |
| 7 | 4,140 | 6,310 | 7,380 | 123,600 | 6,520 | 3,800 | 2,330 | 16,700 | 26,800 | 26,200 | 6,370 | 4,950 |
| 8 | 4,140 | 6,310 | 7,380 | 122,900 | 6,520 | 3,700 | 2,440 | 16,700 | 35,200 | 23,200 | 6,730 | 5,910 |
| 9 | 4,050 | 6,310 | 8,520 | 121,600 | 6,520 | 4,030 | 2,320 | 16,400 | 35,700 | 19,300 | 7,150 | 5,910 |
| 10 | 4,140 | 6,520 | 10,400 | 120,400 | 6,520 | 4,040 | 2,150 | 17,100 | 41,900 | 14,100 | 6,730 | 5,910 |
| 11 | 4,140 | 6,310 | 10,400 | 19,300 | 6,310 | 3,960 | 2,030 | 18,200 | 38,700 | 12,800 | 6,520 | 5,910 |
| 12 | 4,140 | 6,310 | 9,880 | 118,200 | 6,520 | 3,700 | 1,980 | 19,700 | 27,700 | 13,100 | 6,730 | 5,710 |
| 13 | 4,140 | 6,310 | 9,060 | 117,600 | 6,520 | 4,100 | 3,460 | 20,800 | 21,300 | 13,100 | 6,520 | 5,580 |
| 14 | 4,140 | 6,520 | 8,440 | 16,700 | 6,310 | 3,720 | 5,460 | 21,200 | 18,900 | 14,400 | 6,520 | 5,350 |
| 15 | 4,140 | 6,520 | 7,830 | 116,000 | 6,310 | 3,230 | 6,940 | 22,800 | 24,500 | 14,700 | 6,520 | 4,220 |
| 16 | 4,140 | 6,100 | 7,830 | 115,400 | 6,310 | 3,740 | 7,830 | 22,800 | 32,200 | 413,700 | 6,520 | 4,220 |
| 17 | 4,050 | 6,110 | 7,830 | 114,700 | 5,710 | 3,510 | 8,550 | 22,800 | 29,800 | 410,800 | 6,520 | 4,220 |
| 18 | 4,140 | 6,520 | 8,490 | 13,700 | 5,910 | 3,820 | 9,060 | 23,200 | 29,800 | 9,350 | 6,520 | 4,220 |
| 19 | 3,650 | 6,310 | 11,600 | 13,100 | 5,910 | 3,510 | 9,600 | 22,800 | 25,800 | 10,200 | 6,730 | 4,220 |
| 20 | 3,930 | 6,520 | 12,200 | 12,400 | 5,710 | 3,620 | 10,200 | 22,800 | 25,600 | 12,400 | 6,940 | 4,220 |
| 21 | 4,140 | 6,520 | 11,600 | 11,800 | 5,710 | 3,660 | 10,700 | 22,800 | 23,600 | 11,900 | 7,000 | 4,220 |
| 22 | 4,220 | 6,730 | 11,800 | 10,000 | 5,710 | 3,560 | 11,600 | 22,800 | 23,600 | 9,970 | 6,940 | 4,220 |
| 23 | 4,220 | 6,940 | 15,000 | 10,200 | 5,520 | 3,890 | 13,100 | 23,200 | 16,100 | 9,060 | 6,940 | 4,220 |
| 24 | 4,220 | 6,940 | 16,400 | 9,600 | 5,520 | 3,900 | 14,000 | 24,500 | 9,350 | 9,970 | 6,940 | 4,220 |
| 25 | 4,800 | 6,940 | 16,700 | 9,350 | 5,060 | 3,740 | 15,000 | 26,600 | 6,940 | 8,800 | 7,160 | 4,220 |
| 26 | 6,520 | 6,940 | 18,400 | 7,560 | 5,350 | 3,560 | 15,700 | 28,900 | 10,700 | 8,060 | 6,940 | 4,220 |
| 27 | 6,520 | 6,940 | 21,600 | 5,710 | 5,140 | 3,790 | 16,400 | 31,300 | 22,800 | 8,060 | 6,940 | 4,220 |
| 28 | 6,520 | 6,940 | 19,700 | 5,520 | 5,140 | 3,200 | 16,400 | 35,700 | 29,400 | 7,800 | 7,160 | 5,580 |
| 29 | 6,310 | 6,940 | 20,400 | 6,520 | - | 2,420 | 16,400 | 35,700 | 30,500 | 6,520 | 6,860 | 5,310 |
| 30 | 6,310 | 6,940 | 20,000 | 5,520 | - | 2,820 | 16,700 | 35,700 | 31,300 | 6,110 | 5,870 | 4,140 |
| 31 | 6,310 | - | 19,300 | 5,350 | - | 3,030 | - | 35,700 | - | 6,110 | 7,160 | - |

| Month | Observed | | | | Change in contents in Flathead Lake (acre-feet) | Adjusted for change in reservoir contents | | | |
|--------------------|--------------------------|---------|--------|----------------------|---|---|--------------------------|-----------------|-------------------|
| | Discharge in second-foot | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-foot | | Run-off in inches |
| | Maximum | Minimum | Mean | | | | Mean | Per square mile | |
| October..... | 6,520 | 3,660 | 4,584 | 281,900 | +56,000 | 337,900 | 5,495 | | |
| November..... | 6,940 | 5,800 | 6,510 | 397,400 | -111,000 | 276,400 | 4,645 | | |
| December..... | 21,600 | 6,940 | 11,600 | 715,100 | -195,000 | 518,100 | 8,426 | | |
| Calendar year 1941 | 21,600 | 2,190 | 6,154 | 4,456,000 | +303,000 | 4,759,000 | 6,574 | | |
| January..... | 23,600 | 5,330 | 14,270 | 877,300 | -617,100 | 260,200 | 4,232 | | |
| February..... | 6,520 | 5,060 | 5,937 | 329,700 | -162,600 | 167,100 | 3,009 | | |
| March..... | 4,950 | 2,420 | 3,673 | 225,800 | -69,300 | 156,500 | 2,545 | | |
| April..... | 16,700 | 1,910 | 7,888 | 469,400 | +447,800 | 917,200 | 15,410 | | |
| May..... | 35,250 | 16,400 | 22,750 | 1,399,000 | +422,200 | 1,821,000 | 29,620 | | |
| June..... | 41,900 | 8,940 | 25,030 | 1,490,000 | +366,000 | 1,856,000 | 31,190 | | |
| July..... | 33,200 | 6,110 | 14,710 | 904,500 | +29,000 | 933,500 | 15,180 | | |
| August..... | 7,600 | 5,860 | 6,727 | 413,600 | -130,000 | 283,600 | 4,612 | | |
| September..... | 6,050 | 4,060 | 4,729 | 281,400 | -96,000 | 185,400 | 3,116 | | |
| Water year 1941-42 | 41,900 | 1,910 | 10,740 | 7,773,000 | -60,000 | 7,713,000 | 10,650 | | |

Note.- Change in contents based on average of mean gage heights of last two days of each month and first two days of following month.

a No gage-height record; discharge computed on basis of power-plant records at Kerr Dam.

b Fragmentary gage-height record; discharge computed on basis of partly estimated gage heights.

Time basis: Mountain standard time prior to 2 a.m., Feb. 8, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Middle Fork of Flathead River at Essex, Mont.

Location.- Water-stage recorder, lat. 48°16', long. 113°36', in SW 1/4 sec. 14, T. 29 N., R. 18 W., 0.6 mile upstream from Ole Creek, 0.7 mile southeast of Essex, and 4 miles downstream from Bear Creek.

Drainage area.- 517 square miles.

Records available.- October 1939 to September 1942.

Extremes.- Maximum discharge during year, 7,740 second-feet May 24 (gage height, 8.35 feet); minimum, 64 second-feet Mar. 6 (gage height, 1.76 feet); minimum daily, 95 second-feet Jan. 2, 3.

1939-42: Maximum discharge, that of May 24, 1942; minimum, 17 second-feet Jan. 11, 1941 (gage height, 1.30 feet, ice jam upstream); minimum daily, 30 second-feet (estimated) Jan. 22, 1940 (stage-discharge relation affected by ice).

Remarks.- Records good except those for periods of ice effect or fragmentary gage-height record, which are fair. No regulation or diversion.

Rating tables, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Mar. 3

Mar. 4 to Sept. 30

| | | | | | | | | | |
|-----|-----|-----|-------|-----|-----|-----|-------|-----|-------|
| 1.8 | 67 | 3.6 | 780 | 2.0 | 110 | 3.6 | 780 | 6.0 | 3,560 |
| 2.0 | 107 | 4.0 | 1,080 | 2.4 | 229 | 4.0 | 1,080 | 7.0 | 6,250 |
| 2.4 | 220 | 4.5 | 1,520 | 2.8 | 380 | 4.5 | 1,530 | 8.1 | 7,200 |
| 2.8 | 363 | 5.0 | 2,060 | 3.2 | 555 | 5.0 | 2,110 | | |
| 3.2 | 545 | 5.5 | 2,750 | | | | | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|--------|------|------|------|--------|--------|-------|-------|------|-------|
| 1 | 380 | 328 | 336 | 100 | 233 | 170 | 293 | 1,530 | 2,600 | 1,800 | 400 | 240 |
| 2 | 406 | 324 | 389 | 95 | 233 | 180 | 320 | 1,700 | 2,520 | 1,750 | 388 | 226 |
| 3 | 415 | 313 | 1,880 | 95 | 230 | 200 | 348 | 1,700 | 2,670 | 1,640 | 376 | 219 |
| 4 | 510 | 324 | 2,190 | h100 | 230 | 177 | 376 | 1,680 | 2,970 | 1,480 | 360 | 216 |
| 5 | 566 | 313 | 1,620 | 120 | 223 | 170 | 412 | 1,480 | 4,250 | 1,580 | 352 | 209 |
| 6 | 520 | 310 | *1,330 | 150 | 217 | 156 | 474 | 1,430 | 4,740 | 1,240 | 356 | 203 |
| 7 | 500 | 299 | 1,120 | h175 | 220 | 170 | 456 | 1,580 | 4,910 | 1,160 | 344 | 199 |
| 8 | 477 | 288 | 956 | 215 | 217 | 170 | 492 | 1,920 | 4,570 | 1,080 | 332 | 193 |
| 9 | 460 | 281 | 860 | 260 | 214 | 186 | 528 | 2,670 | 3,910 | 978 | 324 | 193 |
| 10 | 441 | 274 | 741 | 280 | 196 | 206 | 630 | 3,990 | 3,350 | 895 | 312 | 206 |
| 11 | 432 | 267 | 667 | *305 | 211 | 196 | 1,010 | 4,230 | 2,900 | 918 | 300 | 240 |
| 12 | 441 | 270 | 655 | 255 | 206 | 193 | f2,040 | 3,580 | 2,380 | 865 | 293 | 222 |
| 13 | 454 | 274 | 550 | 255 | 202 | 180 | 2,520 | 3,350 | 2,110 | 774 | 300 | 209 |
| 14 | 450 | 344 | 578 | 220 | 202 | 174 | 2,620 | 3,040 | 2,040 | 709 | 293 | 219 |
| 15 | 437 | 415 | 600 | 175 | 202 | 174 | 2,970 | 2,900 | 2,180 | 673 | 286 | 226 |
| 16 | 441 | 428 | 684 | 160 | 146 | 167 | 2,240 | 2,520 | 2,520 | 655 | 275 | 271 |
| 17 | 472 | 410 | 572 | 160 | 138 | 164 | 2,040 | 2,310 | 2,310 | 645 | 268 | 293 |
| 18 | 490 | 393 | 546 | 160 | 136 | 164 | 1,920 | 2,110 | 2,110 | 620 | 260 | 296 |
| 19 | 496 | 372 | 600 | 150 | 158 | 158 | 1,920 | 2,040 | 2,040 | 590 | 254 | 275 |
| 20 | 490 | 361 | 794 | 130 | 200 | 156 | 2,310 | f2,110 | 1,920 | 560 | 246 | 264 |
| 21 | 462 | 344 | 829 | 100 | *180 | 164 | 3,550 | 2,520 | 1,800 | 532 | 240 | 271 |
| 22 | 468 | 260 | 760 | 160 | 160 | 170 | 4,570 | 3,350 | 1,700 | 514 | 236 | 278 |
| 23 | 454 | 313 | 709 | 180 | 160 | 170 | f3,830 | f5,250 | 1,640 | 496 | 232 | 268 |
| 24 | 437 | 313 | 661 | 200 | 146 | 161 | f3,040 | f7,200 | 1,580 | 478 | 229 | 264 |
| 25 | 416 | 340 | f572 | 220 | 165 | 158 | 2,520 | f5,760 | 1,640 | 460 | 222 | 260 |
| 26 | 406 | 344 | f402 | 240 | 160 | *156 | 2,110 | f6,120 | 1,980 | 474 | 222 | 254 |
| 27 | 389 | 332 | 320 | 260 | 160 | 156 | 1,800 | f6,760 | 1,920 | 488 | 222 | 240 |
| 28 | 376 | 310 | 260 | 260 | 155 | 158 | 1,640 | f4,740 | 1,860 | 447 | 222 | 232 |
| 29 | 355 | 317 | 200 | 260 | - | 170 | 1,480 | f3,830 | 1,860 | 429 | 222 | 222 |
| 30 | 324 | 320 | 160 | 236 | - | 196 | 1,430 | 3,200 | 1,860 | 412 | 219 | 216 |
| 31 | 324 | - | 120 | 214 | - | 236 | - | 2,820 | - | 408 | 246 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 13,687 | 556 | 324 | 442 | 0.855 | 0.99 | 27,150 |
| November..... | 9,771 | 428 | 260 | 326 | .631 | .70 | 19,380 |
| December..... | 22,539 | 2,190 | 120 | 727 | 1.41 | 1.63 | 44,710 |
| Calendar year 1941..... | 202,848 | 3,250 | 70 | 556 | 1.08 | 14.61 | 402,300 |
| January..... | 5,890 | 305 | 95 | 190 | .368 | .42 | 11,680 |
| February..... | 5,302 | 233 | 135 | 189 | .366 | .38 | 10,580 |
| March..... | 5,406 | 236 | 156 | 174 | .337 | .39 | 10,720 |
| April..... | 51,889 | 4,570 | 293 | 1,730 | 3.35 | 3.74 | 102,900 |
| May..... | 98,570 | 7,200 | 1,430 | 3,180 | 6.15 | 7.09 | 195,500 |
| June..... | 76,820 | 4,910 | 1,580 | 2,561 | 4.95 | 5.52 | 182,400 |
| July..... | 28,550 | 1,800 | 408 | 624 | 1.59 | 1.83 | 50,680 |
| August..... | 8,631 | 400 | 219 | 286 | .651 | .64 | 17,560 |
| September..... | 7,124 | 296 | 193 | 237 | .458 | .51 | 14,130 |
| Water year 1941-42..... | 331,379 | 7,200 | 95 | 906 | 1.76 | 23.84 | 657,300 |

* Winter discharge measurement made on this day.

f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

h Computed from staff-gage readings.

Note.- Stage-discharge relation affected by ice Dec. 27 to Jan. 27, Feb. 18 to Mar. 3.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

PEND OREILLE RIVER BASIN

Middle Fork of Flathead River near Belton, Mont.

Location.- Staff gage, lat. 48°29'50", long. 114°00'30", in NE¼ sec. 34, T. 32 N., R. 19 W., three-quarters of a mile downstream from McDonald Creek, 1½ miles west of Belton, and ¾ miles upstream from mouth.

Drainage area.- 1,140 square miles.

Records available.- October 1939 to September 1942.

Extremes.- Maximum discharge observed during year, 15,700 second-feet May 24 (gage height, 7.46 feet); minimum observed, 410 second-feet Mar. 27, 28 (gage height, 1.41 feet).

1939-42: Maximum discharge observed, that of May 24, 1942; minimum observed, 232 second-feet Jan. 21, 1940 (gage height, 1.08 feet).

Remarks.- Records good. No regulation or diversion. Gage read once daily.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Mar. 21 | | | | | Mar. 22 to Sept. 30 | | | | |
|-------------------|-------|-----|-------|--|---------------------|-------|-----|-------|------------|
| 1.4 | 400 | 3.2 | 2,440 | | 1.4 | 410 | 3.2 | 2,490 | 6.0 10,800 |
| 1.8 | 850 | 3.8 | 3,610 | | 1.8 | 700 | 3.8 | 3,720 | 7.0 12,800 |
| 2.2 | 1,070 | 4.6 | 5,410 | | 2.2 | 1,090 | 4.6 | 5,560 | 7.5 16,700 |
| 2.7 | 1,680 | 5.0 | 6,950 | | 2.7 | 1,710 | 5.0 | 7,060 | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|------|------|--------|--------|--------|-------|-------|-------|
| 1 | 1,480 | 1,020 | 1,070 | 1,120 | 640 | 430 | 580 | 3,960 | 6,750 | 6,750 | 1,780 | 745 |
| 2 | 1,480 | 1,020 | 1,120 | 1,180 | 640 | 430 | 700 | 4,210 | 6,450 | 6,450 | 1,780 | 745 |
| 3 | 1,640 | 960 | 5,560 | 1,120 | 640 | 460 | 790 | 4,210 | 6,750 | 6,450 | 1,710 | 706 |
| 4 | 1,760 | 1,020 | 6,950 | 1,120 | 640 | 430 | 880 | 3,960 | 7,370 | 6,160 | 1,640 | 660 |
| 5 | 1,900 | 960 | 5,120 | 1,020 | 640 | 430 | 930 | 3,720 | 7,680 | 5,850 | 1,500 | 660 |
| 6 | 1,820 | 960 | 4,310 | 1,070 | 640 | 430 | 1,040 | 3,720 | 10,600 | 4,730 | 1,500 | 620 |
| 7 | 1,750 | 910 | 3,830 | 960 | 600 | 430 | 1,090 | 3,720 | 11,000 | 4,210 | 1,600 | 620 |
| 8 | 1,680 | 910 | 3,390 | 910 | 600 | 430 | 1,140 | 4,210 | 11,300 | 4,210 | 1,440 | 620 |
| 9 | 1,610 | 860 | 2,980 | 910 | 565 | 430 | 1,200 | 5,850 | 10,600 | 4,210 | 1,380 | 580 |
| 10 | 1,540 | 815 | 2,610 | 910 | 565 | 530 | 1,380 | 7,370 | 9,300 | 4,210 | 1,380 | 660 |
| 11 | 1,540 | 815 | 2,440 | 1,120 | 565 | 430 | 1,780 | 8,970 | 8,320 | 4,730 | 1,380 | 660 |
| 12 | 1,480 | 860 | 2,120 | 1,020 | 565 | 495 | 3,720 | 8,000 | 7,370 | 4,470 | 1,320 | 660 |
| 13 | 1,640 | 815 | 2,120 | 1,020 | 530 | 460 | 5,000 | 8,000 | 6,750 | 3,960 | 1,260 | 700 |
| 14 | 1,480 | 1,070 | 1,900 | 910 | 530 | 460 | 5,000 | 7,060 | 6,450 | 3,490 | 1,200 | 660 |
| 15 | 1,480 | 1,350 | 1,900 | 815 | 530 | 460 | 6,450 | 7,060 | 6,750 | 3,270 | 1,140 | 700 |
| 16 | 1,480 | 1,410 | 1,900 | 815 | 495 | 430 | 5,280 | 6,450 | 6,750 | 3,060 | 1,090 | 745 |
| 17 | 1,540 | 1,480 | 1,900 | 815 | 460 | 430 | 5,000 | 5,850 | 6,750 | 3,490 | 1,040 | 880 |
| 18 | 1,640 | 1,360 | 1,750 | 615 | 430 | 430 | 4,470 | 5,660 | 6,750 | 3,270 | 1,040 | 880 |
| 19 | 1,610 | 1,360 | 1,820 | 815 | 430 | 430 | 4,470 | 5,280 | 6,450 | 3,070 | 980 | 835 |
| 20 | 1,610 | 1,360 | 2,280 | 725 | 495 | 430 | 5,000 | 5,000 | 6,150 | 2,670 | 980 | 835 |
| 21 | 1,540 | 1,350 | 2,790 | 680 | 495 | 430 | 6,150 | 5,560 | 5,560 | 2,490 | 980 | 835 |
| 22 | 1,640 | 1,350 | 2,440 | 565 | 495 | 440 | 9,300 | 6,750 | 5,280 | 2,320 | 930 | 880 |
| 23 | 1,480 | 1,020 | 2,440 | 600 | 460 | 440 | 8,970 | 10,600 | 5,000 | 2,490 | 930 | 880 |
| 24 | 1,410 | 1,020 | 2,280 | 680 | 430 | 440 | 7,370 | 14,900 | 5,000 | 2,320 | 880 | 880 |
| 25 | 1,560 | 1,120 | 2,120 | 725 | 460 | 440 | 6,150 | 14,200 | 5,000 | 2,320 | 835 | 930 |
| 26 | 1,350 | 1,180 | 1,820 | 725 | 460 | 440 | 5,560 | 14,200 | 5,280 | 2,160 | 835 | 930 |
| 27 | 1,290 | 1,120 | 1,540 | 680 | 430 | 410 | 5,000 | 14,200 | 5,560 | 2,080 | 835 | 880 |
| 28 | 1,240 | 1,070 | 1,410 | 725 | 430 | 410 | 4,470 | 12,600 | 5,850 | 2,080 | 790 | 835 |
| 29 | 1,240 | 1,070 | 1,610 | 680 | - | 440 | 44,210 | 9,630 | 6,850 | 1,920 | 790 | 790 |
| 30 | 1,120 | 1,070 | 1,610 | 680 | - | 440 | 3,960 | 8,320 | 6,450 | 1,920 | 745 | 790 |
| 31 | 1,020 | - | 1,350 | 640 | - | 505 | - | 7,370 | - | 1,850 | 790 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-foot |
| October..... | 46,430 | 1,900 | 1,020 | 1,498 | 1.31 | 1.51 | 92,090 |
| November..... | 32,665 | 1,480 | 815 | 1,058 | 1.94 | 1.06 | 64,770 |
| December..... | 78,480 | 6,950 | 1,070 | 2,532 | 2.22 | 2.66 | 155,700 |
| Calendar year 1941..... | 636,221 | 7,620 | 310 | 1,743 | 1.63 | 20.76 | 1,262,000 |
| January..... | 26,570 | 1,130 | 565 | 967 | .752 | .87 | 52,700 |
| February..... | 14,860 | 640 | 430 | 531 | .468 | .49 | 29,470 |
| March..... | 13,720 | 530 | 410 | 443 | .389 | .46 | 27,810 |
| April..... | 117,040 | 9,300 | 580 | 3,901 | 3.42 | 3.82 | 232,100 |
| May..... | 230,490 | 14,900 | 3,720 | 7,435 | 6.52 | 7.62 | 457,200 |
| June..... | 211,120 | 11,300 | 5,000 | 7,037 | 6.17 | 6.88 | 418,900 |
| July..... | 112,860 | 6,750 | 1,850 | 3,640 | 3.19 | 3.68 | 223,900 |
| August..... | 36,380 | 1,780 | 745 | 1,174 | 1.03 | 1.19 | 72,160 |
| September..... | 22,795 | 930 | 560 | 760 | .667 | .74 | 45,210 |
| Water year 1941-42..... | 943,390 | 14,900 | 410 | 2,585 | 2.27 | 30.77 | 1,871,000 |

d Doubtful gage-height record; discharge computed on basis of gage heights one foot lower.
Time basial Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.
To convert war time to standard time, subtract 1 hour.

South Fork of Flathead River near Columbia Falls Mont.

Location.- Water-stage recorder, lat. 48°22', long. 114°03', in NE¼ sec. 17, T. 30 N., R. 19 W., 2 miles upstream from mouth and 9 miles east of Columbia Falls. Datum of gage is 3,031.3 feet above mean sea level, datum of 1929 (Corps of Engineers, U. S. Army, bench mark).

Drainage area.- 1,640 square miles.

Records available.- September 1910 to September 1916, April 1923 to September 1942.

Average discharge.- 13 years (1928-32, 1933-42), 2,916 second-feet.

Extremes.- Maximum discharge during year, 23,300 second-feet May 27 (gage height, 13.36 feet); minimum daily, 400 second-feet Feb. 18; minimum gage height, 1.33 feet Mar. 20, 21.

1910-16, 1923-42: Maximum discharge observed, 46,200 second-feet June 19, 1916 (gage height, 16.6 feet, site and datum then in use), from rating curve extended above 20,000 second-feet; minimum discharge, 206 second-feet Dec. 6, 1935 (stage-discharge relation affected by ice).

Remarks.- Records excellent except those for periods of ice effect, which are fair.

Rating tables, water year 1941-42, except period of ice effect
(gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Apr. 22 | | | | Apr. 23 to Sept. 30 | | | |
|-------------------|-------|-----|--------|---------------------|-------|------|--------|
| 1.0 | 380 | 6.0 | 5,420 | 1.4 | 550 | 7.0 | 7,250 |
| 1.5 | 600 | 7.0 | 7,100 | 2.0 | 930 | 8.5 | 10,100 |
| 2.0 | 910 | 8.0 | 8,930 | 3.0 | 1,760 | 10.0 | 13,500 |
| 3.0 | 1,890 | 9.5 | 12,100 | 4.0 | 2,790 | 11.5 | 17,500 |
| 4.0 | 2,680 | | | 5.0 | 4,070 | 13.0 | 22,000 |
| 5.0 | 3,960 | | | 6.0 | 5,560 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|--------|------|------|--------|--------|--------|-------|-------|-------|
| 1 | 1,560 | 1,050 | 1,160 | 1,100 | 750 | 700 | 980 | 4,790 | 6,740 | 7,430 | 1,540 | 748 |
| 2 | 1,640 | 1,050 | 1,360 | 1,060 | 750 | 700 | 1,240 | 5,080 | 5,740 | 7,250 | 1,440 | 718 |
| 3 | 1,600 | 1,020 | 4,680 | 1,000 | 750 | 700 | 1,360 | 5,090 | 9,130 | 6,890 | 1,400 | 700 |
| 4 | 2,060 | 1,050 | 6,060 | 1,000 | 750 | 700 | 1,440 | 4,940 | 10,100 | 6,560 | 1,320 | 682 |
| 5 | 2,180 | 1,050 | 4,960 | 1,000 | 700 | 650 | 1,640 | 4,640 | 13,000 | 6,040 | 1,320 | 670 |
| 6 | 2,010 | 1,020 | *4,240 | 1,000 | 700 | 650 | 2,010 | 4,490 | 14,000 | 5,560 | 1,280 | 652 |
| 7 | 1,920 | 1,020 | 3,690 | 1,000 | 700 | 600 | 2,010 | 4,640 | 16,000 | 5,090 | 1,260 | 634 |
| 8 | 1,760 | 946 | 3,240 | 1,000 | 650 | 600 | 2,010 | 5,240 | 16,800 | 4,640 | 1,240 | 622 |
| 9 | 1,690 | 810 | 2,860 | 1,000 | 650 | 600 | 2,210 | 6,560 | 14,000 | 4,360 | 1,160 | 610 |
| 10 | 1,600 | 810 | 2,570 | 1,050 | 600 | 580 | 2,620 | 9,620 | 12,600 | 4,070 | 1,120 | 588 |
| 11 | 1,560 | 876 | 2,410 | 1,100 | 600 | 700 | 3,820 | 11,000 | 10,600 | 3,930 | 1,120 | 718 |
| 12 | 1,520 | 910 | 2,260 | *1,160 | 600 | 700 | 6,390 | 10,100 | 9,120 | 3,930 | 1,080 | 700 |
| 13 | 1,660 | 946 | 2,010 | 1,200 | 600 | 700 | 7,820 | 6,930 | 8,170 | 3,530 | 1,080 | 682 |
| 14 | 1,620 | 1,240 | 1,820 | 1,100 | 600 | 700 | 8,560 | 8,170 | 7,610 | 3,150 | 1,040 | 718 |
| 15 | 1,480 | 1,560 | 1,960 | 900 | 550 | 654 | 9,320 | 8,360 | 7,980 | 2,970 | 1,000 | 718 |
| 16 | 1,440 | 1,760 | 1,960 | 950 | 500 | 612 | 7,640 | 7,610 | 9,560 | 2,910 | 965 | 760 |
| 17 | 1,480 | 1,740 | 1,920 | 1,000 | *420 | 580 | 6,740 | 6,890 | 8,930 | 2,850 | 930 | 646 |
| 18 | 1,520 | 1,640 | 1,820 | 1,100 | 400 | 570 | 6,220 | 6,380 | 7,980 | 2,740 | 909 | 832 |
| 19 | 1,520 | 1,580 | 1,970 | 1,000 | 450 | 575 | 5,900 | 5,880 | 7,790 | 2,670 | 881 | 790 |
| 20 | 1,480 | 1,440 | 2,260 | 900 | 500 | 550 | 6,390 | 5,720 | 7,260 | 2,400 | 860 | 742 |
| 21 | 1,480 | 1,400 | 2,360 | 760 | 550 | 545 | 6,360 | 6,210 | 6,720 | 2,260 | 832 | 718 |
| 22 | 1,440 | 1,200 | 2,210 | 600 | 570 | 550 | 12,100 | 7,980 | 6,210 | 2,150 | 811 | 694 |
| 23 | 1,400 | 1,160 | 2,110 | 850 | 550 | 566 | 11,400 | 12,100 | 6,890 | 2,050 | 790 | 682 |
| 24 | 1,360 | 1,120 | 1,960 | 900 | 550 | 570 | 9,120 | 16,000 | 6,880 | 1,960 | 776 | 668 |
| 25 | 1,320 | 1,280 | 1,820 | 950 | 550 | 560 | 7,960 | 18,300 | 5,880 | 1,900 | 760 | 640 |
| 26 | 1,280 | 1,520 | 1,360 | 900 | 600 | 555 | 6,890 | 19,800 | 7,070 | 1,900 | 748 | 622 |
| 27 | 1,240 | 1,200 | 1,260 | 900 | 650 | *555 | 6,210 | 12,700 | 7,960 | 1,850 | 748 | 610 |
| 28 | 1,200 | 1,160 | 1,200 | 860 | 700 | 560 | 5,560 | 16,400 | 7,790 | 1,760 | 754 | 592 |
| 29 | 1,160 | 1,120 | 1,300 | 800 | - | 570 | 5,090 | 12,600 | 7,430 | 1,670 | 748 | 580 |
| 30 | 1,120 | 1,120 | 1,250 | 700 | - | 616 | 4,790 | 10,600 | 7,610 | 1,680 | 756 | 568 |
| 31 | 1,080 | - | 1,150 | 700 | - | 732 | - | 9,320 | - | 1,560 | 766 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Inches | | Acres-feet | |
|-------------------------|------------------|---------|---------|-------|-----------------|--------|--|------------|--|
| | | | | | | Inches | | Acres-feet | |
| October..... | 47,180 | 2,180 | 1,080 | 1,522 | 0.928 | 1.07 | | 93,580 | |
| November..... | 35,756 | 1,730 | 1,192 | 1,192 | .727 | .81 | | 70,980 | |
| December..... | 73,070 | 6,060 | 1,150 | 2,557 | 1.44 | 1.66 | | 144,900 | |
| Calendar year 1941..... | 712,015 | 11,000 | 400 | 1,951 | 1.19 | 16.16 | | 1,412,000 | |
| January..... | 29,710 | 1,200 | 700 | 958 | .584 | .67 | | 58,930 | |
| February..... | 16,920 | 760 | 400 | 604 | .368 | .38 | | 33,580 | |
| March..... | 19,311 | 732 | 545 | 625 | .380 | .44 | | 38,300 | |
| April..... | 163,810 | 12,100 | 980 | 5,480 | 3.33 | 3.72 | | 324,900 | |
| May..... | 287,240 | 21,700 | 4,490 | 9,266 | 5.66 | 6.51 | | 569,700 | |
| June..... | 274,700 | 15,600 | 5,880 | 9,157 | 5.68 | 6.23 | | 544,900 | |
| July..... | 109,530 | 7,430 | 1,580 | 3,533 | 2.15 | 2.48 | | 217,900 | |
| August..... | 31,436 | 1,540 | 736 | 1,014 | .616 | .71 | | 62,350 | |
| September..... | 20,634 | 646 | 568 | 684 | .417 | .47 | | 40,730 | |
| Water year 1941-42..... | 1,109,196 | 21,700 | 400 | 3,039 | 1.85 | 25.16 | | 2,200,000 | |

* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Dec. 27 to Mar. 14 (no gage-height record Dec. 28 to Jan. 11; discharge computed on basis of weather records and records for Middle Fork of Flathead River near Belton).

Time basis.- Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Stillwater River near Whitefish, Mont.

Location.- Water-stage recorder, lat. 48°19', long. 114°23', in Sw¹ sec. 34, T. 30 N., R. 22 W., 600 feet downstream from highway bridge, 7 miles southwest of Whitefish, and 10 miles upstream from Whitefish Creek.

Records available.- November 1930 to September 1942.

Average discharge.- 12 years, 309 second-feet.

Extremes.- Maximum discharge during year, 1,470 second-feet May 31 (gage height, 9.63 feet); minimum, 78 second-feet Mar. 28 (gage height, 1.07 feet).
1930-42: Maximum discharge, 2,680 second-feet Apr. 28, 1934 (gage height, 14.47 feet); minimum, probably less than 50 second-feet during period of ice effect Jan. 21-31, 1940.

Remarks.- Records good except those for periods of fragmentary gage-height record and those based on once-daily gage readings, which are fair, and those for periods of ice effect, which are poor. Some water stored during high-water periods and released for logging operations during summer. No diversion.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 98 | 103 | 114 | 150 | 100 | 90 | 88 | 652 | 1,450 | 1,000 | 373 | 176 |
| 2 | 98 | 104 | 114 | 145 | 110 | 90 | 97 | 652 | 1,390 | 986 | 373 | 176 |
| 3 | 100 | 103 | 122 | 145 | 105 | 90 | 110 | 670 | 1,300 | h967 | 350 | 176 |
| 4 | 106 | 103 | 167 | 145 | 110 | 90 | 116 | 652 | 1,240 | h948 | 315 | 171 |
| 5 | 110 | 106 | 201 | 135 | 110 | 95 | 125 | 634 | 1,240 | h910 | 308 | 171 |
| 6 | 114 | 107 | 201 | 140 | 115 | 95 | 140 | 616 | 1,280 | h872 | 302 | 166 |
| 7 | 116 | 106 | *195 | 135 | 110 | 95 | 155 | 581 | 1,320 | h834 | 302 | 166 |
| 8 | 118 | 103 | 189 | 130 | 110 | 95 | 178 | 581 | 1,320 | h796 | 296 | 160 |
| 9 | 122 | 102 | 195 | 130 | 110 | 100 | 231 | 564 | 1,350 | f724 | 289 | 160 |
| 10 | 124 | 101 | 213 | 130 | 105 | 105 | 270 | 581 | 1,350 | 670 | 282 | 154 |
| 11 | 125 | 99 | 225 | 130 | 100 | 110 | 290 | 652 | 1,320 | 682 | 276 | 160 |
| 12 | 125 | 100 | 220 | 130 | 105 | 110 | 333 | 742 | 1,280 | 652 | h296 | 154 |
| 13 | 125 | 102 | 210 | *130 | 105 | 110 | 393 | 796 | 1,240 | 634 | h358 | 154 |
| 14 | 124 | 107 | 195 | 130 | 105 | 110 | 468 | 853 | 1,180 | 616 | h329 | 149 |
| 15 | 124 | 117 | 185 | 125 | 105 | 110 | 532 | h910 | 1,140 | 598 | h282 | 154 |
| 16 | 125 | 135 | 172 | 125 | 100 | 110 | f564 | h929 | 1,080 | 564 | f215 | 154 |
| 17 | 123 | 140 | 162 | 125 | 90 | 110 | 551 | h929 | 1,040 | 532 | 144 | 154 |
| 18 | 123 | 145 | 162 | 120 | *100 | 110 | 615 | h929 | 1,000 | 532 | 134 | 154 |
| 19 | 124 | 145 | 162 | 120 | 105 | 110 | 581 | h910 | 986 | 532 | 129 | 154 |
| 20 | 123 | 140 | 167 | 115 | 100 | 110 | f681 | h872 | 967 | 516 | 139 | 149 |
| 21 | 122 | 135 | 178 | 115 | 95 | 115 | f581 | h853 | 929 | 500 | 166 | 149 |
| 22 | 123 | 130 | 179 | 115 | 95 | 120 | f598 | h834 | 910 | 494 | 176 | 149 |
| 23 | 121 | 130 | 178 | 110 | 90 | 125 | 706 | h834 | 872 | 452 | 176 | 144 |
| 24 | 118 | 125 | 184 | 110 | 85 | 120 | f778 | h834 | 834 | 436 | 176 | 144 |
| 25 | 116 | 120 | 190 | 110 | 90 | 115 | f796 | h891 | 796 | 420 | 176 | 139 |
| 26 | 115 | 120 | 190 | 105 | 90 | 100 | f834 | h1,000 | 815 | 404 | 171 | 139 |
| 27 | 114 | 118 | 185 | 105 | 90 | *87 | 834 | 1,180 | 853 | 404 | 171 | 134 |
| 28 | 112 | 115 | 180 | 105 | 90 | 81 | 796 | 1,320 | 910 | 404 | 171 | 134 |
| 29 | 112 | 114 | 175 | 110 | - | 82 | 742 | 1,410 | 967 | 396 | 171 | 129 |
| 30 | 110 | 114 | 165 | 110 | - | 84 | 706 | 1,450 | 1,000 | 388 | 171 | 127 |
| 31 | 106 | - | 160 | 105 | - | 85 | - | 1,470 | - | 380 | 176 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 3,616 | 125 | 98 | 117 | 7,170 | | |
| November..... | | | | | | 3,488 | 145 | 99 | 116 | 6,920 | | |
| December..... | | | | | | 5,534 | 225 | 114 | 179 | 10,980 | | |
| Calendar year 1941..... | | | | | | 53,044 | 408 | 53 | 145 | 105,800 | | |
| January..... | | | | | | 3,635 | 150 | 105 | 124 | 7,610 | | |
| February..... | | | | | | 2,525 | 115 | 85 | 101 | 5,600 | | |
| March..... | | | | | | 3,160 | 125 | 81 | 102 | 6,270 | | |
| April..... | | | | | | 13,821 | 834 | 88 | 461 | 27,410 | | |
| May..... | | | | | | 26,781 | 1,470 | 564 | 864 | 53,120 | | |
| June..... | | | | | | 33,359 | 1,450 | 796 | 1,112 | 66,170 | | |
| July..... | | | | | | 19,203 | 1,000 | 380 | 619 | 38,090 | | |
| August..... | | | | | | 7,393 | 373 | 129 | 258 | 14,660 | | |
| September..... | | | | | | 4,600 | 176 | 127 | 153 | 9,120 | | |
| Water year 1941-42..... | | | | | | 127,615 | 1,470 | 81 | 350 | 255,100 | | |

* Winter discharge measurement made on this day.

f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

h Computed on basis of once-daily gage readings.

Note.- Stage-discharge relation affected by ice Nov. 21-26, Dec. 12-15, Dec. 25 to Mar. 26.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Logan Creek at Tally Lake, near Whitefish, Mont.

Location.- Staff gage, lat. 48°27', long. 114°34', in NW $\frac{1}{4}$ sec. 17, T. 31 N., R. 23 W., 2 $\frac{1}{2}$ miles north of Tally Lake and 10 miles west of Whitefish.

Records available.- April 1936 to September 1942 (discontinued). August 1931 to April 1933, May to September 1934 at site 2 $\frac{1}{2}$ miles upstream.

Extremes.- Maximum discharge during year, 496 second-feet May 29 (gage height, 3.22 feet, from graph based on gage readings); minimum observed, 11 second-feet Oct. 1, 1931-33, 1934, 1936-42; Maximum gage height, 7.22 feet May 28, 29, 1933, site and datum then in use (discharge not determined); minimum discharge observed, 0.7 second-foot Sept. 1, 2, 1940.

Remarks.- Records good. Gage read twice daily. Natural storage in Tally Lake.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 11 | 15 | 23 | 33 | 26 | 21 | 17 | 243 | 442 | 259 | 91 | 27 |
| 2 | 13 | 15 | 24 | 33 | 24 | 21 | 16 | 243 | 422 | 259 | 59 | 27 |
| 3 | 14 | 15 | 28 | 33 | 23 | 21 | 20 | 227 | 383 | 276 | 87 | 28 |
| 4 | 14 | 15 | 30 | 32 | 23 | 21 | 24 | 227 | 364 | 276 | 79 | 28 |
| 5 | 15 | 15 | 33 | 32 | 23 | 21 | 28 | 212 | 364 | 259 | 75 | 28 |
| 6 | 16 | 15 | 30 | 32 | 23 | 21 | 32 | 212 | 383 | 227 | 72 | 28 |
| 7 | 17 | 15 | 45 | 31 | 23 | 20 | 35 | 197 | 422 | 212 | 70 | 26 |
| 8 | 18 | 15 | 49 | 31 | 23 | 20 | 42 | 212 | 422 | 197 | 70 | 28 |
| 9 | 18 | 15 | 49 | 30 | 23 | 20 | 49 | 227 | 402 | 177 | 70 | 26 |
| 10 | 19 | 16 | 49 | 29 | 23 | 20 | 59 | 243 | 402 | 164 | 68 | 28 |
| 11 | 19 | 16 | 46 | 28 | 22 | 20 | 70 | 259 | 383 | 159 | 62 | 28 |
| 12 | 18 | 16 | 43 | 27 | 21 | 20 | 85 | 259 | 346 | 153 | 59 | 26 |
| 13 | 18 | 16 | 40 | 26 | 21 | 20 | 141 | 276 | 346 | 151 | 56 | 26 |
| 14 | 18 | 17 | 39 | 26 | 21 | 19 | 191 | 276 | 328 | 151 | 52 | 26 |
| 15 | 18 | 17 | 39 | 26 | 21 | 19 | 227 | 293 | 310 | 153 | 47 | 26 |
| 16 | 18 | 21 | 38 | 25 | b21 | 19 | 243 | 310 | 310 | 153 | 46 | 26 |
| 17 | 18 | 25 | 38 | 25 | b21 | 19 | 259 | 328 | 276 | 151 | 44 | 26 |
| 18 | 18 | 30 | 38 | 24 | b21 | 19 | 259 | 328 | 243 | 151 | 42 | 26 |
| 19 | 18 | 31 | 37 | 24 | b21 | 19 | 259 | 328 | 243 | 146 | 38 | 26 |
| 20 | 18 | 30 | 37 | 23 | *b20 | 19 | 259 | 310 | 227 | 141 | 37 | 25 |
| 21 | 18 | 30 | 37 | 23 | b20 | 19 | 259 | 310 | 227 | 131 | 35 | 26 |
| 22 | 18 | 26 | 36 | 23 | b21 | 18 | 276 | 293 | 212 | 124 | 33 | 26 |
| 23 | 18 | 24 | 36 | 21 | 21 | 18 | 310 | 276 | 212 | 117 | 31 | 26 |
| 24 | 18 | 24 | 36 | 21 | 21 | 18 | 326 | 276 | 197 | 115 | 30 | 27 |
| 25 | 18 | 24 | 36 | 21 | 21 | 18 | 383 | 310 | 197 | 110 | 28 | 26 |
| 26 | 17 | 24 | 36 | 24 | 21 | 17 | 364 | 346 | 197 | 106 | 26 | 26 |
| 27 | 17 | 24 | 36 | 26 | 21 | 17 | 328 | 402 | 212 | 101 | 24 | 26 |
| 28 | 17 | 24 | 35 | 30 | 21 | 17 | 310 | 442 | 227 | 101 | 24 | 24 |
| 29 | 17 | 24 | 35 | 32 | - | 17 | 276 | 486 | 243 | 97 | 25 | 24 |
| 30 | 16 | 23 | 34 | 30 | - | 17 | 259 | 466 | 259 | 97 | 26 | 24 |
| 31 | 16 | - | 34 | 30 | - | 17 | - | 486 | - | 95 | 27 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 526 | 19 | 11 | 17.0 | 1,040 | | |
| November..... | | | | | | 617 | 31 | 15 | 20.6 | 1,280 | | |
| December..... | | | | | | 1,146 | 49 | 23 | 37.0 | 2,270 | | |
| Calendar year 1941..... | | | | | | 9,374.8 | 90 | - | 25.7 | 18,580 | | |
| January..... | | | | | | 853 | 33 | 21 | 27.5 | 1,660 | | |
| February..... | | | | | | 611 | 26 | 20 | 21.8 | 1,210 | | |
| March..... | | | | | | 592 | 21 | 17 | 19.1 | 1,170 | | |
| April..... | | | | | | 5,420 | 383 | 17 | 181 | 10,760 | | |
| May..... | | | | | | 9,323 | 486 | 197 | 301 | 18,490 | | |
| June..... | | | | | | 9,201 | 442 | 197 | 307 | 18,250 | | |
| July..... | | | | | | 5,009 | 276 | 95 | 162 | 9,940 | | |
| August..... | | | | | | 1,563 | 91 | 24 | 50.4 | 3,100 | | |
| September..... | | | | | | 803 | 28 | 24 | 26.8 | 1,590 | | |
| Water year 1941-42..... | | | | | | 35,664 | 496 | 11 | 97.7 | 70,720 | | |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Whitefish Creek near Kalispell, Mont.

Location.- Water-stage recorder, lat. $46^{\circ}19'$, long. $114^{\circ}16'$, in SW $\frac{1}{4}$ sec. 34, T. 30 N., R. 21 W., 8 miles north of Kalispell and 8 miles upstream from mouth. Datum of gage is 2,969.7 feet above mean sea level, datum of 1929 (Corps of Engineers, U. S. Army, bench mark).

Records available.- November to December 1906, July 1928 to September 1942.

Average discharge.- 13 years (1929-42), 177 second-feet.

Extremes.- Maximum discharge during year, 682 second-feet June 6 (gage height, 2.98 feet); minimum, 15 second-feet Oct. 15, 16 (gage height, 1.00 feet).
1906, 1928-42: Maximum discharge, 1,260 second-feet June 3, 1932 (gage height, 4.26 feet); minimum, 4.5 second-feet Oct. 18, 1934 (gage height, 0.83 foot).

Remarks.- Records good except those for periods of ice effect, which are poor. Some regulation by Whitefish Lake. No diversion.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | 36 | 121 | 22 | 85 | 200 | 150 | 88 | 306 | 635 | 485 | 173 | 121 |
| 2 | 36 | 121 | 22 | h75 | 200 | 187 | 93 | 345 | 633 | 475 | 164 | 118 |
| 3 | 30 | 121 | 23 | h70 | 190 | 152 | 108 | 367 | 633 | 487 | 155 | 118 |
| 4 | 30 | 118 | *25 | h70 | 180 | 132 | 108 | 391 | 635 | 454 | 146 | 113 |
| 5 | 28 | 121 | 24 | h70 | 160 | 100 | 113 | 375 | 657 | 442 | 143 | 113 |
| 6 | 28 | 121 | 25 | h75 | 140 | 79 | 121 | 364 | 657 | 426 | 140 | 110 |
| 7 | 28 | 121 | 154 | h80 | 120 | 76 | 126 | 356 | 657 | 406 | 140 | 110 |
| 8 | 27 | 118 | 176 | h85 | 98 | 74 | 132 | 353 | 657 | 391 | 140 | 108 |
| 9 | 25 | 118 | 176 | *92 | 96 | 76 | 135 | 353 | 657 | 375 | 137 | 108 |
| 10 | 24 | 118 | 173 | 100 | 96 | 79 | 146 | 364 | 653 | 360 | 135 | 108 |
| 11 | 23 | 118 | 173 | 110 | 93 | 86 | 149 | 410 | 653 | 349 | 135 | 110 |
| 12 | 22 | 118 | 170 | 120 | 93 | 86 | 186 | 446 | 653 | 345 | 132 | 72 |
| 13 | 20 | 118 | 167 | 130 | 93 | 83 | 205 | 468 | 610 | 334 | 135 | 57 |
| 14 | 18 | 118 | 167 | 130 | 90 | 81 | 215 | 475 | 588 | 320 | 135 | 53 |
| 15 | 15 | 121 | 167 | 130 | 90 | 79 | 228 | 527 | 571 | 309 | 132 | 51 |
| 16 | 15 | 129 | 167 | 130 | 108 | 76 | 224 | 522 | 563 | 306 | 132 | 51 |
| 17 | 123 | 132 | 167 | 130 | *128 | 76 | 224 | 505 | 549 | 302 | 132 | 49 |
| 18 | 155 | 132 | 167 | 140 | 120 | 76 | 228 | 496 | 527 | 292 | 132 | 47 |
| 19 | 152 | 132 | 167 | 140 | 120 | 74 | 228 | 483 | 531 | 278 | 132 | 45 |
| 20 | 149 | 129 | 170 | 140 | 120 | 72 | 231 | 458 | 518 | 264 | 129 | 43 |
| 21 | 146 | 128 | 170 | 140 | 120 | 74 | 241 | 450 | 505 | 250 | 129 | 42 |
| 22 | 143 | 124 | 167 | 140 | 120 | 78 | 287 | 442 | 498 | 237 | 126 | 42 |
| 23 | 140 | 63 | 164 | 140 | 120 | 76 | 295 | 450 | 475 | 229 | 126 | 42 |
| 24 | 140 | 25 | 161 | 140 | 130 | *76 | 298 | 479 | 467 | 215 | 124 | 40 |
| 25 | 137 | 24 | 155 | 150 | 130 | 74 | 302 | 505 | 458 | 202 | 121 | 38 |
| 26 | 135 | 24 | 150 | 160 | 130 | 74 | 306 | 558 | 467 | 199 | 124 | 38 |
| 27 | 135 | 24 | 140 | 180 | 140 | 74 | 313 | 633 | 471 | 196 | 126 | 38 |
| 28 | 132 | 24 | 130 | 180 | 140 | 76 | 313 | 633 | 488 | 189 | 124 | 36 |
| 29 | 126 | 23 | 120 | 190 | - | 79 | 309 | 657 | 496 | 186 | 121 | 36 |
| 30 | 126 | 23 | 110 | 200 | - | 61 | 306 | 657 | 496 | 183 | 121 | 36 |
| 31 | 124 | - | 100 | 200 | - | 53 | - | 633 | - | 180 | 124 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 2,466 | 155 | 15 | 79.5 | 4,890 | | |
| November..... | | | | | | 2,915 | 132 | 23 | 97.2 | 5,780 | | |
| December..... | | | | | | 4,069 | 176 | 22 | 131 | 8,070 | | |
| Calendar year 1941..... | | | | | | 45,424 | 476 | 15 | 125 | 90,090 | | |
| January..... | | | | | | 3,922 | 200 | 70 | 127 | 7,780 | | |
| February..... | | | | | | 3,565 | 200 | 90 | 127 | 7,070 | | |
| March..... | | | | | | 2,720 | 167 | 72 | 87.7 | 5,400 | | |
| April..... | | | | | | 6,236 | 313 | 88 | 208 | 12,370 | | |
| May..... | | | | | | 14,471 | 657 | 306 | 467 | 28,700 | | |
| June..... | | | | | | 18,965 | 657 | 458 | 566 | 33,660 | | |
| July..... | | | | | | 9,643 | 438 | 180 | 311 | 19,130 | | |
| August..... | | | | | | 4,165 | 173 | 121 | 134 | 8,260 | | |
| September..... | | | | | | 2,091 | 121 | 56 | 69.7 | 4,160 | | |
| Water year 1941-42..... | | | | | | 73,228 | 657 | 15 | 201 | 145,200 | | |

* Winter discharge measurement made on this day.

h Computed from staff-gage readings.

Note.- Stage-discharge relation affected by ice Dec. 26 to Feb. 7, Feb. 17 to Mar. 1.

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.

To convert war time to standard time, subtract 1 hour.

Ashley Creek near Kalispell, Mont.

Location.- Wire-weight gage and Cippoletti weir, lat. 48°11', long. 114°24', in SE $\frac{1}{4}$ sec. 16, T. 23 N., R. 22 W., 4 miles west of Kalispell.

Records available.- April 1931 to March 1933, April 1934 to September 1942.

Extremes.- Maximum discharge observed during year, 100 second-feet June 10 (gage height, 4.70 feet); no flow at times.
1931-42: Maximum discharge observed, 285 second-feet Apr. 26, 1934 (gage height, 9.30 feet, former control and datum); no flow at times.

Remarks.- Records good. Gage read twice daily. Some diversions. Storage in Ashley and Smith Lakes.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1 | | 0 | 0.1 | | | 0 | 22 | 28 | 90 | 63 | 17 | 5.0 |
| 2 | | 0 | .2 | | | 0 | 24 | 27 | 90 | 63 | 16 | 4.6 |
| 3 | | 0 | 4.6 | | | 0 | 23 | 26 | 90 | 60 | 15 | 4.4 |
| 4 | | 0 | 2.6 | | | 0 | 21 | 25 | 92 | 58 | 14 | 4.2 |
| 5 | | 0 | .8 | | | 0 | 22 | 24 | 93 | 58 | 13 | 4.1 |
| 6 | | 0 | .3 | | | 0 | 22 | 24 | 94 | 57 | 12 | 3.9 |
| 7 | | 0 | .3 | | | 0 | 22 | 25 | 94 | 54 | 12 | 3.8 |
| 8 | | 0 | .3 | | | 0 | 22 | 23 | 97 | 51 | 11 | 3.5 |
| 9 | | 0 | .4 | | | .8 | 19 | 23 | 97 | 49 | 10 | 3.8 |
| 10 | | 0 | .4 | | | 6.9 | 21 | 24 | 99 | 48 | 10 | 3.7 |
| 11 | | 0 | .4 | | | 2.1 | 21 | 24 | 97 | 47 | 10 | 3.7 |
| 12 | | 0 | .4 | | | 1.4 | 21 | 26 | 94 | 44 | 9.2 | 3.6 |
| 13 | | 0 | .4 | | | .6 | 18 | 29 | 94 | 40 | 9.2 | 3.6 |
| 14 | | .1 | .4 | | | .6 | 19 | 33 | 89 | 38 | 8.6 | 3.6 |
| 15 | | 1.0 | .3 | | | .4 | 23 | 33 | 87 | 37 | 7.5 | 3.6 |
| 16 | | .5 | .4 | | | .3 | 23 | 37 | 83 | 37 | 7.4 | 3.6 |
| 17 | | .4 | .4 | | | .2 | 27 | 42 | 81 | 36 | 7.1 | 3.8 |
| 18 | | .3 | .4 | | | .2 | 26 | 46 | 78 | 33 | 6.6 | 3.7 |
| 19 | | .2 | .9 | | | .3 | 24 | 48 | 76 | 32 | 6.6 | 3.6 |
| 20 | | .2 | 1.2 | | | .6 | 26 | 49 | 72 | 30 | 6.3 | 3.4 |
| 21 | | .2 | 1.3 | | | .8 | 27 | 52 | 69 | 28 | 6.3 | 3.2 |
| 22 | | .2 | 1.3 | | | 1.1 | 29 | 52 | 68 | 26 | 5.6 | 3.1 |
| 23 | | .2 | 1.3 | | | 1.2 | 28 | 53 | 64 | 24 | 5.3 | 3.1 |
| 24 | | .1 | 1.2 | | | 1.3 | 27 | 56 | 61 | 23 | 5.3 | 2.9 |
| 25 | | .1 | 1.0 | | | 1.4 | 29 | 58 | 56 | 22 | 4.9 | 2.9 |
| 26 | | .1 | .9 | | | 2.2 | 34 | 66 | 59 | 21 | 4.9 | 2.8 |
| 27 | | .1 | .8 | | | 2.8 | 27 | 73 | 63 | 20 | 4.6 | 3.0 |
| 28 | | .1 | .7 | | | 4.1 | 33 | 78 | 63 | 20 | 4.4 | 3.0 |
| 29 | | .1 | .6 | | | 6.0 | 29 | 78 | 64 | 18 | 4.0 | 3.0 |
| 30 | | .1 | .4 | | | 8.6 | 29 | 83 | 65 | 18 | 4.0 | 2.9 |
| 31 | | - | 0 | | | 9.9 | - | 89 | - | 17 | 5.0 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| November..... | | | | | | 4.0 | 1.0 | 0 | .13 | 7.9 | | |
| December..... | | | | | | 24.7 | 4.6 | 0 | .80 | 49 | | |
| Calendar year 1941..... | | | | | | 570.9 | 17 | 0 | 1.56 | 1,130 | | |
| January..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| February..... | | | | | | 0 | 0 | 0 | 0 | 0 | | |
| March..... | | | | | | 53.7 | 9.9 | 0 | 1.73 | 107 | | |
| April..... | | | | | | 737 | 34 | 18 | 24.6 | 1,460 | | |
| May..... | | | | | | 1,364 | 89 | 23 | 43.7 | 2,690 | | |
| June..... | | | | | | 2,419 | 99 | 58 | 80.6 | 4,800 | | |
| July..... | | | | | | 1,172 | 63 | 17 | 37.8 | 2,320 | | |
| August..... | | | | | | 262.6 | 17 | 4.0 | 8.47 | 521 | | |
| September..... | | | | | | 107.4 | 5.0 | 2.8 | 3.58 | 213 | | |
| Water year 1941-42..... | | | | | | 6,134.4 | 99 | 0 | 16.8 | 12,170 | | |

Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Swan River near Big Fork, Mont.

Location.- Water-stage recorder, lat. 48°01', long. 113°59', in NW¼ sec. 14, T. 26 N., R. 19 W., at outlet of Swan Lake, 7 miles southeast of Big Fork.

Drainage area.- 647 square miles.

Records available.- April 1922 to September 1942. October 1910 to May 1911 at site 2 miles upstream from Swan Lake.

Average discharge.- 16 years (1922-24; 1928-42), 971 second-feet.

Extremes.- Maximum discharge during year, 3,980 second-feet May 28 (gage height, 5.06 feet); minimum, 301 second-feet Feb. 19, Mar. 2 (gage height, 2.04 feet).
1922-42: Maximum discharge, 8,280 second-feet June 18, 1933 (gage height, 7.00 feet); minimum, 85 second-feet Jan. 26-29, 1930 (gage height, 0.04 foot).

Remarks.- Records good. No diversion above station. Natural storage in Swan Lake.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Nov. 4)

| | | | | | |
|-----|-----|-----|-------|-----|-------|
| 2.0 | 285 | 3.0 | 990 | 4.5 | 2,990 |
| 2.3 | 420 | 3.5 | 1,550 | 5.0 | 3,880 |
| 2.6 | 635 | 4.0 | 2,220 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 489 | 435 | 468 | 410 | 352 | 317 | 375 | 1,370 | 2,700 | 2,440 | 826 | 438 |
| 2 | 496 | 429 | 468 | 400 | 352 | 321 | 410 | 1,310 | 2,440 | 2,440 | 810 | 432 |
| 3 | 518 | 429 | 548 | 390 | 356 | 330 | 456 | 1,280 | 2,300 | 2,440 | 774 | 405 |
| 4 | 541 | 423 | 619 | 390 | 361 | 330 | 480 | 1,230 | 2,300 | 2,440 | 765 | 410 |
| 5 | 548 | 456 | 694 | 390 | 366 | 330 | 525 | 1,190 | 2,520 | 2,370 | 738 | 410 |
| 6 | 570 | 462 | 729 | 400 | 366 | 338 | 595 | 1,170 | 2,610 | 2,300 | 729 | 400 |
| 7 | 586 | 468 | 747 | 400 | 361 | 338 | 635 | 1,140 | 3,080 | 2,220 | 703 | 400 |
| 8 | 602 | 450 | 747 | 400 | 356 | 338 | 703 | 1,120 | 3,420 | 2,140 | 694 | 400 |
| 9 | 610 | 438 | 720 | 385 | 361 | 338 | 792 | 1,140 | 3,690 | 2,000 | 669 | 400 |
| 10 | 594 | 438 | 678 | 395 | 356 | 343 | 855 | 1,300 | 3,690 | 1,860 | 669 | 400 |
| 11 | 594 | 426 | 660 | 400 | 352 | 352 | 936 | 1,540 | 3,600 | 1,790 | 635 | 400 |
| 12 | 563 | 432 | 635 | 408 | 348 | 352 | 1,060 | 1,720 | 3,350 | 1,790 | 597 | 400 |
| 13 | 548 | 444 | 611 | 405 | 343 | 352 | 1,280 | 1,860 | 2,990 | 1,790 | 595 | 432 |
| 14 | 548 | 462 | 563 | 410 | 348 | 352 | 1,610 | 1,860 | 2,670 | 1,660 | 571 | 432 |
| 15 | 540 | 502 | 571 | 405 | 343 | 352 | 1,930 | 1,860 | 2,520 | 1,560 | 563 | 432 |
| 16 | 510 | 563 | 579 | 395 | 348 | 356 | 2,140 | 1,960 | 2,440 | 1,480 | 555 | 432 |
| 17 | 503 | 619 | 587 | 390 | 334 | 352 | 2,070 | 1,720 | 2,600 | 1,430 | 548 | 444 |
| 18 | 483 | 619 | 603 | 385 | 313 | 352 | 2,000 | 1,660 | 2,670 | 1,320 | 532 | 444 |
| 19 | 489 | 619 | 611 | 385 | 305 | 348 | 1,930 | 1,560 | 2,600 | 1,280 | 525 | 444 |
| 20 | 499 | 603 | 611 | 380 | 309 | 343 | 1,790 | 1,450 | 2,520 | 1,210 | 502 | 444 |
| 21 | 496 | 595 | 619 | 370 | 313 | 343 | 1,720 | 1,410 | 2,370 | 1,150 | 498 | 432 |
| 22 | 489 | 571 | 627 | 361 | 317 | 338 | 1,660 | 1,380 | 2,070 | 1,110 | 474 | 432 |
| 23 | 483 | 540 | 611 | 356 | 321 | 338 | 2,140 | 1,480 | 1,930 | 1,070 | 474 | 420 |
| 24 | 476 | 502 | 595 | 356 | 317 | 338 | 2,220 | 1,930 | 1,860 | 1,010 | 456 | 420 |
| 25 | 476 | 480 | 579 | 352 | 317 | 348 | 2,140 | 2,520 | 1,860 | 972 | 438 | 410 |
| 26 | 469 | 495 | 540 | 352 | 317 | 343 | 2,000 | 2,990 | 1,860 | 936 | 444 | 410 |
| 27 | 476 | 495 | 468 | 356 | 317 | 343 | 1,660 | 3,510 | 2,140 | 918 | 444 | 380 |
| 28 | 469 | 498 | 444 | 352 | 321 | 348 | 1,720 | 3,680 | 2,300 | 918 | 438 | 360 |
| 29 | 449 | 474 | 405 | 361 | - | 348 | 1,560 | 3,780 | 2,440 | 900 | 432 | 380 |
| 30 | 449 | 468 | 420 | 356 | - | 352 | 1,450 | 3,330 | 2,440 | 882 | 432 | 380 |
| 31 | 435 | - | 415 | 356 | - | 361 | - | 2,990 | - | 873 | 426 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 15,988 | 610 | 435 | 496 | 0.798 | 0.92 | 31,710 |
| November..... | 14,825 | 619 | 423 | 514 | .764 | .85 | 29,400 |
| December..... | 16,172 | 747 | 405 | 586 | .906 | 1.04 | 36,040 |
| Calendar year 1941..... | 237,315 | 2,120 | 284 | 650 | 1.00 | 13.62 | 470,700 |
| January..... | 11,848 | 410 | 352 | 382 | .590 | .68 | 23,600 |
| February..... | 9,470 | 356 | 306 | 338 | .522 | .54 | 18,780 |
| March..... | 10,634 | 361 | 317 | 343 | .530 | .61 | 21,090 |
| April..... | 41,242 | 2,220 | 375 | 1,375 | 2.13 | 2.37 | 61,800 |
| May..... | 58,540 | 3,680 | 1,120 | 1,888 | 2.92 | 3.36 | 116,100 |
| June..... | 78,160 | 3,690 | 1,860 | 2,605 | 4.03 | 4.49 | 155,000 |
| July..... | 48,699 | 2,440 | 873 | 1,571 | 2.43 | 2.80 | 96,590 |
| August..... | 17,929 | 828 | 426 | 578 | .893 | 1.03 | 35,580 |
| September..... | 12,443 | 444 | 380 | 415 | .641 | .72 | 24,680 |
| Water year 1941-42..... | 337,950 | 3,880 | 305 | 926 | 1.43 | 19.41 | 670,200 |

Note.- Discharge computed from staff-gage readings Jan. 1-8, June 20-23, July 9-27, Sept. 6-30.
Time basis: Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter.
To convert war time to standard time, subtract 1 hour.

Priest Lake at outlet near Coolin, Idaho

Location.- Water-stage recorder, lat. 48°29'30", long. 116°53'00", in SE¼ sec. 5, T. 59 N., R. 4 W., half a mile east of outlet and 1¼ miles northwest of Coolin. Datum of gage is 2,435.06 feet (Coast and Geodetic Survey datum) or 2,437.99 feet (Geological Survey datum) above mean sea level.

Drainage area.- 572 square miles.

Records available.- April 1928 to September 1942. June 1911 to September 1913 (fragmentary gage-height records at Coolin) published as part of records for Priest River at outlet of Priest Lake, at Coolin.

Extremes.- Maximum gage height during year, 4.32 feet May 29; minimum, 0.60 foot Sept. 30. 1928-42: Maximum gage height observed, 5.94 feet May 23, 1932; minimum observed, -0.16 foot Nov. 23-25, Dec. 4-6, 1936.

Gage height, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1 | 1.21 | 1.42 | 1.62 | 2.33 | 1.49 | 1.03 | 0.90 | 2.75 | 4.19 | 3.19 | 2.30 | 1.11 |
| 2 | 1.20 | 1.40 | 1.72 | 2.29 | 1.47 | 1.05 | .95 | 2.75 | 4.14 | 3.14 | 2.25 | 1.09 |
| 3 | 1.21 | 1.40 | 2.02 | 2.23 | 1.47 | 1.06 | .97 | 2.75 | 4.09 | 3.09 | 2.19 | 1.06 |
| 4 | 1.24 | 1.42 | 2.20 | 2.17 | 1.46 | 1.04 | 1.01 | 2.73 | 4.04 | 3.02 | 2.16 | 1.03 |
| 5 | 1.23 | 1.44 | 2.32 | 2.12 | 1.48 | 1.03 | 1.05 | 2.71 | 3.98 | 2.95 | 2.12 | 1.01 |
| 6 | 1.22 | 1.43 | 2.41 | 2.09 | 1.46 | 1.02 | 1.08 | 2.69 | 3.92 | 2.88 | 2.08 | .97 |
| 7 | 1.23 | 1.43 | 2.44 | 2.04 | 1.44 | 1.01 | 1.13 | 2.68 | 3.90 | 2.82 | 2.05 | .96 |
| 8 | 1.24 | 1.42 | 2.46 | 2.02 | 1.42 | 1.00 | 1.17 | 2.68 | 3.87 | 2.74 | 2.00 | .92 |
| 9 | 1.25 | 1.41 | 2.44 | 1.98 | 1.39 | - | 1.23 | 2.70 | 3.84 | 2.70 | 1.95 | .91 |
| 10 | 1.27 | 1.39 | 2.43 | 1.96 | 1.38 | - | 1.29 | 2.78 | 3.81 | 2.69 | 1.91 | .91 |
| 11 | 1.32 | 1.38 | 2.41 | 1.92 | 1.37 | - | 1.37 | 2.92 | 3.76 | 2.68 | 1.86 | .80 |
| 12 | 1.37 | 1.37 | 2.38 | 1.88 | 1.35 | - | 1.46 | 2.89 | 3.69 | 2.70 | 1.81 | .89 |
| 13 | 1.44 | 1.40 | 2.36 | 1.86 | 1.32 | - | 1.50 | 3.04 | 3.61 | 2.68 | 1.76 | .87 |
| 14 | 1.48 | 1.50 | 2.33 | 1.84 | 1.31 | .96 | 1.76 | 3.09 | 3.53 | 2.65 | 1.71 | .86 |
| 15 | 1.51 | 1.68 | 2.32 | 1.81 | 1.29 | .96 | 1.91 | 3.12 | 3.53 | 2.62 | 1.67 | .84 |
| 16 | 1.53 | 1.65 | 2.34 | 1.77 | 1.27 | .95 | 2.04 | 3.11 | 3.55 | 2.63 | 1.63 | .82 |
| 17 | 1.54 | 1.69 | 2.36 | 1.74 | 1.24 | .95 | 2.14 | 3.10 | 3.52 | 2.65 | 1.61 | .81 |
| 18 | 1.55 | 1.71 | 2.38 | 1.71 | 1.22 | .95 | 2.26 | 3.08 | 3.48 | 2.65 | 1.57 | .78 |
| 19 | 1.56 | 1.71 | 2.42 | 1.68 | 1.19 | .94 | 2.36 | 3.06 | 3.44 | 2.64 | 1.54 | .76 |
| 20 | 1.57 | 1.70 | 2.51 | 1.65 | 1.17 | .93 | 2.46 | 3.07 | 3.41 | 2.62 | 1.50 | .76 |
| 21 | 1.57 | 1.70 | 2.57 | 1.63 | 1.16 | .92 | 2.58 | 3.08 | 3.37 | 2.58 | 1.47 | .73 |
| 22 | 1.57 | 1.68 | 2.59 | 1.59 | 1.13 | .91 | 2.71 | 3.15 | 3.31 | 2.54 | 1.44 | .72 |
| 23 | 1.56 | 1.68 | 2.64 | 1.56 | 1.12 | .91 | 2.83 | 3.29 | 3.26 | 2.50 | 1.40 | .71 |
| 24 | 1.55 | 1.67 | 2.64 | 1.56 | 1.10 | .90 | 2.87 | 3.45 | 3.24 | 2.47 | 1.34 | .69 |
| 25 | 1.53 | 1.65 | 2.61 | 1.57 | 1.09 | .90 | 2.89 | 3.60 | 3.23 | 2.47 | 1.30 | .68 |
| 26 | 1.52 | 1.65 | 2.58 | 1.56 | 1.08 | .89 | 2.89 | 3.83 | 3.28 | 2.48 | 1.28 | .67 |
| 27 | 1.50 | 1.65 | 2.55 | 1.56 | 1.07 | .88 | 2.88 | 4.07 | 3.29 | 2.46 | 1.24 | .65 |
| 28 | 1.50 | 1.62 | 2.52 | 1.57 | 1.05 | .87 | 2.85 | 4.24 | 3.28 | 2.40 | 1.18 | .64 |
| 29 | 1.49 | 1.62 | 2.48 | 1.55 | - | .87 | 2.87 | 4.30 | 3.27 | 2.37 | 1.16 | .62 |
| 30 | 1.46 | 1.62 | 2.46 | 1.54 | - | .87 | 2.78 | 4.29 | 3.23 | 2.37 | 1.14 | .61 |
| 31 | 1.44 | - | 2.40 | 1.50 | - | .88 | - | 4.25 | - | 2.33 | 1.13 | - |

Time basis. Mountain standard time prior to 2 a.m., Feb. 9, 1942; mountain war time thereafter. To convert war time to standard time, subtract 1 hour.

Priest River at outlet of Priest Lake, near Coolin, Idaho

Location.- Water-stage recorder, lat. 48°29', long. 116°54', in SW $\frac{1}{4}$ sec. 5, T. 59 N., R. 4 W., at southwest end of Priest Lake, 2 miles northwest of Coolin. Datum of gage is 2,435.06 feet (Coast and Geodetic Survey datum) or 2,437.99 feet (Geological Survey datum) above mean sea level.

Drainage area.- 572 square miles.

Records available.- June 1911 to September 1918 (fragmentary), May 1919 to September 1942.

Average discharge.- 28 years (1913-18, 1919-42), 1,074 second-feet.

Extremes.- Maximum discharge during year, 4,100 second-feet May 29, 30; maximum gage height, 3.63 feet May 29; minimum discharge, 314 second-feet Sept. 30 (gage height, 0.46 foot).

1911-42: Maximum discharge, 7,290 second-feet May 30, 1917 (gage height, 6.83 feet); minimum, 118 second-feet Nov. 25, 1936 (gage height, -0.32 foot).

Remarks.- Records good except those affected by backwater from logs, which are fair. No diversion above station.

Discharges, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|
| 1 | 694 | 850 | 1,000 | 1,600 | 889 | 597 | 544 | 2,030 | 3,920 | 2,570 | 1,220 | 505 |
| 2 | 687 | 835 | 1,070 | 1,620 | 873 | 604 | 564 | 2,030 | 3,840 | 2,500 | 1,150 | 493 |
| 3 | 694 | 842 | 1,310 | 1,480 | 866 | 618 | 583 | 2,030 | 3,760 | 2,430 | 1,150 | 474 |
| 4 | 709 | 858 | 1,490 | 1,440 | 881 | 611 | 597 | 2,030 | 3,670 | 2,360 | 1,130 | 462 |
| 5 | 702 | 873 | 1,600 | 1,400 | 881 | 611 | 618 | 1,960 | 3,580 | 2,290 | 1,110 | 451 |
| 6 | 702 | 873 | 1,720 | 1,360 | 873 | 611 | 652 | 1,960 | 3,500 | 2,160 | 1,100 | 428 |
| 7 | 702 | 873 | 1,780 | 1,330 | 858 | 604 | 673 | 1,900 | 3,500 | 2,100 | 1,080 | 428 |
| 8 | 702 | 866 | 1,780 | 1,300 | 842 | 604 | 694 | 1,900 | 3,500 | 1,710 | 1,050 | 411 |
| 9 | 709 | 866 | 1,780 | 1,270 | 835 | 604 | 730 | 1,960 | 3,420 | 1,360 | 1,020 | 405 |
| 10 | 723 | 858 | 1,720 | 1,240 | 827 | 604 | 767 | 2,030 | 3,340 | 1,340 | 1,000 | 411 |
| 11 | 760 | 850 | 1,720 | 1,220 | 819 | 590 | 818 | 2,160 | 3,280 | 1,330 | 960 | 411 |
| 12 | 789 | 842 | 1,720 | 1,190 | 804 | 597 | 889 | 2,220 | 3,180 | 1,350 | 930 | 406 |
| 13 | 842 | 858 | 1,660 | 1,180 | 797 | 590 | 710 | 2,220 | 3,100 | 1,340 | 900 | 395 |
| 14 | 866 | 837 | 1,620 | 1,150 | 789 | 583 | 800 | 2,360 | 2,940 | 1,320 | 870 | 395 |
| 15 | 881 | 1,000 | 1,610 | 1,140 | 774 | 570 | 1,200 | 2,430 | 2,940 | 1,280 | 830 | 385 |
| 16 | 897 | 1,050 | 1,640 | 1,120 | 760 | 560 | 1,310 | 2,430 | 2,940 | 1,280 | 820 | 380 |
| 17 | 905 | 1,080 | 1,660 | 1,090 | 737 | 557 | 840 | 2,360 | 2,940 | 1,300 | 800 | 380 |
| 18 | 915 | 1,100 | 1,660 | 1,070 | 716 | 557 | 650 | 2,360 | 2,870 | 1,300 | 770 | 369 |
| 19 | 921 | 1,110 | 1,720 | 1,050 | 702 | 544 | 1,050 | 2,360 | 2,870 | 1,290 | 760 | 359 |
| 20 | 921 | 1,110 | 1,840 | 1,030 | 687 | 537 | 1,200 | 2,360 | 2,800 | 1,300 | 750 | 350 |
| 21 | 929 | 1,120 | 1,870 | 1,010 | 673 | 524 | 1,450 | 2,360 | 2,720 | 1,300 | 710 | 345 |
| 22 | 921 | 1,110 | 1,900 | 990 | 659 | 518 | 1,600 | 2,430 | 2,640 | 1,260 | 694 | 341 |
| 23 | 921 | 1,090 | 1,960 | 970 | 645 | 524 | 1,900 | 2,640 | 2,640 | 1,220 | 666 | 336 |
| 24 | 913 | 1,070 | 1,960 | 960 | 638 | 518 | 2,160 | 2,800 | 2,570 | 890 | 631 | 336 |
| 25 | 913 | 1,070 | 1,900 | 945 | 631 | 518 | 2,220 | 3,020 | 2,570 | 900 | 611 | 336 |
| 26 | 905 | 1,070 | 1,900 | 945 | 624 | 518 | 2,220 | 3,340 | 2,640 | 920 | 590 | 332 |
| 27 | 905 | 1,040 | 1,840 | 953 | 611 | 512 | 2,160 | 3,760 | 2,640 | 1,100 | 570 | 328 |
| 28 | 897 | 1,040 | 1,780 | 945 | 604 | 512 | 2,160 | 3,920 | 2,640 | 1,250 | 544 | 328 |
| 29 | 889 | 1,010 | 1,720 | 929 | - | 512 | 2,100 | 4,100 | 2,640 | 1,280 | 531 | 323 |
| 30 | 873 | 1,000 | 1,720 | 921 | - | 512 | 2,100 | 4,100 | 2,570 | 1,280 | 518 | 323 |
| 31 | 858 | - | 1,660 | 913 | - | 518 | - | 4,010 | - | 1,250 | 512 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 25,643 | 929 | 687 | 827 | 1.45 | 1.57 | 50,860 |
| November..... | 29,151 | 1,120 | 835 | 972 | 1.70 | 1.90 | 57,820 |
| December..... | 52,310 | 1,960 | 1,000 | 1,687 | 2.95 | 3.40 | 103,800 |
| Calendar year 1941..... | 432,016 | 3,840 | 336 | 1,184 | 2.07 | 28.11 | 856,900 |
| January..... | 35,661 | 1,600 | 913 | 1,150 | 2.01 | 2.32 | 70,730 |
| February..... | 21,295 | 889 | 604 | 761 | 1.33 | 1.35 | 42,240 |
| March..... | 17,429 | 618 | 512 | 562 | .983 | 1.13 | 34,570 |
| April..... | 35,960 | 2,220 | 544 | 1,199 | 2.10 | 2.54 | 71,330 |
| May..... | 79,640 | 4,100 | 1,900 | 2,569 | 4.49 | 5.18 | 158,000 |
| June..... | 92,140 | 3,920 | 2,570 | 3,071 | 5.37 | 5.99 | 182,800 |
| July..... | 46,560 | 2,570 | 890 | 1,502 | 2.63 | 3.03 | 92,560 |
| August..... | 25,957 | 1,220 | 512 | 837 | 1.46 | 1.69 | 51,480 |
| September..... | 11,625 | 505 | 323 | 388 | .678 | .76 | 23,060 |
| Water year 1941-42..... | 473,371 | 4,100 | 323 | 1,297 | 2.27 | 30.79 | 939,000 |

a No gage-height record; discharge computed on basis of stage relation curve for Priest Lake and Priest River or record for station near Priest River and weather records.

Note.- Backwater from logs Apr. 13, 14, Apr. 17-23, July 8 to Aug. 21; discharge computed on basis of records for station near Priest River.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Priest River near Priest River, Idaho

Location.- Water-stage recorder, lat. 48°13', long. 116°55', in NE¼SE¼ sec. 11, T. 56 N., R. 5 W., 500 feet downstream from Saddler Creek, a quarter of a mile downstream from Lower West Branch, 2½ miles north of Priest River, and 3½ miles upstream from mouth.

Drainage area.- 902 square miles.

Records available.- October 1930 to September 1942. June 1903 to April 1905, November 1910 to April 1911, May to December 1923, and February 1929 to September 1930 at site 3 miles downstream.

Average discharge.- 12 years (1930-42), 1,490 second-feet.

Extremes.- Maximum discharge during year, 5,550 second-feet May 28, 29; maximum gage height, 5.92 feet May 29; minimum discharge, 457 second-feet Sept. 30 (gage height, 1.17 feet).

1903-5, 1910-11, 1923, 1929-42: Maximum discharge, 8,890 second-feet May 23, 1932 (gage height, 8.03 feet); minimum recorded, 184 second-feet Jan. 7, 1937 (gage height, 0.54 foot).

Remarks.- Records good except those for periods of ice effect, no gage-height record, or backwater from logs, which are fair. No diversion above station. Some regulation on tributary.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 933 | 1,020 | 1,300 | 2,200 | 1,210 | 860 | 1,160 | 2,780 | 5,100 | 3,250 | 1,490 | 695 |
| 2 | 918 | 1,010 | *1,820 | 2,100 | 1,190 | 900 | 1,450 | 2,780 | 4,960 | 3,190 | 1,440 | 676 |
| 3 | 897 | 1,030 | 2,870 | 2,000 | 1,170 | 980 | 1,550 | 2,780 | 4,820 | 3,070 | 1,400 | 663 |
| 4 | 933 | 1,090 | 2,680 | 1,860 | 1,310 | 950 | 1,520 | 2,760 | 4,680 | 2,950 | 1,360 | 644 |
| 5 | 928 | 1,110 | 2,450 | 1,900 | 1,420 | 940 | 1,540 | 2,870 | 4,540 | 2,890 | 1,320 | 638 |
| 6 | 897 | 1,100 | 2,600 | 1,850 | 1,350 | 920 | 1,370 | 2,870 | 4,400 | 2,720 | 1,300 | 620 |
| 7 | 911 | 1,080 | 2,500 | 1,800 | 1,270 | 900 | 1,390 | 2,820 | 4,540 | 2,620 | 1,270 | 595 |
| 8 | 911 | 1,040 | 2,450 | 1,750 | 1,230 | 890 | 1,420 | 2,620 | 4,400 | 2,500 | 1,240 | 595 |
| 9 | 897 | 1,020 | 2,400 | *1,720 | 1,200 | 976 | 1,470 | 2,620 | 4,400 | 1,830 | 1,210 | 595 |
| 10 | 962 | 1,010 | 2,340 | 1,640 | 1,170 | 1,060 | 1,610 | 2,840 | 4,400 | 1,740 | 1,180 | 608 |
| 11 | 991 | 998 | 2,230 | 1,630 | 1,150 | 1,010 | 1,610 | 3,130 | 4,260 | 1,750 | 1,140 | 595 |
| 12 | 1,020 | 953 | 2,130 | 1,800 | 1,120 | 998 | 1,730 | 3,310 | 4,130 | 1,770 | 1,100 | 583 |
| 13 | 1,070 | 1,080 | 2,130 | 1,560 | 1,090 | 978 | 1,830 | 3,310 | 4,000 | 1,730 | 1,070 | 571 |
| 14 | 1,070 | 1,600 | 2,080 | 1,530 | 1,060 | 969 | 1,610 | 3,370 | 3,800 | 1,700 | 1,040 | 571 |
| 15 | 1,090 | 1,610 | 2,080 | 1,490 | 1,070 | 933 | 2,030 | 3,370 | 3,870 | 1,680 | 1,010 | 559 |
| 16 | 1,100 | 1,610 | 2,400 | 1,440 | 1,040 | 918 | 2,030 | 3,310 | 3,870 | 1,680 | 983 | 548 |
| 17 | 1,100 | 1,580 | 2,560 | 1,410 | *969 | 940 | 2,030 | 3,310 | 3,800 | 1,810 | 962 | 553 |
| 18 | 1,110 | 1,510 | 2,600 | 1,580 | 976 | 940 | 1,880 | 3,310 | 3,680 | 1,710 | 940 | 548 |
| 19 | 1,110 | 1,470 | 3,250 | 1,350 | 969 | 911 | 1,680 | 3,280 | 3,680 | 1,680 | 918 | 530 |
| 20 | 1,110 | 1,420 | 3,800 | 1,320 | 947 | *904 | 1,680 | 3,280 | 3,610 | 1,650 | 897 | 518 |
| 21 | 1,110 | 1,410 | 3,610 | 1,280 | 947 | 904 | 2,080 | 3,250 | 3,680 | 1,640 | 869 | 512 |
| 22 | 1,110 | 1,380 | 3,370 | 1,250 | 928 | 954 | 2,340 | 3,370 | 3,430 | 1,610 | 855 | 507 |
| 23 | 1,100 | 1,360 | 3,310 | 1,230 | 897 | 947 | 2,620 | 3,460 | 3,370 | 1,570 | 827 | 501 |
| 24 | 1,090 | 1,340 | 3,130 | 1,230 | 900 | 918 | 3,070 | 3,680 | 3,310 | 1,500 | 800 | 496 |
| 25 | 1,080 | 1,340 | 2,890 | 1,270 | 900 | 890 | 3,130 | 3,870 | 3,370 | 1,090 | 766 | 490 |
| 26 | 1,070 | 1,340 | 2,780 | 1,290 | 890 | 869 | 3,130 | 4,540 | 3,740 | 1,150 | 760 | 484 |
| 27 | 1,060 | 1,310 | 2,700 | 1,330 | 880 | 862 | 3,070 | 5,400 | 3,680 | 1,150 | 746 | 479 |
| 28 | 1,050 | 1,300 | 2,600 | 1,350 | 860 | 869 | 3,010 | 5,550 | 3,550 | 1,520 | 727 | 473 |
| 29 | 1,070 | 1,290 | 2,500 | 1,310 | - | 833 | 2,950 | 5,550 | 3,430 | 1,560 | 706 | 468 |
| 30 | 1,050 | 1,300 | 2,500 | 1,260 | - | 904 | 2,840 | 5,400 | 3,370 | 1,590 | 701 | 462 |
| 31 | 1,030 | - | 2,400 | 1,210 | - | 933 | - | 5,250 | - | 1,550 | 714 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 31,786 | 1,110 | 997 | 1,025 | 1.14 | 1.31 | 63,050 |
| November..... | 37,691 | 1,610 | 983 | 1,256 | 1.39 | 1.55 | 74,750 |
| December..... | 79,790 | 3,800 | 1,300 | 2,574 | 2.85 | 3.29 | 158,300 |
| Calendar year 1941..... | 588,419 | 5,100 | 507 | 1,607 | 1.78 | 24.17 | 1,163,000 |
| January..... | 47,640 | 2,800 | 1,210 | 1,537 | 1.70 | 1.96 | 94,490 |
| February..... | 30,091 | 1,420 | 860 | 1,075 | 1.19 | 1.24 | 59,680 |
| March..... | 28,808 | 1,060 | 860 | 929 | 1.03 | 1.19 | 57,140 |
| April..... | 60,336 | 3,130 | 1,160 | 2,011 | 2.23 | 2.49 | 119,700 |
| May..... | 109,390 | 5,550 | 2,620 | 3,529 | 3.91 | 4.51 | 217,000 |
| June..... | 119,870 | 5,100 | 3,310 | 3,996 | 4.43 | 4.94 | 237,800 |
| July..... | 59,840 | 3,280 | 1,090 | 1,930 | 2.14 | 2.47 | 118,700 |
| August..... | 31,743 | 1,490 | 701 | 1,024 | 1.14 | 1.31 | 62,960 |
| September..... | 16,777 | 695 | 462 | 559 | 0.620 | .59 | 33,280 |
| Water year 1941-42..... | 653,756 | 5,550 | 462 | 1,791 | 1.99 | 26.95 | 1,297,000 |

* Winter discharge measurement made on this day.

c Backwater from logs; discharge computed on basis of records for station near Coolin.

Note.- No gage-height record Dec. 27 to Jan. 8, Feb. 24 to Mar. 7; discharge computed on basis of weather records and records for Priest River and Priest Lake near Coolin. Stage-discharge relation affected by ice Jan. 22 and probably during most of periods of no gage-height record.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Salmon River near Waneta, British Columbia

Location.- Staff gage, lat. 49°01'30", long. 117°22'30", three-quarters of a mile upstream from mouth and 15 miles upstream from Waneta.

Records available.- March 1936 to September 1942.

Extremes.- Maximum discharge observed during year, 8,870 second-feet May 26 (gage height, 14.35 feet); minimum daily discharge, 150 second-feet Sept. 30.
1936-42: Maximum discharge observed, 9,060 second-feet May 26, 1938 (gage height, 14.55 feet); minimum, 78 second-feet Feb. 19, 1937 (result of discharge measurement during period of ice effect); discharge may have been less sometime during periods of ice effect.

Remarks.- Gage read twice daily.

Cooperation.- Records furnished by Dominion Water and Power Bureau, Department of Mines and Resources, Canada. Some discharge measurements made by Geological Survey.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|-------|-------|------------------|---------|---------|--------|-----------------|-------|---------|------------|-------|
| 1 | 919 | 733 | 809 | 616 | 364 | 268 | 595 | 1,760 | 3,670 | 2,590 | 640 | 239 |
| 2 | 866 | 705 | 986 | 578 | 376 | 268 | 669 | 1,800 | 3,700 | 2,460 | 602 | 227 |
| 3 | 883 | a741 | 3,620 | 527 | 370 | 290 | 769 | 1,750 | 4,030 | 2,260 | 574 | 220 |
| 4 | 878 | 777 | 3,390 | 507 | 391 | 271 | 901 | 1,710 | 4,740 | 2,000 | 534 | 215 |
| 5 | 867 | 833 | 2,190 | 468 | 385 | 266 | 1,050 | 1,680 | 3,910 | 1,810 | 510 | 206 |
| 6 | a853 | 809 | 1,940 | 418 | 379 | 261 | 1,240 | 1,690 | 4,030 | 1,620 | 497 | 202 |
| 7 | 849 | 689 | 1,750 | 384 | 364 | 261 | 1,240 | 1,850 | 4,580 | 1,460 | 481 | 197 |
| 8 | 892 | 713 | 1,670 | 340 | 364 | 268 | 1,280 | 2,070 | 4,030 | 1,330 | 456 | 197 |
| 9 | 865 | 697 | 1,650 | 356 | 358 | 279 | 1,360 | 2,580 | 3,760 | 1,200 | 424 | 204 |
| 10 | 1,270 | 681 | 1,420 | 298 | 346 | 304 | 1,600 | 3,380 | 3,650 | 1,110 | 376 | 197 |
| 11 | 1,320 | 689 | 1,350 | 307 | 334 | 304 | 1,900 | 3,160 | 3,140 | a1,160 | 394 | 195 |
| 12 | 1,800 | 773 | 1,280 | 400 | 320 | 292 | a1,930 | 2,750 | 2,790 | 1,200 | 376 | 189 |
| 13 | 1,630 | 745 | 1,140 | 394 | 304 | 295 | a1,960 | 2,990 | 2,520 | 1,110 | 368 | 193 |
| 14 | 1,510 | 1,490 | 1,150 | 406 | 268 | 290 | 2,000 | 3,290 | 2,850 | 1,030 | 352 | 193 |
| 15 | 1,470 | 1,370 | 1,090 | 421 | 276 | 292 | 2,100 | 2,990 | 4,150 | 1,020 | 343 | 206 |
| 16 | 1,430 | 1,350 | 1,420 | 391 | 298 | 295 | 2,030 | 2,670 | 5,100 | 1,610 | 332 | 200 |
| 17 | 1,410 | 1,260 | 1,160 | 370 | 284 | 318 | 2,130 | 2,420 | 4,050 | 1,830 | 329 | 197 |
| 18 | 1,320 | 1,180 | 1,120 | 398 | 292 | 295 | 2,160 | 2,310 | 3,510 | 1,400 | 301 | 204 |
| 19 | 1,260 | 1,120 | 1,180 | 424 | a294 | 271 | 2,190 | 2,280 | 3,180 | 1,140 | 290 | 195 |
| 20 | 1,240 | 1,060 | 1,540 | 394 | 295 | 268 | 2,310 | 2,390 | 3,160 | 1,010 | 279 | 181 |
| 21 | 1,180 | 1,020 | 1,520 | 376 | 279 | 279 | 3,040 | 2,890 | 3,040 | 928 | 271 | 177 |
| 22 | 1,180 | 937 | 1,430 | 361 | 263 | 312 | 4,220 | 4,650 | 2,750 | 945 | 271 | 175 |
| 23 | 1,160 | 919 | 1,410 | 364 | 197 | 301 | 2,990 | 5,600 | 2,680 | 777 | 261 | 173 |
| 24 | 1,130 | 883 | 1,240 | 424 | 274 | 318 | 2,480 | 5,850 | 2,850 | 753 | 244 | 165 |
| 25 | 1,060 | 901 | 1,130 | 424 | 271 | 306 | 2,240 | 6,210 | 3,010 | 689 | 244 | 161 |
| 26 | 1,000 | 865 | 919 | 424 | 276 | 298 | 2,070 | 8,870 | 3,100 | 651 | 253 | 158 |
| 27 | 914 | 829 | 883 | 430 | 268 | 301 | 1,850 | 8,680 | 2,950 | 654 | 276 | 156 |
| 28 | 874 | 769 | 825 | 456 | 268 | 323 | 1,710 | 5,680 | 2,990 | 673 | 274 | 156 |
| 29 | 841 | 753 | 785 | 452 | - | 340 | 1,650 | 4,800 | 2,910 | 769 | 264 | 154 |
| 30 | 793 | 801 | 745 | 394 | - | 400 | 1,650 | 4,140 | 2,850 | 793 | 258 | 150 |
| 31 | 757 | - | 697 | 382 | - | 472 | - | 3,690 | - | 721 | 246 | - |
| | | | | | | | | | | | | |
| Month | | | | Second-foot-days | Maximum | Minimum | Mean | Per square mile | | Run-off | | |
| | | | | | | | | | | Inches | Acres-feet | |
| October..... | | | | 34,410 | 1,800 | 757 | 1,110 | 2.22 | 2.56 | 68,250 | | |
| November..... | | | | 27,072 | 1,490 | 669 | 902 | 1.80 | 2.01 | 53,700 | | |
| December..... | | | | 43,319 | 3,620 | 697 | 1,400 | 2.80 | 3.23 | 85,920 | | |
| Calendar year 1941..... | | | | 437,542 | 6,820 | 186 | 1,200 | 2.40 | 32.55 | 867,900 | | |
| January..... | | | | 12,683 | 616 | 298 | 415 | .83 | .96 | 25,510 | | |
| February..... | | | | 8,748 | 391 | 197 | 312 | .62 | .65 | 17,350 | | |
| March..... | | | | 9,306 | 472 | 261 | 300 | .60 | .69 | 18,480 | | |
| April..... | | | | 66,314 | 4,220 | 595 | 1,840 | 3.68 | 4.11 | 109,700 | | |
| May..... | | | | 108,580 | 8,870 | 1,680 | 3,500 | 7.00 | 8.07 | 215,400 | | |
| June..... | | | | 103,590 | 5,100 | 2,520 | 3,450 | 6.90 | 7.70 | 205,500 | | |
| July..... | | | | 38,603 | 2,590 | 651 | 1,250 | 2.50 | 2.88 | 76,570 | | |
| August..... | | | | 11,330 | 640 | 244 | 365 | .73 | .84 | 22,470 | | |
| September..... | | | | 5,682 | 239 | 150 | 189 | .38 | .42 | 11,270 | | |
| Water year 1941-42..... | | | | 458,817 | 8,870 | 150 | 1,260 | 2.52 | 34.12 | 910,100 | | |

a No gage-height record; discharge interpolated.

Note.- Stage-discharge relation affected by ice Dec. 28 to Jan. 22.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Sheep Creek near Northport, Wash.

Location.- Water-stage recorder, lat. 48°56'40", long. 117°46'40", in NE¼NE¼ sec. 25, T. 40 N., R. 39 E., at county highway bridge, 1 mile upstream from mouth and 1½ miles north of Northport. Datum of gage is 1,300 feet above mean sea level, subject to correction to datum of 1929.

Drainage area.- 225 square miles.

Records available.- June 1929 to September 1942 (discontinued).

Average discharge.- 13 years, 219 second-feet.

Extremes.- Maximum discharge during year, 1,920 second-feet May 27 (gage height, 26.71 feet), from rating curve extended above 1,200 second-feet; minimum, 37 second-feet Sept. 28, 30 (gage height, 22.85 feet).

1929-42: Maximum discharge, 2,450 second-feet Apr. 29, 1933 (gage height, 27.46 feet), from rating curve extended above 1,200 second-feet; minimum not determined (probably less than 8 second-feet sometime during period of ice effect, Dec. 25, 1929 to Apr. 7, 1930).

Remarks.- Records good except those for period of ice effect, which are poor. Flow partly regulated by flash dam 6½ miles upstream occasionally used in logging operations. No diversion.

Rating table, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used July 17 to Sept. 30)

| | | | | | |
|------|----|------|-----|------|-------|
| 22.8 | 22 | 23.4 | 130 | 24.6 | 513 |
| 22.8 | 37 | 23.7 | 199 | 25.0 | 705 |
| 23.0 | 61 | 24.0 | 285 | 25.5 | 1,000 |
| 25.2 | 95 | 24.5 | 386 | 26.0 | 1,350 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|------|------|-------|
| 1 | 194 | 162 | 204 | b180 | 130 | 90 | 192 | 531 | 1,100 | 434 | 155 | 57 |
| 2 | 192 | 158 | 237 | b170 | 128 | 90 | 240 | 559 | 1,070 | 405 | 147 | 56 |
| 3 | 196 | 162 | 317 | b160 | 128 | 89 | 271 | 582 | 970 | 378 | 140 | 54 |
| 4 | 204 | 169 | 434 | b150 | 130 | 88 | 314 | 588 | 906 | 348 | 132 | 53 |
| 5 | 199 | 179 | 442 | b150 | 130 | 88 | 370 | 541 | 906 | 331 | 126 | 50 |
| 6 | 194 | 179 | 413 | b140 | 126 | 86 | 429 | 527 | 815 | 308 | 120 | 48 |
| 7 | 199 | 178 | 393 | b130 | 124 | 85 | 472 | 531 | 786 | 289 | 120 | 48 |
| 8 | 199 | 172 | 370 | b130 | 120 | 85 | 496 | 568 | 755 | 266 | 119 | 48 |
| 9 | 196 | 167 | 348 | b120 | 120 | 83 | 522 | 616 | 705 | 251 | 111 | 46 |
| 10 | 212 | 165 | 351 | b110 | 119 | 83 | 568 | 616 | 680 | 237 | 108 | 47 |
| 11 | 237 | 162 | 317 | b110 | 117 | 93 | 645 | 1,100 | 655 | 234 | 102 | 46 |
| 12 | 254 | 162 | 305 | b120 | 113 | 95 | 758 | 1,170 | 618 | 240 | 97 | 46 |
| 13 | 257 | 169 | 289 | b120 | 111 | 97 | 815 | 1,100 | 588 | 229 | 91 | 46 |
| 14 | 257 | 218 | 283 | b120 | 109 | 98 | 878 | 1,140 | 531 | 215 | 88 | 44 |
| 15 | 251 | 226 | 277 | b120 | 107 | 98 | 938 | 1,100 | 559 | 207 | 86 | 44 |
| 16 | 248 | 298 | 298 | b120 | 107 | 98 | 906 | 1,000 | 606 | 237 | 81 | 43 |
| 17 | 243 | 302 | 302 | b120 | 100 | 100 | 908 | 908 | 597 | 302 | 79 | 43 |
| 18 | 237 | 292 | 292 | b120 | 102 | 100 | 938 | 845 | 559 | 295 | 76 | 43 |
| 19 | 232 | 280 | 289 | b120 | 102 | 100 | 938 | 815 | 559 | 274 | 73 | 42 |
| 20 | 223 | 288 | 321 | b120 | 98 | 100 | 906 | 758 | 564 | 246 | 70 | 41 |
| 21 | 218 | 260 | 352 | b120 | 95 | 102 | 938 | 732 | 550 | 232 | 67 | 40 |
| 22 | 212 | 248 | 366 | b120 | 93 | 106 | 1,100 | 815 | 531 | 212 | 66 | 40 |
| 23 | 204 | 237 | 388 | 130 | 93 | 107 | 1,100 | 970 | 504 | 202 | 64 | 39 |
| 24 | 199 | 232 | 348 | *138 | 93 | 107 | 938 | 1,070 | 486 | 186 | 63 | 39 |
| 25 | 194 | 232 | 331 | 143 | 91 | 107 | 845 | 1,070 | 486 | 179 | 50 | 38 |
| 26 | 186 | 225 | 305 | 147 | 90 | 106 | 732 | 1,350 | 522 | 169 | 63 | 38 |
| 27 | 182 | 221 | 256 | 145 | 90 | 107 | 680 | 1,870 | 550 | 185 | 61 | 38 |
| 28 | 176 | *212 | b240 | *142 | 88 | 113 | 618 | 1,750 | 556 | 167 | 61 | 36 |
| 29 | 172 | 210 | b220 | *139 | - | 120 | 554 | 1,500 | 500 | 179 | 61 | 37 |
| 30 | 167 | 207 | b200 | 138 | - | 130 | 531 | 1,310 | 472 | 167 | 60 | 37 |
| 31 | 165 | - | b190 | 132 | - | 161 | - | 1,170 | - | 162 | 59 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off Inches | Run-off Acres-feet |
|-------------------------|------------------|---------|---------|------|-----------------|-------------------|-----------------------|
| October..... | 5,499 | 257 | 185 | 210 | 0.935 | 1.07 | 12,890 |
| November..... | 5,393 | 302 | 168 | 213 | .947 | 1.06 | 12,580 |
| December..... | 9,646 | 442 | 190 | 311 | 1.38 | 1.59 | 19,130 |
| Calendar year 1941..... | 124,439 | 1,420 | 45 | 341 | 1.52 | 20.57 | 246,800 |
| January..... | 4,122 | 180 | 110 | 133 | .591 | .68 | 8,190 |
| February..... | 3,080 | 130 | 88 | 109 | .494 | .50 | 6,050 |
| March..... | 3,119 | 151 | 86 | 101 | .449 | .52 | 6,190 |
| April..... | 20,532 | 1,100 | 192 | 694 | 3.04 | 3.39 | 40,720 |
| May..... | 29,409 | 1,870 | 527 | 949 | 4.22 | 4.86 | 58,530 |
| June..... | 19,647 | 1,100 | 472 | 655 | 2.91 | 3.25 | 38,970 |
| July..... | 7,760 | 434 | 162 | 250 | 1.11 | 1.28 | 18,370 |
| August..... | 2,805 | 156 | 59 | 90.5 | .402 | .46 | 5,580 |
| September..... | 1,331 | 57 | 37 | 44.4 | .197 | .22 | 2,640 |
| Water year 1941-42..... | 114,303 | 1,870 | 37 | 313 | 1.39 | 18.88 | 226,700 |

* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Kettle River near Ferry, Wash.

(International gaging station)

Location.- Water-stage recorder, lat. 48°58'40", long. 118°46'10", in lot 7, sec. 10, T. 40 N., R. 32 E., 14 miles south of international boundary and Ferry and 3 miles upstream from Toroda Creek. Datum of gage is 1,840.00 feet above mean sea level, subject to correction to datum of 1929.

Drainage area.- 2,220 square miles.

Records available.- August 1928 to September 1942.

Average discharge.- 14 years, 1,349 second-feet.

Extremes.- Maximum discharge during year, 18,200 second-feet May 27 (gage height, 20.54 feet); minimum, 207 second-feet Sept. 30 (gage height, 9.75 feet).

1928-42: Maximum discharge, that of May 27, 1942; minimum, 14 second-feet (discharge measurement) Jan. 23, 1930, but may have been less during period of ice effect Jan. 18-23, 1930.

Remarks.- Records good except those for periods of ice effect, which are poor. Several small diversions above station for irrigation.

Cooperation.- This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|------|-------|------|-------|------|--------|
| 9.9 | 267 | 12.0 | 1,840 | 16.0 | 5,150 |
| 10.2 | 408 | 13.0 | 3,050 | 16.0 | 12,400 |
| 10.6 | 640 | 14.0 | 4,630 | 20.0 | 17,000 |
| 11.2 | 1,080 | 15.0 | 6,240 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|--------|-------|------|------|------|-------|--------|-------|-------|-------|-------|
| 1 | 2,060 | 1,400 | 1,030 | b430 | 608 | 424 | 634 | 3,330 | 6,750 | 2,990 | 1,640 | 456 |
| 2 | 2,170 | 1,350 | 1,920 | b420 | 608 | 429 | 798 | 3,610 | 6,550 | 2,720 | 1,590 | 456 |
| 3 | 2,230 | 1,350 | 1,690 | b420 | 616 | 424 | 949 | 3,470 | 6,150 | 2,530 | 1,540 | 434 |
| 4 | 2,780 | 1,350 | 1,740 | b420 | 627 | 419 | 1,080 | 3,330 | 6,750 | 2,550 | 1,350 | 415 |
| 5 | 2,660 | 1,350 | 1,690 | b420 | 621 | 413 | 1,300 | 3,190 | 6,150 | 2,120 | 1,350 | 398 |
| 6 | 2,470 | 1,350 | 1,640 | b450 | 621 | 403 | 1,650 | 3,190 | 7,950 | 2,000 | 1,170 | 378 |
| 7 | 2,290 | 1,300 | 1,490 | b500 | 602 | 403 | 1,740 | 3,400 | 6,750 | 1,840 | 1,080 | 363 |
| 8 | 2,230 | 1,260 | 1,440 | b560 | 596 | 403 | 1,900 | 3,680 | 6,950 | 1,690 | 1,040 | 358 |
| 9 | 2,120 | 1,260 | 1,400 | b550 | 583 | 413 | 2,060 | 4,370 | 6,150 | 1,540 | 1,000 | 344 |
| 10 | 2,170 | 1,220 | 1,350 | b740 | 577 | 440 | 2,290 | 5,530 | 7,950 | 1,440 | 941 | 334 |
| 11 | 2,470 | 1,220 | 1,300 | 798 | 565 | 445 | 2,650 | 6,600 | 6,790 | 1,440 | 872 | 330 |
| 12 | 2,530 | 1,220 | 1,220 | 820 | 547 | 450 | 3,330 | 6,420 | 6,420 | 2,000 | 905 | 320 |
| 13 | 2,470 | 1,220 | 1,170 | 820 | 523 | 445 | 3,400 | 6,240 | 6,680 | 2,230 | 740 | 318 |
| 14 | 2,290 | 1,400 | 1,170 | 790 | 535 | 434 | 3,400 | 7,170 | 6,530 | 1,950 | 727 | 307 |
| 15 | 2,230 | 1,490 | 1,220 | b770 | 535 | 429 | 3,760 | 6,980 | 6,580 | 1,740 | 706 | 302 |
| 16 | 2,290 | 1,490 | 1,260 | b760 | 517 | 429 | 3,760 | 6,060 | 6,790 | 1,840 | 673 | 298 |
| 17 | 2,290 | 1,440 | 1,260 | 740 | 466 | 434 | 4,690 | 5,530 | 6,530 | 3,050 | 640 | 289 |
| 18 | 2,250 | 1,400 | 1,170 | 727 | 472 | 434 | 5,860 | 5,190 | 5,020 | 4,210 | 615 | 285 |
| 19 | 2,060 | 1,350 | 1,170 | 747 | 445 | 429 | 5,530 | 4,650 | 4,690 | 4,060 | 583 | 280 |
| 20 | 2,060 | 1,300 | 1,220 | 727 | 495 | 429 | 6,550 | 4,650 | 4,530 | 3,260 | 565 | 285 |
| 21 | 2,060 | 1,220 | 1,260 | *686 | 472 | *429 | 6,060 | 5,190 | 4,370 | 2,790 | 517 | 276 |
| 22 | 1,950 | 1,220 | 1,170 | b550 | 419 | 434 | 6,790 | 6,790 | 4,210 | 2,410 | 495 | 271 |
| 23 | 1,840 | 1,040 | 1,170 | b640 | 434 | 434 | 6,060 | 9,580 | 3,910 | 2,170 | 472 | 267 |
| 24 | 1,790 | 1,080 | 1,130 | 634 | 461 | 429 | 5,190 | 10,600 | 4,060 | 1,950 | 467 | 255 |
| 25 | 1,740 | 1,220 | 1,080 | 647 | 408 | 419 | 4,690 | 11,500 | 3,910 | 1,740 | 460 | 251 |
| 26 | 1,690 | 1,260 | 925 | 653 | 403 | 408 | 4,210 | 15,100 | 3,760 | 1,640 | 461 | 238 |
| 27 | 1,640 | 1,220 | 792 | 653 | 461 | 406 | 3,910 | 17,900 | 3,760 | 1,690 | 472 | 234 |
| 28 | 1,540 | 1,170 | 535 | 660 | 434 | 429 | 3,680 | 14,600 | 3,540 | 1,590 | 500 | 230 |
| 29 | 1,490 | *1,130 | b480 | 653 | - | 446 | 3,470 | 11,500 | 3,470 | 1,690 | 506 | 234 |
| 30 | 1,440 | 1,130 | b450 | 634 | - | 478 | 3,330 | 10,000 | 3,190 | 1,640 | 483 | 218 |
| 31 | 1,400 | - | b440 | 634 | - | 535 | - | 9,160 | - | 1,840 | 467 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 64,620 | 2,720 | 1,400 | 2,065 | 128,200 |
| November..... | 35,410 | 1,490 | 1,040 | 1,280 | 76,190 |
| December..... | 35,982 | 1,740 | 440 | 1,161 | 71,370 |
| Calendar year 1941..... | 680,243 | 8,870 | 100 | 1,864 | 1,349,000 |
| January..... | 19,853 | 820 | 420 | 640 | 39,380 |
| February..... | 14,640 | 627 | 403 | 523 | 29,040 |
| March..... | 13,377 | 535 | 403 | 432 | 26,530 |
| April..... | 103,861 | 6,790 | 634 | 3,462 | 206,000 |
| May..... | 215,910 | 17,900 | 3,190 | 7,062 | 434,200 |
| June..... | 179,340 | 8,950 | 3,190 | 6,978 | 355,700 |
| July..... | 87,860 | 4,210 | 1,440 | 2,189 | 134,600 |
| August..... | 24,906 | 1,640 | 450 | 803 | 49,400 |
| September..... | 9,424 | 456 | 218 | 514 | 18,690 |
| Water year 1941-42..... | 791,172 | 17,900 | 218 | 2,168 | 1,569,000 |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Kettle River near Laurier, Wash.

(International gaging station)

Location.— Water-stage recorder, lat. 48°50'50", long. 118°13'00", in SW¹/₄ sec. 11, T. 40 N., R. 38 E., 500 feet downstream from Deep Creek, 1½ miles southeast of Laurier, and 12 miles upstream from Boulder Creek.

Drainage area.— 3,800 square miles.

Records available.— September 1929 to September 1942.

Average discharge.— 13 years, 2,660 second-feet.

Extremes.— Maximum discharge during year, 27,400 second-feet May 28 (gage height, 15.73 feet); minimum, 456 second-feet Sept. 30 (gage height, 3.19 feet).

1929-42: Maximum discharge, that of May 28, 1942; minimum not determined (probably occurred during winter of 1929-30).

Maximum stage known, about 22 feet sometime in May or June 1894, from information by local residents.

Remarks.— Records excellent except those for period of ice effect, which are poor.

North Fork regulated by reservoir at Grand Forks, British Columbia. Numerous small diversions for irrigation and domestic supply.

Cooperation.— This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-------|-----|-------|------|--------|------|--------|
| 3.2 | 461 | 5.0 | 1,810 | 8.0 | 6,370 | 12.0 | 16,500 |
| 3.6 | 680 | 5.5 | 2,360 | 9.0 | 8,520 | 13.0 | 19,300 |
| 4.0 | 942 | 6.0 | 3,000 | 10.0 | 10,900 | 14.0 | 22,800 |
| 4.5 | 1,340 | 7.0 | 4,520 | 11.0 | 13,500 | 15.0 | 25,500 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|--------|--------|---------|-------|------------------|---------|---------|--------|----------------------|-------|-------|
| 1 | 5,720 | 2,670 | 2,300 | b1,530 | 1,420 | 971 | 1,580 | 6,370 | 14,600 | 5,970 | 2,860 | 878 |
| 2 | 5,870 | 2,600 | 2,360 | b1,600 | 1,380 | 971 | 1,710 | 6,570 | 14,100 | 5,590 | 2,670 | 865 |
| 3 | 5,870 | 2,540 | 3,000 | b1,470 | 1,380 | 978 | 2,130 | 6,570 | 13,800 | 5,220 | 2,600 | 862 |
| 4 | 4,190 | 2,540 | 3,800 | b1,450 | 1,380 | 964 | 3,450 | 6,170 | 14,300 | 4,690 | 2,480 | 818 |
| 5 | 4,690 | 2,600 | 3,720 | b1,440 | 1,380 | 949 | 3,350 | 8,070 | 14,100 | 4,350 | 2,240 | 792 |
| 6 | 4,350 | 2,600 | 3,420 | b1,440 | 1,340 | 949 | 3,500 | 5,780 | 13,500 | 4,030 | 2,130 | 773 |
| 7 | 4,190 | 2,600 | 3,350 | b1,460 | 1,290 | 942 | 3,870 | 5,970 | 14,100 | 3,720 | 2,080 | 741 |
| 8 | 3,940 | 2,480 | 3,210 | b1,500 | 1,290 | 942 | 4,190 | 6,370 | 16,600 | 3,420 | 1,980 | 729 |
| 9 | 3,800 | 2,420 | 3,070 | b1,520 | 1,250 | 942 | 4,350 | 7,200 | 14,600 | 3,210 | 1,860 | 710 |
| 10 | 3,800 | 2,360 | 3,000 | b1,540 | 1,210 | 1,000 | 4,680 | 8,760 | 14,300 | 3,070 | 1,810 | 692 |
| 11 | 4,030 | 2,300 | 2,880 | b1,560 | 1,210 | 1,010 | 5,590 | 11,200 | 13,000 | 3,000 | 1,710 | 639 |
| 12 | 4,350 | 2,300 | 2,750 | b1,560 | 1,210 | 1,080 | 6,570 | 11,400 | 11,400 | 3,210 | 1,580 | 628 |
| 13 | 4,520 | 2,360 | 2,600 | b1,530 | 1,170 | 1,010 | 7,410 | 10,700 | 10,700 | 3,500 | 1,520 | 622 |
| 14 | 4,190 | 2,600 | 2,540 | b1,510 | 1,170 | 1,010 | 7,200 | 11,900 | 10,200 | 3,440 | 1,420 | 606 |
| 15 | 4,190 | 3,070 | 2,540 | b1,470 | 1,130 | 985 | 7,630 | 12,500 | 10,200 | 3,280 | 1,340 | 600 |
| 16 | 4,190 | 3,280 | 2,670 | b1,450 | 1,130 | 978 | 7,630 | 11,200 | 11,900 | 3,140 | 1,290 | 577 |
| 17 | 4,190 | 3,280 | 2,670 | b1,430 | 1,090 | 978 | 8,070 | 10,200 | 10,400 | 3,500 | 1,250 | 572 |
| 18 | 4,190 | 3,140 | 2,600 | b1,380 | 1,060 | 985 | 10,400 | 9,210 | 8,980 | 4,520 | 1,170 | 566 |
| 19 | 4,030 | 3,000 | 2,640 | b1,330 | 1,020 | 985 | 10,400 | 8,980 | 8,520 | 5,970 | 1,130 | 566 |
| 20 | 3,940 | 2,960 | 2,600 | b1,330 | 1,020 | 978 | 9,950 | 8,520 | 8,070 | 5,400 | 1,090 | 555 |
| 21 | 5,870 | 2,750 | 2,800 | b1,280 | 1,090 | *978 | 10,700 | 8,980 | 8,070 | 4,690 | 1,020 | 539 |
| 22 | 5,720 | 2,670 | 2,800 | *b1,240 | 1,020 | 978 | 12,200 | 10,700 | 7,630 | 4,030 | 978 | 528 |
| 23 | 5,640 | 2,420 | 2,730 | b1,500 | 978 | 985 | 11,900 | 14,600 | 7,200 | 3,720 | 942 | 523 |
| 24 | 5,500 | 2,360 | 2,670 | 1,290 | 1,020 | 985 | 10,200 | 17,200 | 7,200 | 3,350 | 907 | 517 |
| 25 | 5,350 | 2,420 | 2,540 | 1,420 | 1,020 | 964 | 8,980 | 17,800 | 7,200 | 3,140 | 872 | 512 |
| 26 | 3,280 | 2,480 | 2,240 | 1,470 | 942 | 957 | 8,070 | 21,100 | 7,200 | 2,860 | 872 | 512 |
| 27 | 3,140 | 2,420 | b2,050 | 1,520 | 978 | 949 | 7,410 | 25,900 | 7,200 | 2,800 | 872 | 466 |
| 28 | 3,070 | *2,360 | b1,850 | 1,560 | 1,020 | 971 | 6,990 | 25,900 | 6,990 | 2,800 | 907 | 481 |
| 29 | 2,930 | 2,300 | b1,720 | 1,560 | - | 1,010 | 6,570 | 20,500 | 6,780 | 2,930 | 907 | 471 |
| 30 | 2,800 | 2,240 | b1,650 | 1,520 | - | 1,050 | 6,370 | 17,200 | 6,370 | 2,930 | 907 | 471 |
| 31 | 2,730 | - | b1,580 | 1,420 | - | 1,090 | - | 15,500 | - | 2,930 | 907 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 118,270 | 4,690 | 2,730 | 3,815 | 234,600 | | |
| November..... | | | | | | 78,000 | 3,280 | 2,240 | 2,600 | 154,700 | | |
| December..... | | | | | | 82,210 | 5,800 | 1,580 | 2,682 | 165,100 | | |
| Calendar year 1941..... | | | | | | 1,361,766 | 15,200 | 412 | 3,731 | 2,701,000 | | |
| January..... | | | | | | 44,960 | 1,560 | 1,240 | 1,460 | 89,180 | | |
| February..... | | | | | | 32,588 | 1,420 | 942 | 1,164 | 64,640 | | |
| March..... | | | | | | 30,464 | 1,080 | 942 | 933 | 60,480 | | |
| April..... | | | | | | 205,010 | 12,200 | 1,350 | 8,787 | 402,700 | | |
| May..... | | | | | | 369,010 | 25,900 | 5,780 | 11,900 | 731,900 | | |
| June..... | | | | | | 319,210 | 16,600 | 6,370 | 10,640 | 633,100 | | |
| July..... | | | | | | 118,910 | 5,970 | 2,800 | 3,836 | 235,900 | | |
| August..... | | | | | | 46,201 | 2,860 | 872 | 1,490 | 91,640 | | |
| September..... | | | | | | 18,514 | 872 | 471 | 627 | 37,320 | | |
| Water year 1941-42..... | | | | | | 1,461,647 | 25,900 | 471 | 4,005 | 2,899,000 | | |

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for station near Ferry.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

KETTLE RIVER BASIN

Myers Creek near Myncaster, British Columbia

(International gaging station)

Location.- Water-stage recorder and 4-foot Cippoletti weir, lat. 49°00'00". long. 119°01'15", 50 feet north of international boundary, a quarter of a mile south of Myncaster, British Columbia, and 4½ miles downstream from Mary Ann Creek.

Drainage area.- 80 square miles.

Records available.- October 1929 to September 1942 (fragmentary) in water-supply papers of Geological Survey. May 1923 to September 1929 in bulletins of Dominion Water and Power Bureau, Canada.

Extremes.- Maximum discharge recorded during period August to September, 75 second-feet July 16 (gage height, 2.41 feet); minimum, 12.9 second-feet Sept. 25 (gage height, 0.65 foot).

1923-42: Maximum discharge recorded, 109 second-feet June 7, 1942, result of discharge measurement; no flow July 16-18, 25, 1926, Aug. 13-25, 1939.

Remarks.- Records good. Diversions above station for irrigation. Weir not in place during year.

Cooperation.- This station is one of the international gaging stations maintained by Canada under agreement with the United States.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | | | | | | | | | | 52 | 35.5 | 18.5 |
| 2 | | | | | | | | | | 51 | 35.5 | 17.6 |
| 3 | | | | | | | | | | 48.7 | 31.1 | 16.7 |
| 4 | | | | | | | | | | 47.2 | 29.4 | 16.4 |
| 5 | | | | | | | | | | 46.1 | 28.4 | 15.6 |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | 43.8 | 27.2 | 15.6 |
| 8 | | | | | | | | | | 41.6 | 26.5 | 15.0 |
| 9 | | | | | | | | | | 39.4 | 27.5 | 15.3 |
| 10 | | | | | | | | | | 38.0 | 26.2 | 15.0 |
| | | | | | | | | | | 37.3 | 24.9 | 15.0 |
| 11 | | | | | | | | | | | | |
| 12 | | | | | | | | | | 54 | 23.6 | 14.8 |
| 13 | | | | | | | | | | 56 | 22.4 | 14.6 |
| 14 | | | | | | | | | | 48.0 | 23.0 | 15.0 |
| 15 | | | | | | | | | | 43.8 | 21.5 | 15.0 |
| | | | | | | | | | | 42.0 | 20.8 | 15.3 |
| 16 | | | | | | | | | | | | |
| 17 | | | | | | | | | | 60 | 21.2 | 14.5 |
| 18 | | | | | | | | | | 69 | 19.4 | 15.0 |
| 19 | | | | | | | | | | 58 | 19.4 | 14.8 |
| 20 | | | | | | | | | | 51 | 18.5 | 14.5 |
| | | | | | | | | | | 46.8 | 18.5 | 15.0 |
| 21 | | | | | | | | | | | | |
| 22 | | | | | | | | | | 43.8 | 17.9 | 14.2 |
| 23 | | | | | | | | | | 40.9 | 17.9 | 14.2 |
| 24 | | | | | | | | | | 38.4 | 17.9 | 13.4 |
| 25 | | | | | | | | | | 36.2 | 16.7 | 13.9 |
| | | | | | | | | | | 35.2 | 16.7 | 13.2 |
| 26 | | | | | | | | | | | | |
| 27 | | | | | | | | | | 34.8 | 17.6 | 13.7 |
| 28 | | | | | | | | | | 34.2 | 17.6 | 13.2 |
| 29 | | | | | | | | | | 34.8 | 17.9 | 13.2 |
| 30 | | | | | | | | | | 34.2 | 19.1 | 13.4 |
| 31 | | | | | | | | | | 43.8 | 17.9 | 13.2 |
| | | | | | | | | | | 36.9 | 18.5 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|---------------------|------------------|---------|---------|------|----------------------|
| October..... | | | | | |
| November..... | | | | | |
| December..... | | | | | |
| Calendar year | | | | | |
| January..... | - | - | - | - | - |
| February..... | - | - | - | - | - |
| March..... | - | - | - | - | - |
| April..... | - | - | - | - | - |
| May..... | - | - | - | - | - |
| June..... | - | - | - | - | - |
| July..... | 1,386.9 | 69 | 34.2 | 44.7 | 2,750 |
| August..... | 692.3 | 33.5 | 16.7 | 22.3 | 1,370 |
| September..... | 444.7 | 18.5 | 13.2 | 14.8 | 882 |
| The period..... | - | - | - | - | 5,000 |

Time basis: Pacific war time. To convert war time to standard time, subtract 1 hour.

Colville River at Kettle Falls, Wash.

Location.- Staff gage, lat. 48°36', long. 118°04', in sec. 29, T. 36 N., R. 38 E., 500 feet downstream from Stevens County Light & Power Co.'s plant at foot of Meyers Falls, half a mile south of town of Kettle Falls, and 5 miles upstream from mouth.

Records available.- October 1922 to September 1942.

Average discharge.- 20 years, 247 second-feet.

Extremes.- Maximum discharge observed during year, 1,270 second-feet May 29 (gage height, 7.88 feet); minimum observed, 89 second-feet Sept. 27 (gage height, 5.12 feet).

1922-42: Maximum discharge observed, 2,720 second-feet Apr. 20, 1938; minimum observed, 0.5 second-foot Aug. 15, 1930.

Remarks.- Records good except those for period of ice effect, which are poor. Gage read twice daily. Several ditches divert water above station for irrigation. Slight regulation for power by small reservoir above falls.

Cooperation.- Gage-height record and one discharge measurement furnished by Washington Water Power Co.

Rating tables, water year 1941-42 except period of ice effect (gage height, in feet, and discharge, in second-feet)

Oct. 1 to Jan. 22

Jan. 23 to Sept. 30

| | | | | | |
|-----|-----|-----|-----|-----|-------|
| 5.4 | 154 | 5.2 | 104 | 7.0 | 758 |
| 5.7 | 229 | 5.5 | 164 | 7.5 | 1,030 |
| 6.0 | 320 | 5.8 | 248 | | |
| 6.5 | 508 | 6.1 | 350 | | |
| 7.0 | 730 | 6.5 | 514 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|------------------|------|---------|------|---------|------|------|-------|----------------------|------|------|-------|
| 1 | 154 | 177 | 244 | 468 | 492 | 332 | 470 | 633 | 1,210 | 608 | 248 | 121 |
| 2 | 154 | 190 | 298 | 426 | 470 | 350 | 537 | 633 | 1,210 | 584 | 233 | 121 |
| 3 | 166 | 190 | 258 | 408 | 470 | 350 | 608 | 658 | 1,210 | 537 | 218 | 121 |
| 4 | 177 | 202 | 354 | 389 | 470 | 369 | 658 | 658 | 1,210 | 514 | 218 | 112 |
| 5 | 190 | 216 | 389 | 380 | 560 | 388 | 658 | 658 | 1,150 | 470 | 204 | 112 |
| 6 | 166 | 216 | 389 | 370 | 560 | 408 | 658 | 633 | 1,090 | 449 | 190 | 112 |
| 7 | 190 | 216 | 372 | 360 | 537 | 388 | 708 | 633 | 1,090 | 428 | 190 | 104 |
| 8 | 177 | 216 | 372 | 358 | 560 | 428 | 758 | 608 | 1,030 | 388 | 177 | 104 |
| 9 | 177 | 216 | 372 | 350 | 560 | 428 | 758 | 608 | 973 | 369 | 164 | 112 |
| 10 | 190 | 202 | 354 | 348 | 584 | 428 | 808 | 608 | 973 | 350 | 164 | 112 |
| 11 | 190 | 202 | 354 | 340 | 584 | 428 | 808 | 658 | 918 | 350 | 164 | 112 |
| 12 | 177 | 202 | 354 | 330 | 537 | 428 | 863 | 708 | 863 | 332 | 152 | 121 |
| 13 | 190 | 202 | 337 | 325 | 514 | 449 | 918 | 758 | 808 | 332 | 141 | 121 |
| 14 | 190 | 229 | 337 | 320 | 514 | 449 | 918 | 758 | 808 | 314 | 141 | 121 |
| 15 | 190 | 258 | 288 | 310 | 470 | 470 | 918 | 758 | 758 | 314 | 141 | 121 |
| 16 | 190 | 288 | 337 | 305 | 449 | 449 | 973 | 758 | 808 | 314 | 141 | 141 |
| 17 | 190 | 288 | 354 | 300 | 428 | 449 | 973 | 758 | 808 | 332 | 141 | 112 |
| 18 | 190 | 304 | 389 | 295 | 428 | 449 | 973 | 658 | 758 | 350 | 131 | 121 |
| 19 | 190 | 288 | 408 | 290 | 408 | 449 | 973 | 658 | 758 | 332 | 131 | 112 |
| 20 | 177 | 288 | 526 | 290 | 388 | 449 | 918 | 658 | 708 | 314 | 121 | 131 |
| 21 | 177 | 273 | 656 | 280 | 388 | 449 | 918 | 658 | 708 | 314 | 121 | 104 |
| 22 | 177 | 258 | 632 | 285 | 388 | 449 | 863 | 658 | 658 | 297 | 121 | 112 |
| 23 | 177 | 244 | 682 | 297 | 350 | 449 | 863 | 658 | 658 | 280 | 112 | 112 |
| 24 | 177 | 244 | 730 | 332 | 350 | 428 | 863 | 708 | 633 | 248 | 112 | 104 |
| 25 | 177 | 229 | 730 | 332 | 350 | 428 | 808 | 758 | 633 | 248 | 112 | 112 |
| 26 | 190 | 229 | 730 | 350 | 350 | 408 | 808 | 808 | 658 | 248 | 121 | 104 |
| 27 | 190 | 229 | 682 | 350 | 350 | 408 | 758 | 918 | 708 | 248 | 112 | 104 |
| 28 | 190 | 244 | 682 | 428 | 332 | 408 | 758 | 1,150 | 758 | 280 | 121 | 112 |
| 29 | 177 | 229 | 656 | 470 | - | 428 | 758 | 1,270 | 658 | 248 | 121 | 121 |
| 30 | 177 | 229 | 591 | 449 | - | 428 | 658 | 1,210 | 658 | 248 | 121 | 112 |
| 31 | 190 | - | 508 | 449 | - | 428 | - | 1,210 | - | 248 | 121 | - |
| Month | Second-foot-days | | Maximum | | Minimum | | Mean | | Run-off in acre-feet | | | |
| October..... | 5,614 | | 190 | | 154 | | 161 | | 11,140 | | | |
| November..... | 6,998 | | 304 | | 177 | | 233 | | 15,880 | | | |
| December..... | 14,362 | | 730 | | 244 | | 463 | | 28,490 | | | |
| Calendar year 1941 | 123,726 | | 880 | | 39 | | 339 | | 245,400 | | | |
| January..... | 10,995 | | 470 | | 290 | | 355 | | 21,810 | | | |
| February..... | 12,841 | | 584 | | 332 | | 459 | | 25,470 | | | |
| March..... | 13,049 | | 470 | | 332 | | 421 | | 25,880 | | | |
| April..... | 23,911 | | 973 | | 470 | | 797 | | 47,430 | | | |
| May..... | 23,466 | | 1,270 | | 608 | | 757 | | 46,540 | | | |
| June..... | 25,971 | | 1,210 | | 633 | | 862 | | 51,310 | | | |
| July..... | 10,888 | | 808 | | 248 | | 351 | | 21,600 | | | |
| August..... | 4,705 | | 248 | | 112 | | 152 | | 9,330 | | | |
| September..... | 3,441 | | 141 | | 104 | | 115 | | 6,830 | | | |
| Water year 1941-42..... | 156,141 | | 1,270 | | 104 | | 428 | | 309,700 | | | |

Note.- Stage-discharge relation affected by ice Jan. 5-22.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Mill Creek near Colville, Wash.

Location.— Water-stage recorder, lat. 48°34'55", long. 117°51'00", in lot 3, NW¼ sec. 35, T. 38 N., R. 39 E., 3 miles northeast of Colville and 5 miles downstream from North Fork. Datum of gage is 1,964.3 feet above mean sea level (Stevens County bench mark, subject to correction to datum of 1929).

Drainage area.— 82 square miles.

Records available.— February 1940 to September 1942.

Extremes.— Maximum discharge during year, 544 second-feet May 27 (gage height, 4.79 feet); minimum, 14 second-feet Sept. 23-30 (gage height, 1.91 feet).

1940-42: Maximum discharge, that of May 27, 1942; minimum recorded, 3.6 second-feet Aug. 28, 31, Sept. 1, 1940 (gage height, 1.69 feet); stage and discharge may have been less sometime during period of no gage-height record, Feb. 1-4, 1940.

Remarks.— Records good except those for periods of no gage-height record, ice effect, or backwater from beaver dam, which are poor. Some diversion above station for irrigation. No regulation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 21 | a16 | 30 | b50 | 50 | 37 | 108 | 117 | 206 | 88 | 37 | 20 |
| 2 | 20 | a17 | 47 | b50 | 47 | 38 | 142 | 120 | 191 | 84 | 37 | 19 |
| 3 | 21 | a19 | 110 | b55 | 47 | 44 | 147 | 127 | 179 | 82 | 34 | 18 |
| 4 | 22 | a21 | 85 | b50 | 55 | 41 | 150 | 120 | 171 | 76 | 33 | 16 |
| 5 | 21 | a23 | 68 | b50 | 56 | 40 | 156 | 113 | 163 | 74 | 31 | 17 |
| 6 | 20 | a21 | 66 | b45 | 52 | 39 | 165 | 108 | 154 | 70 | 50 | 17 |
| 7 | 21 | a20 | 61 | b45 | 51 | 39 | 165 | 103 | 154 | 68 | 50 | 17 |
| 8 | 21 | a19 | 58 | b45 | 49 | 39 | 170 | 101 | 145 | 66 | 50 | 17 |
| 9 | 20 | a19 | 55 | b40 | 48 | 40 | 172 | 101 | 140 | 63 | 28 | 17 |
| 10 | 22 | a19 | 52 | b40 | 47 | 47 | 180 | 128 | 133 | 62 | 28 | 17 |
| 11 | 24 | a19 | 52 | b40 | 46 | 46 | 191 | 138 | 129 | 63 | 28 | 16 |
| 12 | 22 | a20 | 50 | b45 | 46 | 46 | 197 | 144 | 123 | 64 | 26 | 16 |
| 13 | 21 | a24 | 48 | b45 | 45 | 46 | 189 | 140 | 116 | 59 | 24 | 15 |
| 14 | 21 | a33 | 48 | b45 | 46 | 46 | 206 | 144 | 112 | 58 | 25 | 16 |
| 15 | 20 | 44 | 50 | b45 | 45 | 44 | 214 | 136 | 144 | 59 | 25 | 16 |
| 16 | 20 | 46 | 75 | b45 | 44 | 44 | 197 | 150 | 162 | 66 | 24 | 16 |
| 17 | 19 | 41 | 77 | b45 | 38 | 44 | 216 | 124 | 132 | 71 | 23 | 16 |
| 18 | 19 | 38 | 72 | b45 | 36 | 44 | 201 | 121 | 122 | 63 | 23 | 16 |
| 19 | 19 | 36 | 106 | b45 | 42 | 44 | 184 | 117 | 119 | 59 | 22 | 16 |
| 20 | 18 | 34 | 199 | b45 | 41 | 43 | 179 | 119 | 116 | 54 | 22 | 16 |
| 21 | 18 | 33 | 177 | b45 | 40 | 43 | 172 | 113 | 106 | 50 | 21 | 15 |
| 22 | 17 | 31 | 147 | b45 | 39 | 51 | 168 | 119 | 104 | 46 | 21 | 15 |
| 23 | 17 | 31 | 156 | 46 | 36 | 52 | 160 | 136 | 100 | 44 | 21 | 14 |
| 24 | 16 | 29 | 124 | 46 | 38 | 47 | 162 | 150 | 107 | 43 | 20 | 14 |
| 25 | 16 | 29 | 113 | 53 | 38 | 46 | 153 | 150 | 111 | 42 | 20 | 14 |
| 26 | 16 | 29 | 96 | a52 | 36 | 46 | 144 | 248 | 127 | 42 | 21 | 14 |
| 27 | 16 | 29 | 90 | 59 | 36 | 48 | 136 | 463 | 112 | 41 | 22 | 14 |
| 28 | 16 | 28 | b55 | 64 | 37 | 50 | 128 | 324 | 104 | 42 | 22 | 14 |
| 29 | 16 | 29 | b60 | 67 | - | 54 | 123 | 272 | 96 | 41 | 22 | 14 |
| 30 | 16 | 31 | b70 | 52 | - | 61 | 117 | 236 | 94 | 39 | 21 | 14 |
| 31 | 16 | - | b65 | 50 | - | 72 | - | 222 | - | 38 | 20 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 592 | 24 | 16 | 19.1 | 0.233 | 0.27 | 1,170 |
| November..... | 828 | 46 | 16 | 27.6 | .337 | .36 | 1,640 |
| December..... | 2,564 | 199 | 30 | 83.7 | 1.02 | 1.15 | 5,150 |
| Calendar year 1941..... | 19,493 | 199 | 13 | 53.4 | .651 | 8.86 | 38,640 |
| January..... | 1,504 | 64 | 40 | 48.5 | .591 | .68 | 2,980 |
| February..... | 1,232 | 56 | 35 | 44.0 | .557 | .56 | 2,440 |
| March..... | 1,421 | 72 | 37 | 45.8 | .559 | .64 | 2,820 |
| April..... | 4,982 | 216 | 108 | 166 | 2.02 | 2.26 | 9,880 |
| May..... | 4,892 | 463 | 101 | 157 | 1.81 | 2.21 | 9,680 |
| June..... | 3,974 | 205 | 94 | 132 | 1.51 | 1.80 | 7,880 |
| July..... | 1,815 | 88 | 38 | 58.5 | .713 | .82 | 3,600 |
| August..... | 791 | 37 | 20 | 26.5 | .311 | .36 | 1,570 |
| September..... | 477 | 20 | 14 | 15.9 | .194 | .22 | 946 |
| Water year 1941-42..... | 25,092 | 463 | 14 | 68.7 | .838 | 11.38 | 49,760 |

Peak discharge.— Dec. 20 (11 a.m.) 230 sec.-ft.; May 27 (3:30 a.m.) 544 sec.-ft.; June 16 (1:15 a.m.) 199 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for Sheep Creek near Northport.

b Stage-discharge relation affected by ice.

c Backwater from beaver dam; discharge computed on basis of records for Sheep Creek near Northport.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Coeur d'Alene River at Enaville, Idaho

Location.—Water-stage recorder, lat. 47°34', long. 116°15', in NW¼ sec. 30, T. 49 N., R. 2 E., 800 feet upstream from highway bridge, a quarter of a mile northwest of Enaville post office, 1.1 miles upstream from South Fork, and 3.5 miles downstream from North Fork. Datum of gage is 2,100.00 feet above mean sea level.

Drainage area.—895 square miles.

Records available.—October 1939 to September 1942. March 1911 to April 1913 (fragmentary records collected at site a quarter of a mile downstream, published as North Fork of Coeur d'Alene River at Enaville).

Extremes.—Maximum discharge during year, 12,200 second-feet Dec. 20 (gage height, 69.07 feet), from rating curve extended above 8,000 second-feet; minimum, 218 second-feet Sept. 30 (gage height, 60.55 feet).
1939-42: Maximum discharge, that of Dec. 20, 1941; minimum, 160 second-feet Aug. 26, 27, Sept. 3, 4, 1940; minimum gage height, 60.55 feet, Aug. 26, 27, Sept. 3, 4, 1940, Sept. 30, 1942.

From local information concerning high-water marks, flood in December 1933 reached a stage of 79.47 feet and that in April 1938 a stage of 78.16 feet.

Remarks.—Records good. No appreciable diversion or regulation above the station.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|--------|--------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 272 | 343 | 909 | bl,500 | 734 | 502 | 2,500 | 2,210 | 2,440 | 1,490 | 497 | 310 |
| 2 | 272 | 343 | 1,190 | bl,550 | 747 | 513 | 4,920 | 2,210 | 2,280 | 1,440 | 476 | 293 |
| 3 | 276 | 359 | 5,140 | bl,400 | 734 | 575 | 4,750 | 2,100 | 2,050 | 1,360 | 460 | 281 |
| 4 | 320 | 402 | 7,120 | bl,250 | 855 | 552 | 4,260 | 2,050 | 1,950 | 1,320 | 445 | 272 |
| 5 | 347 | 436 | 5,260 | bl,250 | 1,180 | 555 | 4,100 | 1,950 | 1,850 | 1,240 | 451 | 286 |
| 6 | 343 | 445 | 3,490 | bl,250 | 1,200 | 546 | 4,420 | 1,950 | 1,710 | 1,150 | 421 | 261 |
| 7 | 353 | 438 | 2,880 | bl,200 | 1,120 | 546 | 4,580 | 1,850 | 1,660 | 1,080 | 412 | 253 |
| 8 | 421 | 426 | 2,440 | bl,110 | 1,060 | 773 | 4,750 | 1,950 | 1,580 | 1,020 | 412 | 253 |
| 9 | 436 | 412 | 2,160 | bl,080 | 1,010 | 2,000 | 4,920 | 2,100 | 1,580 | 955 | 402 | 253 |
| 10 | 431 | 407 | 1,950 | bl,100 | 988 | 3,280 | 5,090 | 2,440 | 1,580 | 918 | 389 | 258 |
| 11 | 421 | 394 | 1,760 | bl,110 | 937 | 3,070 | 6,550 | 2,440 | 1,660 | 951 | 376 | 258 |
| 12 | 440 | 412 | 1,620 | bl,000 | 886 | 2,820 | 5,530 | 2,320 | 1,580 | 944 | 363 | 253 |
| 13 | 558 | 476 | 1,440 | 902 | 859 | 2,260 | 5,120 | 2,210 | 1,490 | 850 | 355 | 250 |
| 14 | 575 | 1,010 | 1,400 | 805 | 812 | 2,100 | 7,520 | 2,210 | 1,440 | 818 | 347 | 258 |
| 15 | 541 | 1,800 | 1,360 | 689 | 792 | 1,850 | 7,520 | 2,600 | 1,580 | 806 | 343 | 261 |
| 16 | 507 | 2,440 | 1,490 | 581 | 780 | 1,650 | 6,380 | 2,560 | 1,660 | 895 | 335 | 256 |
| 17 | 502 | 2,260 | 2,050 | 547 | 823 | 1,530 | 5,440 | 2,500 | 1,660 | 909 | 328 | 253 |
| 18 | 475 | 1,850 | 2,520 | 708 | 554 | 1,440 | 4,920 | 2,320 | 1,660 | 813 | 324 | 253 |
| 19 | 460 | 1,580 | 5,180 | 559 | 571 | 1,320 | 4,580 | 2,160 | 1,760 | 754 | 317 | 253 |
| 20 | 470 | 1,320 | 11,500 | 552 | 653 | 1,240 | 4,260 | 2,050 | 1,710 | 702 | 310 | 245 |
| 21 | 450 | 1,160 | 10,200 | 436 | 571 | 1,160 | 4,750 | 2,000 | 1,550 | 659 | 306 | 240 |
| 22 | 426 | 1,050 | 6,950 | 416 | 505 | 1,190 | 5,950 | 2,100 | 1,580 | 629 | 300 | 236 |
| 23 | 407 | 937 | 5,440 | 513 | 535 | 1,240 | 5,440 | 2,440 | 1,530 | 599 | 296 | 233 |
| 24 | 389 | 853 | 4,260 | 529 | 559 | 1,200 | 4,260 | 2,380 | 1,490 | 575 | 290 | 229 |
| 25 | 390 | 858 | 3,420 | 529 | 593 | 1,160 | 3,640 | 2,260 | 1,440 | 555 | 284 | 229 |
| 26 | 371 | 958 | 2,810 | 505 | 518 | 1,080 | 3,210 | 2,620 | 1,490 | 545 | 280 | 227 |
| 27 | 353 | 916 | 2,320 | 555 | 529 | 1,050 | 2,880 | 3,140 | 1,400 | 529 | 286 | 225 |
| 28 | 359 | 895 | 2,050 | 506 | 518 | 1,000 | 2,680 | 3,420 | 1,580 | 529 | 300 | 222 |
| 29 | 371 | 895 | 2,100 | 792 | - | 1,090 | 2,440 | 3,210 | 1,620 | 541 | 300 | 222 |
| 30 | 387 | 902 | 1,950 | 754 | - | 1,280 | 2,260 | 2,880 | 1,580 | 529 | 300 | 220 |
| 31 | 355 | - | bl,650 | 708 | - | 1,620 | - | 2,680 | - | 507 | 314 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 12,671 | 575 | 272 | 409 | 0.457 | 0.53 | 25,130 |
| November..... | 25,985 | 2,440 | 343 | 900 | 1.01 | 1.12 | 53,520 |
| December..... | 105,789 | 11,500 | 909 | 3,413 | 3.81 | 4.40 | 209,800 |
| Calendar year 1941..... | 439,939 | 11,500 | 231 | 1,205 | 1.35 | 18.29 | 872,600 |
| January..... | 27,296 | 1,550 | 416 | 581 | .984 | 1.13 | 54,140 |
| February..... | 21,693 | 1,200 | 518 | 775 | .866 | .90 | 43,030 |
| March..... | 41,982 | 3,280 | 502 | 1,354 | 1.51 | 1.74 | 83,270 |
| April..... | 145,630 | 8,530 | 2,260 | 4,854 | 5.42 | 6.05 | 288,900 |
| May..... | 73,110 | 3,420 | 1,850 | 2,388 | 2.63 | 3.04 | 146,000 |
| June..... | 50,230 | 2,440 | 1,400 | 1,674 | 1.87 | 2.09 | 99,630 |
| July..... | 26,639 | 1,490 | 507 | 859 | .960 | 1.11 | 52,640 |
| August..... | 11,019 | 497 | 284 | 355 | .597 | .46 | 21,850 |
| September..... | 7,523 | 310 | 220 | 251 | .280 | .51 | 14,920 |
| Water year 1941-42..... | 550,567 | 11,500 | 220 | 1,508 | 1.68 | 22.88 | 1,092,000 |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Coeur d'Alene River near Cataldo, Idaho

Location.- Water-stage recorder, lat. 47°34', long. 116°19', in sec. 26, T. 49 N., R. 1 E., 18 miles upstream from Cataldo and 3 miles downstream from South Fork. Datum of gage is 2,100 feet above mean sea level.

Drainage area.- 1,220 square miles.

Records available.- April 1911 to December 1912, July 1920 to September 1942.

Average discharge.- 23 years, 2,328 second-feet.

Extremes.- Maximum discharge during year, 13,000 second-feet Dec. 20 (gage height, 45.97 feet); minimum, 322 second-feet Sept. 29, 30 (gage height, 38.00 feet).
1911-12, 1920-42: Maximum discharge, 55,300 second-feet Dec. 22 or 23, 1933 (gage height, 56.9 feet, from floodmark), from rating curve extended above 24,000 second-feet by logarithmic plotting; minimum, 122 second-feet Dec. 4, 1929; minimum gage height, 37.03 feet Sept. 6, 1931.

Remarks.- Records good except those for October to December, which are fair. No appreciable diversion or regulation above station.

Cooperation.- Gage-height record and eight discharge measurements furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|-------|--------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| 1 | 440 | 584 | 1,110 | 1,560 | 1,230 | 535 | 3,320 | 3,020 | 3,570 | 2,310 | 723 | 428 |
| 2 | 440 | 578 | 1,450 | 1,960 | 1,230 | 885 | 5,870 | 3,020 | 3,320 | 2,210 | 695 | 410 |
| 3 | 446 | 504 | 6,050 | 1,780 | 1,230 | 966 | 6,050 | 2,850 | 3,020 | 2,060 | 660 | 394 |
| 4 | 536 | 681 | 8,120 | 1,580 | 1,400 | 902 | 5,690 | 2,740 | 2,850 | 1,910 | 648 | 368 |
| 5 | 566 | 730 | 5,690 | 1,580 | 1,910 | 910 | 5,520 | 2,580 | 2,630 | 1,810 | 618 | 382 |
| 6 | 560 | 751 | 4,700 | 1,580 | 1,910 | 928 | 5,870 | 2,520 | 2,460 | 1,580 | 597 | 377 |
| 7 | 597 | 751 | 3,970 | 1,500 | 1,810 | 994 | 6,060 | 2,580 | 2,460 | 1,560 | 573 | 372 |
| 8 | 651 | 751 | 3,870 | 1,400 | 1,720 | 902 | 6,440 | 2,740 | 2,310 | 1,450 | 572 | 366 |
| 9 | 750 | 744 | 3,200 | 1,360 | 1,680 | 1,450 | 6,440 | 3,020 | 2,310 | 1,580 | 564 | 360 |
| 10 | 723 | 737 | 2,850 | 1,400 | 1,580 | 4,550 | 6,840 | 3,440 | 2,310 | 1,320 | 542 | 372 |
| 11 | 709 | 723 | 2,520 | 1,500 | 1,540 | 4,400 | 8,340 | 3,440 | 2,410 | 1,360 | 530 | 372 |
| 12 | 744 | 751 | 2,260 | 1,400 | 1,450 | 3,830 | 9,990 | 3,020 | 2,310 | 1,360 | 512 | 372 |
| 13 | 886 | 849 | 2,010 | 1,270 | 1,380 | 3,440 | 9,750 | 3,020 | 2,210 | 1,230 | 506 | 360 |
| 14 | 950 | 1,680 | 1,860 | 1,180 | 1,320 | 3,200 | 9,030 | 3,200 | 2,150 | 1,190 | 500 | 372 |
| 15 | 866 | 1,810 | 1,810 | 1,080 | 1,270 | 2,850 | 9,030 | 3,850 | 2,310 | 1,150 | 494 | 377 |
| 16 | 849 | 3,030 | 2,110 | 966 | 1,230 | 2,590 | 7,900 | 3,830 | 2,410 | 1,320 | 48 | 372 |
| 17 | 814 | 2,900 | 2,960 | 1,010 | 1,060 | 2,360 | 7,050 | 3,700 | 2,340 | 1,320 | 470 | 372 |
| 18 | 779 | 2,410 | 3,320 | 1,080 | 966 | 2,210 | 6,240 | 3,440 | 2,410 | 1,190 | 464 | 377 |
| 19 | 751 | 2,060 | 6,050 | 1,010 | 1,090 | 2,060 | 5,690 | 3,200 | 2,520 | 1,090 | 452 | 372 |
| 20 | 761 | 1,810 | 12,300 | 902 | 1,060 | 1,910 | 5,520 | 2,960 | 2,460 | 1,020 | 446 | 366 |
| 21 | 730 | 1,630 | 11,500 | 772 | 1,080 | 1,810 | 6,050 | 2,900 | 2,410 | 982 | 434 | 360 |
| 22 | 709 | 1,450 | 8,120 | 751 | 990 | 1,860 | 7,680 | 3,200 | 2,310 | 954 | 428 | 355 |
| 23 | 681 | 1,270 | 6,640 | 835 | 894 | 1,680 | 7,050 | 3,700 | 2,210 | 902 | 428 | 350 |
| 24 | 680 | 1,190 | 5,350 | 950 | 928 | 1,860 | 5,850 | 3,700 | 2,160 | 870 | 422 | 350 |
| 25 | 648 | 1,190 | 4,550 | 974 | 958 | 1,810 | 4,550 | 3,570 | 2,110 | 842 | 418 | 338 |
| 26 | 632 | 1,230 | 3,700 | 960 | 863 | 1,720 | 4,250 | 3,970 | 2,160 | 814 | 422 | 333 |
| 27 | 611 | 1,190 | 3,080 | 1,080 | 870 | 1,630 | 3,830 | 4,550 | 2,060 | 800 | 434 | 333 |
| 28 | 611 | 1,150 | 2,800 | 1,320 | 863 | 1,630 | 3,570 | 4,860 | 2,410 | 786 | 440 | 328 |
| 29 | 632 | 1,110 | 2,800 | 1,320 | - | 1,680 | 3,440 | 4,550 | 2,520 | 793 | 434 | 328 |
| 30 | 625 | 1,110 | 2,560 | 1,250 | - | 1,910 | 3,060 | 4,110 | 2,410 | 772 | 434 | 322 |
| 31 | 597 | - | 2,160 | 1,190 | - | 2,360 | - | 3,830 | - | 744 | 446 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|--------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October | 20,972 | 950 | 440 | 677 | 0.555 | 0.64 | 41,800 |
| November | 36,274 | 3,060 | 578 | 1,276 | 1.05 | 1.17 | 75,920 |
| December | 131,190 | 12,300 | 1,110 | 4,232 | 3.47 | 4.00 | 260,300 |
| Calendar year 1941 | 588,730 | 12,300 | 311 | 1,605 | 1.32 | 17.89 | 1,162,000 |
| January | 38,760 | 1,960 | 751 | 1,250 | 1.02 | 1.18 | 76,880 |
| February | 35,490 | 1,910 | 863 | 1,288 | 1.04 | 1.08 | 70,390 |
| March | 82,168 | 4,560 | 835 | 2,005 | 1.64 | 1.89 | 123,300 |
| April | 195,130 | 9,990 | 3,060 | 6,204 | 5.02 | 5.67 | 369,200 |
| May | 105,390 | 4,860 | 2,520 | 3,400 | 2.79 | 3.21 | 209,000 |
| June | 75,560 | 3,570 | 2,060 | 2,452 | 2.01 | 2.24 | 145,900 |
| July | 39,159 | 2,310 | 744 | 1,263 | 1.04 | 1.19 | 77,670 |
| August | 16,779 | 723 | 418 | 509 | .417 | .48 | 31,300 |
| September | 10,958 | 428 | 322 | 365 | .299 | .33 | 21,730 |
| Water year 1941-42 | 757,830 | 12,300 | 322 | 2,076 | 1.70 | 23.08 | 1,503,000 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Coeur d'Alene Lake at Coeur d'Alene, Idaho

Location.- Water-stage recorder, lat. 47°40', long. 116°46', in sec. 24, T. 50 N., R. 4 W., 500 feet southwest of south end of Eleventh Street, Coeur d'Alene. Datum of gage is 2,100.00 feet above mean sea level, referred to originally accepted elevation (2,157.40 feet) of Geological Survey bench mark in southeast corner of Merriam Building (see Water-Supply Paper 882).

Drainage area.- 3,750 square miles.

Records available.- February 1905 to September 1942. April 1903 to February 1905, from St. Joe Boom Co.'s gage at mouth of St. Joe River.

Extremes.- Maximum gage height during year, 28.27 feet Apr. 18; minimum, 23.51 feet Mar. 7.

1903-42: Maximum gage height, 39.05 feet Dec. 25, 1933; minimum, 19.9 feet Oct. 10-12, 1904, Sept. 24, 25, 1905, Oct. 14 to Nov. 3, 1906.

Maximum stage known prior to 1903, 37.6 feet May 31, 1894, from high-water marks.

Remarks.- Washington Water Power Co. stores considerable water in lake. Stage regulated by tainter gates and bear-trap dam at Post Falls.

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

Gage-height, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 26.52 | 26.11 | 25.97 | 26.07 | 24.84 | 23.63 | 24.52 | 26.98 | 27.34 | 27.94 | 28.00 | 27.68 |
| 2 | 26.47 | 26.08 | 26.05 | 26.09 | 24.84 | 23.58 | 24.74 | 26.84 | 27.21 | 27.90 | 27.99 | 27.55 |
| 3 | 26.43 | 26.07 | 26.20 | 26.12 | 24.82 | 23.55 | 25.04 | 26.79 | 27.12 | 27.86 | 27.97 | 27.53 |
| 4 | 26.41 | 26.06 | 26.69 | 26.11 | 24.89 | 23.59 | 25.27 | 26.76 | 27.07 | 27.82 | 27.96 | 27.64 |
| 5 | 26.41 | 26.06 | 26.92 | 26.08 | 24.98 | 23.59 | 25.46 | 26.82 | 27.19 | 27.83 | 27.98 | 27.65 |
| 6 | 26.40 | 26.04 | 26.96 | 26.04 | 25.06 | 23.55 | 25.62 | 26.92 | 27.32 | 27.81 | 27.97 | 27.64 |
| 7 | 26.38 | 26.00 | 26.87 | 26.01 | 25.07 | 23.53 | 25.80 | 27.05 | 27.45 | 27.81 | 27.94 | 27.80 |
| 8 | 26.36 | 26.98 | 26.73 | 26.02 | 25.07 | 23.55 | 25.98 | 27.15 | 27.61 | 27.87 | 27.95 | 27.80 |
| 9 | 26.37 | 26.94 | 26.54 | 26.02 | 25.06 | 23.64 | 26.12 | 27.22 | 27.87 | 27.90 | 27.94 | 27.62 |
| 10 | 26.39 | 26.91 | 26.47 | 26.04 | 25.01 | 24.01 | 26.30 | 27.38 | 27.63 | 27.93 | 27.93 | 27.61 |
| 11 | 26.39 | 26.89 | 26.15 | 26.07 | 24.94 | 24.56 | 26.51 | 27.48 | 27.72 | 28.01 | 27.94 | 27.59 |
| 12 | 26.41 | 26.88 | 26.96 | 26.01 | 24.84 | 24.83 | 26.81 | 27.67 | 27.50 | 27.98 | 27.92 | 27.57 |
| 13 | 26.42 | 26.90 | 25.83 | 26.86 | 24.76 | 24.96 | 27.18 | 27.61 | 27.61 | 27.95 | 27.88 | 27.58 |
| 14 | 26.43 | 26.98 | 26.74 | 26.71 | 24.66 | 25.01 | 27.55 | 27.68 | 27.82 | 27.99 | 27.86 | 27.58 |
| 15 | 26.44 | 26.19 | 25.73 | 25.54 | 24.54 | 25.00 | 27.84 | 27.78 | 27.83 | 28.03 | 27.88 | 27.56 |
| 16 | 26.46 | 26.48 | 25.78 | 25.37 | 24.42 | 24.93 | 28.08 | 27.85 | 27.80 | 28.02 | 27.88 | 27.51 |
| 17 | 26.46 | 26.65 | 25.91 | 25.21 | 24.30 | 24.86 | 28.23 | 27.90 | 27.77 | 28.02 | 27.87 | 27.60 |
| 18 | 26.44 | 26.63 | 26.02 | 25.15 | 24.16 | 24.78 | 28.25 | 27.84 | 27.77 | 27.99 | 27.88 | 27.50 |
| 19 | 26.43 | 26.53 | 26.18 | 25.12 | 24.08 | 24.69 | 28.19 | 27.79 | 27.82 | 27.95 | 27.86 | 27.50 |
| 20 | 26.42 | 26.41 | 26.54 | 26.04 | 23.99 | 24.63 | 28.11 | 27.78 | 27.87 | 27.96 | 27.86 | 27.50 |
| 21 | 26.42 | 26.26 | 26.98 | 24.93 | 23.97 | 24.62 | 28.04 | 27.78 | 27.59 | 27.99 | 27.83 | 27.48 |
| 22 | 26.41 | 26.16 | 27.28 | 24.83 | 23.96 | 24.62 | 28.02 | 27.82 | 27.80 | 28.01 | 27.80 | 27.47 |
| 23 | 26.39 | 26.06 | 27.46 | 24.75 | 23.97 | 24.60 | 28.12 | 27.81 | 27.92 | 28.05 | 27.79 | 27.42 |
| 24 | 26.37 | 26.95 | 27.47 | 24.75 | 23.94 | 24.59 | 28.17 | 27.84 | 27.91 | 28.01 | 27.80 | 27.38 |
| 25 | 26.36 | 26.85 | 27.37 | 24.78 | 23.92 | 24.56 | 28.11 | 27.83 | 27.90 | 27.99 | 27.77 | 27.32 |
| 26 | 26.34 | 26.88 | 27.20 | 24.77 | 23.84 | 24.52 | 27.98 | 27.98 | 27.89 | 27.95 | 27.73 | 27.27 |
| 27 | 26.31 | 26.91 | 26.95 | 24.79 | 23.77 | 24.48 | 27.80 | 27.93 | 27.90 | 27.96 | 27.72 | 27.22 |
| 28 | 26.26 | 26.92 | 26.69 | 24.87 | 23.71 | 24.43 | 27.60 | 27.86 | 27.93 | 27.97 | 27.71 | 27.19 |
| 29 | 26.22 | 26.92 | 26.44 | 24.88 | - | 24.39 | 27.38 | 27.78 | 27.97 | 27.99 | 27.70 | 27.14 |
| 30 | 26.19 | 26.96 | 26.22 | 24.87 | - | 24.36 | 27.17 | 27.65 | 27.97 | 27.99 | 27.68 | 27.10 |
| 31 | 26.15 | - | 26.04 | 24.84 | - | 24.37 | - | 27.50 | - | 28.02 | 27.68 | - |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Spokane River at Post Falls, Idaho

Location.— Water-stage recorder, lat. 47°42', long. 116°58', in sec. 4, T. 50 N., R. 5 W., 1,500 feet downstream from power plant of Washington Water Power Co., 3,300 feet downstream from intake of Spokane Valley Farms Co.'s canal, and 1 mile west of Post Falls. Datum of gage is 2,000 feet above mean sea level.

Drainage area.— 3,880 square miles.

Records available.— January 1913 to September 1942.

Average discharge.— River only, 29 years, 5,802 second-feet; river and Spokane Valley Farms Co.'s canal, 29 years, 5,888 second-feet.

Extremes.— Maximum discharge during year, 21,600 second-feet May 26 (gage height, 74.57 feet); minimum, 277 second-feet (regulated) July 22 (gage height, 64.88 feet).

1913-42: Maximum discharge, 50,100 second-feet when recorder was not operating Dec. 25, 1933 (determined from unpublished records collected by Washington Water Power Co. for station at Liberty Bridge); minimum, that of July 22, 1942.

Remarks.— Records good. Spokane Valley Farms Co.'s canal diverts water 3,300 feet above gage for irrigation (see p.178). Flow partly regulated by Coeur d'Alene Lake.

Cooperation.— Gage-height record and four discharge measurements furnished by Washington Water Power Co.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|------|-------|------|-------|------|--------|
| 65.2 | 420 | 67.0 | 1,700 | 69.5 | 5,570 |
| 65.5 | 575 | 67.5 | 2,220 | 70.0 | 6,950 |
| 65.8 | 760 | 68.0 | 2,840 | 71.0 | 6,980 |
| 66.1 | 965 | 68.5 | 3,650 | 72.0 | 11,730 |
| 66.5 | 1,270 | 69.0 | 4,570 | 73.1 | 15,500 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|-------|-------|-------|--------|--------|--------|-------|-------|-------|
| 1 | 1,660 | 1,900 | 2,330 | 2,700 | 3,920 | 2,990 | 5,460 | 11,400 | 11,100 | 6,210 | 1,030 | a470 |
| 2 | 1,660 | 1,900 | 3,540 | 2,990 | 4,760 | 3,150 | 6,650 | 8,980 | 10,000 | 6,210 | 1,010 | a470 |
| 3 | 1,660 | 1,950 | 6,650 | 3,400 | 4,280 | 2,510 | 8,010 | 7,580 | 8,980 | 5,570 | 972 | a470 |
| 4 | 1,660 | 1,900 | 10,300 | 3,830 | 4,860 | 2,700 | 8,250 | 6,860 | 5,830 | 4,380 | 867 | a470 |
| 5 | 1,660 | 1,950 | 11,700 | 3,920 | 5,780 | 2,990 | 8,730 | 8,860 | 3,850 | 3,920 | 780 | a470 |
| 6 | 1,660 | 1,900 | 12,300 | 3,740 | 6,210 | 3,070 | 9,230 | 4,010 | 3,740 | 4,100 | 780 | a470 |
| 7 | 1,660 | 1,950 | 12,000 | 3,150 | 6,430 | 2,570 | 9,750 | 4,190 | 4,480 | 2,190 | 792 | a470 |
| 8 | 1,660 | 1,950 | 11,100 | 2,770 | 6,430 | 2,030 | 10,000 | 5,730 | 5,260 | 1,770 | 775 | 470 |
| 9 | 1,660 | 1,950 | 10,800 | 2,770 | 6,650 | 2,990 | 10,300 | 5,460 | 5,160 | 1,670 | 780 | 460 |
| 10 | 1,700 | 1,950 | 10,300 | 2,330 | 6,970 | 2,510 | 10,600 | 6,210 | 4,380 | 1,430 | 760 | 455 |
| 11 | 1,660 | 1,950 | 9,750 | 3,550 | 6,870 | 5,410 | 11,100 | 7,090 | 4,010 | 2,110 | 669 | 450 |
| 12 | 1,660 | 1,950 | 7,550 | 5,570 | 6,210 | 7,780 | 11,700 | 7,560 | 4,460 | 2,510 | 682 | 445 |
| 13 | 1,660 | 1,950 | 6,210 | 6,210 | 6,210 | 7,780 | 12,700 | 7,560 | 5,160 | 1,680 | 617 | 450 |
| 14 | 1,430 | 1,950 | 5,360 | 6,210 | 6,210 | 8,010 | 13,700 | 7,320 | 5,160 | 1,200 | 526 | 445 |
| 15 | 1,480 | 2,350 | 4,760 | 5,780 | 5,990 | 8,010 | 14,400 | 7,320 | 5,780 | 2,200 | 510 | 460 |
| 16 | 1,480 | 3,390 | 4,860 | 5,990 | 6,210 | 7,780 | 15,200 | 8,280 | 6,210 | 2,990 | 480 | 465 |
| 17 | 1,520 | 7,090 | 5,780 | 4,480 | 5,460 | 7,090 | 15,600 | 9,490 | 5,990 | 2,770 | 495 | 455 |
| 18 | 1,660 | 7,320 | 7,780 | 3,400 | 4,360 | 7,090 | 15,500 | 9,490 | 5,570 | 2,670 | 510 | 445 |
| 19 | 1,660 | 7,320 | 10,300 | 3,920 | 4,010 | 6,210 | 15,500 | 8,980 | 5,260 | 1,300 | 505 | 500 |
| 20 | 1,660 | 7,320 | 11,100 | 3,920 | 4,100 | 5,160 | 15,200 | 7,780 | 5,460 | 1,590 | 470 | 561 |
| 21 | 1,660 | 6,210 | 12,300 | 3,920 | 3,310 | 4,860 | 15,200 | 7,320 | 5,260 | 1,110 | 490 | 647 |
| 22 | 1,660 | 5,780 | 13,300 | 3,830 | 2,180 | 4,760 | 15,200 | 7,320 | 5,360 | 1,220 | 500 | 1,100 |
| 23 | 1,660 | 5,570 | 13,700 | 2,840 | 2,690 | 4,760 | 15,200 | 8,010 | 5,570 | 1,430 | 500 | 1,310 |
| 24 | 1,660 | 4,660 | 13,700 | 2,080 | 2,900 | 4,860 | 15,500 | 9,250 | 5,570 | 1,560 | 510 | 1,450 |
| 25 | 1,660 | 3,560 | 13,300 | 2,110 | 3,070 | 4,860 | 15,500 | 9,760 | 5,570 | 1,450 | 510 | 1,480 |
| 26 | 1,660 | 2,220 | 13,000 | 2,990 | 3,480 | 4,660 | 15,200 | 12,900 | 5,360 | 1,200 | 480 | 1,480 |
| 27 | 1,800 | 2,160 | 12,300 | 3,070 | 3,400 | 4,660 | 14,400 | 13,300 | 5,360 | 860 | 470 | 1,430 |
| 28 | 1,800 | 2,220 | 11,700 | 3,900 | 3,560 | 4,570 | 14,000 | 13,300 | 5,160 | 925 | 475 | 1,390 |
| 29 | 1,900 | 2,160 | 10,800 | 4,190 | - | 4,960 | 13,300 | 13,000 | 5,570 | 885 | 465 | 1,390 |
| 30 | 1,900 | 2,160 | 9,490 | 4,100 | - | 4,570 | 12,700 | 12,700 | 5,990 | 860 | a470 | 1,390 |
| 31 | 1,900 | - | 5,990 | 4,570 | - | 4,570 | - | 12,300 | - | 916 | a470 | - |

| Month | Observed | | | | Diversion through Spokane Valley Farms Co.'s canal (acre-feet) | Corrected for diversion | | | |
|--------------------|--------------------------|---------|--------|----------------------|--|-------------------------|--------------------------|-----------------|-------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run off in inches |
| | Maximum | Minimum | Mean | | | | Mean | Per square mile | |
| October..... | 1,900 | 1,430 | 1,670 | 102,700 | 266 | 102,966 | 1,674 | - | - |
| November..... | 7,320 | 1,900 | 3,286 | 195,500 | 0 | 195,500 | 3,286 | - | - |
| December..... | 13,700 | 2,330 | 9,486 | 583,200 | 0 | 583,200 | 9,486 | - | - |
| Calendar year 1941 | 15,200 | 444 | 3,802 | 2,752,330 | 69,705 | 2,822,085 | 3,698 | 1.00 | 13.64 |
| January..... | 6,210 | 2,060 | 3,810 | 234,300 | 0 | 234,300 | 3,810 | - | - |
| February..... | 6,870 | 2,150 | 4,871 | 270,500 | 0 | 270,500 | 4,871 | - | - |
| March..... | 8,010 | 2,030 | 4,836 | 297,400 | 0 | 297,400 | 4,836 | - | - |
| April..... | 15,500 | 5,460 | 12,460 | 741,200 | 4,460 | 745,660 | 12,530 | - | - |
| May..... | 13,300 | 4,010 | 6,548 | 525,600 | 9,670 | 535,270 | 8,705 | - | - |
| June..... | 11,100 | 3,740 | 5,693 | 335,800 | 12,710 | 351,610 | 5,907 | - | - |
| July..... | 6,210 | 825 | 2,290 | 140,500 | 16,700 | 157,500 | 2,561 | - | - |
| August..... | 1,030 | 465 | 624 | 39,380 | 16,550 | 54,930 | 893 | - | - |
| September..... | 1,480 | 445 | 747 | 44,470 | 6,810 | 51,280 | 862 | - | - |
| Water year 1941-42 | 15,500 | 445 | 4,852 | 3,512,850 | 67,166 | 3,580,016 | 4,945 | 1.27 | 17.30 |

a No gage-height record; discharge computed on basis of trend of flow and records for stations at Spokane and at Liberty Bridge (Washington Water Power Co. station).

Note.— Monthly figures showing discharge in second-feet per square mile and run-off in inches are not published, owing to regulation by Coeur d'Alene Lake. The yearly figures represent more nearly the natural discharge and run-off.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Spokane River at Spokane, Wash.

Location.—Water-stage recorder, lat. 47°39'30", long. 117°26'50", in sec. 13, T. 25 N., R. 42 E., at Cochran Street in Spokane, half a mile upstream from Latah Creek. Datum of gage is about 1,700 feet above mean sea level, subject to correction to datum of 1929.

Drainage area.—4,350 square miles.

Records available.—April 1891 to September 1942.

Average discharges.—51 years, 6,738 second-feet, adjusted.

Extremes.—Maximum discharge during year, 18,400 second-feet (regulated) May 26 (gage height, 23.97 feet); minimum, 738 second-feet (regulated) sometime during period Sept. 17-24 (gage height, 17.04 feet); minimum daily, 917 second-feet (regulated) Sept. 6.

1891-1942: Maximum discharge, 49,000 second-feet May 31, 1894; minimum, 268 second-feet (regulated) Dec. 28, 1935 (gage height, 16.37 feet); minimum daily, that of Sept. 6, 1942.

Remarks.—Records excellent. Water for irrigation diverted above station by Spokane Valley Farms Co. Flow partly regulated by Coeur d'Alene Lake (see p. 171) and by pondage at Spokane. Capacity of Coeur d'Alene Lake between elevations 2,117 and 2,135 feet, 770,000 acre-feet.

Cooperation.—Gage-height record collected in cooperation with and four discharge measurements furnished by Washington Water Power Co.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|------|-------|------|-------|------|--------|
| 17.1 | 796 | 18.5 | 2,580 | 22.0 | 11,100 |
| 17.3 | 1,000 | 19.0 | 3,430 | 23.0 | 14,800 |
| 17.6 | 1,340 | 20.0 | 5,450 | 24.0 | 18,400 |
| 18.0 | 1,840 | 21.0 | 8,030 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|---------|--------|--------|--------|---------|---------|--------|--------|--------|--------|
| 1 | 2,080 | 2,370 | 3,160 | a3,930 | †4,350 | †3,900 | 5,240 | 12,200 | 12,200 | 6,430 | 1,540 | 1,080 |
| 2 | 2,110 | †2,370 | 3,380 | a5,840 | 4,840 | 3,790 | 6,530 | 10,500 | 10,800 | 6,440 | †1,610 | 1,090 |
| 3 | 2,120 | 2,370 | 5,750 | 4,180 | 4,680 | 3,240 | 7,860 | †9,170 | 9,710 | 5,890 | 1,520 | 1,080 |
| 4 | 2,110 | 2,400 | 9,210 | †4,350 | 4,700 | 3,350 | 8,420 | 8,220 | 7,480 | 4,890 | 1,540 | 1,080 |
| 5 | †2,110 | 2,370 | 11,200 | 4,640 | 5,860 | 3,660 | †9,780 | 5,920 | 4,700 | †4,350 | 1,390 | 979 |
| 6 | 2,110 | 2,370 | 11,900 | 4,250 | 6,290 | 3,800 | 9,370 | 4,810 | 4,450 | 4,190 | 1,560 | †917 |
| 7 | 2,110 | 2,430 | †11,800 | 4,100 | 6,280 | 3,310 | 9,630 | 4,840 | †4,710 | 3,680 | 1,390 | 1,010 |
| 8 | 2,110 | 2,390 | 11,300 | 3,620 | †6,200 | †3,150 | 10,000 | 5,630 | 5,650 | 2,570 | 1,350 | 1,130 |
| 9 | 2,140 | †2,390 | 10,900 | 3,530 | 6,520 | 3,170 | 10,400 | 6,010 | 5,500 | 2,540 | †1,340 | 979 |
| 10 | 2,140 | 2,440 | 10,500 | 3,080 | 6,840 | 3,260 | 10,600 | †6,230 | 5,190 | 2,240 | 1,300 | 1,080 |
| 11 | 2,220 | 2,420 | 10,000 | †3,790 | 6,910 | 4,720 | 11,100 | 7,340 | 4,540 | 2,520 | 1,300 | 1,000 |
| 12 | †2,150 | 2,450 | 8,800 | 5,400 | 6,340 | 7,330 | †11,700 | 7,660 | 4,900 | †3,560 | 1,350 | 1,030 |
| 13 | 2,130 | 2,430 | 7,330 | 6,130 | 6,400 | 7,710 | 12,600 | 7,800 | 5,490 | 2,890 | 1,190 | †968 |
| 14 | 1,900 | 2,460 | †6,610 | 6,240 | 6,230 | 7,900 | 13,500 | 7,610 | †5,480 | 2,090 | 1,200 | 1,070 |
| 15 | 1,930 | 2,560 | 5,680 | 5,920 | †6,150 | †8,000 | 14,200 | 7,570 | 5,850 | 2,280 | 1,150 | 948 |
| 16 | 1,890 | †3,240 | 5,720 | 6,070 | 6,360 | 7,940 | 14,900 | 8,260 | 6,530 | 3,750 | †1,080 | 1,080 |
| 17 | 1,940 | 6,090 | 6,040 | 5,170 | 7,250 | 7,240 | 15,300 | †9,640 | 6,300 | 3,480 | 1,080 | †1,060 |
| 18 | 2,110 | 6,960 | 7,770 | †4,020 | 4,980 | 7,120 | 15,300 | 10,100 | 6,040 | 3,350 | 1,110 | †1,030 |
| 19 | †2,080 | 7,010 | 9,770 | 4,130 | 4,510 | 6,530 | †15,300 | 9,690 | 5,570 | †2,820 | 1,110 | †1,110 |
| 20 | 2,140 | 6,920 | 10,900 | 4,320 | 4,630 | 5,690 | 15,300 | 8,470 | 5,750 | 2,270 | 1,060 | †1,100 |
| 21 | 2,100 | 6,440 | †11,800 | 4,300 | 4,130 | 5,090 | 15,300 | 7,620 | †5,520 | 1,640 | 1,030 | †1,130 |
| 22 | 2,130 | 5,640 | 12,800 | 4,210 | †3,370 | †4,970 | 15,300 | 7,730 | 5,680 | 1,950 | 1,090 | †1,200 |
| 23 | 2,160 | †5,870 | 13,300 | 3,830 | 3,100 | 4,920 | 15,300 | 8,190 | 5,770 | 1,890 | †1,090 | †1,560 |
| 24 | 2,070 | 5,060 | 13,500 | 5,130 | 3,430 | 5,060 | 15,300 | †9,590 | 5,900 | 2,230 | 1,030 | †1,760 |
| 25 | 2,120 | 4,200 | 13,200 | †2,690 | 3,780 | 5,050 | 15,300 | 10,400 | 5,920 | 2,140 | 1,060 | 1,780 |
| 26 | †2,130 | 2,810 | 13,000 | 5,430 | 4,060 | 4,960 | †15,300 | 12,500 | 5,690 | †2,000 | 1,080 | 1,840 |
| 27 | 2,170 | 2,780 | 12,600 | 3,780 | 4,070 | 4,970 | 14,600 | 14,300 | 5,620 | 1,630 | 1,040 | †1,840 |
| 28 | 2,320 | 2,780 | †11,900 | 3,970 | 4,130 | 4,770 | 14,300 | 14,100 | †5,550 | 1,480 | 1,020 | 1,840 |
| 29 | 2,360 | 2,730 | 11,200 | 4,610 | - | †5,170 | 13,800 | 14,000 | 5,830 | 1,690 | 1,100 | 1,780 |
| 30 | 2,360 | †2,720 | 10,200 | 4,280 | - | 4,730 | 13,400 | 13,700 | 6,030 | 1,450 | †1,080 | 1,780 |
| 31 | 2,370 | - | 8,000 | 4,690 | - | 4,870 | - | †13,400 | - | 1,490 | 990 | - |

| Month | Observed | | | | Change in contents in Coeur d'Alene Lake (acre-feet) | Adjusted for change in lake contents | | | |
|--------------------|--------------------------|---------|--------|----------------------|--|--------------------------------------|--------------------------|-----------------|-------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run-off in inches |
| | Maximum | Minimum | Mean | | | | Mean | Per square mile | |
| October..... | 2,370 | 1,890 | 2,123 | 130,500 | -13,210 | 117,300 | 1,908 | 0.438 | 0.61 |
| November..... | 7,010 | 2,370 | 3,572 | 212,600 | -8,470 | 207,100 | 3,480 | .800 | .89 |
| December..... | 13,500 | 3,160 | 9,652 | 593,500 | +2,280 | 595,800 | 9,690 | 2.23 | 2.67 |
| Calendar year 1941 | 14,200 | 1,050 | 4,157 | 3,010,000 | +22,280 | 3,032,000 | 4,188 | .963 | 13.10 |
| January..... | 6,240 | 2,690 | 4,305 | 264,600 | -33,180 | 231,400 | 3,763 | .866 | 1.00 |
| February..... | 6,910 | 3,100 | 5,175 | 287,400 | -30,900 | 256,500 | 4,619 | 1.06 | 1.11 |
| March..... | 8,000 | 3,150 | 5,139 | 316,000 | +18,010 | 334,000 | 5,432 | 1.25 | 1.44 |
| April..... | 15,300 | 5,240 | 12,460 | 741,700 | +83,770 | 825,500 | 13,970 | 3.19 | 3.66 |
| May..... | 14,300 | 4,810 | 9,155 | 561,700 | +13,640 | 575,300 | 9,366 | 2.15 | 2.48 |
| June..... | 12,200 | 4,430 | 8,145 | 385,600 | +21,660 | 397,200 | 6,509 | 1.50 | 1.67 |
| July..... | 6,440 | 1,450 | 2,956 | 181,900 | +2,400 | 184,300 | 2,997 | .682 | .79 |
| August..... | 1,610 | 990 | 1,212 | 74,540 | -16,060 | 58,480 | 951 | .219 | .25 |
| September..... | 1,840 | 917 | 1,244 | 74,030 | -24,300 | 49,730 | 836 | .192 | .21 |
| Water year 1941-42 | 15,300 | 917 | 5,254 | 3,804,000 | +18,640 | 3,823,000 | 5,281 | 1.21 | 16.48 |

† Sunday.

a No continuous gage-height record; discharge determined from hourly gage heights observed on indicator in powerhouse.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Spokane River at Long Lake, Wash.

Location.- Water-stage recorder, lat. 47°50', long. 117°50', in SW $\frac{1}{4}$ sec. 13, T. 27 N., R. 39 E., at Long Lake power plant, 12 miles north of Reardan. Datum of gage is 1,300.00 feet above mean sea level, subject to correction to datum of 1929.

Drainage area.- 6,100 square miles.

Records available.- April 1939 to September 1942.

Extremes (regulated).- Maximum discharge during year, 22,200 second-feet May 27 (gage height, 68.91 feet); minimum not determined, occurred during period of backwater from Little Falls power plant; minimum daily, 161 second-feet Aug. 2.

1939-42: Maximum discharge, 29,300 second-feet May 6, 1939 (gage height, 70.95 feet); minimum, 115 second-feet Oct. 6, 1939 (gage height, 57.66 feet), but may have been less sometime during periods of backwater in water years 1940-41 or 1941-42; minimum daily, 161 second-feet July 20, 1941, Aug. 2, 1942.

Remarks.- Records good. Water diverted above station for irrigation. Flow affected considerably by power regulation and by Coeur d'Alene Lake. Capacity of Coeur d'Alene Lake between elevations 2,117 and 2,135 feet, 770,000 acre-feet. Capacity of Long Lake between elevations 1,512 and 1,531 feet, 79,600 acre-feet.

Cooperation.- Gage-height record collected in cooperation with Washington Water Power Co., which furnished one discharge measurement, record of discharge for periods of backwater, and gage heights for Long Lake.

Rating table, water year 1941-42, except periods of backwater
(gage height, in feet, and discharge, in second-feet)

| | | | |
|------|-------|------|--------|
| 60.0 | 1,600 | 63.0 | 6,340 |
| 60.5 | 2,060 | 64.0 | 8,480 |
| 61.0 | 2,750 | 66.0 | 13,400 |
| 62.0 | 4,420 | 68.0 | 19,200 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| 1 | 2,650 | 3,100 | 3,810 | 4,640 | 15,340 | 14,320 | 5,650 | 12,900 | 14,800 | 7,780 | 1,710 | 1,180 |
| 2 | 3,040 | 12,650 | 4,130 | 4,470 | 5,700 | 4,300 | 7,010 | 12,100 | 12,300 | 7,080 | 1,181 | 1,370 |
| 3 | 3,130 | 2,540 | 5,400 | 4,630 | 7,100 | 4,840 | 9,200 | 18,450 | 9,730 | 7,500 | 2,380 | 2,480 |
| 4 | 3,130 | 3,120 | 11,500 | 15,880 | 8,300 | 5,100 | 9,580 | 9,870 | 9,650 | 5,490 | 1,650 | 2,190 |
| 5 | 11,610 | 3,280 | 12,400 | 4,930 | 10,100 | 5,460 | 19,520 | 6,610 | 8,640 | 15,080 | 2,540 | 1,970 |
| 6 | 2,290 | 3,310 | 12,900 | 5,670 | 9,560 | 5,030 | 10,800 | 6,100 | 5,450 | 5,450 | 1,850 | 1,591 |
| 7 | 3,090 | 3,320 | 112,600 | 5,820 | 7,560 | 5,310 | 11,100 | 5,710 | 15,470 | 5,050 | 2,680 | 259 |
| 8 | 2,670 | 2,800 | 13,200 | 5,850 | 18,980 | 14,290 | 10,100 | 6,450 | 7,340 | 3,930 | 1,470 | 495 |
| 9 | 2,740 | 12,500 | 10,900 | 5,060 | 9,150 | 4,920 | 11,400 | 8,150 | 6,310 | 3,930 | 1,961 | 1,040 |
| 10 | 3,190 | 2,980 | 12,100 | 4,760 | 7,640 | 4,130 | 12,200 | 16,900 | 6,340 | 4,000 | 2,740 | 2,060 |
| 11 | 2,840 | 2,920 | 10,600 | 14,440 | 8,140 | 4,790 | 12,900 | 8,720 | 5,870 | 3,870 | 1,780 | 1,790 |
| 12 | 12,160 | 2,870 | 10,500 | 5,060 | 8,650 | 9,330 | 12,300 | 8,710 | 5,440 | 11,640 | 1,900 | 1,080 |
| 13 | 2,460 | 3,290 | 7,920 | 5,250 | 7,200 | 9,120 | 13,800 | 9,150 | 6,500 | 4,160 | 2,190 | 1,232 |
| 14 | 2,700 | 3,430 | 17,570 | 7,650 | 7,540 | 9,550 | 14,300 | 8,850 | 16,490 | 3,540 | 3,000 | 1,760 |
| 15 | 2,740 | 3,800 | 6,580 | 6,710 | 17,920 | 18,550 | 16,600 | 8,970 | 7,070 | 2,660 | 3,000 | 2,150 |
| 16 | 2,600 | 13,940 | 6,290 | 6,700 | 8,280 | 10,500 | 17,500 | 8,790 | 7,040 | 3,040 | 1,566 | 2,490 |
| 17 | 2,760 | 6,230 | 7,430 | 7,240 | 7,780 | 9,470 | 17,000 | 10,500 | 7,920 | 4,400 | 2,040 | 3,070 |
| 18 | 2,650 | 9,420 | 8,570 | 14,680 | 5,720 | 7,630 | 17,000 | 11,200 | 7,140 | 4,110 | 1,250 | 3,770 |
| 19 | 12,090 | 8,150 | 13,900 | 5,260 | 5,740 | 6,580 | 17,500 | 10,200 | 6,530 | 13,900 | 1,540 | 3,030 |
| 20 | 2,450 | 7,770 | 13,200 | 5,290 | 5,620 | 8,160 | 16,600 | 10,600 | 7,300 | 4,960 | 1,020 | 1,498 |
| 21 | 3,120 | 6,180 | 114,300 | 4,930 | 5,460 | 5,860 | 16,900 | 8,270 | 15,820 | 3,100 | 916 | 3,320 |
| 22 | 3,100 | 7,520 | 14,900 | 5,370 | 14,930 | 16,570 | 17,000 | 7,940 | 7,000 | 2,430 | 2,540 | 3,360 |
| 23 | 3,070 | 15,040 | 16,500 | 5,390 | 5,470 | 6,480 | 16,900 | 8,950 | 6,600 | 2,560 | 1,530 | 2,750 |
| 24 | 5,060 | 5,650 | 14,700 | 5,040 | 5,730 | 5,580 | 15,800 | 19,290 | 7,300 | 3,060 | 2,690 | 2,280 |
| 25 | 2,770 | 5,150 | 15,200 | 13,730 | 5,490 | 5,600 | 17,800 | 11,100 | 6,710 | 2,800 | 2,720 | 2,290 |
| 26 | 11,680 | 4,280 | 14,200 | 4,810 | 5,700 | 6,160 | 16,600 | 13,100 | 6,900 | 11,680 | 1,960 | 1,390 |
| 27 | 2,830 | 3,940 | 14,200 | 4,090 | 5,640 | 6,230 | 17,300 | 16,500 | 6,790 | 3,100 | 3,300 | 1,515 |
| 28 | 3,370 | 3,880 | 112,600 | 5,030 | 5,680 | 6,420 | 14,800 | 16,200 | 16,340 | 2,420 | 3,500 | 2,660 |
| 29 | 3,390 | 3,510 | 12,400 | 6,750 | - | 15,620 | 15,000 | 16,200 | 6,110 | 2,370 | 1,620 | 3,450 |
| 30 | 3,020 | 12,690 | 12,600 | 6,550 | - | 6,770 | 15,200 | 14,900 | 7,190 | 2,830 | 1,201 | 1,980 |
| 31 | 3,160 | - | 7,340 | 6,250 | - | 5,980 | - | 14,700 | - | 2,970 | 1,220 | - |

| Month | Observed | | | | Change in contents in Coeur d'Alene and Long Lakes (acre-feet) | Adjusted for change in lake contents | | | |
|--------------------|-----------------------------|--------------|--------|----------------------------|--|---|-----------------------------|-----------------------|-------------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run-off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | Mean | Per square mile | |
| October..... | 3,390 | 1,680 | 2,774 | 170,500 | -15,110 | 155,400 | 2,527 | 0.414 | 0.48 |
| November..... | 9,420 | 2,500 | 4,315 | 256,700 | -2,820 | 253,900 | 4,267 | .700 | .78 |
| December..... | 15,500 | 3,810 | 10,940 | 672,800 | +630 | 673,400 | 10,950 | 1.80 | 2.07 |
| Calendar year 1941 | 16,000 | 161 | 5,226 | 3,784,000 | +23,780 | 3,807,000 | 5,259 | .852 | 11.70 |
| January..... | 7,650 | 3,730 | 5,410 | 332,600 | -33,180 | 299,400 | 4,869 | .799 | .92 |
| February..... | 10,100 | 4,930 | 7,004 | 369,000 | -38,000 | 331,000 | 6,380 | 1.04 | 1.08 |
| March..... | 10,500 | 4,130 | 6,473 | 393,000 | +25,110 | 423,100 | 6,881 | 1.13 | 1.30 |
| April..... | 17,800 | 5,650 | 13,850 | 823,900 | +80,870 | 904,800 | 15,210 | 2.49 | 2.78 |
| May..... | 16,500 | 5,710 | 10,200 | 626,900 | +19,190 | 646,100 | 10,610 | 1.72 | 1.99 |
| June..... | 14,600 | 5,440 | 7,226 | 430,000 | +21,910 | 451,900 | 7,594 | 1.24 | 1.39 |
| July..... | 7,760 | 1,640 | 3,899 | 229,800 | -2,900 | 226,900 | 3,853 | .632 | .73 |
| August..... | 3,500 | 161 | 1,891 | 116,300 | -13,360 | 98,940 | 1,577 | .259 | .30 |
| September..... | 3,770 | 232 | 1,895 | 112,800 | -27,100 | 85,700 | 1,440 | .236 | .26 |
| Water year 1941-42 | 17,800 | 161 | 6,311 | 4,569,000 | +9,240 | 4,579,000 | 6,324 | 1.04 | 14.08 |

† Sunday.

Note.- Backwater from Little Falls Oct. 1 to Dec. 4, July 17 to Sept. 30; discharge computed by Washington Water Power Co. from records of power production.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

St. Joe River at Calder, Idaho

Location.— Water-stage recorder, lat. 47°16', long. 116°11', in sec. 3, T. 45 N., R. 2 E., 150 feet southwest of Chicago, Milwaukee, St. Paul & Pacific Railway station at Calder. Datum of gage is about 2,100 feet above mean sea level.

Drainage area.— 1,080 square miles.

Records available.— July 1920 to September 1942. April 1911 to September 1912 at site 2½ miles downstream.

Average discharge.— 22 years (1920-42), 2,208 second-feet.

Extremes.— Maximum discharge during year, 10,400 second-feet Dec. 3 (gage height, 85.99 feet); minimum, 358 second-feet Sept. 30 (gage height, 79.40 feet).
1911-12, 1920-42: Maximum discharge, 53,000 second-feet Dec. 23, 1933, computed on basis of slope between gages downstream; maximum gage height, 93.1 feet Apr. 18, 1938, from floodmark; minimum discharge, 96 second-feet Dec. 5, 1928 (gage height, 78.43 feet).

Remarks.— Records good except those for period of ice effect, which are fair. No diversion above gage. Operation of splash dam on Marble Creek causes some diurnal fluctuation during log-driving season.

Cooperation.— Gage-height record and nine discharge measurements furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|--------|-------|---------|-------|-------|-------|-------|------|-------|
| 1 | 426 | 635 | 1,160 | 1,340 | 1,120 | 749 | 2,000 | 3,860 | 3,410 | 2,700 | 836 | 505 |
| 2 | 435 | 632 | 1,920 | 1,400 | 1,160 | 768 | 2,580 | 3,700 | 3,270 | 2,580 | 610 | 485 |
| 3 | 426 | 662 | 8,670 | 1,400 | 1,120 | 817 | 2,700 | 3,480 | 3,200 | 2,400 | 775 | 470 |
| 4 | 768 | 920 | 6,270 | 1,400 | 1,250 | 756 | 2,760 | 3,340 | 3,070 | 2,240 | 756 | 455 |
| 5 | 796 | 882 | 4,410 | 1,400 | 1,380 | 762 | 3,340 | 3,270 | 2,940 | 2,130 | 736 | 445 |
| 6 | 626 | 675 | 3,780 | 1,400 | 1,250 | 756 | 3,560 | 3,200 | 2,820 | 1,970 | 723 | 445 |
| 7 | 692 | 638 | 3,270 | 1,500 | 1,200 | 730 | 4,080 | 3,540 | 2,940 | 1,670 | 710 | 445 |
| 8 | 905 | 810 | 2,940 | 1,500 | 1,200 | 748 | 4,250 | 3,560 | 2,780 | 1,770 | 698 | 435 |
| 9 | 1,080 | 803 | 2,640 | 1,200 | 1,250 | 1,340 | 4,800 | 3,930 | 2,760 | 1,670 | 674 | 440 |
| 10 | 920 | 775 | 2,460 | 1,200 | 1,160 | 2,700 | 5,280 | 4,410 | 2,700 | 1,620 | 662 | 480 |
| 11 | 838 | 756 | 2,240 | 1,200 | 1,160 | 2,080 | 6,920 | 4,170 | 2,620 | 1,770 | 650 | 470 |
| 12 | 831 | 782 | 2,130 | 1,200 | 1,120 | 1,970 | 8,400 | 3,930 | 2,520 | 1,620 | 626 | 445 |
| 13 | 890 | 862 | 1,920 | 1,200 | 1,040 | 1,770 | 8,140 | 3,700 | 2,400 | 1,480 | 620 | 435 |
| 14 | 845 | 2,240 | 1,970 | *1,100 | 1,000 | 1,620 | 9,220 | 3,700 | 2,350 | 1,430 | 614 | 430 |
| 15 | 789 | 3,070 | 1,920 | 1,000 | 1,000 | 1,430 | 9,220 | 4,170 | 2,760 | 1,430 | 608 | 430 |
| 16 | 762 | 3,270 | 2,180 | 1,000 | 984 | 1,340 | 7,390 | 4,010 | 2,820 | 1,770 | 602 | 417 |
| 17 | 756 | 2,700 | *2,350 | 1,000 | 704 | 1,250 | 6,700 | 3,860 | 2,760 | 1,570 | 590 | 422 |
| 18 | 736 | 2,240 | 2,300 | 1,000 | 668 | 1,160 | 5,860 | 3,700 | 3,140 | 1,390 | 568 | 422 |
| 19 | 730 | 1,920 | 2,940 | 900 | 944 | 1,120 | 5,470 | 3,480 | 3,270 | 1,300 | 562 | 417 |
| 20 | 810 | 1,670 | 4,580 | 800 | 980 | 1,080 | 5,660 | 3,480 | 3,200 | 1,200 | 546 | 408 |
| 21 | 742 | 1,520 | 4,500 | 750 | 952 | 1,040 | 6,700 | 3,700 | 3,070 | 1,160 | 540 | 404 |
| 22 | 716 | 1,430 | 3,860 | 750 | 868 | 1,120 | 6,940 | 4,250 | 2,880 | 1,120 | 530 | 390 |
| 23 | 698 | 1,250 | 3,410 | 800 | 756 | 1,120 | 7,630 | 4,750 | 2,760 | 1,040 | 525 | 382 |
| 24 | 686 | 1,250 | 3,070 | 850 | 838 | 1,080 | 6,270 | 4,920 | 2,640 | 1,040 | 510 | 382 |
| 25 | 668 | 1,300 | 2,760 | 900 | *796 | 1,080 | 5,660 | 4,220 | 2,640 | 992 | 500 | 374 |
| 26 | 662 | 1,200 | 2,400 | 900 | 789 | 1,040 | 4,920 | 5,100 | 2,640 | 992 | 530 | 374 |
| 27 | 644 | 1,120 | 2,080 | 1,000 | 762 | al, 000 | 4,500 | 4,750 | 2,840 | 1,000 | 546 | 370 |
| 28 | 650 | 1,080 | 2,300 | 1,100 | 756 | al, 000 | 4,250 | 4,500 | 3,200 | 944 | 530 | 366 |
| 29 | 698 | 1,080 | 2,240 | 1,100 | - | al, 100 | 3,930 | 4,170 | 3,000 | 912 | 520 | 366 |
| 30 | 650 | 1,120 | 2,130 | 1,100 | - | al, 200 | 3,760 | 3,860 | 2,880 | 868 | 510 | 368 |
| 31 | 620 | - | 1,670 | 1,100 | - | al, 500 | - | 3,560 | - | 845 | 546 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 22,495 | 1,080 | 426 | 728 | 0.672 | 0.77 | 44,680 |
| November..... | 39,685 | 3,270 | 632 | 1,323 | 1.22 | 1.37 | 75,710 |
| December..... | 92,470 | 8,670 | 1,160 | 2,963 | 2.76 | 3.18 | 183,400 |
| Calendar year 1941..... | 527,054 | 5,200 | 390 | 1,444 | 1.34 | 18.15 | 1,045,000 |
| January..... | 34,080 | 1,400 | 750 | 1,100 | 1.02 | 1.17 | 67,620 |
| February..... | 28,207 | 1,380 | 668 | 1,007 | .932 | .87 | 55,950 |
| March..... | 37,227 | 2,700 | 730 | 1,201 | 1.11 | 1.28 | 75,840 |
| April..... | 164,620 | 9,220 | 2,000 | 5,487 | 5.08 | 5.67 | 328,500 |
| May..... | 122,770 | 5,100 | 3,200 | 3,960 | 3.67 | 4.23 | 243,500 |
| June..... | 86,260 | 3,410 | 2,350 | 2,675 | 2.66 | 2.97 | 171,100 |
| July..... | 46,813 | 2,700 | 845 | 1,510 | 1.40 | 1.61 | 92,850 |
| August..... | 19,155 | 838 | 500 | 618 | .572 | .66 | 37,990 |
| September..... | 12,667 | 505 | 358 | 422 | .391 | .44 | 25,120 |
| Water year 1941-42..... | 706,459 | 9,220 | 358 | 1,936 | 1.79 | 24.32 | 1,401,000 |

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for Coeur d'Alene River near Cataldo and at Enville.

Note.— Stage-discharge relation affected by ice Jan. 2-31.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

SPOKANE RIVER BASIN

St. Maries River at Lotus, Idaho

Location.- Staff gage, lat. 47°14', long. 116°37', in sec. 20, T. 45 N., R. 2 W., just downstream from Lotus. Datum of gage is about 2,160 feet above mean sea level.

Drainage area.- 420 square miles.

Records available.- July 1911 to October 1912, July 1920 to September 1942.

Average discharge.- 22 years (1920-42), 476 second-feet.

Extremes.- Maximum discharge observed during year, 2,570 second-feet Dec. 3; maximum gage height observed, 8.04 feet Jan. 28 (ice jam); minimum daily discharge, 46 second-feet Aug. 24-27; minimum gage height observed, 3.42 feet Sept. 30.

1911-12, 1920-42: Maximum discharge observed, 23,800 second-feet Dec. 22, 23, 1933 (gage height, 12.1 feet), from rating curve extended logarithmically above 4,000 second-feet; minimum discharge, 16 second-feet (estimated) Nov. 21, 1929; minimum gage height observed, 2.71 feet Nov. 20, 1929.

Remarks.- Records fair except those for periods of ice effect, which are poor. Gage read once daily. No diversions above gage.

Cooperation.- Gage-height record and seven discharge measurements furnished by Washington Water Power Co.

Rating table, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Feb. 12 to Mar. 9, July 2 to Sept. 12)

| | | | | | |
|-----|-----|-----|-------|-----|-------|
| 3.4 | 44 | 4.4 | 525 | 5.6 | 1,730 |
| 3.7 | 135 | 4.8 | 850 | 6.0 | 2,380 |
| 4.0 | 275 | 5.2 | 1,230 | 6.4 | 3,200 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|--------|-------|-------|-------|------|------|------|-------|
| 1 | 76 | 108 | 140 | b150 | b400 | 189 | 850 | 640 | 640 | 240 | 97 | 56 |
| 2 | 105 | 108 | 148 | | b500 | 216 | 1,080 | 720 | 562 | 225 | 76 | 53 |
| 3 | 105 | 108 | 2,570 | | b700 | 265 | 940 | 592 | 532 | 207 | 76 | 53 |
| 4 | 120 | 240 | 1,280 | | b900 | 255 | 985 | 548 | 480 | 154 | 76 | 55 |
| 5 | 292 | 202 | 805 | | bl,200 | 255 | 985 | 548 | 462 | 148 | 73 | 51 |
| 6 | 194 | 184 | 640 | | bl,200 | 245 | 1,030 | 518 | 416 | 144 | 73 | 49 |
| 7 | 158 | 148 | 605 | b175 | bl,000 | 235 | 1,030 | 455 | 442 | 135 | 73 | 49 |
| 8 | 240 | 140 | 600 | | 895 | 265 | 985 | 455 | 418 | 176 | 70 | 49 |
| 9 | 302 | 131 | 518 | | 940 | 497 | 940 | 436 | 410 | 171 | 67 | 49 |
| 10 | 235 | 116 | 422 | | 640 | 2,200 | 940 | 548 | 416 | 166 | 51 | 49 |
| 11 | 162 | 116 | 292 | | 532 | 2,030 | 1,080 | 720 | 442 | 184 | 51 | 49 |
| 12 | 158 | 124 | 270 | | 485 | 2,030 | 1,080 | 640 | 396 | 225 | 58 | 51 |
| 13 | 194 | 166 | 240 | b300 | 422 | 1,080 | 1,030 | 760 | 354 | 207 | 51 | 53 |
| 14 | 176 | 760 | 240 | | 366 | 895 | 1,130 | 680 | 302 | 162 | 51 | 51 |
| 15 | 148 | 562 | 292 | | 360 | 720 | 1,400 | 640 | 308 | 158 | 51 | 51 |
| 16 | 140 | 985 | *330 | | 319 | 640 | 1,080 | 548 | 324 | 255 | 51 | 51 |
| 17 | 131 | 640 | 1,080 | | 216 | 878 | 1,150 | 548 | 348 | 319 | 51 | 51 |
| 18 | 124 | 476 | 985 | | 127 | 476 | 1,060 | 548 | 324 | 255 | 51 | 51 |
| 19 | 124 | *410 | 1,870 | b300 | 127 | 436 | 805 | 504 | 600 | 184 | 49 | 51 |
| 20 | 131 | 280 | 2,200 | | 127 | 410 | 805 | 476 | 442 | 171 | 49 | 51 |
| 21 | 131 | 240 | 1,590 | | 91 | 410 | 805 | 410 | 396 | 163 | 51 | 51 |
| 22 | 116 | 212 | 1,080 | | 216 | 410 | 850 | 462 | 348 | 140 | 49 | 51 |
| 23 | 124 | b210 | 985 | | 171 | 448 | 805 | 476 | 319 | 135 | 49 | 51 |
| 24 | 108 | b200 | 805 | | *194 | 396 | 592 | 502 | 202 | 120 | 46 | 51 |
| 25 | 108 | 166 | 720 | b300 | 180 | 336 | 760 | 476 | 194 | 112 | 46 | 51 |
| 26 | 108 | 158 | 548 | | 245 | 292 | 805 | 805 | 207 | 112 | 46 | 51 |
| 27 | 108 | 148 | 410 | | 225 | 292 | 720 | 1,180 | 292 | 108 | 46 | 51 |
| 28 | 108 | 131 | 292 | | 207 | 314 | 640 | 1,030 | 476 | 108 | 49 | 51 |
| 29 | 124 | 131 | 240 | | - | 292 | 720 | 985 | 403 | 97 | 49 | 51 |
| 30 | 148 | 124 | b220 | | - | 348 | 600 | 895 | 292 | 97 | 49 | 49 |
| 31 | 108 | - | b200 | | - | 476 | - | 760 | - | 97 | 51 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 4,606 | 302 | 76 | 149 | 0.365 | 0.41 | 9,140 |
| November..... | 7,724 | 985 | 108 | 257 | .612 | .68 | 15,320 |
| December..... | 22,817 | 2,570 | 140 | 736 | 1.75 | 2.02 | 45,260 |
| Calendar year 1941..... | 122,396 | 2,570 | 71 | 335 | .798 | 10.82 | 242,800 |
| January..... | 6,175 | - | - | 199 | .474 | .55 | 12,250 |
| February..... | 12,983 | 1,200 | 91 | 464 | 1.10 | 1.15 | 25,750 |
| March..... | 17,931 | 2,200 | 189 | 578 | 1.38 | 1.59 | 35,570 |
| April..... | 27,760 | 1,400 | 600 | 926 | 2.20 | 2.46 | 55,100 |
| May..... | 19,595 | 1,180 | 410 | 632 | 1.50 | 1.74 | 38,870 |
| June..... | 11,755 | 640 | 194 | 392 | .933 | 1.04 | 23,320 |
| July..... | 5,196 | 319 | 97 | 188 | .400 | .46 | 10,300 |
| August..... | 1,776 | 97 | 46 | 57.3 | .136 | .16 | 3,560 |
| September..... | 1,829 | 56 | 49 | 51.0 | .121 | .14 | 3,030 |
| Water year 1941-42..... | 139,866 | 2,570 | 46 | 383 | .912 | 12.40 | 277,400 |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Hayden Lake at Hayden Lake, Idaho

Location.- Staff gage, lat. 47°46', long. 116°45', in sec. 18, T. 51 N., R. 3 W., at Avondale and Hayden Lake pumping plants, a quarter of a mile north of Bozanta Tavern. Datum of gage is 2,200.21 feet above mean sea level, datum of 1929.

Records available.- May 1920 to September 1942.

Extremes.- Maximum gage height observed during year, 27.17 feet June 15-17; minimum observed, 21.18 feet Nov. 11, 12.

1920-42: Maximum gage height, 40.41 feet (corrected) Apr. 30 to May 18, 1921; minimum observed, 19.38 feet Dec. 16, 1931.

Remarks.- Gage read once daily. Water is pumped from lake for irrigation and domestic supply.

Gage height, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 21.58 | 21.26 | 21.22 | 22.56 | 22.62 | 23.14 | 24.14 | 26.32 | 27.04 | 27.16 | 26.68 | 23.92 |
| 2 | 21.57 | 21.26 | - | 22.55 | 22.64 | 23.14 | 24.34 | 26.34 | 27.05 | 27.14 | 26.62 | 23.88 |
| 3 | 21.56 | 21.26 | 21.30 | 22.54 | 22.65 | 23.13 | 24.56 | 26.36 | 27.06 | 27.12 | 26.58 | 23.84 |
| 4 | 21.56 | 21.26 | 21.34 | 22.52 | 22.68 | 23.22 | 24.70 | 26.38 | 27.07 | 27.09 | 26.53 | 23.80 |
| 5 | 21.55 | 21.26 | 21.36 | 22.52 | 22.76 | 23.24 | 24.62 | 26.38 | 27.07 | 27.06 | 26.46 | 23.76 |
| 6 | 21.53 | 21.24 | 21.40 | 22.53 | 22.80 | 23.24 | 24.93 | 26.38 | 27.07 | 27.01 | 26.40 | 23.73 |
| 7 | 21.52 | 21.23 | 21.42 | 22.53 | 22.85 | 23.25 | 25.02 | 26.39 | 27.15 | 26.95 | 26.35 | 23.70 |
| 8 | 21.50 | 21.22 | 21.42 | 22.54 | 22.88 | 23.25 | 25.10 | 26.40 | 27.14 | 26.90 | 26.30 | 23.66 |
| 9 | 21.48 | 21.20 | 21.43 | 22.53 | 22.94 | 23.30 | 25.18 | 26.40 | 27.16 | 26.84 | 26.26 | 23.63 |
| 10 | 21.46 | 21.19 | 21.43 | 22.53 | 22.97 | 23.36 | 25.26 | 26.46 | 27.16 | 26.79 | 26.20 | 23.60 |
| 11 | 21.44 | 21.18 | 21.44 | 22.54 | 23.00 | 23.40 | 25.34 | 26.48 | 27.16 | 26.73 | 26.12 | 23.58 |
| 12 | 21.46 | 21.18 | 21.44 | 22.55 | 23.02 | 23.46 | 25.42 | 26.51 | 27.16 | 26.68 | 26.05 | 23.55 |
| 13 | 21.45 | 21.20 | 21.45 | 22.55 | 23.03 | 23.54 | 25.50 | 26.52 | 27.16 | 26.64 | 26.00 | 23.52 |
| 14 | 21.44 | 21.22 | 21.45 | 22.54 | 23.05 | 23.62 | 25.62 | 26.54 | 27.15 | 26.60 | 24.94 | 23.49 |
| 15 | 21.44 | 21.26 | 21.47 | 22.54 | 23.07 | 23.70 | 25.72 | 26.56 | 27.17 | 26.54 | 24.68 | 23.46 |
| 16 | 21.43 | 21.30 | 21.50 | 22.53 | 23.08 | 23.76 | 25.80 | 26.56 | 27.17 | 26.50 | 24.52 | 23.43 |
| 17 | 21.42 | 21.31 | 21.66 | 22.55 | 23.09 | 23.80 | 25.88 | 26.56 | 27.17 | 26.45 | 24.75 | 23.40 |
| 18 | 21.42 | 21.32 | 21.62 | 22.52 | 23.10 | 23.82 | 25.96 | 26.56 | 27.16 | 26.40 | 24.70 | 23.38 |
| 19 | 21.41 | 21.32 | 21.72 | 22.62 | 23.10 | 23.84 | 26.00 | 26.56 | 27.16 | 26.34 | 24.65 | 23.36 |
| 20 | 21.40 | 21.31 | 21.90 | 22.62 | 23.11 | 23.87 | 26.04 | 26.57 | 27.16 | 26.30 | 24.60 | 23.33 |
| 21 | 21.39 | 21.30 | 22.10 | 22.52 | 23.12 | 23.89 | 26.08 | 26.58 | 27.15 | 26.26 | 24.54 | 23.31 |
| 22 | 21.38 | 21.29 | 22.20 | 22.52 | 23.12 | 23.90 | 26.10 | 26.58 | 27.15 | 26.21 | 24.48 | 23.28 |
| 23 | 21.37 | 21.27 | 22.32 | 22.52 | 23.12 | 23.92 | 26.13 | 26.60 | 27.15 | 26.16 | 24.42 | 23.26 |
| 24 | 21.36 | 21.27 | 22.39 | 22.51 | 23.12 | 23.95 | 26.16 | 26.61 | 27.14 | 26.11 | 24.36 | 23.24 |
| 25 | 21.35 | 21.27 | 22.44 | 22.51 | 23.13 | 23.97 | 26.20 | 26.62 | 27.14 | 26.06 | 24.30 | 23.22 |
| 26 | 21.34 | 21.26 | 22.46 | 22.50 | 23.14 | 23.98 | 26.24 | 26.70 | 27.16 | 26.00 | 24.22 | 23.20 |
| 27 | 21.33 | 21.25 | 22.45 | 22.51 | 23.14 | 23.99 | 26.26 | 26.80 | 27.15 | 25.94 | 24.16 | 23.16 |
| 28 | 21.31 | 21.24 | 22.50 | 22.52 | 23.14 | 24.00 | 26.28 | 26.88 | 27.15 | 25.88 | 24.10 | 23.16 |
| 29 | 21.30 | 21.23 | 22.52 | 22.52 | - | 24.01 | 26.29 | 26.94 | 27.16 | 25.92 | 24.04 | 23.14 |
| 30 | 21.28 | 21.22 | 22.54 | 22.52 | - | 24.03 | 26.30 | 26.98 | 27.15 | 25.78 | 24.00 | 23.12 |
| 31 | 21.27 | - | 22.56 | 22.50 | - | 24.06 | - | 27.01 | - | 25.73 | 23.96 | - |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Spokane Valley Farms Co.'s canal at Post Falls, Idaho

Location.- Water-stage recorder, lat. 47°43', long. 116°57', in sec. 3, T. 50 N., R. 5 W., 300 feet downstream from headgate and half a mile northwest of Post Falls.

Records available.- May 1911 to September 1917, September 1919 to September 1942.

Extremes.- Maximum discharge during year, 285 second-feet July 9; maximum gage height, 5.57 feet (present datum) July 29; no flow October 15 to April 6.

1911-17, 1919-42: Maximum discharge observed, 304 second-feet May 28, 1936; no flow during nonirrigation seasons.

Remarks.- Records excellent. Canal diverts water for irrigation from Spokane River in SE $\frac{1}{4}$ Sec. 3, T. 50 N., R. 5 W.

Cooperation.- Observers services furnished by Spokane Valley Farms Co. Four discharge measurements furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------|------------------|---------|---------|------|----------------------|-------|
| 1 | 10 | | | | | | 0 | 130 | 157 | 236 | 276 | 227 |
| 2 | 10 | | | | | | 0 | 135 | 180 | 248 | 276 | 210 |
| 3 | 10 | | | | | | 0 | 149 | 194 | 258 | 275 | 210 |
| 4 | 10 | | | | | | 0 | 150 | 199 | 271 | 275 | 211 |
| 5 | 10 | | | | | | 0 | 142 | 202 | 279 | 276 | 212 |
| 6 | 10 | | | | | | 0 | 125 | 202 | 280 | 276 | 212 |
| 7 | 10 | | | | | | 14 | 137 | 203 | 280 | 275 | 211 |
| 8 | 10 | | | | | | 25 | 147 | 203 | 277 | 275 | 202 |
| 9 | 10 | | | | | | 81 | 149 | 203 | 280 | 275 | 197 |
| 10 | 10 | | | | | | 80 | 149 | 202 | 279 | 275 | 196 |
| 11 | 10 | | | | | | 82 | 156 | 208 | 274 | 275 | 196 |
| 12 | 10 | | | | | | 86 | 163 | 208 | 272 | 273 | 195 |
| 13 | 10 | | | | | | 90 | 162 | 206 | 272 | 273 | 195 |
| 14 | 4 | | | | | | 91 | 162 | 210 | 270 | 273 | 194 |
| 15 | 0 | | | | | | 91 | 168 | 210 | 271 | 274 | 193 |
| 16 | 0 | | | | | | 98 | 171 | 206 | 268 | 274 | 99 |
| 17 | 0 | | | | | | 98 | 168 | 202 | 270 | 273 | 23 |
| 18 | 0 | | | | | | 97 | 168 | 219 | 273 | 273 | 22 |
| 19 | 0 | | | | | | 104 | 165 | 229 | 273 | 273 | 21 |
| 20 | 0 | | | | | | 109 | 168 | 228 | 273 | 273 | 21 |
| 21 | 0 | | | | | | 107 | 168 | 227 | 275 | 271 | 20 |
| 22 | 0 | | | | | | 106 | 175 | 227 | 274 | 270 | 20 |
| 23 | 0 | | | | | | 104 | 177 | 226 | 274 | 270 | 19 |
| 24 | 0 | | | | | | 104 | 176 | 235 | 274 | 271 | 19 |
| 25 | 0 | | | | | | 107 | 175 | 238 | 274 | 269 | 18 |
| 26 | 0 | | | | | | 107 | 165 | 237 | 265 | 281 | 18 |
| 27 | 0 | | | | | | 106 | 155 | 237 | 274 | 252 | 18 |
| 28 | 0 | | | | | | 115 | 155 | 237 | 275 | 250 | 18 |
| 29 | 0 | | | | | | 122 | 154 | 237 | 275 | 248 | 18 |
| 30 | 0 | | | | | | 127 | 154 | 236 | 277 | 246 | 18 |
| 31 | 0 | | | | | | - | 152 | - | 277 | 246 | - |
| Month | | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | |
| October..... | | | | | | | 134 | 10 | 0 | 4.3 | 266 | |
| November..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| December..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| Calendar year 1941..... | | | | | | | 35,147 | 263 | 0 | 96.3 | 69,700 | |
| January..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| February..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| March..... | | | | | | | 0 | 0 | 0 | 0 | 0 | |
| April..... | | | | | | | 2,251 | 127 | 0 | 75.0 | 4,460 | |
| May..... | | | | | | | 4,573 | 177 | 130 | 157 | 9,670 | |
| June..... | | | | | | | 6,409 | 238 | 157 | 214 | 12,710 | |
| July..... | | | | | | | 8,418 | 280 | 236 | 272 | 16,700 | |
| August..... | | | | | | | 8,342 | 276 | 246 | 269 | 16,550 | |
| September..... | | | | | | | 3,433 | 227 | 18 | 114 | 6,810 | |
| Water year 1941-42..... | | | | | | | 33,860 | 280 | 0 | 92.8 | 67,170 | |

Note.- No gage-height record Jan. 7 to Apr. 2.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Osoyoos Lake near Oroville, Wash.

(International gaging station)

Location.- Water-stage recorder, lat. 48°59'15", long. 119°27'15", in lot 1, sec. 8, T. 40 N., R. 27 E., on west shore, 1 mile south of international boundary and 3 miles north of Oroville. Datum of gage is at mean sea level, subject to correction to datum of 1929.

Drainage area.- 3,250 square miles.

Records available.- July 1928 to September 1942.

Extremes.- Maximum water-surface elevation during year, 916.54 feet May 29; minimum, 914.12 feet Mar. 29.

1928-42: Maximum water-surface elevation, 917.23 feet Apr. 28, 1934; minimum, 911.21 feet Oct. 14, 1929.

Remarks.- Diversion in Canada for irrigation. Okanogan River subject to natural regulation by several lakes, and to artificial regulation, as an aid to navigation, by Okanogan Lake. Dam at Zosel's mill in Oroville may cause backwater in Osoyoos Lake.

Cooperation.- This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 15.36 | 15.35 | 15.51 | 15.55 | 15.73 | 15.07 | 14.22 | 15.65 | 16.49 | 16.42 | 15.09 | 15.36 |
| 2 | 15.36 | 15.35 | 15.53 | 15.54 | 15.72 | 15.00 | 14.29 | 15.63 | 16.47 | 16.41 | 15.08 | 15.36 |
| 3 | 15.39 | 15.35 | 15.52 | 15.55 | 15.72 | 14.95 | 14.37 | 15.60 | 16.43 | 16.41 | 15.07 | 15.36 |
| 4 | 15.41 | 15.35 | 15.55 | 15.53 | 15.73 | 14.88 | 14.45 | 15.57 | 16.37 | 16.39 | 15.04 | 15.36 |
| 5 | 15.42 | 15.37 | 15.55 | 15.52 | 15.73 | 14.84 | 14.54 | 15.52 | 16.35 | 16.38 | 15.02 | 15.37 |
| 6 | 15.42 | 15.38 | 15.57 | 15.52 | 15.72 | 14.78 | 14.64 | 15.48 | 16.34 | 16.35 | 15.99 | 15.37 |
| 7 | 15.43 | 15.39 | 15.57 | 15.52 | 15.71 | 14.73 | 14.72 | 15.44 | 16.34 | 16.33 | 15.96 | 15.38 |
| 8 | 15.43 | 15.39 | 15.57 | 15.55 | 15.71 | 14.68 | 14.83 | 15.42 | 16.33 | 16.30 | 15.94 | 15.39 |
| 9 | 15.41 | 15.38 | 15.57 | 15.57 | 15.72 | 14.64 | 14.92 | 15.43 | 16.35 | 16.27 | 15.92 | 15.40 |
| 10 | 15.41 | 15.38 | 15.57 | 15.58 | 15.72 | 14.59 | 15.03 | 15.50 | 16.36 | 16.25 | 14.91 | 15.40 |
| 11 | 15.41 | 15.39 | 15.57 | 15.59 | 15.71 | 14.55 | 15.17 | 15.60 | 16.38 | 16.24 | 15.88 | 15.39 |
| 12 | 15.41 | 15.39 | 15.57 | 15.60 | 15.71 | 14.50 | 15.29 | 15.67 | 16.41 | 16.21 | 15.84 | 15.40 |
| 13 | 15.40 | 15.40 | 15.56 | 15.60 | 15.70 | 14.49 | 15.39 | 15.70 | 16.42 | 16.19 | 15.79 | 15.43 |
| 14 | 15.39 | 15.41 | 15.57 | 15.60 | 15.70 | 14.44 | 15.52 | 15.74 | 16.42 | 16.20 | 15.76 | 15.43 |
| 15 | 15.38 | 15.42 | 15.58 | 15.60 | 15.69 | 14.40 | 15.52 | 15.76 | 16.44 | 16.20 | 15.75 | 15.43 |
| 16 | 15.38 | 15.45 | 15.72 | 15.60 | 15.69 | 14.39 | 15.69 | 15.75 | 16.44 | 16.27 | 15.74 | 15.43 |
| 17 | 15.38 | 15.46 | 15.72 | 15.60 | 15.67 | 14.36 | 15.79 | 15.73 | 16.45 | 16.31 | 15.72 | 15.40 |
| 18 | 15.39 | 15.46 | 15.74 | 15.60 | 15.64 | 14.32 | 15.66 | 15.71 | 16.45 | 16.32 | 15.70 | 15.35 |
| 19 | 15.41 | 15.45 | 15.74 | 15.60 | 15.62 | 14.30 | 15.68 | 15.69 | 16.44 | 16.34 | 15.69 | 15.34 |
| 20 | 15.40 | 15.44 | 15.78 | 15.60 | 15.58 | 14.26 | 15.89 | 15.65 | 16.44 | 16.35 | 15.68 | 15.33 |
| 21 | 15.40 | 15.44 | 15.78 | 15.61 | 15.56 | 14.24 | 15.90 | 15.62 | 16.43 | 16.33 | 15.64 | 15.32 |
| 22 | 15.40 | 15.44 | 15.78 | 15.61 | 15.49 | 14.21 | 15.96 | 15.65 | 16.42 | 16.32 | 15.58 | 15.30 |
| 23 | 15.40 | 15.43 | 15.79 | 15.61 | 15.44 | 14.20 | 15.97 | 15.71 | 16.41 | 16.30 | 15.57 | 15.29 |
| 24 | 15.39 | 15.41 | 15.79 | 15.61 | 15.38 | 14.19 | 15.94 | 15.79 | 16.39 | 16.27 | 15.56 | 15.27 |
| 25 | 15.38 | 15.43 | 15.77 | 15.64 | 15.31 | 14.18 | 15.92 | 15.92 | 16.40 | 16.23 | 15.49 | 15.26 |
| 26 | 15.37 | 15.44 | 15.73 | 15.67 | 15.26 | 14.15 | 15.89 | 16.09 | 16.40 | 16.18 | 15.46 | 15.23 |
| 27 | 15.37 | 15.45 | 15.72 | 15.72 | 15.19 | 14.14 | 15.84 | 16.26 | 16.40 | 16.18 | 15.42 | 15.22 |
| 28 | 15.37 | 15.46 | 15.69 | 15.73 | 15.13 | 14.14 | 15.80 | 16.48 | 16.41 | 16.17 | 15.41 | 15.21 |
| 29 | 15.34 | 15.47 | 15.67 | 15.73 | - | 14.13 | 15.73 | 16.52 | 16.41 | 16.14 | 15.39 | 15.20 |
| 30 | 15.33 | 15.49 | 15.66 | 15.73 | - | 14.13 | 15.67 | 16.50 | 16.42 | 16.13 | 15.39 | 15.19 |
| 31 | 15.33 | - | 15.62 | 15.72 | - | 14.16 | - | 16.50 | - | 16.10 | 15.35 | - |

Note.- Add 906 feet to obtain elevation above mean sea level.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

OKANOGAN RIVER BASIN

Okanogan River near Tonasket, Wash.

(International gaging station)

Location.— Water-stage recorder, lat. 48°38'00", long. 119°27'50", in lot 3, sec. 8, T. 36 N., R. 27 E., 1,000 feet upstream from Chewiliken Creek and 5½ miles south of Tonasket.

Drainage area.— 7,250 square miles.

Records available.— April 1929 to September 1942. May 1911 to September 1925 (equivalent records at site a quarter of a mile upstream from Salmon Creek at Okanogan, published as Okanogan River at Okanogan) in reports of Geological Survey. June 1911 to September 1933 in State Water-Supply Bulletin 5.

Average discharge.— 27 years (1911-25, 1929-42), 2,693 second-feet.

Extremes.— Maximum discharge during year, 18,900 second-feet May 28 (gage height, 15.78 feet); minimum, 763 second-feet Apr. 3.

1911-25, 1929-42: Maximum discharge recorded, 25,400 second-feet Apr. 27, 1934 (gage height, 18.3 feet); minimum recorded, 128 second-feet Sept. 5, 1931 (gage height, 3.43 feet).

Remarks.— Records excellent except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Flow subject to natural regulation by several lakes, and, as an aid to navigation, to artificial regulation by Okanogan Lake. Power plant on Similkameen River affects low flow slightly.

Cooperation.— This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating tables, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to May 21 | | | | May 22 to Sept. 30 | | | |
|------------------|-------|------|-------|--------------------|-------|------|--------|
| 6.2 | 750 | 9.0 | 3,780 | 6.0 | 1,360 | 12.0 | 10,600 |
| 6.6 | 1,020 | 10.0 | 5,680 | 6.8 | 2,240 | 14.0 | 14,800 |
| 7.0 | 1,350 | 11.0 | 7,720 | 8.4 | 4,390 | 15.6 | 18,500 |
| 7.8 | 2,160 | | | 10.0 | 6,940 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|---------|---------|-------|---------|-------|--------|--------|-------|-------|-------|
| 1 | 1,830 | 2,340 | 2,000 | bl, 660 | 1,630 | 1,220 | 799 | 4,180 | 13,500 | 5,940 | 2,990 | 1,510 |
| 2 | 1,880 | 2,290 | *2,100 | bl, 660 | 1,630 | 1,180 | 815 | 4,270 | 12,500 | 5,780 | 2,860 | 1,510 |
| 3 | 2,100 | 2,220 | 2,160 | bl, 780 | 1,630 | 1,180 | 782 | 4,180 | 12,800 | 5,620 | 2,860 | 1,460 |
| 4 | 2,220 | 2,160 | 2,910 | bl, 740 | 1,730 | 1,140 | 815 | 4,100 | 12,700 | 5,460 | 2,900 | 1,460 |
| 5 | 2,780 | 2,160 | 3,060 | bl, 780 | 1,680 | 1,140 | 848 | 3,940 | 12,900 | 5,140 | 2,660 | 1,460 |
| 6 | 2,760 | 2,220 | 2,840 | bl, 800 | 1,630 | al, 120 | 880 | 3,860 | 12,700 | 4,990 | 2,540 | 1,410 |
| 7 | 2,660 | 2,290 | 2,780 | bl, 830 | 1,630 | al, 100 | 950 | 4,020 | 13,100 | 4,840 | 2,480 | 1,410 |
| 8 | 2,560 | 2,290 | 2,760 | bl, 860 | 1,630 | al, 080 | 1,060 | 4,440 | 13,700 | 4,640 | 2,420 | 1,410 |
| 9 | 2,520 | 2,220 | 2,660 | bl, 870 | 1,580 | al, 070 | 1,160 | 4,990 | 13,100 | 4,240 | 2,420 | 1,410 |
| 10 | 2,400 | 2,160 | 2,580 | 1,880 | 1,580 | al, 060 | 1,260 | 5,780 | 12,500 | 4,090 | 2,420 | 1,460 |
| 11 | 2,460 | 2,160 | 2,580 | 1,880 | 1,580 | al, 050 | 1,400 | 6,410 | 11,600 | 3,950 | 2,360 | 1,460 |
| 12 | 3,060 | 2,160 | 2,460 | 1,880 | 1,580 | al, 050 | 1,830 | 6,410 | 10,600 | 3,810 | 2,240 | 1,460 |
| 13 | 2,980 | 2,220 | 2,400 | 1,880 | 1,580 | al, 050 | 2,460 | 6,200 | 9,830 | 3,670 | 2,120 | 1,460 |
| 14 | 2,840 | 2,280 | 2,160 | 1,880 | 1,580 | al, 040 | 2,910 | 6,840 | 9,450 | 3,600 | 2,060 | 1,460 |
| 15 | 2,840 | 2,340 | 2,160 | 1,830 | 1,530 | 1,020 | 3,060 | 7,500 | 9,450 | 3,530 | 2,000 | 1,410 |
| 16 | 3,060 | 2,520 | 2,340 | *1,790 | 1,530 | 1,020 | 3,060 | 7,720 | 9,640 | 3,600 | 1,940 | 1,460 |
| 17 | 3,120 | 2,520 | 2,400 | 1,780 | 1,530 | 985 | 3,190 | 7,500 | 9,260 | 3,670 | 1,940 | 1,460 |
| 18 | 3,940 | 2,400 | 2,400 | 1,730 | 1,480 | 985 | 3,560 | 7,280 | 8,700 | 3,510 | 1,890 | 1,410 |
| 19 | 3,560 | 2,280 | 2,280 | 1,730 | 1,480 | 985 | 3,780 | 7,280 | 8,160 | 3,510 | 1,890 | 1,410 |
| 20 | 3,400 | 2,220 | 2,280 | 1,730 | 1,480 | 950 | 3,860 | 7,280 | 7,800 | 3,670 | 1,890 | 1,410 |
| 21 | 3,330 | 2,160 | 2,340 | 1,730 | 1,440 | 950 | 4,270 | 7,720 | 7,450 | 3,530 | 1,760 | 1,410 |
| 22 | 3,190 | 2,050 | 2,280 | 1,680 | 1,400 | 950 | 5,120 | 9,880 | 6,940 | 3,590 | 1,560 | 1,410 |
| 23 | 3,060 | 2,050 | 2,280 | 1,630 | 1,400 | 950 | 5,580 | 11,400 | 6,770 | 3,260 | 1,560 | 1,360 |
| 24 | 2,910 | 1,830 | 2,220 | 1,680 | 1,350 | 915 | 5,360 | 13,300 | 6,600 | 3,120 | 1,620 | 1,350 |
| 25 | 2,780 | 1,780 | 2,160 | 1,630 | 1,350 | 880 | 5,180 | 14,400 | 6,600 | 3,060 | 1,560 | 1,340 |
| 26 | 2,720 | 2,000 | 2,050 | 1,940 | 1,300 | 915 | 4,990 | 15,700 | 6,430 | 2,920 | 1,560 | 1,320 |
| 27 | 2,660 | 2,100 | 1,940 | 2,160 | 1,260 | 880 | 4,800 | 17,800 | 6,430 | 2,920 | 1,510 | 1,300 |
| 28 | 2,580 | 2,050 | bl, 840 | 2,100 | 1,220 | 848 | 4,530 | 18,600 | 6,260 | 3,120 | 1,510 | 1,290 |
| 29 | 2,520 | 2,000 | 1,730 | 1,700 | - | 850 | 4,360 | 16,600 | 6,260 | 2,990 | 1,510 | 1,250 |
| 30 | 2,400 | 2,000 | bl, 690 | 1,680 | - | 848 | 4,160 | 15,100 | 6,260 | 2,920 | 1,510 | 1,250 |
| 31 | 2,340 | - | bl, 670 | 1,680 | - | 808 | - | 14,000 | - | 2,920 | 1,510 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 85,450 | 3,940 | 1,830 | 2,756 | 169,500 |
| November..... | 65,440 | 2,520 | 1,780 | 2,181 | 129,800 |
| December..... | 71,510 | 3,060 | 1,670 | 2,307 | 141,800 |
| Calendar year 1941..... | 727,134 | 5,180 | 560 | 1,992 | 1,442,000 |
| January..... | 55,810 | 2,160 | 1,630 | 1,800 | 110,700 |
| February..... | 42,420 | 1,730 | 1,220 | 1,515 | 84,140 |
| March..... | 31,249 | 1,220 | 808 | 1,008 | 61,980 |
| April..... | 86,919 | 5,580 | 792 | 2,897 | 172,400 |
| May..... | 267,580 | 18,500 | 3,860 | 8,632 | 530,700 |
| June..... | 269,190 | 13,700 | 6,260 | 9,640 | 573,600 |
| July..... | 121,900 | 5,940 | 2,920 | 3,932 | 241,600 |
| August..... | 63,970 | 2,990 | 1,510 | 2,064 | 126,900 |
| September..... | 42,190 | 1,510 | 1,250 | 1,406 | 83,680 |
| Water year 1941-42..... | 1,223,628 | 18,500 | 782 | 3,352 | 2,427,000 |

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for Methow River at Twisp and Similkameen River near Nighthawk.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Similkameen River near Nighthawk, Wash.

(International gaging station)

Location.— Water-stage recorder, lat. 48°59'10", long. 119°37'00", in NW¼ sec. 7, T. 40 N., R. 26 E., 1½ miles downstream from Nighthawk and 12 miles upstream from mouth.

Drainage area.— 3,420 square miles.

Records available.— September 1928 to September 1942. May 1911 to September 1928 (mean monthly discharge including that of Oroville-Tonasket Irrigation District canal) at site 4 miles upstream from Oroville, published as Similkameen River near Oroville.

Average discharge.— 31 years, 2,076 second-feet.

Extremes.— Maximum discharge during year, 20,000 second-feet May 27 (gage height, 13.09 feet); minimum, 382 second-feet Sept. 15, 29, 30 (gage height, 3.01 feet).

1928-42: Maximum discharge, 27,200 second-feet Apr. 26, 1934 (gage height, 14.96 feet); minimum, 120 second-feet Jan. 6, 1930 (gage height, 2.05 feet).

Remarks.— Records excellent except those for periods of no gage-height record or ice effect, which are fair. Flow at high stages regulated by natural diversion into and release from Palmer Lake. Small diversions above station for irrigation.

Cooperation.— This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-------|-----|-------|------|--------|
| 3.2 | 470 | 5.0 | 1,870 | 10.0 | 10,500 |
| 3.5 | 626 | 5.5 | 2,450 | 12.0 | 16,200 |
| 3.7 | 745 | 6.0 | 3,040 | 13.0 | 19,700 |
| 4.0 | 950 | 7.0 | 4,430 | | |
| 4.5 | 1,380 | 8.0 | 6,150 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|------|------|------|-------|--------|--------|-------|-------|-------|
| 1 | 1,290 | 1,670 | *1,290 | 571 | 745 | 570 | 561 | 3,430 | 11,200 | 4,430 | 1,520 | 593 |
| 2 | 1,520 | 1,620 | 1,580 | 6600 | 745 | 560 | 568 | 3,560 | 10,700 | 4,430 | 1,420 | 576 |
| 3 | 1,620 | 1,570 | 1,770 | 6530 | 745 | 560 | 649 | 3,300 | 11,000 | 4,130 | 1,350 | 555 |
| 4 | 2,040 | 1,520 | 2,490 | 6650 | 745 | 550 | 684 | 3,300 | 11,700 | 3,880 | 1,290 | 540 |
| 5 | 2,310 | 1,570 | 2,140 | 6680 | 745 | 540 | 706 | 3,300 | 11,500 | 3,700 | 1,200 | 519 |
| 6 | 2,140 | 1,620 | 2,040 | 6710 | 739 | 540 | 771 | 3,300 | 11,500 | 3,560 | 1,160 | 504 |
| 7 | 1,980 | 1,670 | 1,980 | 727 | 727 | 540 | 880 | 3,560 | 12,300 | 3,300 | 1,160 | 494 |
| 8 | 1,920 | 1,620 | 1,920 | 762 | 714 | 540 | 1,030 | 4,130 | 12,300 | 3,040 | 1,160 | 490 |
| 9 | 1,870 | 1,670 | 1,620 | 790 | 708 | 550 | 1,070 | 4,590 | 11,600 | 2,790 | 1,160 | 480 |
| 10 | 1,820 | 1,520 | 1,770 | 810 | 696 | 550 | 1,200 | 5,490 | 11,000 | 2,670 | 1,160 | 460 |
| 11 | 2,420 | 1,470 | 1,670 | 810 | 690 | 560 | 1,470 | 5,420 | 9,740 | 2,550 | 1,030 | 475 |
| 12 | 2,360 | 1,520 | 1,620 | 880 | 690 | 570 | 2,040 | 5,420 | 8,830 | 2,490 | 950 | 475 |
| 13 | 2,240 | 1,670 | 1,420 | 915 | 672 | 570 | 2,370 | 5,420 | 8,170 | 2,370 | 915 | 470 |
| 14 | 2,240 | 1,620 | 1,290 | 880 | 649 | 570 | 2,490 | 6,150 | 7,960 | 2,200 | 860 | 461 |
| 15 | 2,400 | 1,770 | 1,470 | *845 | 649 | 570 | 2,430 | 6,730 | 8,170 | 2,140 | 845 | 451 |
| 16 | 2,480 | 1,820 | 1,520 | 845 | 649 | 561 | 2,310 | 6,530 | 8,170 | 2,200 | 804 | 445 |
| 17 | 3,300 | 1,770 | 1,520 | 810 | 643 | 555 | 2,550 | 6,340 | 7,540 | 2,310 | 771 | 456 |
| 18 | 2,900 | 1,670 | 1,420 | 804 | 626 | 550 | 2,790 | 6,150 | 6,930 | 2,430 | 739 | 461 |
| 19 | 2,820 | 1,570 | 1,340 | 810 | 610 | 550 | 2,850 | 6,340 | 6,530 | 2,370 | 714 | 475 |
| 20 | 2,720 | 1,520 | 1,580 | 804 | 610 | 545 | 3,040 | 6,530 | 6,150 | 2,140 | 884 | 475 |
| 21 | 2,620 | 1,380 | 1,380 | 752 | 600 | 540 | 3,700 | 7,330 | 5,780 | 1,950 | 655 | 470 |
| 22 | 2,490 | 1,420 | 1,290 | 752 | 600 | 529 | 4,750 | 9,510 | 5,420 | 1,670 | 632 | 456 |
| 23 | 2,370 | 1,200 | 1,290 | 721 | 590 | 529 | 4,590 | 12,300 | 5,250 | 1,720 | 620 | 437 |
| 24 | 2,260 | 1,070 | 1,240 | 714 | 580 | 524 | 4,280 | 13,700 | 5,080 | 1,620 | 604 | 423 |
| 25 | 2,200 | 1,290 | 1,160 | 784 | 590 | 519 | 4,130 | 15,300 | 5,080 | 1,620 | 592 | 418 |
| 26 | 2,090 | 1,470 | 1,070 | 604 | 580 | 514 | 3,840 | 17,600 | 5,080 | 1,620 | 582 | 410 |
| 27 | 1,980 | 1,420 | 1,030 | 797 | 580 | 509 | 3,700 | 19,300 | 4,910 | 1,570 | 568 | 400 |
| 28 | 1,920 | 1,340 | 880 | 790 | 570 | 514 | 3,560 | 15,300 | 4,750 | 1,570 | 593 | 392 |
| 29 | 1,820 | 1,290 | 810 | 778 | - | 519 | 3,430 | 12,800 | 4,750 | 1,470 | 610 | 387 |
| 30 | 1,770 | 1,240 | 678 | 758 | - | 519 | 3,430 | 12,300 | 4,750 | 1,520 | 626 | 382 |
| 31 | 1,670 | - | 593 | 745 | - | 535 | - | 11,700 | - | 1,570 | 626 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|-----------|
| | | | | | | Inches | Acre-feet |
| October..... | 67,580 | 3,500 | 1,290 | 2,180 | 0.637 | 0.73 | 134,000 |
| November..... | 45,470 | 1,820 | 1,070 | 1,616 | .445 | .49 | 90,190 |
| December..... | 44,671 | 2,490 | 593 | 1,441 | .421 | .49 | 88,600 |
| Calendar year 1941..... | 570,055 | 4,750 | 296 | 1,562 | .457 | 6.19 | 1,131,000 |
| January..... | 23,728 | 915 | 571 | 765 | .224 | .26 | 47,060 |
| February..... | 18,497 | 745 | 570 | 661 | .193 | .20 | 36,690 |
| March..... | 16,852 | 570 | 509 | 544 | .159 | .18 | 33,430 |
| April..... | 71,891 | 4,750 | 561 | 2,396 | .701 | .78 | 142,600 |
| May..... | 246,060 | 19,300 | 3,300 | 7,937 | 2.32 | 2.68 | 488,100 |
| June..... | 243,740 | 12,300 | 4,750 | 8,125 | 2.38 | 2.65 | 485,500 |
| July..... | 77,160 | 4,430 | 1,470 | 2,469 | .728 | .84 | 155,000 |
| August..... | 27,660 | 1,520 | 582 | 892 | .261 | .30 | 54,860 |
| September..... | 14,051 | 593 | 382 | 468 | .137 | .15 | 27,870 |
| Water year 1941-42..... | 697,360 | 19,300 | 382 | 2,469 | .719 | 9.75 | 1,760,000 |

Peak discharge.— May 10 (11 p.m.) 5,600 sec.-ft.; May 15 (8 p.m.) 6,730 sec.-ft.; May 27 (6 a.m.) 20,000 sec.-ft.; June 4 (2:30 a.m.) 12,000 sec.-ft.; June 7 (8 p.m.) 12,800 sec.-ft.; June 16 (3 to 5 a.m.) 8,590 sec.-ft.

* Winter-discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Notes.— No gage-height record Oct. 11-21, Feb. 19 to Mar. 15; discharge computed on basis of records for Okanogan River near Tonasket and Methow River at Twisp.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Methow River at Twisp, Wash.

Location.— Water-stage recorder, lat. 48°21'40", long. 120°06'50", in sec. 17, T. 33 N., R. 22 E., at highway bridge at Twisp, a quarter of a mile downstream from Twisp River.

Drainage area.— 1,330 square miles.

Records available.— June 1919 to September 1929, October 1933 to September 1942.

Average discharge.— 19 years, 1,170 second-feet.

Extremes.— Maximum discharge during year, 21,300 second-feet May 26 (gage height, 10.76 feet, from floodmark); minimum, 188 second-feet Sept. 29.

1919-29, 1933-42: Maximum discharge, that of May 26, 1942; minimum observed, 134 second-feet Sept. 4, 5, 1926, Sept. 9, 10, 1929 (gage height, 1.42 feet), but may have been less sometime during period of ice effect, Jan. 6 to Mar. 4, 1937.

Remarks.— Records excellent except those for period of doubtful gage-height record, which are fair, and those for period of ice effect, which are poor. Water diverted above station for irrigation by two canals by Methow Valley Irrigation District, by Risley ditch and by many other ditches.

Rating table, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-------|------|--------|
| 1.5 | 178 | 3.5 | 1,370 | 7.0 | 7,490 |
| 1.7 | 234 | 4.0 | 1,900 | 8.0 | 10,400 |
| 2.0 | 348 | 4.5 | 2,520 | 9.0 | 13,900 |
| 2.5 | 610 | 5.0 | 3,260 | 10.0 | 17,800 |
| 3.0 | 950 | 6.0 | 5,110 | 11.0 | 22,200 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|-------|------|------|------|------|------------------|---------|---------|-------|----------------------|------|-------|
| 1 | 696 | 728 | 598 | b310 | 389 | 327 | 486 | 2,140 | 5,760 | 3,590 | 702 | 244 |
| 2 | 690 | 702 | 671 | b300 | 389 | 327 | 552 | 2,020 | 5,990 | 3,500 | 677 | 237 |
| 3 | 702 | 734 | *650 | b290 | 389 | 323 | 610 | 1,960 | 5,990 | 3,260 | 647 | 231 |
| 4 | 822 | 747 | 815 | b280 | 385 | 319 | 671 | 1,900 | 6,230 | 3,020 | 593 | 231 |
| 5 | 815 | 741 | 754 | b280 | 376 | 323 | 768 | 1,840 | 6,470 | 2,950 | 546 | 228 |
| 6 | 801 | 721 | 734 | b290 | 376 | 323 | 918 | 1,900 | 7,490 | 2,590 | 502 | 225 |
| 7 | 815 | 690 | 715 | b310 | 371 | 323 | 1,030 | 2,140 | 8,590 | 2,320 | 569 | 222 |
| 8 | 788 | 684 | 664 | b330 | 366 | 327 | 1,150 | 2,460 | 7,760 | 2,020 | 653 | 219 |
| 9 | 768 | 665 | 677 | b340 | 362 | 335 | 1,240 | 3,020 | 7,230 | 1,790 | 616 | 216 |
| 10 | 781 | 665 | 628 | b350 | 362 | 348 | 1,370 | 3,590 | 5,990 | 1,620 | 581 | 213 |
| 11 | 822 | 647 | 622 | 353 | 357 | 353 | 1,740 | 3,500 | 5,000 | 1,470 | 519 | 213 |
| 12 | 836 | 647 | 564 | 323 | 357 | 353 | 2,020 | 3,260 | 4,400 | 1,370 | 481 | 207 |
| 13 | 815 | 671 | 593 | 306 | 348 | 353 | 2,080 | 3,340 | 4,310 | 1,240 | 449 | 204 |
| 14 | 801 | 781 | 610 | 295 | 357 | 348 | 2,200 | 3,590 | 4,800 | 1,190 | 419 | 204 |
| 15 | 843 | 788 | 628 | 291 | 348 | 348 | 2,080 | 3,590 | 5,320 | 1,190 | 394 | 210 |
| 16 | 903 | 741 | 622 | 283 | 353 | 348 | 2,020 | 3,420 | 4,700 | 1,190 | 376 | 201 |
| 17 | 990 | 702 | 604 | 276 | 348 | 348 | 2,140 | 3,340 | 4,030 | 1,240 | 366 | 204 |
| 18 | 998 | 671 | 598 | 268 | 348 | 353 | 2,140 | 3,180 | 3,590 | 1,150 | 353 | 204 |
| 19 | 1,010 | 634 | 593 | 279 | 335 | 357 | 2,140 | 3,180 | 3,260 | 1,070 | 335 | 204 |
| 20 | 1,010 | 616 | 604 | 327 | 348 | 362 | 2,320 | 3,420 | 3,020 | 998 | 310 | 210 |
| 21 | 990 | 628 | 575 | 385 | 344 | 362 | 3,020 | 4,600 | 2,880 | 942 | 298 | 207 |
| 22 | 958 | 581 | 564 | 371 | 340 | 371 | 3,590 | 8,310 | 2,730 | 887 | 283 | 204 |
| 23 | 942 | 530 | 548 | 376 | 344 | 371 | 3,260 | 11,100 | 2,730 | 829 | 276 | 199 |
| 24 | 910 | 604 | 476 | 394 | 344 | 366 | 3,020 | 12,800 | 2,660 | 768 | 272 | 199 |
| 25 | 887 | 653 | 476 | 404 | 335 | 362 | 2,730 | 16,100 | 2,800 | 715 | 265 | 196 |
| 26 | 864 | 628 | 414 | 404 | 327 | 366 | 2,520 | 120,000 | 2,980 | 781 | 265 | 199 |
| 27 | 843 | 610 | 357 | 404 | 340 | 380 | 2,320 | 118,000 | 2,880 | 761 | 261 | 199 |
| 28 | 815 | 598 | b340 | *404 | 331 | 380 | 2,260 | 114,000 | 3,100 | 721 | 268 | 194 |
| 29 | 788 | 593 | b330 | 389 | - | 394 | 2,060 | 48,000 | 3,420 | 728 | 272 | 188 |
| 30 | 754 | 593 | b330 | 385 | - | 419 | 2,020 | 6,470 | 3,500 | 747 | 268 | 194 |
| 31 | 741 | - | b320 | 385 | - | 449 | - | 5,990 | - | 734 | 268 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 26,198 | 1,010 | 690 | 845 | 51,960 | | |
| November..... | | | | | | 19,993 | 768 | 530 | 666 | 39,660 | | |
| December..... | | | | | | 17,894 | 850 | 320 | 577 | 35,490 | | |
| Calendar year 1941..... | | | | | | 416,613 | 5,020 | 235 | 1,142 | 826,700 | | |
| January..... | | | | | | 10,382 | 404 | 268 | 335 | 20,590 | | |
| February..... | | | | | | 9,969 | 369 | 327 | 356 | 19,770 | | |
| March..... | | | | | | 11,018 | 449 | 319 | 355 | 21,850 | | |
| April..... | | | | | | 56,495 | 3,590 | 1,888 | 1,883 | 112,100 | | |
| May..... | | | | | | 182,160 | 20,000 | 1,484 | 5,876 | 361,300 | | |
| June..... | | | | | | 139,430 | 8,590 | 2,660 | 4,648 | 276,600 | | |
| July..... | | | | | | 47,381 | 3,590 | 715 | 1,528 | 93,980 | | |
| August..... | | | | | | 13,074 | 702 | 258 | 422 | 25,930 | | |
| September..... | | | | | | 6,306 | 244 | 188 | 210 | 12,510 | | |
| Water year 1941-42..... | | | | | | 540,300 | 20,000 | 188 | 1,480 | 1,072,000 | | |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed on basis of records for Similkameen River near Nighthawk.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Stehekin River at Stehekin, Wash.

Location.- Water-stage recorder, lat. 48°19'50", long. 120°41'40", in SE½ sec. 26, T. 33 N., R. 17 E., 1,200 feet upstream from Boulder Creek and 2 miles upstream from Lake Chelan and Stehekin.

Drainage area.- 372 square miles, including that of Boulder Creek.

Records available.- October 1910 to October 1915, January 1927 to September 1942. Flow of Boulder Creek included.

Average discharge.- 20 years, 1,322 second-feet.

Extremes.- Maximum discharge during year, 8,370 second-feet May 25 (gauge height, 26.27 feet); minimum, 226 second-feet Mar. 4 (gauge height, 19.05 feet).
1910-15, 1927-42: Maximum discharge, 12,900 second-feet June 2, 1936 (gauge height, 27.18 feet), from rating curve extended above 8,500 second-feet; minimum, 56 second-feet Jan. 12, 1930.

Remarks.- Records good. At very high stages small part of flow is diverted above gage by natural sloughs; quantity diverted included in daily discharge.

Cooperation.- Gauge-height record collected in cooperation with Washington Water Power Co., which furnished many discharge measurements.

Rating table, water year 1941-42 (gauge height, in feet, and discharge, in second-feet)

| | | | | | |
|------|-----|------|-------|------|-------|
| 19.1 | 241 | 20.3 | 910 | 23.0 | 4,060 |
| 19.3 | 317 | 20.6 | 1,160 | 24.0 | 5,730 |
| 19.5 | 406 | 21.0 | 1,530 | 25.0 | 7,740 |
| 19.7 | 508 | 21.5 | 2,060 | | |
| 20.0 | 690 | 22.0 | 2,640 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1 | 828 | 565 | 613 | 401 | 263 | 229 | 548 | 1,360 | 2,900 | 4,060 | 1,120 | 435 |
| 2 | 897 | 536 | 1,360 | 481 | 258 | 235 | 632 | 1,300 | 3,240 | 4,220 | 1,120 | 466 |
| 3 | 2,170 | 565 | 1,680 | 406 | 266 | 232 | 658 | 1,300 | 3,380 | 3,820 | 1,120 | 514 |
| 4 | 1,580 | 589 | 1,380 | 374 | 266 | 229 | 746 | 1,300 | 3,240 | 3,820 | 1,160 | 571 |
| 5 | 1,080 | 790 | 1,200 | 365 | 263 | 241 | 910 | 1,300 | 3,520 | 3,510 | 1,120 | 589 |
| 6 | 958 | 677 | 1,160 | 374 | 263 | 235 | 1,080 | 1,430 | 4,380 | 2,770 | 1,200 | 487 |
| 7 | 898 | 607 | 1,030 | 369 | 259 | 235 | 1,160 | 1,750 | 4,220 | 2,520 | 1,160 | 436 |
| 8 | 805 | 571 | 958 | 374 | 259 | 241 | 1,250 | 2,100 | 3,600 | 2,160 | 1,200 | 466 |
| 9 | 820 | 565 | 910 | 365 | 255 | 235 | 1,540 | 2,400 | 3,240 | 1,940 | 1,250 | 497 |
| 10 | 1,430 | 559 | 842 | 347 | 255 | 309 | 1,480 | 2,280 | 2,770 | 1,830 | 1,200 | 397 |
| 11 | 1,300 | 625 | 798 | 338 | 255 | 301 | 1,880 | 2,050 | 2,340 | 1,880 | 1,070 | 383 |
| 12 | 1,200 | 619 | 746 | 330 | 252 | 297 | 2,050 | 1,780 | 2,100 | 1,480 | 918 | 445 |
| 13 | 1,030 | 697 | 718 | 321 | 248 | 297 | 2,000 | 1,780 | 2,450 | 1,380 | 812 | 482 |
| 14 | 1,200 | 1,040 | 690 | 317 | 245 | 293 | 1,880 | 2,050 | 3,170 | 1,530 | 828 | 430 |
| 15 | 1,300 | 926 | 697 | 313 | 248 | 293 | 1,730 | 2,100 | 4,220 | 1,780 | 872 | 577 |
| 16 | 1,740 | 828 | 697 | 309 | 248 | 293 | 1,680 | 2,050 | 2,980 | 1,730 | 880 | 398 |
| 17 | 1,530 | 753 | 664 | 305 | 248 | 293 | 1,780 | 2,000 | 2,340 | 1,680 | 872 | 334 |
| 18 | 1,300 | 690 | 651 | 301 | 248 | 293 | 1,650 | 2,000 | 2,100 | 1,430 | 926 | 306 |
| 19 | 1,340 | 638 | 619 | 297 | 241 | 289 | 1,730 | 2,160 | 1,940 | 1,480 | 958 | 301 |
| 20 | 1,200 | 601 | 632 | 293 | 245 | 293 | 2,000 | 2,640 | 1,730 | 1,580 | 982 | 338 |
| 21 | 1,120 | 583 | 601 | 285 | 241 | 297 | 2,700 | 3,820 | 1,730 | 1,680 | 895 | 326 |
| 22 | 1,070 | 536 | 583 | 261 | 241 | 297 | 2,700 | 5,780 | 1,680 | 1,730 | 850 | 366 |
| 23 | 1,020 | 514 | 571 | 277 | 241 | 293 | 2,280 | 5,970 | 2,160 | 1,630 | 850 | 369 |
| 24 | 966 | 577 | 525 | 281 | 238 | 289 | 2,000 | 6,160 | 2,100 | 1,380 | 805 | 374 |
| 25 | 842 | 664 | 514 | 281 | 235 | 281 | 1,780 | 7,530 | 2,100 | 1,430 | 607 | 351 |
| 26 | 858 | 607 | 466 | 281 | 232 | 285 | 1,580 | 5,970 | 2,100 | 1,530 | 536 | 343 |
| 27 | 790 | 571 | 455 | 273 | 229 | 289 | 1,480 | 4,060 | 2,340 | 1,360 | 466 | 330 |
| 28 | 718 | 569 | 450 | 266 | 232 | 293 | 1,380 | 3,170 | 3,100 | 1,340 | 497 | 330 |
| 29 | 681 | 559 | 435 | 263 | - | 301 | 1,340 | 2,840 | 3,210 | 1,260 | 445 | 334 |
| 30 | 607 | 613 | 435 | 263 | - | 351 | 1,540 | 2,770 | 3,520 | 1,160 | 440 | 326 |
| 31 | 559 | - | 401 | 263 | - | 406 | - | 2,940 | - | 1,200 | 426 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 33,627 | 2,170 | 589 | 1,085 | 2.92 | 3.56 | 66,700 |
| November..... | 19,224 | 1,040 | 514 | 641 | 1.72 | 1.92 | 38,130 |
| December..... | 23,481 | 1,680 | 401 | 757 | 2.03 | 2.56 | 46,570 |
| Calendar year 1941..... | 395,633 | 3,810 | 221 | 1,084 | 2.91 | 39.57 | 785,100 |
| January..... | 9,934 | 421 | 263 | 320 | .860 | .99 | 19,700 |
| February..... | 6,975 | 266 | 229 | 249 | .669 | .70 | 13,830 |
| March..... | 8,803 | 406 | 229 | 284 | .763 | .88 | 17,460 |
| April..... | 46,794 | 2,700 | 548 | 1,560 | 4.19 | 4.68 | 92,810 |
| May..... | 59,040 | 7,530 | 1,330 | 2,840 | 7.65 | 8.80 | 174,600 |
| June..... | 84,190 | 4,380 | 1,730 | 2,806 | 7.54 | 8.42 | 167,000 |
| July..... | 62,110 | 4,220 | 1,160 | 2,004 | 5.39 | 6.21 | 123,200 |
| August..... | 27,605 | 1,250 | 426 | 890 | 2.39 | 2.76 | 54,750 |
| September..... | 12,269 | 589 | 301 | 409 | 1.10 | 1.23 | 24,340 |
| Water year 1941-42..... | 423,052 | 7,530 | 229 | 1,159 | 3.12 | 42.30 | 839,100 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Lake Chelan at Chelan, Wash.

Location.- Water-stage recorder, lat. 47°50'00", long. 120°05'40", in lot 3, sec. 15, T. 27 N., R. 22 E., 2 miles west of Chelan. Datum of gage is at mean sea level, adjustment of 1912.

Drainage area.- 950 square miles.

Records available.- September 1897 to December 1899, January to June 1905, December 1910 to September 1942.

Extremes.- Maximum water-surface elevation during year, 1,100.0 feet June 27, 29, 30; minimum, 1,091.95 feet Apr. 5.
1897-99, 1905, 1910-42: Maximum water-surface elevation, 1,100.0 feet July 19, 1937, July 1, 8, 1938, July 26, 1939, June 19, 1940, June 22, July 16, 1941, June 27, 29, 30, 1942; minimum, 1,076.76 feet Jan. 27, 28, Dec. 2, 3, 1896.

Remarks.- Reservoir is formed by low concrete dam at lake outlet completed Sept. 3, 1927. Capacity, 676,100 acre-feet between elevations 1,079 and 1,100 feet. Regulation between these elevations is allowed by stipulation of Federal Power Commission. Water is used for power development. Elevation of lake maintained between elevations 1,092 and 1,100 feet during period Aug. 16 to Sept. 15 for scenic effect and recreational purposes.

Cooperation.- Gage-height record collected in cooperation with Washington Water Power Co.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 95.69 | 95.59 | 96.73 | 96.71 | 94.89 | 93.29 | 92.16 | 94.51 | 98.04 | 99.88 | 99.60 | 98.58 |
| 2 | 95.65 | 96.60 | 96.78 | 96.67 | 94.83 | 93.30 | 92.13 | 94.58 | 98.02 | 99.88 | 99.57 | 98.51 |
| 3 | 95.72 | 96.65 | 96.90 | 96.62 | 94.78 | 93.25 | 92.09 | 94.64 | 98.04 | 99.88 | 99.55 | 98.45 |
| 4 | 95.80 | 96.65 | 96.96 | 96.57 | 94.76 | 93.22 | 92.01 | 94.73 | 98.05 | 99.86 | 99.53 | 98.33 |
| 5 | 95.85 | 96.70 | 96.96 | 96.49 | 94.68 | 93.21 | 91.99 | 94.79 | 98.12 | 99.86 | 99.55 | 98.33 |
| 6 | 95.97 | 96.70 | 96.99 | 96.41 | 94.61 | 93.18 | 91.97 | 94.84 | 98.30 | 99.89 | 99.54 | 98.25 |
| 7 | 95.88 | 96.68 | 97.02 | 96.32 | 94.56 | 93.13 | 92.00 | 94.94 | 98.49 | 99.89 | 99.50 | 98.18 |
| 8 | 95.88 | 96.68 | 97.04 | 96.28 | 94.52 | 93.13 | 92.04 | 95.05 | 98.65 | 99.89 | 99.52 | 98.16 |
| 9 | 95.89 | 96.69 | 97.03 | 96.22 | 94.49 | 93.14 | 92.08 | 95.22 | 98.80 | 99.87 | 99.55 | 98.15 |
| 10 | 95.96 | 96.71 | 97.00 | 96.17 | 94.43 | 93.09 | 92.15 | 95.44 | 98.94 | 99.88 | 99.60 | 98.12 |
| 11 | 96.00 | 96.74 | 96.98 | 96.12 | 94.38 | 93.05 | 92.26 | 95.60 | 99.04 | 99.89 | 99.64 | 98.02 |
| 12 | 96.07 | 96.78 | 96.95 | 95.07 | 94.32 | 93.01 | 92.39 | 95.74 | 99.10 | 99.82 | 99.64 | 97.98 |
| 13 | 96.12 | 96.78 | 96.94 | 95.99 | 94.27 | 92.96 | 92.52 | 95.84 | 99.18 | 99.80 | 99.42 | 97.97 |
| 14 | 96.14 | 96.89 | 96.97 | 95.93 | 94.22 | 92.90 | 92.70 | 95.98 | 99.32 | 99.81 | 99.39 | 97.93 |
| 15 | 96.19 | 96.90 | 97.00 | 95.85 | 94.17 | 92.87 | 92.78 | 96.09 | 99.57 | 99.81 | 99.37 | 97.97 |
| 16 | 96.26 | 96.91 | 97.09 | 95.77 | 94.10 | 92.85 | 92.37 | 96.21 | 99.66 | 99.84 | 99.34 | 97.74 |
| 17 | 96.29 | 96.92 | 97.08 | 95.70 | 94.01 | 92.79 | 92.98 | 96.36 | 99.63 | 99.86 | 99.36 | 97.61 |
| 18 | 96.35 | 96.91 | 97.07 | 95.64 | 93.95 | 92.75 | 93.05 | 96.48 | 99.60 | 99.83 | 99.32 | 97.49 |
| 19 | 96.43 | 96.86 | 97.12 | 95.61 | 93.87 | 92.70 | 93.19 | 96.63 | 99.60 | 99.79 | 99.28 | 97.49 |
| 20 | 96.51 | 96.83 | 97.12 | 95.53 | 93.78 | 92.63 | 93.31 | 96.61 | 99.63 | 99.83 | 99.30 | 97.28 |
| 21 | 96.53 | 96.84 | 97.11 | 95.43 | 93.68 | 92.60 | 93.47 | 96.77 | 99.65 | 99.84 | 99.21 | 97.20 |
| 22 | 96.56 | 96.83 | 97.11 | 95.36 | 93.59 | 92.58 | 93.66 | 97.12 | 99.65 | 99.86 | 99.16 | 97.10 |
| 23 | 96.59 | 96.83 | 97.10 | 95.28 | 93.50 | 92.55 | 93.81 | 97.51 | 99.76 | 99.87 | 99.18 | 97.03 |
| 24 | 96.57 | 96.86 | 97.04 | 95.22 | 93.45 | 92.49 | 93.92 | 97.99 | 99.81 | 99.82 | 99.20 | 96.93 |
| 25 | 96.58 | 96.85 | 97.03 | 95.23 | 93.40 | 92.42 | 94.02 | 98.52 | 99.85 | 99.77 | 99.13 | 96.85 |
| 26 | 96.59 | 96.82 | 97.03 | 95.20 | 93.37 | 92.37 | 94.11 | 98.98 | 99.87 | 99.75 | 99.02 | 96.74 |
| 27 | 96.61 | 96.80 | 96.98 | 95.15 | 93.35 | 92.31 | 94.18 | 98.96 | 99.94 | 99.76 | 98.98 | 96.69 |
| 28 | 96.62 | 96.73 | 96.94 | 95.08 | 93.31 | 92.26 | 94.26 | 98.82 | 99.90 | 99.72 | 98.85 | 96.59 |
| 29 | 96.61 | 96.72 | 96.89 | 95.01 | - | 92.21 | 94.31 | 98.61 | 99.96 | 99.71 | 98.74 | 96.49 |
| 30 | 96.60 | 96.73 | 96.82 | 94.97 | - | 92.19 | 94.37 | 98.41 | 99.92 | 99.68 | 98.69 | 96.41 |
| 31 | 96.59 | - | 96.75 | 94.91 | - | 92.17 | - | 98.21 | - | 99.65 | 98.66 | - |

Notes.- Add 1,000 feet to obtain elevation above mean sea level.

Monthly elevation and contents, water year October 1941 to September 1942

| Date | Elevation (feet)† | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|-------------------|----------------------|---|
| Sept. 30..... | 1,095.61 | 532,440 | - |
| Oct. 31..... | 1,096.56 | 563,410 | +30,970 |
| Nov. 30..... | 1,096.72 | 568,620 | +5,210 |
| Dec. 31..... | 1,096.70 | 567,970 | -650 |
| Calendar year 1941..... | - | - | +280,300 |
| Jan. 31..... | 1,094.89 | 508,960 | -59,010 |
| Feb. 28..... | 1,093.30 | 457,130 | -51,830 |
| Mar. 31..... | 1,092.14 | 419,490 | -37,640 |
| Apr. 30..... | 1,094.40 | 492,990 | +73,500 |
| May 31..... | 1,098.05 | 612,490 | +119,500 |
| June 30..... | 1,099.86 | 671,530 | +59,040 |
| July 31..... | 1,099.55 | 661,560 | -10,170 |
| Aug. 31..... | 1,098.59 | 629,870 | -31,690 |
| Sept. 30..... | 1,096.31 | 558,260 | -74,610 |
| Water year 1941-42..... | - | - | +22,220 |

† Elevations are midnight means based on records for stations at Purple Point and Chelan.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Chelan River at Chelan, Wash.

Location.- Water-stage recorder, lat. 47°50'05", long. 120°00'40", in SE¼ sec. 12, T. 27 N., R. 22 E., in forebay upstream from control dam at Chelan. Datum of gage is at mean sea level, subject to correction to datum of 1929.

Drainage area.- 950 square miles.

Records available.- October 1903 to September 1942.

Average discharge.- 39 years, 2,010 second-feet, adjusted for storage.

Extremes.- Maximum daily discharge during year, 8,510 second-feet (regulated) May 27; minimum daily, 106 second-feet (regulated) Oct. 19.

1903-42: Maximum daily discharge, 12,800 second-feet June 3, 1936; no flow part of day Jan. 30, 1917, when lake outlet was blocked with ice, and at other times owing to artificial regulation.

Remarks.- Records excellent. Unmeasured water that is diverted for irrigation above station is small percentage of total run-off. Washington Water Power Co. diverts water at Chelan for power and irrigation, which quantity is included in records of daily discharge. Flow regulated by power plant and by Lake Chelan (see preceding page).

Cooperation.- Records furnished by Washington Water Power Co.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|--------|-------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|
| 1 | 1,070 | 481 | 1,280 | 865 | †1,220 | †413 | 1,330 | 648 | 6,140 | 5,730 | 1,970 | 1,440 |
| 2 | 823 | †260 | 1,140 | 1,480 | 1,440 | 982 | 1,290 | 810 | 6,010 | 6,730 | †1,060 | 1,610 |
| 3 | 967 | 1,020 | 1,100 | 1,270 | 1,280 | 961 | 2,050 | †293 | 5,080 | 5,780 | 1,770 | 1,560 |
| 4 | 543 | 596 | 1,330 | †1,310 | 1,400 | 822 | 2,080 | 749 | 4,130 | 5,730 | 1,370 | 1,620 |
| 5 | †618 | 548 | 1,260 | 1,430 | 1,650 | 868 | †1,820 | 705 | 3,630 | †4,380 | 921 | 1,680 |
| 6 | 1,270 | 797 | 1,040 | 1,510 | 1,460 | 853 | 1,140 | 696 | 3,650 | 2,890 | 1,980 | †1,160 |
| 7 | 821 | 840 | †573 | 1,530 | 1,370 | 746 | 1,130 | 781 | †3,480 | 3,960 | 1,150 | 980 |
| 8 | 614 | 576 | 1,290 | 1,410 | †994 | †443 | 903 | 684 | 3,560 | 2,760 | 1,390 | 926 |
| 9 | 624 | †279 | 1,260 | 1,530 | 1,360 | 755 | 882 | 631 | 3,230 | 2,350 | †243 | 1,380 |
| 10 | 474 | 821 | 1,190 | 1,190 | 1,320 | 1,210 | 795 | †261 | 2,430 | 2,140 | 1,650 | 1,220 |
| 11 | 496 | 317 | 1,230 | †919 | 1,330 | 1,170 | 757 | 726 | 2,130 | 2,790 | 1,840 | 1,240 |
| 12 | †134 | 876 | 1,240 | 1,420 | 1,160 | 1,120 | †352 | 809 | 2,160 | †2,060 | 1,840 | 1,410 |
| 13 | 696 | 818 | 996 | 1,590 | 1,380 | 1,430 | 924 | 708 | 2,180 | 1,700 | 1,380 | †420 |
| 14 | 607 | 938 | †590 | 1,570 | 1,120 | 1,020 | 906 | 876 | †2,110 | 2,140 | 1,390 | 1,300 |
| 15 | 790 | 1,330 | 1,170 | 1,640 | †995 | †790 | 933 | 1,050 | 2,710 | 2,040 | 1,260 | 1,720 |
| 16 | 1,030 | †530 | 974 | 1,960 | 1,470 | 1,260 | 865 | 799 | 3,720 | 1,820 | †1,060 | 2,030 |
| 17 | †1,110 | 1,330 | 1,300 | 1,420 | 1,400 | 1,240 | 855 | †386 | 4,330 | 2,080 | 1,690 | 1,990 |
| 18 | 310 | 1,140 | 1,360 | †1,120 | 1,670 | 1,320 | 606 | 1,480 | 3,490 | 2,140 | 1,600 | 1,960 |
| 19 | †106 | 1,180 | 1,240 | 1,660 | 1,730 | 1,170 | †396 | 2,080 | 2,470 | †1,550 | 1,680 | 2,020 |
| 20 | 760 | 427 | †1,170 | 1,610 | 1,780 | 1,190 | 910 | 2,070 | 2,120 | 1,610 | 1,440 | †2,440 |
| 21 | 659 | 883 | †910 | 1,780 | 1,800 | 1,110 | 911 | 2,040 | †2,140 | 2,110 | 1,390 | 1,720 |
| 22 | 627 | 811 | 1,390 | 1,650 | †1,660 | †637 | 953 | 1,660 | 2,100 | 2,130 | 738 | 1,210 |
| 23 | 1,090 | †218 | 1,370 | 1,570 | 1,650 | 1,170 | 768 | 2,070 | 1,690 | 2,100 | †981 | 1,720 |
| 24 | 1,020 | 1,160 | 1,240 | 1,610 | 1,270 | 1,270 | 953 | †2,030 | 2,140 | 2,110 | 1,780 | 1,970 |
| 25 | 766 | 998 | 378 | †995 | 1,040 | 1,230 | 938 | 3,260 | 2,420 | 2,130 | 1,610 | 1,960 |
| 26 | †680 | 899 | 1,140 | 1,470 | 810 | 1,230 | †560 | 7,860 | 2,150 | †1,630 | 1,460 | 1,960 |
| 27 | 769 | 1,360 | 1,380 | 1,640 | †828 | 1,340 | 968 | 8,510 | 3,730 | 1,910 | 1,660 | †984 |
| 28 | 777 | 1,670 | †1,330 | 1,370 | 866 | 1,300 | 973 | 8,440 | †4,430 | 1,960 | 1,760 | 1,640 |
| 29 | 817 | 1,120 | 1,370 | 1,270 | - | †658 | 918 | 8,890 | 2,710 | 1,850 | 1,640 | 1,960 |
| 30 | 970 | †637 | 1,190 | 1,240 | - | 1,260 | 599 | 8,010 | 8,260 | 1,930 | †408 | 1,970 |
| 31 | 856 | - | 1,410 | 1,430 | - | 1,290 | - | †7,920 | - | 1,910 | 1,290 | - |

| Month | Observed | | | | Change in contents in Lake Chelan (acre-feet) | Adjusted for change in reservoir contents | | | |
|--------------------|-----------------------------|--------------|-------|-------------------------|--|--|-----------------------------|-----------------------|-------------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run-off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | Mean | Per square mile | |
| October..... | 1,270 | 106 | 718 | 44,180 | +30,970 | 75,160 | 1,222 | 1.29 | 1.48 |
| November..... | 1,570 | 218 | 829 | 49,310 | +5,210 | 54,520 | 916 | .964 | 1.08 |
| December..... | 1,470 | 378 | 1,168 | 71,830 | -650 | 70,590 | 1,148 | 1.21 | 1.39 |
| Calendar year 1941 | 6,610 | 66 | 1,136 | 822,600 | +280,300 | 1,103,000 | 1,624 | 1.60 | 21.77 |
| January..... | 1,980 | 865 | 1,418 | 87,170 | -59,010 | 28,160 | 458 | .482 | .56 |
| February..... | 1,800 | 694 | 1,302 | 78,280 | -61,830 | 20,450 | 368 | .387 | .40 |
| March..... | 1,430 | 413 | 1,060 | 64,660 | -37,640 | 26,010 | 438 | .461 | .53 |
| April..... | 2,080 | 362 | 980 | 56,310 | +73,800 | 131,800 | 2,215 | 2.35 | 2.60 |
| May..... | 8,510 | 261 | 2,491 | 153,100 | +119,500 | 272,600 | 4,433 | 4.67 | 5.38 |
| June..... | 6,260 | 1,690 | 3,649 | 193,300 | +69,040 | 262,300 | 4,240 | 4.46 | 4.98 |
| July..... | 5,730 | 1,560 | 2,677 | 164,600 | -10,170 | 154,400 | 2,611 | 2.64 | 3.05 |
| August..... | 1,970 | 243 | 1,374 | 84,640 | -31,490 | 52,970 | 661 | .906 | 1.08 |
| September..... | 2,030 | 420 | 1,540 | 91,640 | -74,610 | 17,030 | 266 | .301 | .34 |
| Water year 1941-42 | 8,610 | 106 | 1,667 | 1,134,000 | +22,820 | 1,157,000 | 1,698 | 1.68 | 22.84 |

† Sunday.

Note.- Discharges are combined flow of river, power conduit and irrigation diversion below dam. Change in lake contents based on midnight mean gage heights from stations at Purple Point and Chelan. Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Railroad Creek at Lucerne, Wash.

Location.- Water-stage recorder, lat. 48°11'40", long. 120°35'50", in sec. 9, T. 31 N., R. 18 E., half a mile upstream from mouth and half a mile southwest of Lucerne.

Drainage area.- 64 square miles.

Records available.- December 1910 to June 1913, January 1927 to September 1942.

Average discharge.- 16 years (1911-12, 1927-42), 187 second-feet.

Extremes.- Maximum discharge during year, 1,620 second-feet May 25 (gage height, 4.68 feet); minimum, 26 second-feet Feb. 18 (gage height, 2.59 feet).
1910-13, 1927-42: Maximum discharge, 1,910 second-feet June 8, 1927 (gage height, 5.3 feet); minimum, less than 9.4 second-feet sometime during period of ice effect Jan. 15-25, 1930.

Remarks.- Records good except those for period of ice effect, which are poor. No diversion or regulation.

Cooperation.- Water-stage recorder inspected and six discharge measurements made by employees of Washington Water Power Co.

Rating tables, water year 1941-42, except period of ice effect
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to May 25

May 26 to Sept. 30

| | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-------|-----|----|-----|-----|-----|-----|
| 2.7 | 43 | 3.3 | 228 | 4.3 | 1,030 | 2.8 | 43 | 3.1 | 118 | 3.8 | 468 |
| 2.8 | 65 | 3.5 | 320 | 4.6 | 1,480 | 2.9 | 63 | 3.3 | 196 | 4.0 | 635 |
| 2.9 | 91 | 3.7 | 435 | | | 3.0 | 88 | 3.6 | 344 | 4.3 | 990 |
| 3.1 | 153 | 4.0 | 675 | | | | | | | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|------|------|------|-------|
| 1 | 97 | 94 | 100 | b75 | 47 | 30 | 65 | 159 | 373 | 635 | 266 | 98 |
| 2 | 97 | 88 | 167 | b80 | 45 | 30 | 73 | 185 | 367 | 719 | 262 | 98 |
| 3 | 214 | 100 | 193 | b75 | 45 | 30 | 78 | 182 | 385 | 656 | 252 | 98 |
| 4 | 237 | 103 | 178 | b70 | 45 | 32 | 86 | 182 | 390 | 617 | 247 | 98 |
| 5 | 164 | 117 | 164 | b70 | 45 | 32 | 100 | 178 | 415 | 530 | 242 | 98 |
| 6 | 143 | 114 | 157 | b70 | 43 | 33 | 114 | 182 | 563 | 409 | 242 | 93 |
| 7 | 133 | 106 | 146 | b70 | 45 | 33 | 120 | 201 | 590 | 435 | 242 | 93 |
| 8 | 120 | 100 | 140 | b70 | 45 | 35 | 127 | 237 | 491 | 428 | 242 | 93 |
| 9 | 117 | 97 | 133 | b70 | 43 | 41 | 136 | 271 | 415 | 422 | 237 | 93 |
| 10 | 123 | 91 | 123 | 61 | 41 | 41 | 150 | 271 | 379 | 422 | 233 | 95 |
| 11 | 130 | 91 | 120 | 58 | 41 | 40 | 171 | 262 | 367 | 409 | 228 | 93 |
| 12 | 130 | 91 | 114 | 58 | 40 | 37 | 185 | 245 | 333 | 402 | 219 | 90 |
| 13 | 120 | 111 | 111 | 56 | 41 | 37 | 189 | 241 | 350 | 396 | 214 | 76 |
| 14 | 117 | 140 | 108 | 56 | 40 | 35 | 189 | 245 | 385 | 390 | 205 | 70 |
| 15 | 130 | 123 | 111 | 52 | 40 | 35 | 182 | 258 | 554 | 373 | 196 | 66 |
| 16 | 146 | 117 | 114 | 52 | 40 | 37 | 182 | 258 | 396 | 367 | 192 | 61 |
| 17 | 157 | 111 | 108 | 52 | 38 | 37 | 183 | 252 | 361 | 351 | 133 | 51 |
| 18 | 146 | 100 | 106 | 52 | 37 | 37 | 189 | 262 | 398 | 350 | 175 | 59 |
| 19 | 146 | 94 | 106 | 50 | 41 | 37 | 189 | 271 | 296 | 339 | 171 | 59 |
| 20 | 143 | 88 | 97 | 60 | 37 | 37 | 212 | 315 | 276 | 333 | 154 | 57 |
| 21 | 136 | 91 | 88 | 47 | 35 | 37 | 258 | 386 | 271 | 333 | 147 | 57 |
| 22 | 130 | 78 | 103 | 45 | 33 | 38 | 281 | 639 | 281 | 328 | 143 | 55 |
| 23 | 123 | 81 | 97 | 45 | 32 | 37 | 262 | 576 | 333 | 328 | 140 | 55 |
| 24 | 123 | 88 | 86 | 50 | 30 | 35 | 250 | 1,030 | 333 | 318 | 132 | 55 |
| 25 | 120 | 100 | b86 | 45 | 30 | 35 | 232 | 1,400 | 339 | 312 | 125 | 53 |
| 26 | 117 | 97 | b85 | 47 | 30 | 35 | 216 | 1,150 | 323 | 302 | 122 | 53 |
| 27 | 114 | 91 | b85 | 47 | 30 | 37 | 206 | 617 | 339 | 291 | 115 | 51 |
| 28 | 108 | 88 | b85 | 47 | 30 | 37 | 197 | 402 | 396 | 285 | 112 | 53 |
| 29 | 106 | 88 | b80 | 47 | - | 38 | 189 | 367 | 455 | 281 | 106 | 51 |
| 30 | 97 | 100 | b75 | 47 | - | 43 | 185 | 373 | 483 | 276 | 100 | 55 |
| 31 | 97 | - | b75 | 47 | - | 52 | - | 373 | - | 271 | 94 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 4,061 | 237 | 97 | 132 | 2.06 | 2.37 | 8,090 |
| November..... | 2,978 | 140 | 78 | 99.3 | 1.55 | 1.73 | 5,910 |
| December..... | 3,541 | 193 | 75 | 114 | 1.78 | 2.06 | 7,080 |
| Calendar year 1941..... | 51,018 | 528 | 27 | 167 | 2.61 | 35.48 | 121,000 |
| January..... | 1,751 | 80 | 45 | 56.8 | .888 | 1.02 | 3,490 |
| February..... | 1,069 | 47 | 30 | 38.9 | .608 | .63 | 2,180 |
| March..... | 1,130 | 52 | 30 | 36.5 | .570 | .66 | 2,240 |
| April..... | 5,208 | 281 | 65 | 174 | 2.72 | 3.03 | 10,330 |
| May..... | 12,310 | 1,400 | 178 | 397 | 6.20 | 7.15 | 24,420 |
| June..... | 11,567 | 590 | 271 | 385 | 5.05 | 6.72 | 22,940 |
| July..... | 12,228 | 719 | 271 | 396 | 6.19 | 7.14 | 24,370 |
| August..... | 5,733 | 266 | 94 | 185 | 2.89 | 3.33 | 11,380 |
| September..... | 2,066 | 88 | 51 | 68.9 | 1.08 | 1.20 | 4,100 |
| Water year 1941-42..... | 53,768 | 1,400 | 30 | 175 | 2.73 | 37.04 | 126,400 |

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Wenatchee Lake near Plain, Wash.

Location.- Water-stage recorder, lat. 47°49'50", long. 120°46'30", in sec. 19, T. 27 N., R. 17 E., on north shore, 2½ miles upstream from outlet, 7½ miles northwest of Plain, and 33 miles upstream from Leavenworth. Datum of gage is 1,860.00 feet above mean sea level, subject to correction to datum of 1929; gage readings have been reduced to elevations above mean sea level.

Drainage area.- 277 square miles.

Records available.- January 1932 to September 1942.

Extremes.- Maximum water-surface elevation during year, 1,874.39 feet May 26; minimum, 1,869.59 feet Sept. 29, 30.

1932-42: Maximum water-surface elevation recorded, 1,876.57 feet June 16, 1933; minimum water-surface elevation, 1,869.27 feet Dec. 1, 1936.

Remarks.- Fish weir at lake outlet has some effect on late summer and early autumn gage heights.

Elevation, in feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1 | 70.52 | 70.40 | - | 70.06 | 69.87 | 69.77 | 70.18 | 71.07 | 72.15 | 72.33 | 70.40 | 69.75 |
| 2 | 70.58 | 70.34 | - | 70.03 | 69.86 | 69.78 | 70.35 | 71.04 | 72.23 | 72.42 | 70.40 | 69.75 |
| 3 | 70.69 | 70.33 | - | 70.05 | 69.87 | 69.79 | 70.46 | 70.98 | 72.50 | 72.40 | 70.40 | 69.78 |
| 4 | 71.15 | 70.39 | - | 70.06 | 69.90 | 69.78 | 70.57 | 70.95 | 72.33 | 72.31 | 70.35 | 69.80 |
| 5 | 71.05 | 70.58 | - | 70.02 | 69.90 | 69.80 | 70.70 | 70.95 | 72.38 | 72.20 | 70.34 | 69.82 |
| 6 | 70.88 | 70.67 | 71.72 | 69.98 | 69.89 | 69.82 | 70.86 | 71.02 | 72.58 | 71.91 | 70.33 | 69.81 |
| 7 | 70.55 | 70.65 | 71.51 | 69.99 | 69.89 | 69.82 | 70.99 | 71.24 | 72.84 | 71.65 | 70.31 | 69.79 |
| 8 | 70.33 | 70.58 | 71.35 | 70.01 | 69.89 | 69.82 | 71.09 | 71.51 | 72.73 | 71.42 | 70.31 | 69.78 |
| 9 | 70.82 | 70.52 | 71.19 | 70.01 | 69.88 | 69.89 | 71.19 | 71.74 | 72.58 | 71.24 | 70.31 | 69.77 |
| 10 | 71.16 | 70.47 | 71.05 | 70.02 | 69.88 | 70.02 | 71.27 | 71.83 | 72.44 | 71.10 | 70.30 | 69.74 |
| 11 | 71.64 | 70.40 | 70.93 | 70.02 | 69.89 | 70.09 | 71.51 | 71.83 | 72.24 | 70.99 | 70.24 | 69.73 |
| 12 | 71.77 | 70.41 | 70.83 | 70.02 | 69.88 | 70.10 | 71.76 | 71.56 | 71.97 | 70.91 | 70.20 | 69.72 |
| 13 | 71.67 | 70.46 | 70.76 | 70.01 | 69.86 | 70.10 | 71.87 | 71.42 | 71.86 | 70.82 | 70.16 | 69.73 |
| 14 | 71.48 | 70.51 | 70.70 | 70.00 | 69.85 | 70.10 | 71.83 | 71.40 | 71.98 | 70.76 | 70.16 | 69.73 |
| 15 | 71.39 | 71.12 | 70.69 | 69.98 | 69.94 | 70.08 | 71.73 | 71.51 | 72.45 | 70.82 | 70.11 | 69.71 |
| 16 | 71.38 | 71.07 | 70.68 | 69.97 | 69.83 | 70.07 | 71.62 | 71.59 | 72.72 | 70.87 | 70.10 | 69.69 |
| 17 | 71.57 | 70.95 | 70.64 | 69.94 | 69.82 | 70.07 | 71.63 | 71.57 | 72.42 | 70.85 | 70.08 | 69.67 |
| 18 | 71.47 | 70.80 | 70.62 | 69.92 | 69.81 | 70.07 | 71.60 | 71.55 | 72.07 | 70.96 | 70.07 | 69.65 |
| 19 | 71.37 | 70.70 | 70.62 | 69.91 | 69.80 | 70.04 | 71.58 | 71.61 | 71.81 | 70.92 | 70.08 | 69.63 |
| 20 | 71.38 | 70.62 | 70.60 | 69.90 | 69.80 | 70.01 | 71.57 | 71.93 | 71.62 | 70.91 | 70.08 | 69.62 |
| 21 | 71.14 | 70.53 | 70.56 | 69.89 | 69.80 | 70.00 | 72.09 | 72.43 | 71.48 | 70.90 | 70.09 | 69.63 |
| 22 | 71.02 | 70.47 | 70.51 | 69.87 | 69.80 | 70.00 | 72.34 | 73.13 | 71.44 | 70.89 | 70.08 | 69.64 |
| 23 | 70.92 | 70.41 | 70.47 | 69.86 | 69.80 | 70.00 | 72.19 | 73.73 | 71.51 | 70.87 | 70.06 | 69.66 |
| 24 | 70.85 | 70.40 | 70.41 | 69.87 | 69.80 | 70.00 | 71.93 | 73.86 | 71.58 | 70.81 | 70.01 | 69.68 |
| 25 | 70.79 | 70.60 | 70.36 | 69.90 | 69.80 | 69.98 | 71.73 | 74.06 | 71.58 | 70.73 | 69.97 | 69.67 |
| 26 | 70.72 | 70.64 | 70.31 | 69.92 | 69.79 | 69.96 | 71.52 | 74.30 | 71.55 | 70.67 | 69.91 | 69.67 |
| 27 | 70.68 | - | 70.25 | 69.92 | 69.78 | 69.96 | 71.36 | 73.76 | 71.57 | 70.63 | 69.86 | 69.66 |
| 28 | 70.62 | - | 70.22 | 69.90 | 69.77 | 69.96 | 71.24 | 73.11 | 71.78 | 70.59 | 69.81 | 69.64 |
| 29 | 70.56 | 70.56 | 70.20 | 69.89 | - | 69.96 | 71.13 | 72.64 | 72.06 | 70.51 | 69.80 | 69.59 |
| 30 | 70.50 | - | 70.20 | 69.87 | - | 69.98 | 71.06 | 72.36 | 72.18 | 70.40 | 69.77 | 69.59 |
| 31 | 70.44 | - | 70.17 | 69.86 | - | 70.05 | - | 72.22 | - | 70.42 | 69.76 | - |

Note.- Add 1,800 feet to obtain elevation above mean sea level.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Wenatchee River below Wenatchee Lake, Wash.

Location.— Water-stage recorder, lat. 47°49'50", long. 120°46'30", in sec. 19, T. 27 N., R. 17 E., on north shore of Wenatchee Lake, 2½ miles upstream from outlet, 7½ miles northwest of Plain, and 33 miles upstream from Leavenworth. Datum of gage is 1,860.00 feet above mean sea level, subject to correction to datum of 1929; gage readings have been reduced to elevations above mean sea level. Discharge measurements made at highway bridge half a mile downstream from lake outlet.

Drainage area.— 277 square miles.

Records available.— January 1932 to September 1942 (discontinued).

Average discharge.— 10 years, 1,224 second-feet.

Extremes.— Maximum discharge during year, 5,010 second-feet May 26 (elevation of lake surface, 1,874.39 feet); minimum, 192 second-feet Sept. 29, 30 (elevation of lake surface, 1,869.59 feet).

1932-42: Maximum discharge recorded, 8,310 second-feet June 16, 1933 (elevation of lake surface, 1,876.57 feet); minimum discharge, 134 second-feet Dec. 1, 1936 (elevation of lake surface, 1,869.27 feet).

Remarks.— Records good except those for periods of no gage-height record, which are fair. Flow subject to effect of fish weir at outlet to Wenatchee Lake.

Rating table, water year 1941-42 (elevation, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 1 to Nov. 12, July 15 to Sept. 30)

| | | | | | |
|---------|-----|---------|-------|---------|-------|
| 1,870.0 | 380 | 1,870.8 | 969 | 1,872.0 | 2,180 |
| 1,870.2 | 498 | 1,871.0 | 1,150 | 1,872.5 | 2,730 |
| 1,870.4 | 637 | 1,871.3 | 1,450 | 1,873.0 | 3,300 |
| 1,870.6 | 796 | 1,871.7 | 1,850 | 1,874.0 | 4,600 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|--------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 511 | 545 | a960 | 414 | 314 | 268 | 486 | 1,220 | 2,340 | 2,540 | 601 | 243 |
| 2 | 599 | 505 | a1,400 | 397 | 309 | 273 | 501 | 1,190 | 2,450 | 2,640 | 601 | 243 |
| 3 | 768 | 498 | a2,400 | 408 | 314 | 277 | 685 | 1,130 | 2,510 | 2,620 | 601 | 243 |
| 4 | 1,200 | 582 | a2,300 | 414 | 328 | 273 | 771 | 1,100 | 2,540 | 2,520 | 565 | 264 |
| 5 | 1,100 | 676 | a2,080 | 391 | 328 | 261 | 881 | 1,100 | 2,600 | 2,400 | 568 | 273 |
| 6 | 943 | 747 | 1,870 | 370 | 323 | 290 | 1,020 | 1,170 | 2,820 | 2,080 | 552 | 268 |
| 7 | 916 | 714 | 1,660 | 375 | 323 | 290 | 1,140 | 1,390 | 3,110 | 1,800 | 538 | 260 |
| 8 | 899 | 676 | 1,500 | 386 | 323 | 290 | 1,240 | 1,660 | 2,980 | 1,670 | 538 | 260 |
| 9 | 890 | 630 | 1,340 | 366 | 319 | 323 | 1,540 | 1,890 | 2,920 | 1,390 | 538 | 266 |
| 10 | 1,200 | 594 | 1,200 | 391 | 319 | 391 | 1,420 | 1,990 | 2,660 | 1,250 | 532 | 243 |
| 11 | 1,680 | 579 | 1,090 | 391 | 323 | 430 | 1,660 | 1,990 | 2,440 | 1,140 | 492 | 239 |
| 12 | 1,810 | 615 | 996 | 391 | 319 | 436 | 1,920 | 1,710 | 2,150 | 1,070 | 467 | 235 |
| 13 | 1,710 | 683 | 934 | 366 | 309 | 436 | 2,040 | 1,570 | 2,030 | 987 | 442 | 239 |
| 14 | 1,520 | 978 | 881 | 360 | 304 | 436 | 1,990 | 1,650 | 2,160 | 934 | 419 | 239 |
| 15 | 1,430 | 1,270 | 872 | 370 | 300 | 425 | 1,880 | 1,660 | 2,680 | 978 | 414 | 232 |
| 16 | 1,410 | 1,220 | 864 | 364 | 295 | 419 | 1,770 | 1,740 | 2,970 | 1,010 | 408 | 224 |
| 17 | 1,600 | 1,100 | 830 | 349 | 290 | 419 | 1,780 | 1,720 | 2,640 | 987 | 397 | 217 |
| 18 | 1,500 | 969 | 813 | 338 | 286 | 419 | 1,750 | 1,700 | 2,260 | 1,080 | 391 | 209 |
| 19 | 1,400 | 881 | 813 | 333 | 281 | 402 | 1,730 | 1,760 | 1,970 | 1,030 | 402 | 202 |
| 20 | 1,410 | 813 | 796 | 328 | 281 | 366 | 1,720 | 2,100 | 1,770 | 1,010 | 402 | 199 |
| 21 | 1,170 | 739 | 763 | 323 | 281 | 380 | 2,280 | 2,650 | 1,630 | 1,000 | 408 | 202 |
| 22 | 1,060 | 691 | 722 | 314 | 281 | 380 | 2,650 | 3,520 | 1,590 | 996 | 402 | 206 |
| 23 | 969 | 645 | 691 | 309 | 281 | 380 | 2,390 | 4,180 | 1,660 | 978 | 391 | 213 |
| 24 | 907 | 637 | 645 | 314 | 281 | 380 | 2,100 | 4,330 | 1,730 | 925 | 364 | 220 |
| 25 | 556 | 796 | 608 | 328 | 281 | 370 | 1,880 | 4,680 | 1,730 | 856 | 344 | 217 |
| 26 | 796 | 830 | 572 | 338 | 277 | 359 | 1,670 | 4,890 | 1,700 | 804 | 314 | 217 |
| 27 | 755 | a810 | 532 | 338 | 273 | 359 | 1,510 | 4,210 | 1,720 | 771 | 290 | 217 |
| 28 | 705 | a780 | 511 | 328 | 268 | 359 | 1,590 | 3,430 | 1,940 | 739 | 288 | 209 |
| 29 | 660 | 763 | 498 | 323 | - | 359 | 1,280 | 2,880 | 2,250 | 676 | 264 | 196 |
| 30 | 615 | a860 | 498 | 314 | - | 370 | 1,210 | 2,680 | 2,350 | 637 | 252 | 192 |
| 31 | 572 | - | 479 | 309 | - | 408 | - | 2,420 | - | 608 | 247 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Inches | Acres-feet |
|-------------------------|------------------|---------|---------|-------|-----------------|--------|------------|
| October..... | 33,682 | 1,810 | 511 | 1,087 | 3.92 | 4.62 | 66,810 |
| November..... | 22,782 | 1,270 | 498 | 759 | 2.74 | 3.06 | 45,190 |
| December..... | 32,118 | 2,400 | 479 | 1,056 | 3.74 | 4.31 | 63,710 |
| Calendar year 1941..... | 326,389 | 2,730 | 243 | 894 | 3.23 | 45.83 | 647,400 |
| January..... | 11,100 | 414 | 309 | 368 | 1.29 | 1.49 | 22,020 |
| February..... | 8,411 | 328 | 268 | 300 | 1.08 | 1.13 | 16,690 |
| March..... | 11,268 | 436 | 268 | 363 | 1.31 | 1.51 | 22,360 |
| April..... | 46,082 | 2,550 | 486 | 1,536 | 6.55 | 6.19 | 91,400 |
| May..... | 71,010 | 4,890 | 1,100 | 2,291 | 8.27 | 9.55 | 140,300 |
| June..... | 68,210 | 3,110 | 1,590 | 2,274 | 8.21 | 9.18 | 135,300 |
| July..... | 40,026 | 2,640 | 608 | 1,291 | 4.66 | 5.37 | 79,390 |
| August..... | 13,402 | 601 | 247 | 432 | 1.56 | 1.80 | 26,580 |
| September..... | 6,890 | 273 | 192 | 230 | 0.830 | .93 | 13,670 |
| Water year 1941-42..... | 364,981 | 4,890 | 192 | 1,000 | 3.61 | 49.00 | 723,900 |

a No gage-height record; discharge computed on basis of records for station at Plain.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Wenatchee River at Plain, Wash.

Location.- Water-stage recorder, lat. 47°45'50", long. 120°39'30", in lot 8, sec. 12, T. 26 N., R. 17 E., at Plain, a quarter of a mile downstream from Beaver Creek, 7½ miles downstream from Nason Creek, and 12 miles north of Leavenworth. Datum of gage is 1,805 feet above mean sea level (from river-profile map).

Drainage area.- 591 square miles.

Records available.- November 1910 to September 1942 in reports of Geological Survey.

August 1904 to September 1933 (monthly discharge) in State Water-Supply Bulletin 5.

Average discharge.- 38 years (1904-42), 2,158 second-feet.

Extremes.- Maximum discharge during year, 8,720 second-feet May 26 (gage height, 7.70 feet); minimum, 262 second-feet Sept. 20-24, 30 (gage height, 1.53 feet).

1910-29, 1931-42: Maximum discharge observed, 20,800 second-feet Dec. 13, 1921 (gage height, 11.8 feet, site and datum then in use); minimum discharge, 191 second-feet Dec. 1, 1935 (gage height, 1.34 feet).

Remarks.- Records excellent. Wenatchee Park Land & Irrigation Co. diverts a maximum of about 12 second-feet from Chiwawa River during irrigation seasons. Natural regulation by Wenatchee Lake; late summer flow may be slightly influenced by fish weir at lake outlet.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-------|-----|-------|-----|-------|
| 1.7 | 335 | 2.7 | 970 | 4.0 | 2,260 | 6.0 | 5,250 |
| 1.9 | 435 | 3.0 | 1,230 | 4.5 | 2,870 | 7.0 | 7,200 |
| 2.1 | 550 | 3.3 | 1,510 | 5.0 | 3,580 | | |
| 2.4 | 750 | 3.6 | 1,810 | 5.5 | 4,380 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 908 | 862 | 1,410 | 708 | 556 | 457 | 982 | 2,260 | 4,050 | 4,070 | 962 | 360 |
| 2 | 1,090 | 827 | 2,300 | 687 | 550 | 468 | 1,170 | 2,160 | 4,210 | 4,240 | 962 | 360 |
| 3 | 1,190 | 834 | 3,810 | 694 | 556 | 474 | 1,230 | 2,080 | 4,360 | 4,110 | 962 | 370 |
| 4 | 1,920 | 964 | 3,580 | 687 | 576 | 462 | 1,562 | 2,040 | 4,360 | 3,970 | 998 | 375 |
| 5 | 1,610 | 1,180 | 3,070 | 674 | 576 | 490 | 1,540 | 2,030 | 4,520 | 3,760 | 989 | 390 |
| 6 | 1,360 | 1,180 | 2,600 | 667 | 576 | 508 | 1,780 | 2,160 | 4,870 | 3,200 | 834 | 375 |
| 7 | 1,410 | 1,120 | 2,490 | 660 | 563 | 502 | 2,000 | 2,510 | 5,270 | 2,820 | 820 | 360 |
| 8 | 1,360 | 1,040 | 2,250 | 660 | 563 | 502 | 2,100 | 2,960 | 5,020 | 2,490 | 813 | 355 |
| 9 | 1,360 | 994 | 2,030 | 660 | 550 | 596 | 2,210 | 3,400 | 4,740 | 2,210 | 792 | 360 |
| 10 | 1,720 | 1,020 | 1,860 | 667 | 556 | 764 | 2,360 | 3,430 | 4,460 | 2,030 | 785 | 345 |
| 11 | 2,260 | 1,030 | 1,710 | 667 | 556 | 764 | 2,320 | 3,200 | 4,060 | 1,890 | 767 | 322 |
| 12 | 2,370 | 1,030 | 1,610 | 667 | 544 | 787 | 3,220 | 2,900 | 3,560 | 1,760 | 701 | 317 |
| 13 | 2,200 | 1,140 | 1,610 | 660 | 526 | 736 | 3,320 | 2,690 | 3,400 | 1,610 | 641 | 326 |
| 14 | 1,980 | 1,840 | 1,410 | 654 | 520 | 729 | 3,270 | 2,740 | 3,780 | 1,640 | 615 | 326 |
| 15 | 1,920 | 2,080 | 1,410 | 654 | 514 | 708 | 3,070 | 2,880 | 4,620 | 1,640 | 596 | 330 |
| 16 | 1,860 | 1,920 | 1,460 | 660 | 508 | 694 | 2,920 | 2,990 | 4,780 | 1,650 | 596 | 308 |
| 17 | 2,140 | 1,710 | 1,410 | 634 | 490 | 701 | 3,000 | 2,990 | 4,190 | 1,680 | 576 | 294 |
| 18 | 1,900 | 1,660 | 1,360 | 622 | 484 | 694 | 2,910 | 2,940 | 3,620 | 1,590 | 563 | 278 |
| 19 | 1,860 | 1,410 | 1,360 | 602 | 462 | 680 | 2,910 | 3,130 | 3,220 | 1,640 | 670 | 270 |
| 20 | 1,710 | 1,320 | 1,360 | 596 | 479 | 667 | 3,140 | 3,670 | 2,940 | 1,500 | 570 | 262 |
| 21 | 1,610 | 1,230 | 1,280 | 582 | 479 | 667 | 3,910 | 4,660 | 2,740 | 1,500 | 570 | 262 |
| 22 | 1,610 | 1,130 | 1,230 | 563 | 484 | 667 | 4,510 | 6,170 | 2,690 | 1,480 | 566 | 262 |
| 23 | 1,410 | 1,030 | 1,180 | 580 | 484 | 660 | 3,920 | 7,220 | 2,820 | 1,460 | 532 | 266 |
| 24 | 1,320 | 1,060 | 1,100 | 582 | 484 | 654 | 3,500 | 7,490 | 2,880 | 1,360 | 526 | 266 |
| 25 | 1,230 | 1,380 | 1,040 | 596 | 479 | 634 | 3,130 | 7,940 | 2,910 | 1,260 | 479 | 270 |
| 26 | 1,140 | 1,360 | 970 | 615 | 474 | 628 | 2,640 | 6,420 | 2,870 | 1,220 | 467 | 270 |
| 27 | 1,090 | 1,280 | 906 | 615 | 468 | 628 | 2,610 | 7,010 | 2,870 | 1,180 | 430 | 274 |
| 28 | 1,040 | 1,230 | 876 | 602 | 462 | 628 | 2,440 | 5,730 | 3,200 | 1,120 | 405 | 274 |
| 29 | 966 | 1,230 | 869 | 576 | - | 667 | 2,260 | 4,820 | 3,700 | 1,050 | 405 | 278 |
| 30 | 946 | 1,320 | 855 | 560 | - | 708 | 2,230 | 4,380 | 3,810 | 994 | 380 | 270 |
| 31 | 890 | - | 764 | 544 | - | 785 | - | 4,160 | - | 986 | 370 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 47,370 | 2,370 | 590 | 1,526 | 2.59 | 2.98 | 93,960 |
| November..... | 37,291 | 2,080 | 627 | 1,243 | 2.10 | 2.35 | 73,970 |
| December..... | 51,270 | 3,610 | 764 | 1,654 | 2.80 | 3.23 | 101,700 |
| Calendar year 1941..... | 528,979 | 4,780 | 358 | 1,449 | 2.45 | 33.29 | 1,049,000 |
| January..... | 19,555 | 708 | 544 | 631 | 1.07 | 1.23 | 38,790 |
| February..... | 14,619 | 576 | 462 | 519 | .878 | .91 | 28,800 |
| March..... | 19,679 | 785 | 457 | 635 | 1.07 | 1.24 | 39,030 |
| April..... | 78,432 | 4,310 | 962 | 2,614 | 4.42 | 4.94 | 155,600 |
| May..... | 123,120 | 8,420 | 2,030 | 3,972 | 6.72 | 7.75 | 244,200 |
| June..... | 114,540 | 6,270 | 2,690 | 3,818 | 6.46 | 7.21 | 227,200 |
| July..... | 62,890 | 4,240 | 986 | 2,029 | 3.43 | 3.96 | 124,700 |
| August..... | 19,562 | 962 | 370 | 644 | 1.02 | 1.26 | 39,570 |
| September..... | 9,376 | 390 | 262 | 312 | .528 | .59 | 16,500 |
| Water year 1941-42..... | 597,993 | 8,420 | 262 | 1,638 | 2.77 | 37.65 | 1,186,000 |

Peak discharge.- May 26 (6 to 8 a.m.) 8,720 sec.-ft.; June 7 (8 to 10 a.m.) 5,430 sec.-ft.
Time basis. Pacific standard time prior to 2 a.m., Feb. 9, 1942, Pacific war time thereafter.
 To convert war time to standard time, subtract 1 hour.

Wenatchee River at Peshastin, Wash.

Location.— Water-stage recorder, lat. 47°34'50", long. 120°37'00", in SE¼ sec. 8, T. 24 N., R. 18 E., 1 mile northwest of Peshastin and 3½ miles upstream from Peshastin Creek. Datum of gage is 1,028.04 feet above mean sea level, datum of 1929.

Drainage area.— 1,000 square miles.

Records available.— October 1928 to September 1942 (monthly discharge only October 1928 to February 1929).

Average discharge.— 14 years, 2,708 second-feet.

Extremes.— Maximum discharge during year, 13,100 second-feet May 26 (gage height, 9.38 feet); minimum, 324 second-feet Sept. 30.
1929-42: Maximum discharge, 20,400 second-feet June 16, 1933 (gage height, 11.82 feet); minimum, 133 second-feet Oct. 14, 1939 (gage height, 1.26 feet).

Remarks.— Records excellent except those for periods of ice effect, which are fair. Several diversions above station for irrigation. Slight regulation by mill pond at Leavenworth, by power plant in Tumwater Canyon, and by fish weir at Wenatchee Lake outlet.

Rating table, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-------|-----|-------|-----|--------|
| 1.7 | 365 | 3.5 | 1,720 | 8.0 | 9,530 |
| 2.0 | 515 | 4.5 | 2,920 | 9.0 | 12,100 |
| 2.4 | 755 | 5.5 | 4,300 | | |
| 2.9 | 1,120 | 6.5 | 6,090 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|------|-------|-------|--------|-------|-------|-------|-------|
| 1 | 1,020 | 1,170 | 2,000 | 1,070 | 742 | 630 | 1,550 | 3,180 | 5,870 | 5,870 | 1,190 | 466 |
| 2 | 1,500 | 1,110 | 3,560 | 1,060 | 736 | 636 | 1,660 | 3,050 | 6,080 | 6,080 | 1,170 | 450 |
| 3 | 1,450 | 1,140 | 5,490 | 1,030 | 755 | 648 | 1,780 | 2,980 | 6,290 | 5,870 | 1,120 | 498 |
| 4 | 2,540 | 1,350 | 4,940 | 1,020 | 762 | 642 | 1,940 | 2,860 | 6,290 | 5,870 | 1,060 | 482 |
| 5 | 2,240 | 1,790 | 4,300 | 1,000 | 768 | 660 | 2,240 | 2,790 | 6,510 | 5,290 | 1,040 | 482 |
| 6 | 1,940 | 1,720 | 3,860 | 1,000 | 768 | 703 | 2,540 | 3,050 | 7,410 | 4,450 | 1,020 | 498 |
| 7 | 1,940 | 1,610 | 3,510 | 990 | 762 | 703 | 2,790 | 3,510 | 7,870 | 4,000 | 984 | 482 |
| 8 | 1,880 | 1,500 | 3,120 | 990 | 755 | 710 | 2,980 | 4,150 | 7,410 | 3,510 | 960 | 466 |
| 9 | 1,880 | 1,450 | 2,860 | 980 | 755 | 788 | 3,120 | 4,770 | 7,180 | 3,180 | 953 | 482 |
| 10 | 2,300 | 1,400 | 2,660 | 980 | 748 | 1,050 | 3,310 | 4,770 | 6,510 | 2,860 | 925 | 466 |
| 11 | 3,180 | 1,450 | 2,420 | 980 | 755 | 1,070 | 4,000 | 4,450 | 5,870 | 2,660 | 897 | 450 |
| 12 | 3,180 | 1,500 | 2,240 | 976 | 742 | 1,060 | 4,610 | 4,000 | 5,110 | 2,480 | 848 | 440 |
| 13 | 2,980 | 1,660 | 2,120 | 953 | 703 | 1,030 | 4,610 | 3,720 | 4,770 | 2,240 | 820 | 435 |
| 14 | 2,720 | 2,720 | 2,000 | 911 | 716 | 1,000 | 4,610 | 3,860 | 5,290 | 2,060 | 762 | 445 |
| 15 | 2,600 | 2,980 | 2,000 | 883 | 710 | 976 | 4,300 | 4,000 | 6,730 | 2,240 | 729 | 440 |
| 16 | 2,540 | 2,660 | 2,000 | 869 | 703 | 960 | 4,150 | 4,150 | 6,950 | 2,240 | 716 | 435 |
| 17 | 2,920 | 2,420 | 1,940 | 855 | 690 | 960 | 4,150 | 4,150 | 5,870 | 2,300 | 703 | 415 |
| 18 | 2,720 | 2,180 | 1,880 | 834 | 648 | 968 | 4,000 | 4,000 | 5,110 | 2,180 | 684 | 401 |
| 19 | 2,600 | 2,000 | 1,880 | 807 | 642 | 946 | 4,000 | 4,300 | 4,450 | 2,060 | 703 | 401 |
| 20 | 2,480 | 1,830 | 1,880 | 794 | 678 | 926 | 4,450 | 5,290 | 4,150 | 2,000 | 703 | 396 |
| 21 | 2,240 | 1,720 | 1,830 | 770 | 678 | 939 | 5,480 | 7,180 | 3,860 | 2,000 | 690 | 378 |
| 22 | 2,060 | 1,610 | 1,720 | 770 | 666 | 939 | 6,080 | 9,780 | 3,720 | 1,940 | 678 | 374 |
| 23 | 1,940 | 1,450 | 1,610 | 770 | 660 | 932 | 5,480 | 11,000 | 4,000 | 1,880 | 654 | 383 |
| 24 | 1,830 | 1,450 | 1,500 | 774 | 654 | 911 | 4,770 | 11,300 | 4,150 | 1,780 | 642 | 383 |
| 25 | 1,720 | 1,940 | 1,450 | 794 | 654 | 897 | 4,300 | 12,300 | 4,150 | 1,660 | 618 | 388 |
| 26 | 1,610 | 1,940 | 1,270 | 810 | 636 | 876 | 3,860 | 12,600 | 4,000 | 1,560 | 568 | 392 |
| 27 | 1,500 | 1,780 | 1,200 | 810 | 636 | 869 | 3,580 | 10,300 | 4,000 | 1,500 | 570 | 392 |
| 28 | 1,450 | 1,720 | 1,170 | 794 | 630 | 883 | 3,380 | 8,330 | 4,610 | 1,450 | 526 | 370 |
| 29 | 1,350 | 1,720 | 1,140 | 768 | - | 904 | 3,180 | 6,950 | 5,290 | 1,350 | 526 | 347 |
| 30 | 1,300 | 1,880 | 1,110 | 742 | - | 968 | 3,120 | 6,290 | 5,480 | 1,260 | 498 | 347 |
| 31 | 1,210 | - | 1,090 | 729 | - | 1,090 | - | 5,870 | - | 1,210 | 476 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 64,760 | 5,180 | 1,020 | 2,089 | 128,400 |
| November..... | 52,840 | 2,980 | 1,110 | 1,761 | 104,800 |
| December..... | 71,540 | 6,480 | 1,090 | 2,308 | 141,900 |
| Calendar year 1941..... | 729,698 | 6,730 | 498 | 1,999 | 1,447,000 |
| January..... | 27,503 | 1,070 | 729 | 887 | 54,550 |
| February..... | 19,752 | 768 | 630 | 705 | 39,180 |
| March..... | 27,275 | 1,090 | 630 | 880 | 54,100 |
| April..... | 109,820 | 6,080 | 1,350 | 3,661 | 217,800 |
| May..... | 178,870 | 12,600 | 2,790 | 5,770 | 354,800 |
| June..... | 164,980 | 7,870 | 3,720 | 5,499 | 327,200 |
| July..... | 86,830 | 6,080 | 1,210 | 2,801 | 172,200 |
| August..... | 24,453 | 1,190 | 476 | 789 | 48,500 |
| September..... | 12,784 | 498 | 347 | 426 | 26,360 |
| Water year 1941-42..... | 841,405 | 12,600 | 347 | 2,305 | 1,669,000 |

Peak discharge.— May 26 (12:30 a.m.) 13,100 sec.-ft.; June 7 (6 to 7 a.m.) 8,100 sec.-ft.

* Winter discharge measurement made on this day.

† No gage-height record; discharge computed on basis of records for station at Plain.

Note.— Stage-discharge relation affected by ice Dec. 26 to Jan. 12, Jan. 21-23.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Chiwawa River near Plain, Wash.

Location.- Water-stage recorder, lat. 47°50'30", long. 120°39'40", in SE $\frac{1}{4}$ sec. 13, T. 27 N., R. 17 E., half a mile upstream from Goose Creek, 6 miles north of Plain, 7 miles upstream from mouth, and 11 miles northeast of Chiwaukum. Datum of gage is 2,100 feet above mean sea level (from river-profile map).

Drainage area.- 169 square miles.

Records available.- August 1936 to September 1942. May 1911 to October 1914 at site 4 miles downstream, published as Chiwawa Creek near Leavenworth.

Extremes.- Maximum discharge during year, 2,510 second-feet May 26 (gage height, 7.12 feet); minimum, 69 second-feet Sept. 27-30 (gage height, 3.77 feet), but may have been less during period of ice effect.

1911-14, 1936-42: Maximum discharge recorded, 3,210 second-feet May 25, 26, 1938 (gage height, 7.66 feet); minimum recorded, 67 second-feet Nov. 28, 1938 (gage height, 3.74 feet), but may have been less during periods of ice effect.

Remarks.- Records good except those for period of ice effect, which are poor. No diversion or regulation.

Rating table, water year 1941-42 except period of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-------|
| 3.7 | 55 | 4.3 | 229 | 5.0 | 590 | 6.0 | 1,320 |
| 3.9 | 99 | 4.5 | 320 | 5.3 | 780 | 6.6 | 1,910 |
| 4.1 | 156 | 4.7 | 420 | 5.6 | 990 | 7.0 | 2,370 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 176 | 180 | 242 | 180 | 112 | 94 | 194 | 614 | 1,030 | 1,100 | 242 | 97 |
| 2 | 170 | 170 | 531 | 110 | 110 | 221 | 1,070 | 1,070 | 1,130 | 246 | 94 | 94 |
| 3 | 244 | 183 | 682 | 100 | 107 | 97 | 225 | 572 | 1,120 | 1,050 | 229 | 94 |
| 4 | 350 | 213 | 542 | 100 | 110 | 94 | 250 | 566 | 1,150 | 1,020 | 217 | 94 |
| 5 | 238 | 238 | *470 | 90 | 107 | 99 | 296 | 572 | 1,190 | 969 | 213 | 94 |
| 6 | 213 | 225 | 442 | 90 | 107 | 99 | 350 | 608 | 1,280 | 794 | 206 | 92 |
| 7 | 221 | 198 | 390 | 95 | 104 | 99 | 380 | 696 | 1,360 | 734 | 198 | 89 |
| 8 | 202 | 187 | 360 | 95 | 107 | 99 | 405 | 774 | 1,280 | 650 | 194 | 87 |
| 9 | 194 | 180 | 330 | 90 | 107 | 118 | 451 | 864 | 1,180 | 584 | 194 | 87 |
| 10 | 272 | 183 | 310 | 95 | 107 | 141 | 475 | 692 | 1,070 | 560 | 194 | 85 |
| 11 | 301 | 187 | 286 | 100 | 104 | 135 | 596 | 822 | 941 | 530 | 187 | 85 |
| 12 | 301 | 190 | 272 | 95 | 102 | 129 | 632 | 760 | 857 | 475 | 176 | 82 |
| 13 | 250 | 246 | 259 | 90 | 99 | *123 | 632 | 722 | 871 | 436 | 166 | 82 |
| 14 | 229 | 400 | 255 | 85 | 99 | 118 | 650 | 741 | 1,010 | 426 | 159 | 80 |
| 15 | 242 | 330 | 255 | *90 | 97 | 115 | 612 | 774 | 1,220 | 470 | 150 | 82 |
| 16 | 268 | 282 | 263 | 90 | 97 | 112 | 612 | 767 | 1,100 | 458 | 147 | 82 |
| 17 | 306 | 246 | 250 | 100 | 97 | 115 | 626 | 780 | 934 | 453 | 144 | 77 |
| 18 | 268 | 229 | 246 | 100 | 94 | 110 | 614 | 767 | 843 | 405 | 141 | 75 |
| 19 | 277 | 210 | 217 | 110 | 97 | 107 | 632 | 601 | 787 | 415 | 141 | 75 |
| 20 | 259 | 202 | 242 | 100 | 102 | 107 | 702 | 885 | 734 | 405 | 138 | 75 |
| 21 | 242 | 194 | 242 | 100 | 94 | 110 | 878 | 1,120 | 715 | 410 | 138 | 75 |
| 22 | 242 | 187 | 225 | 100 | 97 | 112 | 941 | 1,540 | 722 | 405 | 132 | 73 |
| 23 | 233 | 176 | 217 | 100 | 97 | 112 | 945 | 1,900 | 760 | 400 | 126 | 71 |
| 24 | 233 | 194 | 200 | 100 | 94 | 110 | 797 | 2,040 | 780 | 365 | 123 | 71 |
| 25 | 225 | 242 | 180 | 110 | 94 | 107 | 734 | 2,230 | 767 | 335 | 118 | 71 |
| 26 | 217 | 210 | 170 | 110 | 92 | 107 | 676 | 2,330 | 754 | 335 | 121 | 71 |
| 27 | 213 | 198 | 160 | 120 | 92 | 110 | 638 | 1,710 | 760 | 320 | 112 | 69 |
| 28 | 206 | 190 | 150 | 120 | 94 | 115 | 606 | 1,360 | 913 | 301 | 110 | 69 |
| 29 | 198 | 202 | 140 | *130 | - | 121 | 584 | 1,160 | 1,010 | 277 | 110 | 69 |
| 30 | 190 | 235 | 130 | 120 | - | 138 | 584 | 1,090 | 1,010 | 268 | 104 | 69 |
| 31 | 183 | - | 120 | 112 | - | 159 | - | 1,050 | - | 263 | 99 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 7,363 | 350 | 170 | 238 | 1.41 | 1.62 | 14,600 |
| November..... | 6,858 | 400 | 170 | 217 | 1.28 | 1.45 | 12,900 |
| December..... | 8,778 | 662 | 120 | 283 | 1.67 | 1.95 | 17,410 |
| Calendar year 1941..... | 121,416 | 1,320 | 70 | 353 | 1.97 | 26.72 | 240,800 |
| January..... | 3,137 | 130 | 80 | 101 | .598 | .69 | 6,220 |
| February..... | 2,820 | 112 | 92 | 101 | .598 | .62 | 5,590 |
| March..... | 3,509 | 159 | 94 | 113 | .669 | .77 | 6,960 |
| April..... | 12,608 | 941 | 194 | 560 | 3.31 | 3.70 | 35,540 |
| May..... | 32,105 | 2,330 | 566 | 1,036 | 6.13 | 7.06 | 65,680 |
| June..... | 29,198 | 1,350 | 715 | 973 | 5.76 | 6.43 | 57,910 |
| July..... | 16,743 | 1,130 | 263 | 540 | 3.20 | 3.68 | 33,210 |
| August..... | 4,975 | 246 | 99 | 160 | .947 | 1.09 | 9,870 |
| September..... | 2,416 | 97 | 69 | 80.5 | .476 | .53 | 4,790 |
| Water year 1941-42..... | 134,357 | 2,330 | 69 | 368 | 2.18 | 29.55 | 266,500 |

Peak discharge.- May 26 (4 a.m.) 2,510 sec.-ft.; June 7 (4 a.m.) 1,400 sec.-ft.

Note.- Stage-discharge measurement made on this day.

Time basis.- Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Ice Creek above Snow Creek, near Leavenworth, Wash.

Location.- Water-stage recorder, lat. 47°32'25", long. 120°42'55", in SE $\frac{1}{4}$ sec. 28, T. 24 N., R. 17 E., three-eighths of a mile upstream from Snow Creek and $\frac{1}{4}$ miles southwest of Leavenworth.

Drainage area.- 193 square miles.

Records available.- September 1936 to September 1942.

Extremes.- Maximum discharge during year, 3,310 second-feet May 25 (gage height, 9.16 feet); minimum recorded, 78 second-feet Sept. 29 (gage height, 2.19 feet).
1936-42: Maximum discharge, 4,320 second-feet June 3, 1937 (gage height, 10.10 feet), from rating curve extended above 3,000 second-feet; minimum may have been less than 55 second-feet sometime during periods of ice effect Nov. 29 to Dec. 2, 1936, Jan. 2 to Mar. 10, 1937.

Remarks.- Records good except those for periods of no gage-height record or ice effect, which are fair. No diversion. Some regulation by headwater lakes for irrigation.

Rating table, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|-----|-----|-----|-----|-------|-----|-------|
| 2.2 | 74 | 3.0 | 158 | 4.5 | 461 | 7.0 | 1,490 |
| 2.4 | 92 | 3.5 | 236 | 5.0 | 612 | 8.0 | 2,140 |
| 2.7 | 122 | 4.0 | 356 | 6.0 | 1,000 | 9.0 | 3,090 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|-------|-------|-------|-------|------|-------|
| 1 | 286 | 226 | 475 | b165 | 146 | 114 | 293 | 664 | 1,290 | 1,390 | 228 | 99 |
| 2 | 283 | 219 | 1,430 | b185 | 145 | 116 | 325 | 629 | 1,390 | 1,390 | 236 | 96 |
| 3 | 373 | 245 | 1,410 | b185 | 145 | 116 | 348 | 596 | 1,390 | 1,290 | 219 | 93 |
| 4 | a750 | a310 | 1,050 | b185 | 146 | 116 | 408 | 579 | 1,390 | 1,260 | 211 | 93 |
| 5 | a500 | a360 | 875 | b180 | 149 | 120 | 504 | 579 | 1,490 | 1,120 | 203 | 98 |
| 6 | a450 | a340 | 794 | b180 | 145 | 120 | 564 | 664 | 1,850 | 896 | 203 | 111 |
| 7 | a460 | a320 | 717 | b180 | 141 | 123 | 628 | 834 | 1,780 | 814 | 200 | 110 |
| 8 | a440 | a300 | *646 | b185 | 139 | 126 | 646 | 1,030 | 1,600 | 699 | 201 | 110 |
| 9 | a420 | a290 | 596 | b185 | 139 | 164 | 681 | 1,140 | 1,600 | 646 | 192 | 111 |
| 10 | a600 | a310 | 533 | b185 | 138 | 211 | 755 | 1,030 | 1,390 | 612 | 186 | 107 |
| 11 | a660 | a330 | 504 | b185 | 139 | 181 | 960 | 875 | 1,290 | 579 | 175 | 104 |
| 12 | 664 | a350 | 461 | b185 | 135 | 171 | 1,060 | 794 | 1,070 | 548 | 166 | 102 |
| 13 | 548 | a500 | 454 | b185 | 124 | 164 | 932 | 755 | 1,120 | 489 | 167 | 101 |
| 14 | 504 | a800 | 421 | *182 | 139 | 159 | 938 | 814 | 1,340 | 475 | 149 | 99 |
| 15 | 518 | 681 | 421 | 180 | 132 | 155 | 875 | 854 | 1,780 | 504 | 145 | 99 |
| 16 | 548 | 564 | 434 | 175 | 130 | 157 | 854 | 875 | 1,540 | 504 | 141 | 96 |
| 17 | 629 | 489 | 408 | 172 | 126 | 159 | 875 | 854 | 1,240 | 533 | 137 | 94 |
| 18 | a550 | 434 | 383 | 166 | 106 | 161 | 794 | 854 | 1,070 | 489 | 134 | 94 |
| 19 | a570 | 396 | 408 | 166 | 115 | 161 | 854 | 1,050 | 960 | 434 | 132 | 90 |
| 20 | a500 | 359 | 408 | 164 | 135 | 157 | 1,050 | 1,440 | 875 | 421 | 134 | 88 |
| 21 | a430 | 346 | 371 | 159 | 125 | 159 | 1,390 | 2,060 | 854 | 396 | 137 | 85 |
| 22 | a410 | 314 | 348 | 149 | 122 | 159 | 1,260 | 2,790 | 854 | 396 | 131 | 83 |
| 23 | a390 | 304 | 356 | 152 | 119 | 157 | 1,070 | 2,690 | 917 | 371 | 126 | 82 |
| 24 | a350 | 304 | 314 | 161 | 118 | 157 | 938 | 2,090 | 938 | 336 | 121 | 81 |
| 25 | a320 | 504 | 304 | 161 | 117 | 153 | 854 | 3,090 | 960 | 314 | 117 | 79 |
| 26 | 304 | 408 | 245 | 161 | 114 | 155 | 774 | 2,490 | 896 | 304 | 118 | 77 |
| 27 | 263 | 371 | b230 | 159 | 115 | 155 | 736 | 1,990 | 917 | 293 | 113 | 76 |
| 28 | 273 | 359 | b200 | 155 | 113 | 155 | 664 | 1,540 | 1,160 | 283 | 115 | 75 |
| 29 | 264 | 396 | b195 | 148 | - | 162 | 646 | 1,390 | 1,290 | 264 | 117 | 75 |
| 30 | 256 | 475 | b190 | 145 | - | 186 | 646 | 1,290 | 1,340 | 264 | 108 | 75 |
| 31 | 228 | - | b185 | 145 | - | 219 | - | 1,290 | - | 245 | 104 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|-------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 13,731 | 750 | 228 | 443 | 2.30 | 2.65 | 27,240 |
| November..... | 11,608 | 800 | 219 | 387 | 2.01 | 2.24 | 23,020 |
| December..... | 15,726 | 1,430 | 185 | 507 | 2.63 | 3.03 | 31,190 |
| Calendar year 1941..... | 160,216 | 1,460 | 105 | 439 | 2.27 | 30.89 | 317,800 |
| January..... | 5,290 | 185 | 145 | 171 | .886 | 1.02 | 10,490 |
| February..... | 3,856 | 149 | 106 | 131 | .679 | .70 | 7,250 |
| March..... | 4,769 | 219 | 114 | 154 | .798 | .92 | 9,460 |
| April..... | 23,363 | 1,390 | 293 | 779 | 4.04 | 4.50 | 46,340 |
| May..... | 40,120 | 3,090 | 579 | 1,294 | 6.70 | 7.73 | 79,580 |
| June..... | 37,561 | 1,850 | 834 | 1,252 | 6.49 | 7.24 | 74,500 |
| July..... | 18,549 | 1,390 | 245 | 598 | 3.10 | 3.57 | 36,790 |
| August..... | 4,856 | 236 | 104 | 157 | .813 | .94 | 9,630 |
| September..... | 2,783 | 111 | 75 | 92.8 | .481 | .54 | 5,520 |
| Water year 1941-42..... | 182,011 | 3,090 | 75 | 499 | 2.59 | 35.08 | 361,000 |

Peak discharge.- May 25 (11 a.m.) 3,310 sec.-ft.; June 6 (11:30 p.m.) 2,060 sec.-ft.; June 15 (12:30 p.m.) 1,920 sec.-ft.

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of recorded range in stage and records for Chiwawa River near Plain.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Yakima River near Martin, Wash.

Location.- Water-stage recorder, lat. 47°19'10", long. 121°20'10", just downstream from dam at outlet of Keechelus Lake, 3½ miles northwest of Martin, Kittitas County, and 12 miles upstream from Easton.

Drainage area.- 55 square miles.

Records available.- October 1903 to September 1942.

Average discharge.- 38 years (1904-42), 321 second-feet (adjusted for storage since January 1906).

Extremes (regulated).- Maximum discharge during year, 747 second-feet Aug. 8, 24-29; no flow Oct. 17-25.

1903-42: Maximum discharge, 7,370 second-feet Mar. 26, 1915, when temporary crib dam was washed out; practically no flow when gates in Keechelus Lake Dam are closed.

Remarks.- Records good except those for extremely low flow, which are poor. Flow regulated by Keechelus Lake (see p. 198). Figures of daily discharge not adjusted for change in contents of Keechelus Lake.

Cooperation.- Records collected and prepared in cooperation with Bureau of Reclamation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used Oct. 16 to Jan. 25)

| | | | | | | | |
|-----|-----|-----|----|-----|-----|-----|-----|
| 2.1 | 0.3 | 2.6 | 17 | 3.3 | 78 | 4.5 | 249 |
| 2.2 | 1.7 | 2.8 | 30 | 3.6 | 116 | 5.0 | 539 |
| 2.4 | 8.0 | 3.0 | 47 | 4.0 | 170 | 6.0 | 547 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 339 | 1 | 1 | 1 | 1 | 1 | 1 | 293 | 208 | 368 | 692 | 641 |
| 2 | 339 | 1 | 1 | 1 | 1 | 1 | 1 | 320 | 240 | 398 | 692 | 503 |
| 3 | 339 | 1 | 1 | 1 | 1 | 1 | 1 | 339 | 293 | 398 | 692 | 503 |
| 4 | 339 | 1 | 1 | 1 | 1 | 1 | 1 | 339 | 330 | 460 | 692 | 503 |
| 5 | 339 | 1 | 1 | 1 | 1 | 1 | 1 | 358 | 408 | 481 | 692 | 503 |
| 6 | 339 | 1 | 1 | 1 | 1 | 1 | 1 | 358 | 470 | 492 | 692 | 503 |
| 7 | 339 | 1 | 1 | 1 | 1 | 1 | 1 | 358 | 470 | 514 | 692 | 503 |
| 8 | 408 | 1 | 1 | 1 | 1 | 1 | 2 | 302 | 470 | 547 | 692 | 503 |
| 9 | 503 | 1 | 1 | 1 | 1 | 1 | 2 | 224 | 470 | 593 | 692 | 503 |
| 10 | 525 | 1 | 1 | 1 | 1 | 1 | 2 | 224 | 470 | 641 | 692 | 503 |
| 11 | 525 | 1 | 1 | 1 | 1 | 1 | 2 | 293 | 428 | 692 | 692 | 503 |
| 12 | 492 | 1 | 1 | 1 | 1 | 1 | 2 | 348 | 398 | 692 | 692 | 503 |
| 13 | 460 | 1 | 1 | 1 | 1 | 1 | 2 | 358 | 398 | 692 | 692 | 503 |
| 14 | 460 | 1 | 1 | 1 | 1 | 1 | 2 | 358 | 398 | 692 | 692 | 503 |
| 15 | 211 | 1 | 1 | 1 | 1 | 1 | 2 | 358 | 378 | 692 | 692 | 503 |
| 16 | 3 | 1 | 1 | 1 | 1 | 1 | 2 | 330 | 339 | 692 | 692 | 503 |
| 17 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 302 | 330 | 692 | 692 | 503 |
| 18 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 302 | 330 | 692 | 692 | 503 |
| 19 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 302 | 330 | 692 | 692 | 470 |
| 20 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 256 | 330 | 692 | 692 | 439 |
| 21 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 197 | 330 | 692 | 692 | 439 |
| 22 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 110 | 330 | 692 | 692 | 439 |
| 23 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 112 | 330 | 692 | 719 | 439 |
| 24 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 178 | 330 | 692 | 747 | 439 |
| 25 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 200 | 330 | 692 | 747 | 439 |
| 26 | 0 | 1 | 1 | 1 | 1 | 1 | 16 | 191 | 330 | 692 | 747 | 439 |
| 27 | 1 | 1 | 1 | 1 | 1 | 1 | 113 | 162 | 330 | 692 | 747 | 316 |
| 28 | 1 | 1 | 1 | 1 | 1 | 1 | 180 | 149 | 330 | 692 | 747 | 232 |
| 29 | 1 | 1 | 1 | 1 | 1 | 1 | 208 | 166 | 330 | 692 | 747 | 232 |
| 30 | 1 | 1 | 1 | 1 | 1 | 1 | 266 | 186 | 330 | 692 | 719 | 232 |
| 31 | 1 | 1 | 1 | 1 | 1 | 1 | - | 200 | - | 692 | 692 | - |

| Month | Observed | | | | Change in contents in Keechelus Lake (acre-feet) | Adjusted for change in reservoir contents | | | |
|--------------------|--------------------------|--------------|------|----------------------|--|---|--------------------------|-----------------|-------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | Mean | Per square mile | |
| October..... | 525 | 0 | 192 | 11,830 | +6,840 | 18,670 | 304 | 5.53 | 6.36 |
| November..... | 1 | 1 | 1.0 | 60 | +19,220 | 19,220 | 324 | 5.89 | 6.67 |
| December..... | 1 | 1 | 1.0 | 61 | +19,980 | 20,010 | 325 | 5.91 | 6.68 |
| Calendar year 1941 | 1,380 | 0 | 212 | 153,400 | +8,140 | 161,500 | 223 | 4.05 | 55.03 |
| January..... | 1 | 1 | 1.0 | 61 | +5,700 | 5,760 | 93.7 | 1.70 | 1.96 |
| February..... | 1 | 1 | 1.0 | 56 | +5,590 | 5,650 | 102 | 1.85 | 1.93 |
| March..... | 1 | 1 | 1.0 | 61 | +9,550 | 9,610 | 156 | 2.84 | 3.28 |
| April..... | 266 | 110 | 27.3 | 1,620 | +29,270 | 30,590 | 519 | 9.44 | 10.63 |
| May..... | 358 | 110 | 264 | 16,210 | +15,140 | 31,350 | 510 | 9.27 | 10.69 |
| June..... | 470 | 208 | 350 | 21,400 | +7,110 | 28,510 | 479 | 8.71 | 9.72 |
| July..... | 692 | 368 | 626 | 38,510 | -30,530 | 7,980 | 128 | 2.33 | 2.69 |
| August..... | 747 | 692 | 704 | 43,310 | -40,790 | 2,520 | 41.0 | .745 | .86 |
| September..... | 641 | 232 | 458 | 27,270 | -24,320 | 2,950 | 49.6 | .902 | 1.01 |
| Water year 1941-42 | 747 | 0 | 222 | 160,400 | +22,630 | 183,100 | 253 | 4.60 | 62.42 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.
To convert war time to standard time, subtract 1 hour.

Yakima River at Cle Elum, Wash.

Location.- Water-stage recorder, lat. 47°11'20", long. 120°56'40", in sec. 27, T. 20 N., R. 15 E., at highway bridge at Cle Elum, just upstream from Roslyn Creek and 7 miles upstream from Teanaway River.

Drainage area.- 500 square miles.

Records available.- August 1906 to September 1942.

Average discharge.- 36 years, 1,920 second-feet (adjusted for storage since October 1906 and diversions since 1930).

Extremes.- Maximum discharge during year, 2,740 second-feet (regulated) July 27 (gage height, 6.26 feet); minimum, 131 second-feet (regulated) Oct. 31 (gage height, 3.44 feet).

1906-42: Maximum discharge, 25,600 second-feet Nov. 14, 1906 (gage height, 12.5 feet, from floodmarks); minimum, 64 second-feet (regulated) Nov. 16, 17, 1929, Dec. 4, 1936.

Remarks.- Records good. Kittitas high-line canal diverts water above station for irrigation. Flow partly regulated by Keechelus, Kachess, and Cle Elum Lakes. Figures of daily discharge not adjusted for diversion or change in contents of lakes.

Cooperation.- Records collected and prepared in cooperation with Bureau of Reclamation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|-----|-----|-------|-----|-------|
| 3.5 | 150 | 4.3 | 565 | 5.5 | 1,740 |
| 3.7 | 226 | 4.6 | 615 | 6.0 | 2,370 |
| 4.0 | 370 | 5.0 | 1,190 | 6.5 | 3,120 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1 | 756 | 179 | 280 | 289 | 190 | 190 | 304 | 1,400 | 905 | 1,980 | 2,370 | 2,370 |
| 2 | 772 | 190 | 334 | 370 | 190 | 202 | 344 | 1,510 | 968 | 1,950 | 2,370 | 2,240 |
| 3 | 756 | 206 | 550 | 284 | 190 | 222 | 393 | 1,510 | 986 | 2,110 | 2,370 | 1,980 |
| 4 | 713 | 202 | 621 | 270 | 206 | 210 | 434 | 1,510 | 1,170 | 2,240 | 2,300 | 1,920 |
| 5 | 652 | 226 | 645 | 275 | 222 | 210 | 555 | 1,340 | 1,190 | 2,240 | 2,300 | 1,560 |
| 6 | 514 | 198 | 646 | 318 | 235 | 218 | 738 | 1,400 | 1,180 | 2,300 | 2,300 | 1,860 |
| 7 | 427 | 214 | 670 | 397 | 235 | 222 | 851 | 1,510 | 986 | 2,300 | 2,300 | 1,980 |
| 8 | 421 | 218 | 597 | 381 | 244 | 230 | 895 | 1,460 | 833 | 2,300 | 2,300 | 1,980 |
| 9 | 393 | 202 | 536 | 360 | 252 | 270 | 878 | 1,380 | 815 | 2,300 | 2,300 | 1,980 |
| 10 | 360 | 198 | 479 | 284 | 261 | 398 | 869 | 1,290 | 958 | 2,510 | 2,300 | 2,040 |
| 11 | 360 | 222 | 440 | 239 | 289 | 453 | 1,000 | 1,250 | 1,210 | 2,550 | 2,300 | 2,040 |
| 12 | 360 | 226 | 416 | 214 | 294 | 453 | 1,120 | 1,260 | 1,120 | 2,550 | 2,300 | 1,980 |
| 13 | 308 | 244 | 393 | 210 | 275 | 427 | 1,050 | 1,320 | 1,040 | 2,720 | 2,300 | 1,920 |
| 14 | 284 | 308 | 370 | 206 | 265 | 393 | 995 | 1,400 | 1,180 | 2,720 | 2,300 | 1,920 |
| 15 | 289 | 427 | 370 | 202 | 261 | 365 | 905 | 1,460 | 1,090 | 2,550 | 2,370 | 1,980 |
| 16 | 304 | 472 | 404 | 198 | 257 | 354 | 851 | 1,510 | 756 | 2,720 | 2,370 | 1,980 |
| 17 | 252 | 460 | 404 | 198 | 235 | 339 | 824 | 1,460 | 833 | 2,650 | 2,370 | 1,980 |
| 18 | 226 | 376 | 391 | 196 | 239 | 325 | 750 | 1,400 | 1,070 | 2,550 | 2,370 | 1,980 |
| 19 | 214 | 299 | 466 | 186 | 222 | 315 | 670 | 1,390 | 1,310 | 2,580 | 2,580 | 1,980 |
| 20 | 206 | 304 | 521 | 186 | 218 | 294 | 645 | 1,370 | 1,400 | 2,550 | 2,650 | 1,980 |
| 21 | 206 | 304 | 492 | 186 | 210 | 239 | 798 | 995 | 1,510 | 2,550 | 2,650 | 1,980 |
| 22 | 514 | 370 | 453 | 198 | 206 | 214 | 851 | 492 | 1,620 | 2,650 | 2,650 | 1,980 |
| 23 | 545 | 492 | 427 | 186 | 206 | 210 | 722 | 427 | 1,680 | 2,550 | 2,650 | 1,980 |
| 24 | 427 | 654 | 404 | 186 | 198 | 239 | 550 | 381 | 1,800 | 2,650 | 2,650 | 1,980 |
| 25 | 214 | 629 | 381 | 186 | 194 | 244 | 492 | 376 | 1,800 | 2,720 | 2,650 | 1,980 |
| 26 | 190 | 637 | 354 | 186 | 190 | 239 | 404 | 365 | 1,600 | 2,720 | 2,650 | 1,980 |
| 27 | 179 | 344 | 339 | 194 | 190 | 210 | 360 | 370 | 1,690 | 2,650 | 2,650 | 1,800 |
| 28 | 164 | 308 | 318 | 198 | 186 | 202 | 360 | 328 | 1,660 | 2,550 | 2,650 | 1,370 |
| 29 | 147 | 294 | 304 | 190 | - | 198 | 586 | 398 | 1,920 | 2,580 | 2,580 | 1,290 |
| 30 | 147 | 289 | 294 | 186 | - | 214 | 1,310 | 887 | 1,920 | 2,440 | 2,510 | 1,250 |
| 31 | 144 | - | 280 | 186 | - | 244 | - | 914 | - | 2,370 | 2,440 | - |

| Month | Observed | | | Change in con- tents (acre- feet)† | Diver- sion by Kitti- tas Canal (acre- feet) | Adjusted for change in contents and diversion | | | | |
|--------------------|-----------------------------|--------------|-------|--|---|--|----------------------------|-----------------------------|-----------------------|-----------------------------|
| | Discharge in second-feet | | | | | Run-off in acre-feet | Run-off in acre-feet | Discharge in second-feet | | Run- off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | | Mean | Per square mile | |
| October..... | 772 | 144 | 373 | 22,920 | +47,250 | 12,560 | 82,730 | 1,345 | 2.69 | 3.10 |
| November..... | 654 | 179 | 323 | 19,220 | +77,330 | 547 | 97,100 | 1,632 | 3.26 | 3.64 |
| December..... | 670 | 280 | 438 | 26,910 | +89,450 | - | 116,400 | 1,893 | 3.79 | 4.36 |
| Calendar year 1941 | 2,650 | 144 | 900 | 651,600 | +23,670 | 238,600 | 913,900 | 1,262 | 2.52 | 34.25 |
| January..... | 387 | 186 | 236 | 14,530 | +24,500 | - | 39,030 | 635 | 1.27 | 1.46 |
| February..... | 294 | 186 | 227 | 12,620 | +21,970 | - | 34,590 | 623 | 1.25 | 1.30 |
| March..... | 453 | 190 | 275 | 16,940 | +37,510 | - | 54,450 | 886 | 1.77 | 2.04 |
| April..... | 1,310 | 304 | 718 | 42,710 | +138,500 | 8,490 | 199,700 | 3,188 | 6.38 | 7.11 |
| May..... | 1,510 | 328 | 1,099 | 67,560 | +96,090 | 33,830 | 197,500 | 3,212 | 6.42 | 7.41 |
| June..... | 1,920 | 756 | 1,287 | 76,560 | +38,090 | 38,450 | 153,100 | 2,673 | 5.15 | 5.71 |
| July..... | 2,720 | 1,980 | 2,497 | 153,600 | -156,800 | 63,200 | 60,000 | 976 | 1.95 | 2.25 |
| August..... | 2,650 | 2,300 | 2,447 | 150,400 | -187,300 | 58,790 | 21,890 | 355 | .712 | .82 |
| September..... | 2,370 | 1,250 | 1,913 | 114,100 | -141,200 | 42,920 | 15,620 | 266 | .532 | .59 |
| Water year 1941-42 | 2,720 | 144 | 992 | 718,100 | +65,390 | 258,800 | 1,062,000 | 1,467 | 2.93 | 39.82 |

† Change in contents in Keechelus, Kachess and Cle Elum Lakes.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Yakima River at Umtanum, Wash.

Location.— Water-stage recorder, lat. 46°51', long. 120°29', in NW¼ sec. 20, T. 16 N., R. 19 E., at Umtanum, half a mile upstream from Umtanum Creek and 10 miles south of Ellensburg. Datum of gage is 1,300.0 feet above mean sea level, datum of 1929.

Drainage area.— 1,620 square miles.

Records available.— August 1906 to September 1942 (fragmentary October 1915 to March 1931).

Extremes.— Maximum discharge during year, 3,450 second-feet (regulated) July 17 (gage height, 32.48 feet); minimum, 315 second-feet (regulated) Jan. 20 (gage height, 30.05 feet).

1906-42: Maximum discharge, 41,000 second-feet Nov. 15 or 16, 1906 (gage height, 41.1 feet, from floodmarks, present datum); minimum, 138 second-feet (regulated) Oct. 3, 1915 (gage height, 2.86 feet, datum then in use).

Remarks.— Records good except those for periods of ice effect or no gage-height record, which are fair. Flow partly regulated by Keeschelus, Kachess and Cle Elum Lakes (see p.198). Water diverted abve station for irrigation of about 91,000 acres.

Cooperation.— Records collected and prepared in cooperation with Bureau of Reclamation.

Rating tables, water year 1941-42 except period of ice effect (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to July 17 | | | | July 18 to Sept. 30 | | | |
|-------------------|-------|------|-------|---------------------|-----|------|-------|
| 30.5 | 650 | 31.6 | 1,900 | 30.1 | 332 | 31.0 | 1,090 |
| 30.7 | 830 | 32.0 | 2,550 | 30.3 | 470 | 31.3 | 1,430 |
| 31.0 | 1,140 | | | 30.5 | 624 | 31.6 | 1,830 |
| 31.3 | 1,600 | | | 30.7 | 795 | 32.0 | 2,440 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|------|-------|-------|-------|-------|-------|--------|-------|-------|
| 1 | 1,260 | 404 | 740 | 666 | 498 | 580 | 1,530 | 1,830 | 1,760 | 2,130 | 2,520 | 2,610 |
| 2 | 1,080 | 463 | 785 | 803 | 490 | 722 | 1,900 | 1,900 | 1,580 | 2,130 | 2,520 | 2,520 |
| 3 | 1,100 | 475 | 1,370 | 850 | 632 | 755 | 2,050 | 2,050 | 1,510 | 2,130 | 2,520 | 2,200 |
| 4 | 1,060 | 530 | 1,690 | 821 | 1,010 | 751 | 2,050 | 2,130 | 1,510 | 2,210 | 2,520 | 2,040 |
| 5 | 1,040 | 624 | 1,540 | b767 | 850 | 713 | 2,050 | 1,980 | 1,540 | 2,300 | 2,440 | 1,970 |
| 6 | 940 | 713 | 1,410 | b704 | 776 | 722 | 2,380 | 1,900 | 1,530 | 2,380 | 2,360 | 1,970 |
| 7 | 812 | 668 | 1,370 | b550 | 821 | 722 | 2,550 | 2,210 | 1,530 | 2,380 | 2,360 | 2,040 |
| 8 | 765 | 650 | 1,290 | b506 | 840 | 767 | 2,550 | 2,130 | 1,410 | 2,380 | 2,360 | 2,200 |
| 9 | 776 | 624 | 1,170 | b580 | 880 | 830 | 2,460 | 2,130 | 1,310 | 2,380 | 2,360 | 2,200 |
| 10 | 731 | 588 | 1,100 | b562 | 910 | 1,230 | 2,460 | 2,050 | 1,310 | 2,460 | 2,360 | 2,200 |
| 11 | 803 | 580 | 1,000 | b546 | 960 | 1,400 | 2,640 | 2,050 | 1,500 | a2,730 | 2,360 | 2,200 |
| 12 | 840 | 562 | 940 | b530 | 920 | 1,380 | 2,910 | 1,980 | 1,600 | a2,910 | 2,360 | 2,200 |
| 13 | 821 | 571 | 690 | b514 | 840 | 1,290 | 2,910 | 1,900 | 1,460 | a3,000 | 2,360 | 2,120 |
| 14 | 731 | 785 | 860 | 498 | 803 | 1,170 | 2,640 | 1,900 | 1,490 | a3,100 | 2,440 | 2,120 |
| 15 | 695 | 1,200 | a970 | 482 | 803 | 1,070 | 2,460 | 1,980 | 1,700 | a3,290 | 2,440 | 2,120 |
| 16 | 695 | 1,180 | 930 | 475 | 803 | 1,030 | 2,210 | 1,980 | 1,530 | a3,390 | 2,440 | 2,200 |
| 17 | 588 | 1,110 | 940 | 453 | 776 | 990 | 2,130 | 2,050 | 1,320 | a3,490 | 2,440 | 2,200 |
| 18 | 498 | 1,030 | 910 | 453 | 740 | 960 | 1,980 | 1,980 | 1,440 | a3,240 | 2,440 | 2,200 |
| 19 | 498 | 920 | 1,030 | a432 | 686 | 920 | 1,830 | 1,900 | 1,600 | a3,050 | 2,610 | 2,200 |
| 20 | 498 | 830 | 1,260 | 397 | 666 | 900 | 1,830 | 1,980 | 1,760 | a2,960 | 2,700 | 2,200 |
| 21 | 546 | 803 | 1,220 | 390 | 669 | 900 | 2,050 | 2,050 | 1,830 | a2,870 | 2,700 | 2,200 |
| 22 | 571 | 776 | 1,140 | 432 | 624 | 890 | 2,500 | 1,760 | 1,900 | 2,780 | 2,700 | 2,200 |
| 23 | 870 | 840 | 1,080 | 538 | 624 | 880 | 2,050 | 1,700 | 1,980 | 2,780 | 2,780 | 2,120 |
| 24 | 930 | 900 | 990 | 439 | 615 | 860 | 1,700 | 1,590 | 2,050 | 2,700 | 2,780 | 2,120 |
| 25 | 758 | 1,120 | 920 | 432 | 562 | 850 | 1,470 | 1,760 | 2,130 | 2,700 | 2,700 | 2,120 |
| 26 | 506 | 1,120 | 850 | 468 | 562 | 830 | 1,260 | 2,130 | 2,210 | 2,700 | 2,780 | 2,120 |
| 27 | 475 | 970 | 776 | 677 | 562 | 830 | 1,140 | 1,980 | 2,130 | 2,780 | 2,780 | 2,120 |
| 28 | 453 | 803 | 749 | 740 | 554 | 621 | 1,060 | 1,760 | 2,130 | 2,700 | 2,870 | 1,760 |
| 29 | 404 | 767 | 767 | 668 | - | 830 | 950 | 1,540 | 2,210 | 2,700 | 2,870 | 1,590 |
| 30 | 424 | 749 | 758 | 571 | - | 900 | 1,330 | 1,630 | 2,130 | 2,610 | 2,780 | 1,550 |
| 31 | 417 | - | 731 | 514 | - | 1,140 | - | 1,830 | - | 2,520 | 2,700 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October..... | 22,595 | 1,260 | 404 | 729 | 44,820 |
| November..... | 23,345 | 1,200 | 404 | 778 | 46,300 |
| December..... | 31,986 | 1,590 | 731 | 1,032 | 63,440 |
| Calendar year 1941..... | 504,423 | 2,910 | 401 | 1,382 | 1,000,000 |
| January..... | 17,678 | 850 | 390 | 570 | 35,060 |
| February..... | 20,448 | 1,010 | 490 | 730 | 40,560 |
| March..... | 28,616 | 1,400 | 580 | 923 | 56,760 |
| April..... | 60,830 | 2,910 | 950 | 2,028 | 120,700 |
| May..... | 59,740 | 2,210 | 1,540 | 1,927 | 118,500 |
| June..... | 51,090 | 2,210 | 1,310 | 1,703 | 101,300 |
| July..... | 83,880 | 3,490 | 2,130 | 2,708 | 166,400 |
| August..... | 79,850 | 2,970 | 2,360 | 2,560 | 157,400 |
| September..... | 63,610 | 2,610 | 1,550 | 2,120 | 126,200 |
| Water year 1941-42..... | 543,168 | 3,490 | 390 | 1,488 | 1,077,000 |

* Winter discharge measurement made on this date.

a No gage-height record; discharge computed on basis of unpublished records of Yakima River at Ellensburg.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Yakima River near Parker, Wash.

Location.- Water-stage recorder, lat. 46°29'40", long. 120°26'10", in sec. 28, T. 12 N., R. 19 E., just downstream from Sunnyside diversion dam, 1½ miles east of Parker, and 3 miles downstream from Ahtanum Creek.

Drainage area.- 3,560 square miles.

Records available.- April 1908 to September 1921, October 1931 to September 1942.

Extremes.- Maximum discharge during year, 4,440 second-feet (regulated) Dec. 8 (gauge height, 5.72 feet); minimum, 20 second-feet (regulated) Apr. 30 (gauge height, 0.65 foot). 1908-21, 1931-42: Maximum discharge, 54,300 second-feet Dec. 23, 1933 (gauge height, 15.0 feet, from floodmarks); practically no flow several days during latter part of irrigation seasons as result of diversions.

Remarks.- Records good except those for period of shifting control, which are fair. Diversions above station for irrigation of large area. Flow partly regulated by diversions and by Keechelus, Kachess, Cle Elum, and Bumping Lakes, and Tieton Reservoir (see p. 198). Figures of daily discharge not adjusted for diversions or change in contents of reservoirs.

Cooperation.- Records collected and prepared in cooperation with Bureau of Reclamation and Office of Indian Affairs.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|-------|-------|-------|--------|-------|-------|-------|-------|------|------|------|-------|
| 1 | 348 | 864 | 1,460 | 1,300 | 1,260 | 1,050 | 846 | 143 | 415 | 156 | 186 | 74 |
| 2 | 302 | 872 | 1,510 | 1,260 | 1,260 | 1,170 | 1,580 | 60 | 223 | 52 | 181 | 84 |
| 3 | 385 | 912 | 3,500 | bl,350 | 1,360 | 1,400 | 1,670 | 249 | 143 | 55 | 192 | 237 |
| 4 | 240 | 992 | 4,130 | bl,300 | 1,620 | 1,380 | 1,670 | 246 | 69 | 184 | 120 | 164 |
| 5 | 263 | 1,020 | 3,680 | bl,120 | 1,890 | 1,260 | 1,720 | 97 | 161 | 256 | 129 | 87 |
| 6 | 263 | 1,160 | 3,850 | b984 | 1,550 | 1,300 | 1,890 | 48 | 136 | 189 | 169 | 87 |
| 7 | 120 | 1,210 | 3,010 | b984 | 1,680 | 1,400 | 2,070 | 172 | 549 | 148 | 112 | 164 |
| 8 | 69 | 1,120 | 3,170 | bl,080 | 1,680 | 1,400 | 1,950 | 353 | 429 | 100 | 169 | 324 |
| 9 | 47 | 1,160 | 2,700 | bl,400 | 1,620 | 1,480 | 1,670 | 429 | 283 | 97 | 127 | 263 |
| 10 | 480 | 1,120 | 2,400 | bl,610 | 1,670 | 1,780 | 1,480 | 429 | 108 | 120 | 164 | 249 |
| 11 | 1,260 | 1,080 | 2,110 | bl,570 | 1,720 | 2,140 | 1,580 | 353 | 153 | 282 | 164 | 214 |
| 12 | 1,580 | 1,120 | 1,970 | bl,460 | 1,790 | 2,200 | 2,140 | 164 | 332 | 282 | 229 | 217 |
| 13 | 1,400 | 1,160 | 1,850 | bl,400 | 1,620 | 2,200 | 2,200 | 56 | 116 | 263 | 228 | 104 |
| 14 | 1,490 | 1,350 | 1,700 | bl,300 | 1,580 | 1,890 | 1,830 | 87 | 63 | 198 | 110 | 100 |
| 15 | 1,550 | 2,400 | 1,700 | bl,260 | 1,530 | 1,530 | 1,480 | 64 | 320 | 249 | 153 | 138 |
| 16 | 1,560 | 2,470 | 1,700 | bl,260 | 1,480 | 1,350 | 862 | 136 | 454 | 256 | 178 | 143 |
| 17 | 1,400 | 2,180 | 1,830 | bl,260 | 1,480 | 1,300 | 549 | 106 | 138 | 282 | 175 | 120 |
| 18 | 1,210 | 1,970 | 1,760 | 1,260 | 1,400 | 1,250 | 304 | 58 | 49 | 236 | 136 | 127 |
| 19 | 1,160 | 1,700 | 1,830 | 1,260 | 1,260 | 1,060 | 161 | 44 | 100 | 132 | 143 | 229 |
| 20 | 1,160 | 1,510 | 2,400 | 1,220 | 1,220 | 970 | 99 | 143 | 100 | 116 | 243 | 189 |
| 21 | 1,160 | 1,460 | 2,620 | 1,120 | 1,260 | 1,070 | 236 | 574 | 61 | 169 | 246 | 169 |
| 22 | 1,160 | 1,260 | 2,400 | 1,120 | 1,220 | 962 | 1,060 | 1,010 | 80 | 184 | 229 | 114 |
| 23 | 1,260 | 1,260 | 2,250 | 1,060 | 1,170 | 936 | 1,000 | 1,400 | 78 | 129 | 125 | 136 |
| 24 | 1,510 | 1,400 | 2,250 | 1,170 | 1,170 | 774 | 454 | 1,440 | 198 | 143 | 263 | 138 |
| 25 | 1,300 | 1,570 | 2,110 | 1,220 | 1,120 | 750 | 220 | 1,580 | 306 | 214 | 132 | 102 |
| 26 | 1,080 | 1,700 | 1,970 | 1,260 | 1,040 | 555 | 76 | 2,010 | 460 | 189 | 143 | 120 |
| 27 | 1,010 | 1,700 | 1,760 | 1,400 | 1,010 | 465 | 58 | 1,680 | 420 | 324 | 189 | 70 |
| 28 | 1,000 | 1,700 | 1,620 | 1,120 | 1,120 | 415 | 49 | 1,170 | 340 | 249 | 308 | 328 |
| 29 | 976 | 1,350 | 1,700 | 1,630 | - | 353 | 556 | 262 | 249 | 308 | 338 | - |
| 30 | 952 | 1,350 | 1,630 | 1,400 | - | 249 | 48 | 374 | 320 | 223 | 229 | 288 |
| 31 | 976 | - | 1,570 | 1,300 | - | 349 | - | 502 | - | 159 | 175 | - |

| Month | Mean discharge in second-feet | | | | | | Change in contents (equiv. lost mean second-feet)† | Combined flow of Yakima River and canals adjusted for change in contents‡ | |
|--------------------|-------------------------------|-----------------------------|---------------------|---------------------|-----------------|--|--|---|----------------------|
| | Yakima River near Parker | Union Gap Canal (estimated) | New Reservoir Canal | Old Reservoir Canal | Sunnyside Canal | Combined flow, Yakima River and canals | | Mean (second-feet) | Run-off in acre-feet |
| October..... | 901 | 5 | 223 | 4.07 | 167 | 1,300 | +816 | 2,116 | 130,100 |
| November..... | 1,394 | 0 | 0 | 8.45 | 0 | 1,402 | +1,661 | 3,065 | 183,500 |
| December..... | 2,246 | 0 | 0 | 5.68 | 0 | 2,251 | +2,242 | 4,493 | 276,300 |
| Calendar year 1941 | 874 | 18.4 | 806 | 15.3 | 535 | 2,249 | +3.4 | 2,861 | 1,630,000 |
| January..... | 1,282 | 0 | 0 | 4.65 | 0 | 1,287 | +476 | 1,763 | 108,400 |
| February..... | 1,414 | 0 | 0 | 4.59 | 0 | 1,419 | +526 | 1,945 | 106,000 |
| March..... | 1,173 | 0 | 212 | 7.40 | 194 | 1,586 | +849 | 2,435 | 149,700 |
| April..... | 1,032 | 35 | 1,518 | 50.7 | 988 | 3,624 | +3,020 | 6,644 | 395,300 |
| May..... | 508 | 35 | 1,918 | 5.37 | 1,210 | 3,676 | +1,893 | 5,569 | 342,400 |
| June..... | 221 | 35 | 1,710 | 11.3 | 1,172 | 3,150 | +970 | 4,120 | 245,300 |
| July..... | 193 | 35 | 1,665 | 11.3 | 1,183 | 3,287 | -3,032 | 255 | 15,680 |
| August..... | 182 | 35 | 1,801 | 5.13 | 1,215 | 3,238 | -4,064 | -626 | -50,790 |
| September..... | 169 | 40 | 1,393 | 4.15 | 981 | 2,587 | -3,050 | -463 | -27,550 |
| Water year 1941-42 | 891 | 18.0 | 891 | 10.2 | 595 | 2,406 | +186 | 2,592 | 1,876,000 |

* Negative results due to large number of unrecorded diversions.

† Change in contents of Keechelus, Kachess, Cle Elum, and Bumping Lakes, and Tieton Reservoir.

‡ Totals are equivalent with monthly results previously determined for Yakima River at Union Gap near Yakima.

b Stage-discharge relation affected by ice.

Note.- Shifting-control method used Oct. 1 to May 8.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Yakima River at Kiona, Wash.

Location.— Water-stage recorder, lat. 46°15'10", long. 119°28'50", in sec. 19, T. 9 N., R. 27 E., at highway bridge at Kiona, 3½ miles downstream from intake of Kiona Canal and 25 miles upstream from mouth.

Drainage area.— 5,520 square miles.

Records available.— August 1896 to March 1915, February 1933 to September 1942.

Extremes.— Maximum discharge during year, 4,680 second-feet (regulated) Dec. 5 (gage height, 6.00 feet); minimum, 1,020 second-feet (regulated) May 1 (gage height, 3.18 feet).

1896-1915, 1933-42: Maximum discharge, 71,100 second-feet Dec. 23, 1933 (gage height, 21.57 feet); minimum, 105 second-feet (regulated) Sept. 11, 1906 (gage height, 2.35 feet).

Remarks.— Records good except those for periods of ice effect, which are fair. Water diverted upstream from gage for irrigation of large acreage. Flow partly regulated by diversions and by Keechelus, Kachess, Cle Elum, and Bumping Lakes, and Tieton Reservoir (see p. 198).

Cooperation.— Records collected and prepared in cooperation with Bureau of Reclamation.

Rating table, water year 1941-42, except period of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | |
|-----|-------|-----|-------|
| 3.2 | 1,030 | 4.5 | 2,430 |
| 3.5 | 1,270 | 5.0 | 3,120 |
| 4.0 | 1,800 | 5.5 | 3,880 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|-------|-------|-------|--------|-------|------------------|---------|---------|-------|----------------------|-------|-------|
| 1 | 1,320 | 1,920 | 2,100 | 2,560 | 2,100 | 1,800 | 1,460 | 1,060 | 2,770 | 1,620 | 1,460 | 1,570 |
| 2 | 1,410 | 1,860 | 2,170 | 2,300 | 2,040 | 1,800 | 1,740 | 1,100 | 2,700 | 1,570 | 1,410 | 1,570 |
| 3 | 1,620 | 1,860 | 2,300 | 22,100 | 2,040 | 1,800 | 2,300 | 1,180 | 2,500 | 1,410 | 1,360 | 1,520 |
| 4 | 1,620 | 1,860 | 3,960 | 21,980 | 2,170 | 2,100 | 2,560 | 1,270 | 2,300 | 1,320 | 1,410 | 1,570 |
| 5 | 1,520 | 1,920 | 4,520 | 21,920 | 2,630 | 2,170 | 2,630 | 1,360 | 2,100 | 1,270 | 1,320 | 1,620 |
| 6 | 1,520 | 1,920 | 4,200 | 21,800 | 3,120 | 1,980 | 2,700 | 1,320 | 1,980 | 1,410 | 1,320 | 1,460 |
| 7 | 1,520 | 1,920 | 3,800 | 21,740 | 2,700 | 2,040 | 2,980 | 1,220 | 1,860 | 1,410 | 1,320 | 1,410 |
| 8 | 1,460 | 2,040 | 3,570 | 21,740 | 2,630 | 2,170 | 3,050 | 1,180 | 2,170 | 1,410 | 1,320 | 1,410 |
| 9 | 1,410 | 2,040 | 3,640 | 1,800 | 2,630 | 2,240 | 2,980 | 1,360 | 2,300 | 1,360 | 1,320 | 1,570 |
| 10 | 1,410 | 1,980 | 3,340 | 21,800 | 2,840 | 2,630 | 2,700 | 1,570 | 2,040 | 1,410 | 1,320 | 1,620 |
| 11 | 1,460 | 2,040 | 3,050 | 21,860 | 2,910 | 3,500 | 2,560 | 1,740 | 1,800 | 1,520 | 1,320 | 1,620 |
| 12 | 2,560 | 1,920 | 2,840 | 21,860 | 2,910 | 3,500 | 2,560 | 1,740 | 1,800 | 1,620 | 1,320 | 1,570 |
| 13 | 2,560 | 1,920 | 2,700 | 21,860 | 2,840 | 3,420 | 3,050 | 1,620 | 1,920 | 1,740 | 1,270 | 1,570 |
| 14 | 2,560 | 1,920 | 2,560 | 21,860 | 2,700 | 3,340 | 3,270 | 1,620 | 1,860 | 1,800 | 1,360 | 1,570 |
| 15 | 2,600 | 2,100 | 2,500 | 21,860 | 2,560 | 2,980 | 2,910 | 1,410 | 1,680 | 1,740 | 1,360 | 1,460 |
| 16 | 2,430 | 2,560 | 2,500 | 21,860 | 2,500 | 2,700 | 2,630 | 1,360 | 1,680 | 1,740 | 1,320 | 1,460 |
| 17 | 2,430 | 3,050 | 2,630 | 21,860 | 2,430 | 2,500 | 2,170 | 1,410 | 1,920 | 1,680 | 1,360 | 1,520 |
| 18 | 2,430 | 2,840 | 2,700 | 1,860 | 2,360 | 2,300 | 1,800 | 1,460 | 1,680 | 1,570 | 1,360 | 1,520 |
| 19 | 2,560 | 2,700 | 2,700 | 1,860 | 2,300 | 2,300 | 1,570 | 1,460 | 1,520 | 1,520 | 1,320 | 1,520 |
| 20 | 2,240 | 2,500 | 3,340 | 1,800 | 2,170 | 2,170 | 1,360 | 1,360 | 1,460 | 1,520 | 1,320 | 1,570 |
| 21 | 2,240 | 2,560 | 4,040 | 1,800 | 2,100 | 2,040 | 1,220 | 1,460 | 1,460 | 1,410 | 1,460 | 1,620 |
| 22 | 2,170 | 2,240 | 3,720 | 1,740 | 2,040 | 2,040 | 1,180 | 1,860 | 1,460 | 1,460 | 1,680 | 1,620 |
| 23 | 2,170 | 2,100 | 3,500 | 1,680 | 2,040 | 2,100 | 1,740 | 2,300 | 1,360 | 1,460 | 1,800 | 1,620 |
| 24 | 2,170 | 2,100 | 3,420 | 1,620 | 2,040 | 2,040 | 2,040 | 2,910 | 1,360 | 1,460 | 1,680 | 1,620 |
| 25 | 2,430 | 2,170 | 3,270 | 1,740 | 1,980 | 1,860 | 1,680 | 3,120 | 1,360 | 1,410 | 1,680 | 1,620 |
| 26 | 2,300 | 2,300 | 3,120 | 1,800 | 1,920 | 1,930 | 1,410 | 3,420 | 1,520 | 1,460 | 1,680 | 1,570 |
| 27 | 2,100 | 2,430 | 2,980 | 1,920 | 1,800 | 1,800 | 1,320 | 3,960 | 1,740 | 1,410 | 1,520 | 1,570 |
| 28 | 2,040 | 2,430 | 2,770 | 2,100 | 1,740 | 1,680 | 1,180 | 3,720 | 1,860 | 1,460 | 1,460 | 1,570 |
| 29 | 1,980 | 2,240 | 2,700 | 2,360 | - | 1,620 | 1,140 | 3,340 | 1,620 | 1,620 | 1,520 | 1,680 |
| 30 | 1,920 | 2,100 | 2,630 | 2,300 | - | 1,520 | 1,060 | 3,120 | 1,570 | 1,570 | 1,570 | 1,860 |
| 31 | 1,860 | - | 2,560 | 2,170 | - | 1,460 | - | 2,770 | - | 1,520 | 1,570 | - |
| Month | | | | | | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet | | |
| October..... | | | | | | 61,520 | 2,560 | 1,320 | 1,985 | 122,000 | | |
| November..... | | | | | | 65,620 | 3,050 | 1,860 | 2,167 | 130,200 | | |
| December..... | | | | | | 95,830 | 4,520 | 2,100 | 3,091 | 190,100 | | |
| Calendar year 1941 | | | | | | 707,330 | 4,520 | 840 | 1,938 | 1,403,000 | | |
| January..... | | | | | | 59,510 | 2,560 | 1,620 | 1,920 | 118,000 | | |
| February..... | | | | | | 66,240 | 3,120 | 1,740 | 2,366 | 131,400 | | |
| March..... | | | | | | 69,460 | 3,500 | 1,460 | 2,241 | 137,800 | | |
| April..... | | | | | | 63,020 | 3,270 | 1,060 | 2,101 | 125,000 | | |
| May..... | | | | | | 59,680 | 3,960 | 1,080 | 1,925 | 118,400 | | |
| June..... | | | | | | 55,350 | 2,770 | 1,360 | 1,845 | 109,800 | | |
| July..... | | | | | | 46,880 | 1,800 | 1,270 | 1,512 | 92,990 | | |
| August..... | | | | | | 44,490 | 1,800 | 1,270 | 1,435 | 88,240 | | |
| September..... | | | | | | 47,050 | 1,860 | 1,410 | 1,568 | 95,320 | | |
| Water year 1941-42 | | | | | | 734,650 | 4,520 | 1,060 | 2,013 | 1,457,000 | | |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

YAKIMA RIVER BASIN

Reservoirs in Yakima River Basin, Wash.

Keechelus Lake on Yakima River, $3\frac{1}{2}$ miles northwest of Martin, completed in 1917 for irrigation, has usable capacity of 153,000 acre-feet at spillway crest. Records furnished by Bureau of Reclamation.

Kachess Lake on Kachess River, $2\frac{1}{2}$ miles northwest of Easton, completed in 1912 for irrigation, has usable capacity of 239,000 acre-feet at spillway crest. Records furnished by Bureau of Reclamation.

Cle Elum Lake on Cle Elum River, 4 miles northwest of Roslyn, completed in 1933 for irrigation, has usable capacity of 436,000 acre-feet at spillway crest. Records furnished by Bureau of Reclamation.

Bumping Lake on Bumping River, 12 miles upstream from American River, 19 miles west of Nile, completed in 1910 for irrigation, has usable capacity of 33,800 acre-feet at spillway crest. Records furnished by Bureau of Reclamation.

Tieton Reservoir on Tieton River just upstream from Wild Cat Creek at Rimrock, $22\frac{1}{2}$ miles southwest of Naches, completed in 1925 for irrigation, has usable capacity of 197,000 acre-feet at spillway crest. Records furnished by Bureau of Reclamation.

Clear Creek Reservoir on North Fork of Tieton River, 28 miles southwest of Naches, completed in 1918 for irrigation, has usable capacity of 5,300 acre-feet at spillway crest. No records for this reservoir.

Monthly gage height and contents, water year October 1941 to September 1942

| Date | Keechelus Lake | | | Kachess Lake | | | Cle Elum Lake | | |
|--------------------|---------------------|----------------------|---|---------------------|----------------------|---|---------------------|----------------------|---|
| | Gage height (feet)† | Contents (acre-feet) | Change in contents during month (acre-feet) | Gage height (feet)† | Contents (acre-feet) | Change in contents during month (acre-feet) | Gage height (feet)† | Contents (acre-feet) | Change in contents during month (acre-feet) |
| Sept. 30..... | 53.32 | 10,470 | - | 19.49 | 75,050 | - | 29.26 | 39,360 | - |
| Oct. 31..... | 38.65 | 17,310 | +6,840 | 20.61 | 78,270 | +3,220 | 44.77 | 76,570 | +37,190 |
| Nov. 30..... | 53.16 | 36,530 | +19,220 | 25.74 | 93,530 | +15,260 | 59.65 | 119,420 | +42,850 |
| Dec. 31..... | 67.22 | 56,480 | +19,950 | 30.96 | 111,980 | +18,460 | 75.27 | 170,480 | +51,060 |
| Calendar year 1941 | - | - | +8,140 | - | - | -6,600 | - | - | +22,190 |
| Jan. 31..... | 70.92 | 62,180 | +5,700 | 32.57 | 117,820 | +5,840 | 78.99 | 183,440 | +12,960 |
| Feb. 28..... | 74.38 | 67,770 | +5,590 | 34.16 | 123,660 | +5,840 | 81.95 | 193,980 | +10,540 |
| Mar. 31..... | 79.99 | 77,320 | +9,550 | 36.58 | 132,680 | +9,020 | 87.15 | 212,920 | +18,940 |
| Apr. 30..... | 95.13 | 106,590 | +29,270 | 43.73 | 160,460 | +27,780 | 107.96 | 294,390 | +81,470 |
| May 31..... | 102.08 | 121,730 | +15,140 | 50.32 | 187,720 | +27,260 | 120.63 | 348,070 | +53,680 |
| June 30..... | 105.18 | 128,840 | +7,110 | 54.04 | 203,670 | +15,950 | 124.04 | 363,100 | +15,030 |
| July 31..... | 91.06 | 98,210 | -30,630 | 43.56 | 159,780 | -43,890 | 104.64 | 280,830 | -82,270 |
| Aug. 31..... | 67.84 | 57,420 | -40,790 | 26.69 | 96,490 | -63,290 | 82.97 | 197,660 | -82,180 |
| Sept. 30..... | 50.63 | 33,100 | -24,320 | 15.66 | 64,080 | -32,410 | 57.62 | 113,200 | -84,450 |
| Water year 1941-42 | - | - | +22,630 | - | - | -10,970 | - | - | +73,620 |
| Date | Bumping Lake | | | Tieton Reservoir | | | | | |
| | Gage height (feet)† | Contents (acre-feet) | Change in contents during month (acre-feet) | Gage height (feet)† | Contents (acre-feet) | Change in contents during month (acre-feet) | Gage height (feet)† | Contents (acre-feet) | Change in contents during month (acre-feet) |
| Sept. 30..... | 93.05 | 2,570 | - | 7.55 | 14,040 | - | | | |
| Oct. 31..... | 93.09 | 2,600 | +30 | 11.97 | 16,930 | +2,890 | | | |
| Nov. 30..... | 105.66 | 11,730 | +9,130 | 28.54 | 30,480 | +13,550 | | | |
| Dec. 31..... | 121.42 | 27,960 | +16,230 | 55.91 | 62,650 | +32,170 | | | |
| Calendar year 1941 | - | - | +15,440 | - | - | -36,670 | | | |
| Jan. 31..... | 114.52 | 20,150 | -7,810 | 64.46 | 75,200 | +12,550 | | | |
| Feb. 28..... | 112.77 | 18,330 | -1,820 | 70.23 | 84,250 | +9,050 | | | |
| Mar. 31..... | 115.94 | 21,680 | +3,350 | 77.06 | 96,620 | +11,370 | | | |
| Apr. 30..... | 126.54 | 34,410 | +12,730 | 92.63 | 124,110 | +28,490 | | | |
| May 31..... | 127.04 | 36,080 | +670 | 102.33 | 143,730 | +19,620 | | | |
| June 30..... | 126.35 | 34,200 | -580 | 111.79 | 164,210 | +20,480 | | | |
| July 31..... | 119.54 | 26,730 | -9,470 | 102.00 | 143,040 | -21,170 | | | |
| Aug. 31..... | 108.97 | 14,640 | -11,090 | 74.68 | 91,560 | -51,480 | | | |
| Sept. 30..... | 94.37 | 3,440 | -11,200 | 55.80 | 62,500 | -29,060 | | | |
| Water year 1941-42 | - | - | +870 | - | - | +48,460 | | | |

† Gage height is mean for the day.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Kachess River near Easton, Wash.

Location.— Water-stage recorder, lat. 47°15'30", long. 121°11'50", in sec. 3, T. 20 N., R. 13 E., three-quarters of a mile downstream from Kachess Lake and 2 miles northwest of Easton.

Drainage area.— 64 square miles.

Records available.— October 1903 to September 1942.

Average discharge.— 39 years, 280 second-feet (adjusted for storage since October 1905).

Extremes (regulated).— Maximum discharge during year, 1,300 second-feet Aug. 20 (gage height, 5.36 feet); no flow on many days.

1903-42: Maximum discharge, 2,240 second-feet (computed from gate opening) Aug. 27, 1920; no flow when gates in dam are closed.

Remarks.— Records good except those for extremely low flow, which are poor. No diversion. Flow regulated by Kachess Lake (see p. 198). Figures of daily discharge not adjusted for change in contents of Kachess Lake.

Cooperation.— Records collected and prepared in cooperation with Bureau of Reclamation.

Rating tables, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Aug. 18 | | | | | | Aug. 18 to Sept. 30 | |
|-------------------|-----|-----|-----|-----|-------|---------------------|-------|
| 0.9 | 0.5 | 1.8 | 24 | 3.0 | 227 | 3.4 | 394 |
| 1.0 | 1.0 | 2.0 | 39 | 3.5 | 385 | 4.0 | 639 |
| 1.2 | 3.0 | 2.2 | 61 | 4.0 | 574 | 4.5 | 866 |
| 1.4 | 6.0 | 2.4 | 91 | 5.0 | 1,040 | 5.0 | 1,110 |
| 1.6 | 13 | 2.7 | 149 | | | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|-------|-------|
| 1 | 748 | 74 | 0 | 1 | 1 | 1 | 2 | 1 | 0 | 317 | 985 | 899 |
| 2 | 771 | 81 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 360 | 985 | 839 |
| 3 | 651 | 47 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 494 | 985 | 550 |
| 4 | 574 | 9 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 533 | 985 | 550 |
| 5 | 447 | 3 | 1 | 1 | 1 | 1 | 2 | 1 | 0 | 554 | 960 | 550 |
| 6 | 308 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 595 | 936 | 572 |
| 7 | 274 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 638 | 936 | 594 |
| 8 | 254 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 26 | 681 | 936 | 594 |
| 9 | 92 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 3 | 794 | 936 | 594 |
| 10 | 2 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 4 | 841 | 936 | 594 |
| 11 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 32 | 841 | 912 | 594 |
| 12 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 1 | 8 | 864 | 912 | 594 |
| 13 | 0 | 0 | 1 | 1 | 1 | 2 | 1 | 0 | 30 | 936 | 912 | 594 |
| 14 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 0 | 61 | 936 | 936 | 594 |
| 15 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 0 | 68 | 936 | 936 | 594 |
| 16 | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 68 | 912 | 936 | 572 |
| 17 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 68 | 888 | 936 | 594 |
| 18 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 68 | 841 | 1,120 | 594 |
| 19 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 66 | 864 | 1,270 | 594 |
| 20 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 68 | 864 | 1,270 | 594 |
| 21 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 68 | 841 | 1,270 | 594 |
| 22 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 86 | 818 | 1,270 | 572 |
| 23 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 100 | 841 | 1,270 | 572 |
| 24 | 1 | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 112 | 864 | 1,270 | 550 |
| 25 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 151 | 936 | 1,270 | 550 |
| 26 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 173 | 960 | 1,270 | 550 |
| 27 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 189 | 960 | 1,240 | 466 |
| 28 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 216 | 965 | 1,190 | 394 |
| 29 | 49 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 224 | 965 | 1,040 | 416 |
| 30 | 33 | 0 | 1 | 1 | 1 | 1 | 1 | 0 | 280 | 965 | 965 | 430 |
| 31 | 33 | - | 1 | 1 | 1 | 1 | - | 0 | - | 965 | 912 | - |

| Month | Observed | | | | Change in contents in Kachess Lake (acre-feet) | Adjusted for change in reservoir contents | | | |
|--------------------|-----------------------------|--------------|-------|-------------------------|---|--|-----------------------------|-----------------------|-------------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | Mean | Per square mile | |
| October..... | 771 | 0 | 141 | 8,660 | +3,220 | 11,880 | 193 | 3.02 | 3.48 |
| November..... | 74 | 0 | 6.6 | 393 | +15,250 | 15,850 | 253 | 4.11 | 4.58 |
| December..... | 1 | 0 | .9 | 52 | +18,450 | 18,500 | 301 | 4.70 | 5.42 |
| Calendar year 1941 | 1,550 | 0 | 194 | 140,100 | -6,500 | 133,500 | 184 | 2.88 | 39.07 |
| January..... | 1 | 0 | .6 | 40 | +5,840 | 5,880 | 95.6 | 1.49 | 1.72 |
| February..... | 1 | 1 | 1.0 | 56 | +5,840 | 5,900 | 106 | 1.66 | 1.73 |
| March..... | 2 | 1 | 1.1 | 69 | +9,020 | 9,090 | 148 | 2.31 | 2.66 |
| April..... | 2 | 1 | 1.2 | 69 | +27,780 | 27,850 | 468 | 7.31 | 8.16 |
| May..... | 1 | 0 | .4 | 28 | +27,280 | 27,290 | 444 | 6.94 | 8.00 |
| June..... | 263 | 0 | 72.4 | 4,310 | +15,950 | 20,260 | 340 | 5.31 | 5.94 |
| July..... | 985 | 317 | 802 | 49,330 | -45,890 | 5,440 | 88.5 | 1.38 | 1.59 |
| August..... | 1,270 | 912 | 1,055 | 64,870 | -63,290 | 1,580 | 25.7 | .402 | .46 |
| September..... | 869 | 394 | 571 | 33,990 | -32,410 | 1,580 | 26.6 | .416 | .46 |
| Water year 1941-42 | 1,270 | 0 | 224 | 161,900 | -10,970 | 150,900 | 208 | 3.25 | 44.20 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

YAKIMA RIVER BASIN

Cle Elum River near Roslyn, Wash.

Location.- Water-stage recorder, lat. 47°14'00", long. 121°03'30", in Sw¼ sec. 11, T. 20 N., R. 14 E., 1,000 feet downstream from dam at Cle Elum Lake and 4 miles northwest of Roslyn.

Drainage area.- 202 square miles.

Records available.- October 1903 to September 1942.

Average discharge.- 39 years, 887 second-feet (adjusted for storage since January 1906).

Extremes (regulated).- Maximum discharge during year, 2,200 second-feet July 12 (gage height, 8.06 feet); minimum, possibly as low as 3 second-feet Nov. 17, 18, when gates in dam at Cle Elum Lake were closed.

1903-42: Maximum discharge, 18,700 second-feet Nov. 15, 1906 (gage height, 14.05 feet); practically no flow when gates in dam are closed.

Remarks.- Records good. No diversion above station. Flow partly regulated by Cle Elum Lake (see p. 198). Figures of daily discharge not adjusted for change in contents of Cle Elum Lake.

Cooperation.- Records collected and prepared in cooperation with Bureau of Reclamation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)
(Shifting-control method used June 20 to Aug. 15)

| | | | | | | | |
|-----|----|-----|----|-----|-----|-----|-------|
| 4.2 | 8 | 4.5 | 46 | 5.0 | 204 | 6.5 | 950 |
| 4.3 | 16 | 4.6 | 70 | 5.5 | 409 | 7.0 | 1,300 |
| 4.4 | 28 | 4.7 | 98 | 6.0 | 650 | 8.0 | 2,150 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|
| 1 | 14 | 20 | 26 | 28 | 28 | 30 | 23 | 1,150 | 689 | 1,790 | 1,620 | 1,580 |
| 2 | 14 | 20 | 26 | 28 | 28 | 30 | 23 | 1,230 | 735 | 1,830 | 1,620 | 1,580 |
| 3 | 14 | 20 | 27 | 28 | 28 | 30 | 23 | 1,260 | 794 | 1,920 | 1,620 | 1,580 |
| 4 | 14 | 20 | 27 | 28 | 28 | 30 | 23 | 1,230 | 985 | 2,010 | 1,630 | 1,580 |
| 5 | 14 | 21 | 27 | 28 | 28 | 30 | 23 | 1,120 | 1,020 | 2,060 | 1,490 | 1,580 |
| 6 | 14 | 21 | 27 | 28 | 28 | 30 | 27 | 1,190 | 950 | 2,060 | 1,490 | 1,580 |
| 7 | 14 | 21 | 27 | 28 | 28 | 30 | 32 | 1,190 | 700 | 2,060 | 1,490 | 1,660 |
| 8 | 14 | 22 | 27 | 28 | 28 | 30 | 32 | 1,050 | 618 | 2,060 | 1,490 | 1,700 |
| 9 | 14 | 22 | 27 | 28 | 28 | 30 | 32 | 983 | 608 | 2,060 | 1,530 | 1,700 |
| 10 | 14 | 22 | 27 | 28 | 28 | 30 | 32 | 950 | 764 | 2,060 | 1,530 | 1,700 |
| 11 | 14 | 22 | 27 | 28 | 30 | 30 | 32 | 950 | 764 | 2,060 | 1,530 | 1,700 |
| 12 | 14 | 22 | 27 | 28 | 30 | 30 | 32 | 1,020 | 661 | 2,060 | 1,530 | 1,620 |
| 13 | 14 | 22 | 27 | 28 | 30 | 30 | 32 | 1,080 | 700 | 2,060 | 1,530 | 1,580 |
| 14 | 16 | 23 | 27 | 28 | 30 | 30 | 32 | 1,150 | 886 | 2,010 | 1,530 | 1,580 |
| 15 | 16 | 23 | 27 | 28 | 30 | 32 | 33 | 1,230 | 706 | 1,960 | 1,530 | 1,580 |
| 16 | 16 | 23 | 27 | 28 | 30 | 27 | 33 | 1,190 | 388 | 1,960 | 1,580 | 1,580 |
| 17 | 16 | 10 | 27 | 28 | 30 | 23 | 33 | 1,190 | 577 | 1,920 | 1,580 | 1,580 |
| 18 | 16 | 9 | 27 | 28 | 30 | 23 | 33 | 1,150 | 794 | 1,870 | 1,580 | 1,580 |
| 19 | 16 | 24 | 27 | 28 | 30 | 23 | 33 | 1,120 | 1,080 | 1,870 | 1,580 | 1,580 |
| 20 | 16 | 24 | 27 | 28 | 30 | 23 | 33 | 983 | 1,230 | 1,870 | 1,580 | 1,580 |
| 21 | 16 | 24 | 27 | 28 | 30 | 23 | 33 | 508 | 1,380 | 1,870 | 1,580 | 1,580 |
| 22 | 16 | 24 | 28 | 28 | 30 | 23 | 33 | 33 | 1,460 | 1,870 | 1,580 | 1,580 |
| 23 | 16 | 24 | 28 | 28 | 30 | 23 | 33 | 33 | 1,530 | 1,870 | 1,580 | 1,580 |
| 24 | 16 | 24 | 28 | 28 | 30 | 23 | 33 | 33 | 1,620 | 1,870 | 1,580 | 1,580 |
| 25 | 17 | 24 | 28 | 28 | 30 | 23 | 33 | 35 | 1,620 | 1,870 | 1,580 | 1,580 |
| 26 | 17 | 24 | 28 | 28 | 30 | 23 | 33 | 35 | 1,580 | 1,870 | 1,580 | 1,580 |
| 27 | 17 | 26 | 28 | 28 | 30 | 23 | 33 | 35 | 1,490 | 1,830 | 1,580 | 1,340 |
| 28 | 18 | 26 | 28 | 28 | 30 | 23 | 35 | 33 | 1,660 | 1,790 | 1,580 | 1,190 |
| 29 | 18 | 26 | 28 | 28 | - | 23 | 486 | 312 | 1,700 | 1,740 | 1,580 | 1,190 |
| 30 | 18 | 26 | 28 | 28 | - | 23 | 1,080 | 689 | 1,740 | 1,620 | 1,580 | 1,150 |
| 31 | 18 | - | 28 | 28 | - | 23 | - | 678 | - | 1,580 | 1,580 | - |

| Month | Observed | | | | Change in contents in Cle Elum Lake (acre-feet) | Adjusted for change in reservoir contents | | | |
|--------------------|--------------------------|--------------|-------|----------------------|---|---|--------------------------|-----------------|-------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | Mean | Per square mile | |
| | | | | | | | | | |
| October..... | 18 | 14 | 15.5 | 954 | +37,190 | 38,140 | 620 | 3.07 | 3.54 |
| November..... | 26 | 9 | 22.0 | 1,310 | +42,850 | 44,160 | 742 | 3.67 | 4.10 |
| December..... | 28 | 26 | 27.3 | 1,680 | +51,060 | 52,740 | 858 | 4.25 | 4.90 |
| Calendar year 1941 | 2,440 | 2 | 603 | 436,300 | +22,190 | 458,500 | 633 | 3.13 | 42.56 |
| January..... | 28 | 28 | 28.0 | 1,720 | +12,960 | 14,680 | 239 | 1.18 | 1.36 |
| February..... | 30 | 28 | 29.3 | 1,630 | +10,540 | 12,170 | 219 | 1.08 | 1.13 |
| March..... | 32 | 23 | 26.6 | 1,630 | +18,940 | 20,570 | 335 | 1.66 | 1.81 |
| April..... | 1,080 | 23 | 80.9 | 4,820 | +61,470 | 66,290 | 1,450 | 7.18 | 8.01 |
| May..... | 1,260 | 33 | 802 | 49,330 | +53,680 | 103,000 | 1,675 | 8.29 | 9.66 |
| June..... | 1,747 | 385 | 1,047 | 62,310 | +15,030 | 77,340 | 1,300 | 6.44 | 7.18 |
| July..... | 2,060 | 1,580 | 1,914 | 117,700 | -32,270 | 35,430 | 576 | 2.85 | 3.29 |
| August..... | 1,620 | 1,490 | 1,559 | 95,880 | -83,180 | 12,700 | 207 | 1.02 | 1.18 |
| September..... | 1,700 | 1,150 | 1,552 | 92,530 | -64,450 | 7,880 | 132 | .653 | .73 |
| Water year 1941-42 | 2,060 | 9 | 596 | 431,300 | +73,820 | 505,100 | 698 | 3.46 | 46.89 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Naches River below Tieton River, near Naches, Wash.

Location.— Water-stage recorder, lat. 46°44'40", long. 120°46'00", in SWNE¼ sec. 36, T. 15 N., R. 16 E., half a mile downstream from Wapatox power canal, three-quarters of a mile downstream from Tieton River, and ¾ miles northwest of Naches. Datum of gage is 1,550 feet above mean sea level.

Drainage area.— 943 square miles.

Records available.— August to October 1905, November 1908 to October 1912, and May 1915 to September 1942 in reports of Geological Survey. September 1905 and October 1908 to September 1912 (mean monthly discharge) in State Water-Supply Bulletin 5.

Average discharge.— 30 years (1908-12, 1916-42), 1,614 second-feet (adjusted for diversions by Selah Valley and Tieton Canals since 1909, city of Yakima at Oak Flat since 1935, and by Wapatox Canal since 1936, and for change in contents in Bumping Lake Reservoir since November 1910, and in Tieton Reservoir since October 1924).

Extremes.— Maximum discharge during year, 2,880 second-feet (regulated) May 25 (gage height, 13.17 feet); minimum, 5 second-feet (regulated) Feb. 25 (gage height, 9.50 feet).

1905, 1908-12, 1915-42: Maximum discharge, 32,200 second-foot Dec. 22, 23, 1933 (gage height, 14.33 feet, site and datum then in use); minimum, 2 second-feet (regulated) Jan. 7, 1937, Dec. 31, 1940.

Remarks.— Records good except those for period of ice effect, which are fair. Flow regulated by Bumping Lake and Tieton Reservoir, by diversion at Oak Flat for supply of city of Yakima, and by diversion of Selah Valley, Tieton, and Wapatox Canals. Figures of daily discharge not adjusted.

Cooperation.— Station is maintained by Bureau of Reclamation in cooperation with Pacific Power & Light Co. Records collected and prepared in cooperation with Bureau of Reclamation. Information concerning municipal diversion at Oak Flat, which is very small in relation to flow past station, furnished by water superintendent of city of Yakima.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|-------|-------|-------|------|------|-------|
| 1 | 36 | 7 | 48 | 80 | 20 | 6 | 350 | 1,020 | 1,250 | 833 | 457 | 229 |
| 2 | 16 | 7 | 347 | b60 | 20 | 6 | 534 | 1,030 | 1,240 | 508 | 457 | 296 |
| 3 | 16 | 8 | 1,680 | b48 | 20 | 6 | 547 | 1,020 | 1,220 | 550 | 459 | 278 |
| 4 | 16 | 12 | 1,250 | b38 | 16 | 6 | 603 | 935 | 1,230 | 569 | 463 | 147 |
| 5 | 25 | 10 | 870 | b25 | 11 | 6 | 741 | 576 | 1,230 | 884 | 494 | 197 |
| 6 | 15 | 10 | 716 | *b20 | 10 | 6 | 558 | 962 | 1,450 | 799 | 534 | 274 |
| 7 | 12 | 11 | 576 | b34 | 10 | 6 | 998 | 1,200 | 1,720 | 749 | 540 | 340 |
| 8 | 13 | 12 | 440 | b51 | 9 | 7 | 1,030 | 1,190 | 1,590 | 709 | 582 | 241 |
| 9 | 12 | 12 | 352 | b74 | 10 | 15 | 1,070 | 1,280 | 1,450 | 741 | 575 | 157 |
| 10 | 12 | 12 | 261 | b65 | 12 | 115 | 1,080 | 1,210 | 1,350 | 725 | 568 | 50 |
| 11 | 18 | 11 | 182 | b97 | 12 | 85 | 1,330 | 1,090 | 1,350 | 685 | 554 | 47 |
| 12 | 28 | 11 | *137 | b89 | 11 | 53 | 1,610 | 935 | 1,230 | 520 | 589 | 60 |
| 13 | 39 | 12 | 87 | b69 | 16 | 29 | 1,620 | 944 | 1,070 | 376 | 561 | 112 |
| 14 | 22 | 357 | 64 | b91 | 10 | 20 | 1,560 | 998 | 1,060 | 274 | 527 | 55 |
| 15 | 18 | 372 | 57 | b91 | 9 | 15 | 1,390 | 1,010 | 1,280 | 249 | 540 | 77 |
| 16 | 16 | 217 | 113 | b91 | 7 | 11 | 1,250 | 1,020 | 1,350 | 200 | 547 | 61 |
| 17 | 16 | 98 | 96 | b91 | 9 | 9 | 1,120 | 953 | 1,300 | 148 | 540 | 77 |
| 18 | 16 | 36 | 87 | b93 | 10 | 8 | 1,040 | 918 | 1,110 | 110 | 520 | 79 |
| 19 | 15 | 19 | 372 | b93 | 9 | 7 | 1,350 | 962 | 1,100 | 101 | 520 | 52 |
| 20 | 15 | 10 | 532 | *b93 | 10 | 7 | 1,240 | 1,300 | 910 | 175 | 569 | 70 |
| 21 | 13 | 9 | 403 | b93 | 8 | 7 | 1,680 | 1,800 | 816 | 278 | 589 | 61 |
| 22 | 12 | 7 | 291 | b91 | 7 | 9 | 1,820 | 2,400 | 533 | 320 | 468 | 84 |
| 23 | 12 | 7 | 357 | b97 | 6 | 12 | 1,800 | 2,750 | 576 | 340 | 439 | 77 |
| 24 | 11 | 8 | 367 | b97 | 6 | 14 | 1,590 | 2,750 | 918 | 427 | 415 | 63 |
| 25 | 14 | 8 | 342 | b65 | 6 | 12 | 1,350 | 2,540 | 560 | 475 | 393 | 59 |
| 26 | 23 | 10 | 265 | 85 | 6 | 11 | 1,150 | 2,570 | 533 | 482 | 368 | 52 |
| 27 | 10 | 9 | 300 | 53 | 6 | 10 | 1,020 | 2,160 | 555 | 527 | 362 | 79 |
| 28 | 9 | 5 | 314 | 28 | 6 | 10 | 910 | 1,740 | 625 | 488 | 355 | 84 |
| 29 | 8 | 11 | 278 | 24 | - | 11 | 808 | 1,620 | 592 | 475 | 301 | 84 |
| 30 | 8 | 22 | 252 | 15 | - | 17 | 910 | 1,460 | 567 | 475 | 229 | 79 |
| 31 | 7 | - | 206 | 20 | - | 93 | - | 1,350 | - | 475 | 218 | - |

| Month | Observed | | | | Change in contents in Bumping Lake and Tieton Reser- voirs (acre-feet) | Diversions by Tieton, Selah Val- ley and Wapatox Canals and city of Yakima (acre-feet) | Adjusted for change in reser- voir contents and diversions | | | |
|-----------------------------|--------------------------------|--------------|-------|----------------------------|---|--|---|--------------------------------|-----------------------|-----------------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | | Run-off in acre-feet | Discharge in second-feet | | Run- off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | | Mean | Per square mile | |
| October..... | 39 | 7 | 16.2 | 994 | +2,920 | 27,750 | 31,690 | 515 | 0.546 | 0.63 |
| November..... | 372 | 7 | 44.8 | 2,670 | +22,680 | 25,720 | 51,070 | 558 | .910 | 1.02 |
| December..... | 1,880 | 48 | 382 | 23,490 | +48,400 | 31,240 | 103,100 | 1,677 | 1.78 | 2.06 |
| Calendar- year 1941..... | 1,880 | 3 | 414 | 299,800 | -21,230 | 461,000 | 739,500 | 1,021 | 1.08 | 14.71 |
| January..... | 93 | 18 | 67.6 | 4,160 | +4,740 | 26,160 | 35,060 | 570 | .604 | .70 |
| February..... | 20 | 6 | 10.4 | 575 | +7,230 | 20,520 | 28,380 | 510 | .541 | .56 |
| March..... | 115 | 6 | 20.3 | 1,250 | +14,720 | 25,540 | 41,510 | 675 | .716 | .83 |
| April..... | 1,820 | 350 | 1,145 | 68,110 | +41,220 | 41,250 | 150,600 | 2,531 | 2.68 | 2.93 |
| May..... | 2,840 | 876 | 1,429 | 87,890 | +20,290 | 58,790 | 167,000 | 2,716 | 2.88 | 3.22 |
| June..... | 1,720 | 625 | 1,125 | 66,930 | +19,600 | 58,200 | 144,700 | 2,432 | 2.58 | 2.88 |
| July..... | 989 | 101 | 506 | 31,100 | -29,640 | 62,320 | 63,750 | 1,037 | 1.10 | 1.27 |
| August..... | 589 | 218 | 477 | 29,540 | -62,570 | 62,640 | 29,410 | 478 | .507 | .58 |
| September..... | 340 | 47 | 125 | 7,470 | -40,260 | 52,420 | 19,630 | 330 | .350 | .39 |
| Water year 1941-42..... | 2,840 | 6 | 448 | 324,000 | +49,330 | 492,600 | 865,900 | 1,196 | 1.27 | 17.22 |

* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

YAKIMA RIVER BASIN

Bumping River near Nile, Wash.

Location.- Water-stage recorder, lat. 46°52', long. 121°18', a quarter of a mile downstream from spillway of Bumping Lake Dam and 19 miles west of Nile, Yakima County.

Drainage area.- 68 square miles.

Records available.- June to July 1906, April 1909 to September 1942.

Average discharge.- 33 years (1909-42), 284 second-feet (adjusted for storage since November 1910).

Extremes (regulated).- Maximum discharge during year, 919 second-feet May 23-25 (gage height, 3.8 feet); minimum, 2 second-feet Nov. 21 (gage height, 0.85 foot).
1906, 1909-42: Maximum discharge, 5,180 second-feet Dec. 29, 1917 (gage height, 9.33 feet); practically no flow when gates in outlet conduit are closed.

Remarks.- Records good except those below 30 second-feet, which are fair. No diversion. Flow regulated by Bumping Lake (see p. 198). Figures of daily discharge not adjusted for change in contents of Bumping Lake.

Cooperation.- Records collected and prepared in cooperation with Bureau of Reclamation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|----|-----|-----|-----|------|
| 1.0 | 5 | 2.0 | 103 | 3.4 | 666 |
| 1.2 | 14 | 2.3 | 176 | 3.5 | 91.9 |
| 1.4 | 26 | 2.6 | 276 | | |
| 1.7 | 52 | 3.0 | 450 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------|--------------------------|---------|------|----------------------|--|----------------------|---|-----------------|-------|-------------------|------|-------|
| 1 | 43 | 55 | 6 | 275 | 236 | 63 | 9 | 476 | 501 | 356 | 257 | 257 |
| 2 | 44 | 53 | 10 | 275 | 236 | 63 | 9 | 450 | 501 | 335 | 257 | 257 |
| 3 | 45 | 50 | 18 | 275 | 232 | 63 | 10 | 450 | 501 | 335 | 257 | 257 |
| 4 | 49 | 41 | 16 | 275 | 176 | 63 | 11 | 450 | 528 | 335 | 257 | 257 |
| 5 | 51 | 44 | 18 | 275 | 147 | 63 | 12 | 450 | 528 | 335 | 257 | 257 |
| 6 | 52 | 43 | 19 | 257 | 125 | 63 | 13 | 450 | 609 | 335 | 257 | 257 |
| 7 | 56 | 48 | 18 | 257 | 125 | 63 | 14 | 378 | 666 | 335 | 257 | 257 |
| 8 | 59 | 49 | 16 | 257 | 125 | 63 | 16 | 335 | 609 | 335 | 257 | 257 |
| 9 | 65 | 49 | 14 | 257 | 125 | 66 | 16 | 335 | 609 | 335 | 257 | 257 |
| 10 | 83 | 50 | 13 | 257 | 125 | 10 | 18 | 335 | 682 | 335 | 257 | 257 |
| 11 | 116 | 51 | 12 | 257 | 125 | 7 | 19 | 275 | 528 | 294 | 257 | 257 |
| 12 | 144 | 52 | 12 | 257 | 123 | 7 | 21 | 239 | 476 | 257 | 257 | 257 |
| 13 | 149 | 45 | 10 | 257 | 125 | 6 | 23 | 239 | 426 | 257 | 257 | 257 |
| 14 | 144 | 29 | 10 | 257 | 121 | 5 | 24 | 239 | 450 | 257 | 257 | 257 |
| 15 | 137 | 11 | 10 | 257 | 66 | 5 | 24 | 239 | 554 | 257 | 257 | 257 |
| 16 | 127 | 6 | 12 | 257 | 66 | 5 | 24 | 239 | 582 | 257 | 257 | 257 |
| 17 | 116 | 4 | 12 | 257 | 66 | 5 | 24 | 239 | 528 | 257 | 257 | 257 |
| 18 | 110 | 4 | 10 | 257 | 66 | 5 | 23 | 294 | 450 | 257 | 257 | 257 |
| 19 | 105 | 3 | 24 | 257 | 66 | 5 | 23 | 356 | 401 | 257 | 257 | 257 |
| 20 | 101 | 3 | 24 | 257 | 66 | 5 | 23 | 501 | 356 | 257 | 257 | 257 |
| 21 | 95 | 2 | 14 | 239 | 66 | 5 | 26 | 609 | 356 | 257 | 257 | 257 |
| 22 | 89 | 31 | 117 | 239 | 65 | 5 | 239 | 820 | 335 | 257 | 257 | 257 |
| 23 | 81 | 52 | 239 | 239 | 65 | 5 | 501 | 919 | 335 | 257 | 257 | 257 |
| 24 | 74 | 52 | 275 | 239 | 65 | 5 | 501 | 919 | 335 | 257 | 257 | 257 |
| 25 | 69 | 53 | 275 | 239 | 65 | 5 | 450 | 919 | 356 | 257 | 257 | 257 |
| 26 | 66 | 55 | 275 | 239 | 65 | 5 | 426 | 552 | 356 | 257 | 257 | 239 |
| 27 | 63 | 53 | 275 | 239 | 63 | 5 | 356 | 756 | 213 | 257 | 257 | 222 |
| 28 | 63 | 55 | 275 | 239 | 63 | 5 | 335 | 639 | 294 | 257 | 257 | 219 |
| 29 | 60 | 33 | 275 | 239 | - | 5 | 375 | 582 | 356 | 257 | 257 | 203 |
| 30 | 59 | 10 | 275 | 239 | - | 5 | 426 | 554 | 356 | 257 | 257 | 125 |
| 31 | 56 | - | 275 | 236 | - | 5 | - | 501 | - | 257 | 257 | - |
| Month | Observed | | | | | | Adjusted for change in reservoir contents | | | | | |
| | Discharge in second-feet | | | Run-off in acre-feet | Change in contents in Bumping Lake (acre-feet) | Run-off in acre-feet | Discharge in second-feet | | | Run-off in inches | | |
| | Maximum | Minimum | Mean | | | | Mean | Per square mile | | | | |
| October..... | 149 | 43 | 82.9 | 5,100 | +30 | 5,130 | 83.4 | 1.23 | 1.41 | | | |
| November..... | 55 | 2 | 36.4 | 2,160 | +9,130 | 11,290 | 190 | 2.79 | 3.11 | | | |
| December..... | 275 | 6 | 92.1 | 5,660 | +16,230 | 21,690 | 366 | 5.24 | 6.04 | | | |
| Calendar year 1941 | 638 | 2 | 156 | 113,000 | +15,440 | 128,500 | 177 | 2.60 | 35.42 | | | |
| January..... | 275 | 236 | 253 | 15,580 | -7,610 | 7,770 | 126 | 1.85 | 2.14 | | | |
| February..... | 236 | 63 | 109 | 6,060 | -1,820 | 4,240 | 76.3 | 1.12 | 1.17 | | | |
| March..... | 66 | 5 | 22.3 | 1,370 | +3,350 | 4,720 | 76.8 | 1.13 | 1.30 | | | |
| April..... | 501 | 9 | 133 | 7,920 | +12,730 | 20,650 | 347 | 5.10 | 5.69 | | | |
| May..... | 919 | 239 | 485 | 29,830 | +670 | 30,500 | 496 | 7.29 | 8.41 | | | |
| June..... | 666 | 213 | 456 | 27,130 | -880 | 26,250 | 441 | 6.49 | 7.24 | | | |
| July..... | 356 | 257 | 284 | 17,460 | -8,470 | 8,990 | 146 | 2.15 | 2.48 | | | |
| August..... | 257 | 257 | 257 | 15,800 | -11,090 | 4,710 | 76.6 | 1.13 | 1.30 | | | |
| September..... | 257 | 125 | 245 | 14,740 | -11,200 | 3,540 | 59.5 | .875 | .98 | | | |
| Water year 1941-42 | 919 | 2 | 206 | 148,800 | +870 | 149,700 | 207 | 3.04 | 41.27 | | | |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

American River near Nile, Wash.

Location.- Water-stage recorder, lat. 46°58'30", long. 121°10'10", in S½ sec. 12, T. 17 N., R. 13 E., 300 feet upstream from Bumping Lake road crossing, three-quarters of a mile upstream from mouth, and 16 miles northwest of Nile. Datum of gage is 2,700.0 feet above mean sea level (Washington State Highway Department bench mark).

Drainage area.- 79 square miles.

Records available.- April 1909 to September 1911, July 1913 to September 1915 (fragmentary), October 1939 to September 1942.

Extremes.- Maximum discharge during year, 940 second-feet Dec. 2 (gage height, 74.96 feet); minimum, 27 second-feet Sept. 29, 30 (gage height, 71.98 feet). 1909-11, 1913-15, 1939-42: Maximum discharge observed, 1,580 second-feet June 2, 1909 (gage height, 4.55 feet, datum then in use), from rating curve extended above 750 second-feet; minimum discharge, 12 second-feet, Nov. 22, 1940.

Remarks.- Records good except those for periods of ice effect, which are poor. No diversion or regulation.

Cooperation.- Records collected and prepared in cooperation with Bureau of Reclamation.

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 41 | 49 | 207 | 130 | 64 | 48 | 160 | 264 | 422 | 380 | 78 | 42 |
| 2 | 41 | 48 | 560 | 121 | 65 | 49 | 177 | 239 | 464 | 358 | 76 | 42 |
| 3 | 41 | 56 | 820 | 115 | 65 | 49 | 184 | 228 | 446 | 323 | 73 | 39 |
| 4 | 48 | 64 | 580 | 108 | 65 | 49 | 202 | 223 | 464 | 296 | 73 | 39 |
| 5 | 49 | 81 | 446 | 104 | 64 | 49 | 228 | 215 | 482 | 287 | 73 | 39 |
| 6 | 50 | 80 | 411 | 98 | 58 | 49 | 247 | 228 | 680 | 231 | 71 | 38 |
| 7 | 52 | 73 | 348 | 94 | 58 | 50 | 284 | 258 | 620 | 207 | 70 | 39 |
| 8 | 52 | 70 | 302 | *90 | 58 | 55 | 305 | 305 | 560 | 190 | 68 | 42 |
| 9 | 53 | 68 | *275 | 88 | 56 | 64 | 323 | 367 | 540 | 177 | 68 | 48 |
| 10 | 70 | 64 | 247 | 85 | *56 | 80 | 339 | 387 | 482 | 155 | 65 | 43 |
| 11 | 86 | 66 | 225 | 83 | 56 | 81 | 401 | 336 | 432 | 160 | 62 | 41 |
| 12 | 110 | 71 | 205 | 81 | 53 | 83 | 442 | 308 | 384 | 153 | 59 | 39 |
| 13 | 94 | 123 | 192 | 80 | 52 | 80 | 442 | 287 | 367 | 135 | 59 | 38 |
| 14 | 86 | 330 | 180 | 78 | 53 | 78 | 446 | 284 | 404 | 150 | 56 | 37 |
| 15 | 80 | 275 | 180 | 78 | 53 | 73 | 418 | 287 | 501 | 187 | 56 | 37 |
| 16 | 73 | 223 | 220 | 78 | 53 | 73 | 397 | 311 | 446 | 139 | 55 | 37 |
| 17 | 74 | 184 | 200 | 78 | 53 | 71 | 374 | 314 | 380 | 158 | 50 | 36 |
| 18 | 71 | 160 | 190 | 78 | 52 | 70 | 345 | 320 | 342 | 139 | 50 | 34 |
| 19 | 73 | 144 | 252 | 74 | 53 | 70 | 351 | 358 | 326 | 128 | 49 | 34 |
| 20 | 73 | 128 | 239 | *76 | 56 | 71 | 391 | 442 | 306 | 119 | 49 | 34 |
| 21 | 68 | 119 | 218 | 73 | 49 | 74 | 482 | 580 | 299 | 112 | 49 | 34 |
| 22 | 65 | 110 | 205 | 62 | 50 | 78 | 520 | 700 | 299 | 110 | 48 | 33 |
| 23 | 62 | 102 | 194 | 66 | 50 | 81 | 464 | 720 | 561 | 104 | 46 | 32 |
| 24 | 59 | 98 | 177 | 71 | 50 | 80 | 418 | 740 | 374 | 100 | 45 | 29 |
| 25 | 56 | 104 | 163 | 71 | 50 | 78 | 377 | 720 | 355 | 94 | 46 | 29 |
| 26 | 55 | 104 | 153 | 74 | 48 | 76 | 339 | 680 | 342 | 90 | 50 | 29 |
| 27 | 55 | 96 | 148 | 74 | 48 | 78 | 314 | 600 | 358 | 86 | 49 | 29 |
| 28 | 55 | 104 | 137 | 71 | 46 | 80 | 287 | 520 | 591 | 85 | 48 | 29 |
| 29 | 53 | 163 | 130 | 68 | - | 88 | 272 | 464 | 394 | 83 | 46 | 28 |
| 30 | 50 | 194 | 128 | 65 | - | 106 | 264 | 446 | 384 | 81 | 45 | 27 |
| 31 | 49 | - | 123 | 66 | - | 132 | - | 432 | - | 81 | 45 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 1,944 | 110 | 41 | 62.7 | 0.794 | 0.92 | 3,860 |
| November..... | 3,541 | 330 | 48 | 118 | 1.49 | 1.87 | 7,020 |
| December..... | 8,058 | 820 | 123 | 260 | 3.29 | 3.79 | 15,980 |
| Calendar year 1941..... | 59,669 | 820 | 35 | 163 | 2.06 | 28.09 | 118,400 |
| January..... | 2,578 | 130 | 62 | 63.2 | 1.05 | 1.21 | 5,110 |
| February..... | 1,536 | 85 | 46 | 54.9 | .895 | .72 | 3,050 |
| March..... | 2,243 | 132 | 48 | 72.4 | .916 | 1.06 | 4,450 |
| April..... | 10,193 | 520 | 160 | 340 | 4.30 | 4.80 | 20,220 |
| May..... | 12,643 | 740 | 215 | 405 | 5.13 | 5.90 | 24,860 |
| June..... | 12,504 | 820 | 299 | 417 | 5.28 | 5.69 | 24,800 |
| July..... | 5,018 | 380 | 81 | 162 | 2.05 | 2.36 | 9,950 |
| August..... | 1,777 | 78 | 45 | 57.3 | .725 | .84 | 3,520 |
| September..... | 1,077 | 48 | 27 | 35.9 | .454 | .51 | 2,140 |
| Water year 1941-42..... | 63,012 | 820 | 27 | 173 | 2.19 | 29.67 | 125,000 |

* Winter discharge measurement made on this date.

Note.- Stage-discharge relation affected by ice Jan. 2-19. Shifting-control method used Jan. 20, 21, Feb. 6 to Mar. 22, Apr. 14-21, May 1-16, May 27 to June 12, June 19 to July 12.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

Tiston River at Tiston Dam, near Naches, Wash.

Location.- Water-stage recorder, lat. 46°39'30", long. 121°07'20", 900 feet upstream from Wild Cat Creek, 1,200 feet downstream from Tiston Dam, 19 miles upstream from Oak Creek, and 22 miles southwest of Naches, Yakima County.

Drainage area.- 187 square miles.

Records available.- August 1908 to September 1914 (fragmentary), October 1918 to March 1919, and April 1925 to September 1942 in reports of Geological Survey. September 1908 to December 1913 and July 1914 to September 1920 in State Water-Supply Bulletin 5.

Average discharge.- 23 years (1908-12, 1918-20, 1925-42), 458 second-feet (adjusted for storage since October 1925).

Extremes (regulated).- Maximum discharge during year, 1,320 second-feet Aug. 19 (gage height, 4.88 feet); minimum, 8 second-feet Nov. 15-18, Nov. 30 to Dec. 18, Dec. 24 to Jan. 17.

1908-14, 1918-19, 1925-42: Maximum discharge, 8,450 second-feet Dec. 22, 1933 (gage height, 9.24 feet); no flow Apr. 4-6, 10, 1930.

Remarks.- Records good except those for very low flow, which are poor. No diversion. Flow regulated by Tiston Reservoir. Figures of daily discharge not adjusted for change in reservoir contents.

Cooperation.- Records collected and prepared in cooperation with Bureau of Reclamation.

Rating table, water year 1941-42 (gage height, in feet, and discharge, in second-feet)

| | | | | | | | |
|-----|----|-----|-----|-----|-----|-----|-------|
| 1.5 | 10 | 2.1 | 51 | 3.0 | 216 | 4.5 | 1,020 |
| 1.7 | 18 | 2.4 | 88 | 3.5 | 420 | 5.0 | 1,400 |
| 1.9 | 32 | 2.7 | 142 | 4.0 | 695 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|-------|-------|-------|
| 1 | 338 | 124 | 8 | 8 | 12 | 12 | 12 | 473 | 254 | 593 | 1,020 | 918 |
| 2 | 287 | 122 | 8 | 8 | 12 | 12 | 12 | 571 | 254 | 627 | 1,020 | 953 |
| 3 | 222 | 124 | 8 | 8 | 12 | 12 | 12 | 538 | 254 | 818 | 1,020 | 918 |
| 4 | 205 | 78 | 8 | 8 | 12 | 12 | 12 | 462 | 254 | 953 | 1,020 | 818 |
| 5 | 219 | 51 | 8 | 8 | 12 | 12 | 12 | 484 | 254 | 884 | 1,100 | 884 |
| 6 | 202 | 65 | 8 | 8 | 12 | 12 | 12 | 627 | 261 | 894 | 1,100 | 988 |
| 7 | 191 | 96 | 8 | 8 | 12 | 12 | 12 | 644 | 261 | 884 | 1,130 | 1,020 |
| 8 | 186 | 80 | 8 | 8 | 12 | 12 | 12 | 549 | 272 | 884 | 1,170 | 884 |
| 9 | 176 | 68 | 8 | 8 | 12 | 12 | 12 | 400 | 272 | 953 | 1,170 | 793 |
| 10 | 174 | 68 | 8 | 8 | 12 | 12 | 12 | 324 | 272 | 953 | 1,170 | 707 |
| 11 | 176 | 68 | 8 | 8 | 12 | 12 | 12 | 333 | 276 | 884 | 1,170 | 644 |
| 12 | 176 | 68 | 8 | 8 | 12 | 12 | 12 | 431 | 276 | 818 | 1,210 | 632 |
| 13 | 155 | 51 | 8 | 8 | 12 | 12 | 12 | 549 | 291 | 707 | 1,130 | 695 |
| 14 | 150 | 18 | 8 | 8 | 12 | 12 | 12 | 638 | 370 | 686 | 1,130 | 695 |
| 15 | 122 | 8 | 8 | 8 | 12 | 12 | 12 | 638 | 308 | 616 | 1,170 | 678 |
| 16 | 122 | 8 | 8 | 8 | 12 | 12 | 12 | 576 | 279 | 544 | 1,170 | 638 |
| 17 | 126 | 8 | 8 | 8 | 12 | 12 | 12 | 489 | 312 | 473 | 1,170 | 638 |
| 18 | 124 | 8 | 8 | 10 | 12 | 12 | 12 | 415 | 516 | 473 | 1,170 | 638 |
| 19 | 122 | 9 | 10 | 12 | 12 | 12 | 11 | 400 | 554 | 554 | 1,170 | 638 |
| 20 | 122 | 10 | 9 | 12 | 12 | 12 | 11 | 386 | 473 | 672 | 1,260 | 693 |
| 21 | 124 | 10 | 9 | 12 | 12 | 12 | 32 | 299 | 511 | 768 | 1,210 | 554 |
| 22 | 122 | 44 | 9 | 12 | 12 | 12 | 72 | 232 | 582 | 612 | 1,130 | 554 |
| 23 | 122 | 68 | 9 | 12 | 12 | 12 | 138 | 216 | 616 | 884 | 1,100 | 522 |
| 24 | 124 | 88 | 8 | 12 | 12 | 12 | 155 | 219 | 571 | 953 | 1,060 | 600 |
| 25 | 122 | 72 | 8 | 12 | 12 | 12 | 162 | 216 | 527 | 988 | 1,020 | 500 |
| 26 | 122 | 62 | 8 | 12 | 12 | 12 | 166 | 216 | 452 | 998 | 1,020 | 500 |
| 27 | 122 | 62 | 8 | 12 | 12 | 12 | 174 | 235 | 380 | 1,020 | 1,020 | 500 |
| 28 | 124 | 62 | 8 | 12 | 12 | 12 | 196 | 241 | 511 | 1,020 | 1,060 | 500 |
| 29 | 126 | 28 | 8 | 12 | - | 12 | 225 | 241 | 682 | 1,020 | 918 | 500 |
| 30 | 126 | 8 | 8 | 12 | - | 12 | 380 | 241 | 582 | 1,020 | 884 | 375 |
| 31 | 122 | - | 8 | 12 | - | 12 | - | 247 | - | 1,020 | 884 | - |

| Month | Observed | | | | Change in contents in Tiston Reservoir (acre-feet) | Adjusted for change in reservoir contents | | | |
|--------------------|--------------------------|--------------|-------|----------------------|--|---|--------------------------|--------------------|-------------------|
| | Discharge in second-feet | | | Run-off in acre-feet | | Run-off in acre-feet | Discharge in second-feet | | Run-off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | Mean | Per square mile | |
| October..... | 338 | 122 | 159 | 9,780 | +2,890 | 12,670 | 206 | 1.10 | 1.27 |
| November..... | 124 | 8 | 54.5 | 3,240 | +13,560 | 16,790 | 282 | 1.51 | 1.68 |
| December..... | 10 | 8 | 8.2 | 504 | +32,170 | 32,670 | 531 | 2.84 | 3.28 |
| Calendar year 1941 | 1,780 | 6 | 381 | 275,700 | -36,670 | 239,000 | 330 | 1.76 | 23.98 |
| January..... | 12 | 8 | 9.7 | 599 | +12,560 | 13,150 | 214 | 1.14 | 1.32 |
| February..... | 12 | 12 | 12.0 | 666 | +9,080 | 9,720 | 175 | 0.936 | .97 |
| March..... | 12 | 12 | 12.0 | 738 | +11,370 | 12,110 | 197 | 1.08 | 1.21 |
| April..... | 380 | 11 | 64.6 | 3,840 | +28,490 | 32,330 | 543 | 2.90 | 3.24 |
| May..... | 644 | 216 | 404 | 24,850 | +19,620 | 44,470 | 723 | 3.97 | 4.46 |
| June..... | 616 | 254 | 386 | 22,960 | +20,480 | 43,440 | 730 | 3.90 | 4.36 |
| July..... | 1,020 | 473 | 817 | 60,250 | -21,170 | 29,080 | 473 | 2.55 | 2.92 |
| August..... | 1,250 | 884 | 1,096 | 67,370 | -51,480 | 15,890 | 258 | 1.38 | 1.59 |
| September..... | 1,020 | 375 | 679 | 40,420 | -29,080 | 11,360 | 191 | 1.02 | 1.14 |
| Water year 1941-42 | 1,250 | 8 | 311 | 226,200 | +48,450 | 273,700 | 378 | 2.02 | 27.44 |

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter. To convert war time to standard time, subtract 1 hour.

Tieton River at headworks of Tieton Canal, near Naches, Wash.

Location.—Water-stage recorder, lat. 46°40'10", long. 121°00'20", in sec. 30, T. 14 N., R. 15 E. (unsurveyed), just downstream from intake of Tieton Canal, 12 miles upstream from Oak Creek, and 16 miles southwest of Naches.

Drainage area.—240 square miles.

Records available.—April to September 1906 (fragmentary gage-height records), July 1907 to September 1942.

Average discharge.—33 years (1907-16, 1918-42), 534 second-feet (adjusted for diversions since 1910 and for storage since October 1924).

Extremes (regulated).—Maximum discharge during year, 954 second-feet Aug. 21 (gage height, 3.67 feet); minimum, 1 second-foot Feb. 25 to Mar. 3.

1907-42: Maximum discharge, 8,910 second-feet Dec. 22, 1933 (gage height, 9.70 feet); no flow at times in 1928, 1929, 1931, 1932, 1934.

Remarks.—Records good except those for periods of ice effect, which are poor. Diversion for irrigation by Tieton Canal. Flow regulated by Tieton Reservoir, 7 miles above gage.

Figures of daily discharge not adjusted for diversion or change in reservoir contents.

Cooperation.—Records collected and prepared in cooperation with Bureau of Reclamation.

Rating table, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | | | |
|-----|----|-----|-----|-----|-----|
| 1.0 | 1 | 2.0 | 85 | 3.0 | 470 |
| 1.2 | 6 | 2.2 | 132 | 3.2 | 596 |
| 1.4 | 13 | 2.4 | 193 | 3.4 | 740 |
| 1.6 | 26 | 2.6 | 269 | 3.6 | 895 |
| 1.8 | 50 | 2.8 | 361 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 377 | 135 | 27 | b25 | 20 | 1 | 53 | 245 | 28 | 261 | 688 | 596 |
| 2 | 327 | 135 | 45 | b22 | 20 | 1 | 56 | 313 | 28 | 287 | 666 | 638 |
| 3 | 261 | 146 | 53 | b20 | 21 | 1 | 56 | 291 | 28 | 453 | 666 | 590 |
| 4 | 211 | 107 | 52 | b19 | 23 | 8 | 60 | 225 | 28 | 666 | 725 | 488 |
| 5 | 218 | 76 | 49 | b18 | 21 | 28 | 70 | 225 | 20 | 610 | 770 | 538 |
| 6 | 222 | 74 | 47 | *b17 | 22 | 30 | 77 | 351 | 28 | 564 | 785 | 652 |
| 7 | 225 | 100 | 40 | b17 | 23 | 30 | 61 | 408 | 29 | 564 | 823 | 696 |
| 8 | 218 | 94 | 35 | b17 | 23 | 40 | 76 | 304 | 30 | 870 | 847 | 596 |
| 9 | 207 | 85 | 33 | b18 | *24 | 50 | 76 | 183 | 30 | 645 | 855 | 492 |
| 10 | 197 | 85 | 28 | b18 | 26 | 68 | 74 | 100 | 27 | 652 | 865 | 382 |
| 11 | 197 | 85 | *27 | b18 | 27 | 68 | 92 | 96 | 27 | 617 | 871 | 304 |
| 12 | 190 | 85 | 25 | b18 | 26 | 63 | 98 | 155 | 24 | 538 | 904 | 265 |
| 13 | 180 | 85 | 24 | b18 | 27 | 58 | 87 | 261 | 20 | 408 | 847 | 342 |
| 14 | 149 | 66 | 24 | 18 | 26 | 52 | 83 | 347 | 37 | 332 | 823 | 342 |
| 15 | 135 | a41 | 26 | 19 | 26 | 47 | 72 | 347 | 35 | 287 | 863 | 323 |
| 16 | 152 | a35 | 30 | 18 | 26 | 45 | 66 | 300 | 16 | 193 | 863 | 278 |
| 17 | 144 | 20 | 28 | 18 | 26 | 44 | 70 | 218 | 22 | 149 | 855 | 282 |
| 18 | 138 | 20 | 30 | 18 | 26 | 42 | 66 | 161 | 161 | 146 | 831 | 287 |
| 19 | 141 | 20 | b33 | 21 | 38 | 40 | 46 | 144 | 253 | 200 | 839 | 291 |
| 20 | 135 | 22 | b38 | 22 | 25 | 42 | 27 | 168 | 167 | 313 | 912 | 245 |
| 21 | 138 | 20 | b41 | 21 | 20 | 47 | 26 | 67 | 180 | 419 | 912 | 207 |
| 22 | 138 | 24 | b38 | 20 | 11 | 50 | 19 | 44 | 253 | 470 | 847 | 207 |
| 23 | 135 | 30 | b36 | 20 | 6 | 46 | 33 | 29 | 295 | 519 | 815 | 183 |
| 24 | 135 | 35 | b35 | 21 | 3 | 42 | 14 | 26 | 265 | 617 | 770 | 164 |
| 25 | 132 | 14 | b33 | 22 | 1 | 32 | 14 | 34 | 215 | 673 | 740 | 161 |
| 26 | 132 | 6 | 33 | 23 | 1 | 20 | 14 | 22 | 141 | 688 | 725 | 164 |
| 27 | 132 | 4 | 29 | 21 | 1 | 18 | 16 | 18 | 85 | 696 | 725 | 164 |
| 28 | 132 | 4 | 29 | 20 | 1 | 17 | 14 | 16 | 167 | 710 | 681 | 171 |
| 29 | 132 | 17 | 28 | 20 | - | 18 | 20 | 21 | 261 | 703 | 610 | 180 |
| 30 | 135 | 28 | 28 | 20 | - | 40 | 144 | 16 | 253 | 703 | 557 | 211 |
| 31 | 132 | - | b27 | 20 | - | 52 | - | 14 | - | 703 | 544 | - |

| Month | Observed | | | Run-off in acre-feet | Change in con- tent in Tieton Reser- voir (acre- feet) | Diver- sion by Tieton Canal (acre- feet) | Adjusted for change in reser- voir contents and diversion | | | | |
|--------------------|-----------------------------|--------------|------|-------------------------|---|--|--|------|-----------------------------|-------|-------------------------|
| | Discharge in second-feet | | | | | | Run-off in acre-feet | Mean | Discharge in second-feet | | Run off in inches |
| | Maxi- mum | Mini- mum | Mean | | | | | | Per square mile | | |
| October..... | 377 | 132 | 177 | 10,860 | +2,890 | 0 | 13,750 | 224 | 0.933 | 1.07 | |
| November..... | 146 | 4 | 56.6 | 3,370 | +13,550 | 733 | 17,650 | 297 | 1.24 | 1.38 | |
| December..... | 53 | 24 | 33.9 | 2,060 | +32,170 | 0 | 34,250 | 557 | 2.32 | 2.68 | |
| Calendar year 1941 | 1,540 | 4 | 277 | 200,700 | -36,670 | 87,200 | 261,200 | 347 | 1.45 | 19.62 | |
| January..... | 25 | 17 | 19.6 | 1,200 | +12,550 | 0 | 13,750 | 224 | .933 | 1.07 | |
| February..... | 38 | 1 | 19.3 | 1,070 | +9,060 | 347 | 10,470 | 189 | .787 | .82 | |
| March..... | 68 | 1 | 36.7 | 2,260 | +11,370 | 484 | 14,110 | 229 | .954 | 1.10 | |
| April..... | 144 | 14 | 56.7 | 3,370 | +28,490 | 5,360 | 37,220 | 626 | 2.61 | 2.91 | |
| May..... | 408 | 14 | 166 | 10,240 | +19,620 | 17,400 | 47,260 | 769 | 3.20 | 3.69 | |
| June..... | 296 | 16 | 107 | 6,340 | +20,480 | 17,370 | 44,190 | 743 | 3.10 | 3.45 | |
| July..... | 710 | 146 | 495 | 30,480 | -21,170 | 19,400 | 28,690 | 467 | 1.95 | 2.24 | |
| August..... | 912 | 544 | 781 | 49,040 | -11,480 | 19,800 | 53,360 | 266 | 1.11 | 1.28 | |
| September..... | 696 | 161 | 348 | 20,690 | -29,060 | 18,740 | 10,370 | 174 | .725 | .81 | |
| Water year 1941-42 | 912 | 1 | 193 | 140,000 | +48,460 | 99,630 | 288,100 | 398 | 1.66 | 22.50 | |

* Winter discharge measurement made on this day.

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

North Fork of Ahtanum Creek near Tampico, Wash.

Location.- Water-stage recorder, lat. 46°33'40", long. 120°55'10", in NW¼ sec. 2, T. 12 N., R. 15 E., 100 feet downstream from Nasty Creek, 3½ miles northwest of Tampico and mouth of South Fork, and 20 miles west of Yakima.

Drainage area.- 69 square miles.

Records available.- August 1907 to September 1924 (incomplete), March 1931 to September 1942.

Average discharge.- 17 years (1909-15, 1931-42), 67.0 second-feet (16 years, 68.0 second-feet; figure published in Water-Supply Paper 932 in error).

Extremes.- Maximum discharge during year, 258 second-feet May 22 (gage height, 1.81 feet); minimum, 10 second-feet Nov. 24 (gage height, 0.20 foot).

1907-24, 1931-42: Maximum discharge, 755 second-feet Dec. 22, 1933; maximum gage height, 4.6 feet June 18, 1916; minimum discharge, 5.8 second-feet Dec. 24, 1939, but may have been less during periods of ice effect.

Remarks.- Records good except those for periods of no gage-height record or ice effect, which are poor. No diversion of importance. No regulation.

Cooperation.- Records collected in cooperation with Indian Service.

Rating table, water year 1941-42, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| | | | |
|-----|----|-----|-----|
| 0.3 | 18 | 1.1 | 109 |
| .5 | 36 | 1.4 | 168 |
| .7 | 57 | 1.8 | 286 |
| .9 | 81 | | |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 13 | a13 | 23 | b20 | 18 | 19 | 90 | 98 | 145 | 63 | 24 | 14 |
| 2 | 13 | a18 | 67 | b23 | 18 | 21 | 100 | 93 | 143 | 61 | 23 | 14 |
| 3 | 13 | 18 | 100 | b26 | 18 | 22 | 106 | 94 | 139 | 57 | 22 | 14 |
| 4 | 13 | 18 | 71 | b24 | 19 | 23 | 109 | 89 | 139 | 54 | 24 | 14 |
| 5 | 13 | 15 | 56 | b20 | 18 | 24 | 120 | 88 | 143 | 50 | 22 | 14 |
| 6 | 13 | 14 | 50 | b20 | 18 | 26 | 139 | 96 | 160 | 48 | 20 | 14 |
| 7 | 13 | 14 | 44 | b20 | 18 | 29 | 145 | 111 | 151 | 45 | 19 | 14 |
| 8 | 13 | 13 | 36 | b20 | 18 | 35 | 147 | 127 | 143 | 44 | 20 | 14 |
| 9 | a13 | 13 | 36 | b20 | 19 | 49 | 151 | 141 | 136 | 43 | 19 | 14 |
| 10 | a13 | 13 | 33 | b20 | 19 | 68 | 151 | 129 | 123 | 42 | 18 | 14 |
| 11 | a13 | 12 | 31 | b21 | 18 | 71 | 168 | 120 | 111 | 40 | 18 | 14 |
| 12 | a13 | 12 | 27 | b21 | 18 | 68 | 174 | 114 | 104 | 40 | 17 | 14 |
| 13 | a13 | 24 | 26 | b22 | 18 | 63 | 170 | 108 | 104 | 38 | 18 | 14 |
| 14 | a13 | 40 | 29 | b22 | 21 | 67 | 169 | 109 | 108 | 40 | 18 | 14 |
| 15 | a13 | 28 | 32 | 23 | 20 | 53 | 141 | 116 | 111 | 38 | 17 | 14 |
| 16 | a13 | 22 | 36 | 23 | 21 | 49 | 133 | 113 | 103 | 38 | 17 | 13 |
| 17 | a13 | 16 | 33 | *21 | 22 | 47 | 123 | 109 | 96 | 36 | 16 | 13 |
| 18 | a16 | 15 | 36 | 20 | 20 | 46 | 118 | 109 | 90 | 36 | 15 | 13 |
| 19 | a15 | a14 | 69 | 21 | 17 | 46 | 123 | 122 | 85 | 34 | 16 | 13 |
| 20 | a14 | a13 | 102 | 20 | 24 | 46 | 143 | 149 | 81 | 31 | 15 | 13 |
| 21 | a15 | a12 | 79 | 20 | 22 | 55 | 172 | 181 | 79 | 30 | 15 | 12 |
| 22 | a13 | 12 | 68 | 19 | 21 | 58 | 172 | 226 | 76 | 28 | 15 | 13 |
| 23 | a13 | 14 | 59 | 18 | 20 | 57 | 155 | 238 | 76 | 26 | 15 | 14 |
| 24 | a13 | 15 | 49 | 19 | 20 | 55 | 139 | 238 | 77 | 25 | 14 | 14 |
| 25 | a13 | *16 | 52 | 18 | 19 | 52 | 125 | 242 | 80 | 24 | 15 | 13 |
| 26 | a14 | 15 | 34 | 19 | 19 | 50 | 116 | 220 | 76 | 25 | 16 | 13 |
| 27 | a14 | 15 | b36 | 22 | 18 | 49 | 113 | 198 | 71 | 32 | 16 | 13 |
| 28 | a15 | 15 | b38 | 20 | 18 | 49 | 104 | 178 | 70 | 25 | 16 | 13 |
| 29 | a15 | 20 | 40 | 20 | - | 53 | 95 | 168 | 69 | 24 | 16 | 13 |
| 30 | a18 | 25 | 40 | 19 | - | 63 | 102 | 160 | 67 | 24 | 15 | 12 |
| 31 | a17 | - | 27 | 18 | - | 76 | - | 151 | - | 24 | 15 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Per square mile | Run-off | |
|-------------------------|------------------|---------|---------|------|-----------------|---------|------------|
| | | | | | | Inches | Acres-feet |
| October..... | 422 | 17 | 13 | 13.6 | 0.197 | 0.25 | 837 |
| November..... | 509 | 40 | 12 | 17.0 | .246 | .27 | 1,010 |
| December..... | 1,453 | 102 | 23 | 47.8 | .693 | .80 | 2,940 |
| Calendar year 1941..... | 15,644 | 154 | 11 | 42.9 | .622 | 8.43 | 31,030 |
| January..... | 639 | 26 | 18 | 20.6 | .299 | .34 | 1,270 |
| February..... | 539 | 24 | 17 | 19.2 | .278 | .29 | 1,070 |
| March..... | 1,482 | 75 | 19 | 47.8 | .693 | .80 | 2,940 |
| April..... | 4,005 | 174 | 90 | 134 | 1.94 | 2.16 | 7,940 |
| May..... | 4,435 | 242 | 68 | 143 | 2.07 | 2.39 | 8,500 |
| June..... | 3,155 | 160 | 37 | 105 | 1.52 | 1.70 | 6,280 |
| July..... | 1,165 | 63 | 24 | 37.6 | .545 | .63 | 2,310 |
| August..... | 547 | 24 | 14 | 17.6 | .255 | .29 | 1,080 |
| September..... | 405 | 14 | 12 | 13.5 | .196 | .22 | 803 |
| Water year 1941-42..... | 18,766 | 242 | 12 | 51.5 | .746 | 10.12 | 37,260 |

* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for South Fork.

b Stage-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

South Fork of Ahtanum Creek at Conrad Ranch, near Tampoico, Wash.

Location.- Staff gage, lat. 46°30'30", long. 120°54'50", in W $\frac{1}{2}$ sec. 23, T. 12 N., R. 15 E., at Conrad Ranch, 2 $\frac{1}{2}$ miles upstream from North Fork, in 2 $\frac{1}{2}$ miles southwest of Tampoico, and 20 miles southwest of Yakima.

Drainage area.- 24.5 square miles.

Records available.- March 1915 to September 1924 (fragmentary), March 1931 to September 1942.

Extremes.- Maximum discharge observed during year, 64 second-feet May 25 (gage height, 1.22 feet); minimum, 4.4 second-feet Oct. 1-18, 21-25 (gage height, 0.45 foot).
1915-24, 1931-42: Maximum discharge observed, 424 second-feet Dec. 23, 1933 (gage height, 3.10 feet); minimum, 2.6 second-feet Aug. 23, 25, 1931 (gage height, 0.35 foot).

Remarks.- Records good except those for periods of ice effect, which are poor. Gage read twice daily. A few diversions above station for irrigation.

Cooperation.- Records collected in cooperation with Indian Service.

Rating table, water year 1941-42, except periods of ice effect
(gage height, in feet, and discharge, in second-feet)

| | | | |
|-----|-----|-----|----|
| 0.5 | 5.8 | 0.9 | 29 |
| .6 | 9.2 | 1.0 | 35 |
| .7 | 14 | 1.1 | 50 |
| .8 | 20 | 1.2 | 62 |

Discharge, in second-feet, water year October 1941 to September 1942

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1 | 4.4 | 5.2 | 6.4 | b7.0 | 7.0 | 8.4 | 31 | 25 | 36 | 14 | 7.7 | 6.4 |
| 2 | 4.4 | 5.5 | 14 | b5.0 | 7.0 | 9.2 | 34 | 24 | 36 | 14 | 7.7 | 6.4 |
| 3 | 4.4 | 5.8 | 21 | b9.0 | 7.0 | 11 | 36 | 24 | 36 | 14 | 7.7 | 6.0 |
| 4 | 4.4 | 5.5 | 16 | b5.0 | 7.0 | 10 | 36 | 24 | 34 | 14 | 8.4 | 6.0 |
| 5 | 4.4 | 5.5 | 11 | b6.0 | 7.4 | 11 | 38 | 22 | 34 | 13 | 7.7 | 5.8 |
| 6 | 4.4 | 5.5 | 10 | b6.0 | 7.4 | 12 | 43 | 22 | 34 | 12 | 7.7 | 5.8 |
| 7 | 4.4 | 5.2 | 9.2 | b6.0 | 7.4 | 16 | 43 | 24 | 34 | 11 | 7.4 | 5.8 |
| 8 | 4.4 | 5.2 | 9.2 | b6.0 | 7.0 | 20 | 45 | 28 | 34 | 10 | 7.0 | 5.8 |
| 9 | 4.4 | 5.2 | 8.4 | b6.0 | 7.7 | 36 | 41 | 31 | 32 | 11 | 7.0 | 5.8 |
| 10 | 4.4 | 5.2 | 8.4 | b6.0 | 7.7 | 43 | 41 | 31 | 30 | 11 | 7.0 | 5.8 |
| 11 | 4.4 | 5.2 | 8.1 | b7.0 | 7.7 | 44 | 45 | 31 | 28 | 11 | 7.0 | 5.8 |
| 12 | 4.4 | 5.2 | 7.7 | b8.0 | 8.1 | 38 | 47 | 30 | 27 | 11 | 7.0 | 5.8 |
| 13 | 4.4 | 8.1 | 7.4 | b9.0 | 8.1 | 31 | 45 | 29 | 27 | 11 | 7.4 | 5.8 |
| 14 | 4.4 | 10 | 7.4 | b9.0 | 8.1 | 27 | 42 | 27 | 25 | 11 | 7.0 | 5.8 |
| 15 | 4.4 | 9.2 | 9.2 | 10 | 8.1 | 26 | 38 | 27 | 25 | 11 | 6.7 | 5.5 |
| 16 | 4.4 | 7.0 | 10 | 7.7 | 8.4 | 22 | 34 | 27 | 25 | 11 | 6.4 | 5.5 |
| 17 | 4.4 | 5.8 | 8.4 | *7.0 | 9.2 | 20 | 32 | 27 | 24 | 11 | 6.4 | 5.5 |
| 18 | 4.4 | 5.2 | 10 | 7.0 | 9.2 | 19 | 30 | 26 | 22 | 10 | 6.0 | 5.2 |
| 19 | 5.2 | 5.2 | 34 | 7.0 | 9.2 | 18 | 29 | 28 | 22 | 10 | 6.0 | 5.2 |
| 20 | 4.6 | 5.2 | 36 | 7.0 | 8.4 | 18 | 30 | 32 | 20 | 9.6 | 6.0 | 5.2 |
| 21 | 4.6 | 5.2 | 32 | 7.0 | 8.4 | 20 | 35 | 36 | 20 | 9.2 | 6.0 | 5.2 |
| 22 | 4.4 | 5.2 | 29 | 8.4 | 8.4 | 20 | 41 | 37 | 19 | 9.2 | 6.0 | 5.2 |
| 23 | 4.4 | 5.2 | 24 | 6.4 | 8.8 | 20 | 38 | 57 | 19 | 9.2 | 6.0 | 5.2 |
| 24 | 4.4 | 5.2 | 19 | 6.4 | 9.2 | 20 | 34 | 61 | 19 | 9.2 | 6.0 | 5.2 |
| 25 | 4.4 | 5.2 | 17 | 6.4 | 8.4 | 19 | 32 | 64 | 19 | 8.8 | 6.0 | 5.2 |
| 26 | 4.6 | *5.2 | b14 | 6.4 | 8.4 | 18 | 31 | 62 | 18 | 8.4 | 6.4 | 5.2 |
| 27 | 5.2 | 5.2 | b13 | 7.0 | 8.4 | 17 | 29 | 57 | 16 | 8.4 | 6.4 | 5.2 |
| 28 | 5.2 | 6.4 | b12 | 7.0 | 7.7 | 16 | 27 | 53 | 16 | 8.4 | 6.4 | 5.2 |
| 29 | 5.2 | 7.0 | 12 | 7.0 | - | 17 | 26 | 47 | 15 | 8.4 | 6.4 | 5.2 |
| 30 | 5.2 | 7.0 | 11 | 7.0 | - | 20 | 25 | 44 | 15 | 8.4 | 6.4 | 5.2 |
| 31 | 5.2 | - | b9.0 | 7.0 | - | 25 | - | 41 | - | 7.7 | 6.4 | - |

| Month | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October..... | 141.8 | 5.2 | 4.4 | 4.57 | 281 |
| November..... | 176.7 | 10 | 5.2 | 5.89 | 350 |
| December..... | 443.8 | 36 | 6.4 | 14.3 | 880 |
| Calendar year 1941..... | 3,970.5 | 56 | 4.2 | 10.9 | 7,878 |
| January..... | 220.7 | 10 | 6.0 | 7.12 | 438 |
| February..... | 224.8 | 9.2 | 7.0 | 8.03 | 446 |
| March..... | 650.6 | 44 | 8.4 | 21.0 | 1,290 |
| April..... | 1,078 | 47 | 25 | 35.9 | 2,140 |
| May..... | 1,108.0 | 64 | 22 | 35.7 | 2,200 |
| June..... | 763.0 | 35 | 18 | 25.4 | 1,510 |
| July..... | 325.9 | 14 | 7.7 | 10.5 | 646 |
| August..... | 209.6 | 8.4 | 6.0 | 6.76 | 416 |
| September..... | 166.9 | 6.4 | 5.2 | 5.56 | 331 |
| Water year 1941-42..... | 5,509.8 | 64 | 4.4 | 15.1 | 10,930 |

* Winter discharge measurement made on this day.

b Stare-discharge relation affected by ice.

Time basis: Pacific standard time prior to 2 a.m., Feb. 9, 1942; Pacific war time thereafter.

To convert war time to standard time, subtract 1 hour.

MISCELLANEOUS DISCHARGE MEASUREMENTS

In addition to the records of stream flow obtained at gaging stations and reported in the preceding pages, measurements of flow were made at the points in the Pacific slope basins in Washington and upper Columbia River Basin indicated in the following table:

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942

Streams tributary to Grays Harbor south of Chehalis River, Wash.
(Measurements made July to October 1942)

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|----------|-------------------|--------------------------------|--|----------------------|
| July 13 | Atwood Creek.... | Johns River.... | NE $\frac{1}{4}$ sec. 20, T. 16 N., R. 10 W., at bridge $\frac{3}{4}$ miles southeast of Markham. | 1.58 |
| Aug. 25 |do..... |do..... |do..... | 1.58 |
| Aug. 31 |do..... |do..... |do..... | 1.10 |
| Sept. 14 |do..... |do..... |do..... | .90 |
| Oct. 6 |do..... |do..... |do..... | .88 |
| Oct. 17 |do..... |do..... |do..... | 1.02 |
| Oct. 27 |do..... |do..... |do..... | 1.17 |
| Sept. 1 | Swamp Creek.... |do..... | SW $\frac{1}{4}$ sec. 17, T. 16 N., R. 10 W., at bridge 3 miles southeast of Markham. | .96 |
| 1 | Gold Creek..... |do..... | SW $\frac{1}{4}$ sec. 7, T. 16 N., R. 10 W., at bridge 2 miles southeast of Markham. | 1.41 |
| 1 | O'Leary Creek... | Grays Harbor... | NW $\frac{1}{4}$ sec. 32, T. 17 N., R. 10 W., at bridge 2 miles northeast of Markham. | 4.22 |
| 1 | Stafford Creek... |do..... | NE $\frac{1}{4}$ sec. 27, T. 17 N., R. 10 W., at bridge 3 miles southwest of Aberdeen. | 1.35 |
| Aug. 31 | Indian Creek.... |do..... | NW $\frac{1}{4}$ sec. 26, T. 17 N., R. 10 W., at bridge $2\frac{1}{2}$ miles southwest of Aberdeen. | 2.18 |
| 31 | Unnamed creek... |do..... | SE $\frac{1}{4}$ sec. 23, T. 17 N., R. 10 W., at bridge 2 miles southwest of Aberdeen. | 1.37 |
| 31 | Campbell Creek... |do..... | SW $\frac{1}{4}$ sec. 24, T. 17 N., R. 10 W., at bridge $1\frac{1}{2}$ miles southwest of Aberdeen. | 1.26 |
| July 13 | Newsiah Creek... |do..... | SW $\frac{1}{4}$ sec. 29, T. 17 N., R. 9 W., 1 mile above highway bridge and $1\frac{1}{2}$ miles south of Aberdeen. | 11.1 |
| Aug. 25 |do..... |do..... |do..... | 10.6 |
| Aug. 31 |do..... |do..... |do..... | 6.09 |
| Sept. 1 |do..... |do..... |do..... | 4.72 |
| Sept. 14 |do..... |do..... |do..... | 4.69 |
| Oct. 6 |do..... |do..... |do..... | 4.32 |
| Oct. 17 |do..... |do..... |do..... | 5.35 |
| Oct. 27 |do..... |do..... |do..... | 9.23 |
| July 13 | Charles Creek... |do..... | SW $\frac{1}{4}$ sec. 21, T. 17 N., R. 9 W., $\frac{1}{2}$ mile south of Aberdeen. | 6.82 |
| Aug. 25 |do..... |do..... |do..... | 5.82 |
| Aug. 31 |do..... |do..... |do..... | 3.54 |
| Sept. 1 |do..... |do..... |do..... | 3.38 |
| Sept. 14 |do..... |do..... |do..... | 2.56 |
| Oct. 6 |do..... |do..... |do..... | 2.63 |
| Oct. 17 |do..... |do..... |do..... | 3.12 |
| Oct. 27 |do..... |do..... |do..... | 4.92 |

Chehalis River Basin, Wash.
(Measurements made July to October 1942)

| | | | | |
|----------|------------------|------------------|--|------|
| Sept. 10 | Chehalis River.. | Grays Harbor... | NW $\frac{1}{4}$ sec. 27, T. 12 N., R. 5 W., $\frac{1}{2}$ mile above Roger Creek and 4 miles south of Pe Ell. | 20.0 |
| 26 |do..... |do..... | On line between secs. 22 and 23, T. 12 N., R. 5 W., $\frac{3}{4}$ miles south of Pe Ell. | 20.0 |
| July 16 |do..... |do..... | NE $\frac{1}{4}$ sec. 4, T. 12 N., R. 5 W., 1,000 feet above Northern Pacific Railway bridge and $\frac{1}{2}$ mile southeast of Pe Ell. | 256 |
| Aug. 28 |do..... |do..... |do..... | 73.0 |
| Aug. 31 |do..... |do..... |do..... | 49.6 |
| Sept. 10 |do..... |do..... |do..... | 41.4 |
| 26 |do..... |do..... |do..... | 31.2 |
| Oct. 6 |do..... |do..... |do..... | 26.4 |
| July 16 | Rock Creek.... | Chehalis River.. | SW $\frac{1}{4}$ sec. 4, T. 12 N., R. 5 W., at highway bridge 1 mile southwest of Pe Ell. | 25.0 |
| Aug. 28 |do..... |do..... |do..... | 9.65 |
| Aug. 31 |do..... |do..... |do..... | 6.39 |
| Sept. 10 |do..... |do..... |do..... | 4.32 |
| 26 |do..... |do..... |do..... | 2.72 |
| Oct. 6 |do..... |do..... |do..... | 3.32 |
| Oct. 31 |do..... |do..... |do..... | 3.10 |
| Sept. 10 | Shields Creek... |do..... | SE $\frac{1}{4}$ sec. 33, T. 13 N., R. 5 W., at highway bridge at Pe Ell. | 163 |
| July 16 | Stowe Creek.... |do..... | SW $\frac{1}{4}$ sec. 34, T. 13 N., R. 5 W., 10 feet above bridge near Northern Pacific Railway depot at Pe Ell. | 0 |
| Aug. 11 |do..... |do..... |do..... | 6.38 |
| Sept. 10 |do..... |do..... |do..... | 1.01 |
| 26 |do..... |do..... |do..... | .09 |
| Oct. 31 |do..... |do..... |do..... | .27 |
| Sept. 10 | Cannonball Creek |do..... | On line between secs. 27 and 28, T. 13 N., R. 5 W., $\frac{1}{2}$ mile above mouth and 1 mile north of Pe Ell. | 33.6 |
| July 18 | Jones Creek.... |do..... | SW $\frac{1}{4}$ sec. 23, T. 13 N., R. 5 W., at highway bridge $1\frac{1}{2}$ miles northeast of Pe Ell. | .05 |
| | | | | .96 |

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Chehalis River Basin, Wash.--Continued
(Measurements made July to October 1942)

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|----------|------------------|--------------------------------|--|----------------------|
| Aug. 11 | Jones Creek.... | Chehalis River.. | SW $\frac{1}{4}$ sec. 23, T. 13 N., R. 5 W., at highway bridge $\frac{1}{2}$ miles northeast of Pe Ell. | 0.11 |
| Sept. 9 |do.... |do.... |do.... | 0 |
| 26 |do.... |do.... |do.... | .02 |
| Nov. 3 |do.... |do.... |do.... | 6.05 |
| July 17 | Elk Creek.... |do.... | SE $\frac{1}{4}$ sec. 5, T. 13 N., R. 5 W., 500 feet above Right Creek and $2\frac{1}{2}$ miles west of Doty. | 55.6 |
| 29 |do.... |do.... |do.... | 21.7 |
| Aug. 11 |do.... |do.... |do.... | 17.8 |
| 22 |do.... |do.... |do.... | 14.4 |
| Sept. 9 |do.... |do.... |do.... | 10.7 |
| 25 |do.... |do.... |do.... | 8.82 |
| Oct. 5 |do.... |do.... |do.... | 11.3 |
| 30 |do.... |do.... |do.... | 25.4 |
| July 17 | Right Creek.... | Elk Creek.... | NW $\frac{1}{4}$ sec. 8, T. 13 N., R. 5 W., at bridge 500 feet above mouth and $2\frac{1}{2}$ miles west of Doty. | 8.67 |
| Aug. 11 |do.... |do.... |do.... | 3.86 |
| Sept. 9 |do.... |do.... |do.... | 2.19 |
| 25 |do.... |do.... |do.... | 1.80 |
| Oct. 30 |do.... |do.... |do.... | 5.92 |
| July 17 | Seven Creek.... |do.... | NW $\frac{1}{4}$ sec. 8, T. 13 N., R. 5 W., at railroad bridge 300 feet above mouth and $2\frac{1}{2}$ miles west of Doty. | 3.96 |
| Aug. 11 |do.... |do.... |do.... | 1.94 |
| Sept. 9 |do.... |do.... |do.... | .80 |
| 25 |do.... |do.... |do.... | .94 |
| Oct. 30 |do.... |do.... |do.... | 2.64 |
| July 17 | Nine Creek.... |do.... | SW $\frac{1}{4}$ sec. 9, T. 13 N., R. 5 W., at railroad bridge 300 feet above mouth and 2 miles west of Doty. | 3.10 |
| Aug. 11 |do.... |do.... |do.... | .75 |
| Sept. 9 |do.... |do.... |do.... | .52 |
| 25 |do.... |do.... |do.... | .53 |
| Oct. 30 |do.... |do.... |do.... | 1.34 |
| July 17 | Deer Creek.... |do.... | NE $\frac{1}{4}$ sec. 9, T. 13 N., R. 5 W., at bridge 400 feet above mouth and $1\frac{1}{2}$ miles west of Doty. | 4.88 |
| 29 |do.... |do.... |do.... | 2.65 |
| Aug. 11 |do.... |do.... |do.... | 1.66 |
| 22 |do.... |do.... |do.... | 1.31 |
| Sept. 9 |do.... |do.... |do.... | .90 |
| 25 |do.... |do.... |do.... | .91 |
| Oct. 5 |do.... |do.... |do.... | 1.11 |
| 30 |do.... |do.... |do.... | 2.48 |
| Sept. 9 | Hay Creek.... |do.... | SE $\frac{1}{4}$ sec. 5, T. 13 N., R. 5 W., at bridge $\frac{1}{2}$ mile above mouth and $\frac{1}{2}$ mile west of Doty. | .19 |
| 9 | Capps Creek.... | Chehalis River.. | NE $\frac{1}{4}$ sec. 3, T. 13 N., R. 5 W., at bridge $\frac{1}{8}$ mile above mouth and $\frac{1}{2}$ mile north of Doty. | .10 |
| 9 | Unnamed creek... |do.... | Sec. 2, T. 13 N., R. 5 W., at bridge $\frac{1}{2}$ mile north of Doty. | .36 |
| 9 | Abaher Creek.... |do.... | NE $\frac{1}{4}$ sec. 2, T. 13 N., R. 5 W., at bridge $\frac{1}{2}$ mile above mouth and $\frac{1}{2}$ mile north of Doty. | 0 |
| July 16 | Dunn Creek.... |do.... | NE $\frac{1}{4}$ sec. 2, T. 13 N., R. 5 W., at bridge $\frac{1}{2}$ mile above mouth and 1 mile northeast of Doty. | 7.26 |
| Aug. 11 |do.... |do.... |do.... | 2.63 |
| Sept. 9 |do.... |do.... |do.... | 1.60 |
| 25 |do.... |do.... |do.... | 1.27 |
| Oct. 30 |do.... |do.... |do.... | 2.84 |
| Sept. 9 | Moccasin Creek.. |do.... | SE $\frac{1}{4}$ sec. 1, T. 13 N., R. 5 W., at bridge $1\frac{1}{2}$ miles east of Doty. | .21 |
| July 18 | Dell Creek.... |do.... | SW $\frac{1}{4}$ sec. 5, T. 13 N., R. 5 W., at bridge 300 feet above mouth and 3 miles east of Doty. | 1.51 |
| 28 |do.... |do.... |do.... | 1.16 |
| Aug. 8 |do.... |do.... |do.... | 1.02 |
| 22 |do.... |do.... |do.... | .82 |
| Sept. 9 |do.... |do.... |do.... | .70 |
| 25 |do.... |do.... |do.... | .65 |
| Oct. 5 |do.... |do.... |do.... | .67 |
| 30 |do.... |do.... |do.... | 1.14 |
| July 18 | Hope Creek.... |do.... | NW $\frac{1}{4}$ sec. 9, T. 13 N., R. 4 W., at highway bridge 4 miles east of Doty. | 1.62 |
| Aug. 8 |do.... |do.... |do.... | .39 |
| Sept. 9 |do.... |do.... |do.... | .10 |
| 25 |do.... |do.... |do.... | .05 |
| Nov. 3 |do.... |do.... |do.... | 10.4 |
| Sept. 9 | Nicholson Creek. |do.... | SW $\frac{1}{4}$ sec. 3, T. 13 N., R. 4 W., at bridge at Meskill 200 feet above mouth. | .01 |
| 9 | Unnamed creek... |do.... | SW $\frac{1}{4}$ sec. 15, T. 13 N., R. 4 W., at bridge 2 miles south of Meskill. | .02 |
| July 20 | Stillman Creek.. | South Fork of Chehalis River | NW $\frac{1}{4}$ sec. 14, T. 12 N., R. 4 W., 300 feet above Halfway Creek and 1 mile southwest of Bolstfort. | 31.4 |
| 30 |do.... |do.... |do.... | 23.9 |
| Aug. 12 |do.... |do.... |do.... | 19.6 |
| 20 |do.... |do.... |do.... | 17.6 |
| Sept. 11 |do.... |do.... |do.... | 14.5 |
| 28 |do.... |do.... |do.... | 13.8 |

MISCELLANEOUS DISCHARGE MEASUREMENTS

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Chehalis River Basin, Wash.--Continued
(Measurements made July to October 1942)

| Date | Stream | Tributary to or diverting from-- | Locality | Discharge (sec.-ft.) |
|----------|------------------------------|----------------------------------|---|----------------------|
| Oct. 6 | Stillman Creek.. | South Fork of Chehalis River | NW $\frac{1}{4}$ sec. 14, T. 12 N., R. 4 W., 300 feet above Halfway Creek and 1 mile southwest of Boistfort. | 12.9 |
| 29 | do. | do. | do. | 17.5 |
| July 20 | Halfway Creek... | Stillman Creek.. | NW $\frac{1}{4}$ sec. 14, T. 12 N., R. 4 W., 300 feet above mouth and 1 mile southwest of Boistfort. | 6.22 |
| 30 | do. | do. | do. | 4.42 |
| Aug. 12 | do. | do. | do. | 3.13 |
| 20 | do. | do. | do. | 2.40 |
| Sept. 11 | do. | do. | do. | 2.14 |
| 28 | do. | do. | do. | 1.98 |
| Oct. 6 | do. | do. | do. | 1.71 |
| 29 | do. | do. | do. | 3.35 |
| July 20 | Lost Creek..... | South Fork of Chehalis River | SE $\frac{1}{4}$ sec. 2, T. 12 N., R. 4 W., at bridge near mouth and $\frac{1}{2}$ mile northwest of Boistfort. | .35 |
| 30 | do. | do. | do. | .18 |
| Aug. 12 | do. | do. | do. | .04 |
| 20 | do. | do. | do. | .02 |
| Sept. 11 | do. | do. | do. | 0 |
| 28 | do. | do. | do. | 0 |
| Oct. 6 | do. | do. | do. | .02 |
| 29 | do. | do. | do. | .04 |
| July 20 | Lake Creek..... | do. | NW $\frac{1}{4}$ sec. 30, T. 13 N., R. 3 W., at bridge at Curtis. | 2.08 |
| 30 | do. | do. | do. | .79 |
| Aug. 12 | do. | do. | do. | .63 |
| 20 | do. | do. | do. | .35 |
| Sept. 11 | do. | do. | do. | .17 |
| 28 | do. | do. | do. | .17 |
| Oct. 6 | do. | do. | do. | .33 |
| 29 | do. | do. | do. | 1.60 |
| July 18 | Bunker Creek.... | Chehalis River.. | SE $\frac{1}{4}$ sec. 36, T. 14 N., R. 4 W., 700 feet above Deep Creek and 6 $\frac{1}{2}$ miles west of Chehalis. | 5.24 |
| 28 | do. | do. | do. | 1.77 |
| Aug. 8 | do. | do. | do. | 1.28 |
| 20 | do. | do. | do. | .33 |
| Sept. 11 | do. | do. | do. | .19 |
| 28 | do. | do. | do. | .19 |
| Oct. 6 | do. | do. | do. | .63 |
| 29 | do. | do. | do. | 1.04 |
| July 18 | Deep Creek..... | Bunker Creek.... | SW $\frac{1}{4}$ sec. 31, T. 14 N., R. 3 W., 1,000 feet above mouth and 6 $\frac{1}{2}$ miles west of Chehalis. | 1.79 |
| 28 | do. | do. | do. | .51 |
| Aug. 8 | do. | do. | do. | .42 |
| 20 | do. | do. | do. | .10 |
| Sept. 11 | do. | do. | do. | 1.08 |
| 28 | do. | do. | do. | 1.09 |
| Oct. 6 | do. | do. | do. | .11 |
| 29 | do. | do. | do. | .62 |
| Sept. 9 | Unnamed ditch... | Chehalis River.. | NW $\frac{1}{4}$ sec. 9, T. 13 N., R. 3 W., 400 feet west of Chehalis River bridge at Adna. | 1.05 |
| 10 | Mill Creek..... | do. | On line between secs. 3 and 10, T. 13 N., R. 3 W., at bridge on State Highway 12, 3 miles southwest of Chehalis. | 0 |
| July 14 | Stearns Creek... | do. | SW $\frac{1}{4}$ sec. 32, T. 13 N., R. 2 W., at bridge 6 miles south of Chehalis. | 1.64 |
| Aug. 8 | do. | do. | do. | 1.27 |
| Sept. 8 | do. | do. | do. | 1.13 |
| 29 | do. | do. | do. | 1.27 |
| Oct. 28 | do. | do. | do. | 1.70 |
| July 14 | do. | do. | SE $\frac{1}{4}$ sec. 24, T. 13 N., R. 3 W., 200 feet above bridge and 3 $\frac{1}{2}$ miles south of Chehalis. | 5.09 |
| 25 | do. | do. | do. | 1.94 |
| Aug. 8 | do. | do. | do. | 2.85 |
| 18 | do. | do. | do. | 2.77 |
| Sept. 8 | do. | do. | do. | 2.48 |
| 29 | do. | do. | do. | 2.79 |
| Oct. 7 | do. | do. | do. | 2.62 |
| 28 | do. | do. | do. | 4.69 |
| July 15 | North Fork of Newaukum River | Newaukum River.. | SW $\frac{1}{4}$ sec. 35, T. 14 N., R. 1 W., at bridge 1 mile above Lucas Creek and 6 miles northwest of Onalaska. | 45.4 |
| 27 | do. | do. | do. | 28.5 |
| Aug. 10 | do. | do. | do. | 19.1 |
| 19 | do. | do. | do. | 13.3 |
| Sept. 8 | do. | do. | do. | 10.4 |
| 23 | do. | do. | do. | 7.87 |
| Oct. 3 | do. | do. | do. | 10.3 |
| 28 | do. | do. | do. | 18.0 |
| July 15 | Lucas Creek..... | North Fork of Newaukum River | SE $\frac{1}{4}$ sec. 2, T. 13 N., R. 1 W., at bridge $\frac{1}{2}$ mile above mouth and 6 miles northwest of Onalaska. | 9.61 |
| 27 | do. | do. | do. | 7.10 |
| Aug. 10 | do. | do. | do. | 5.10 |
| 19 | do. | do. | do. | 4.32 |
| Sept. 8 | do. | do. | do. | 3.18 |
| 25 | do. | do. | do. | 3.12 |

† Estimated.

MISCELLANEOUS DISCHARGE MEASUREMENTS

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Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Chehalis River Basin, Wash.--Continued
(Measurements made July to October 1942)

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|---------|-------------------------------|--------------------------------|---|----------------------|
| Oct. 3 | Lucas Creek..... | North Fork of Newaukum River | SE $\frac{1}{4}$ sec. 2, T. 13 N., R. 1 W., at bridge $\frac{1}{2}$ mile above mouth and 5 miles northwest of Onalaska. | 3.23 |
| 28 | do..... | do..... | do..... | 4.97 |
| July 15 | Middle Fork of Newaukum River | do..... | On line between secs. 17 and 20, T. 13 N., R. 1 W., 300 feet above confluence with North Fork of Newaukum River and 6 miles west of Onalaska. | 4.94 |
| 27 | do..... | do..... | do..... | 1.33 |
| Aug. 10 | do..... | do..... | do..... | .98 |
| 19 | do..... | do..... | do..... | .42 |
| Sept. 8 | do..... | do..... | do..... | .44 |
| 23 | do..... | do..... | do..... | .15 |
| Oct. 3 | do..... | do..... | do..... | .81 |
| 27 | do..... | do..... | do..... | 2.45 |
| July 14 | Dillenbaugh Creek. | Chehalis River.. | SE $\frac{1}{4}$ sec. 9, T. 13 N., R. 2 W., 600 feet below Berwick Creek and $\frac{1}{2}$ mile southeast of Chehalis. | 1.92 |
| 25 | do..... | do..... | do..... | 1.47 |
| Aug. 8 | do..... | do..... | do..... | 1.17 |
| 18 | do..... | do..... | do..... | 1.13 |
| Sept. 8 | do..... | do..... | do..... | .94 |
| 24 | do..... | do..... | do..... | .65 |
| Oct. 7 | do..... | do..... | do..... | 1.10 |
| 28 | do..... | do..... | do..... | 1.89 |
| Sept. 6 | Coal Creek..... | do..... | SE $\frac{1}{4}$ sec. 28, T. 14 N., R. 2 W., at bridge $\frac{1}{2}$ mile east of Chehalis. | 7.10 |
| 11 | do..... | do..... | do..... | 0 |
| July 14 | Salzer Creek..... | do..... | NE $\frac{1}{4}$ sec. 20, T. 14 N., R. 2 W., at bridge on U. S. Highway 99, 1 mile north of Chehalis. | .89 |
| 25 | do..... | do..... | do..... | .50 |
| Aug. 7 | do..... | do..... | do..... | .14 |
| 18 | do..... | do..... | do..... | †.03 |
| Sept. 4 | do..... | do..... | do..... | 0 |
| 23 | do..... | do..... | do..... | 0 |
| Oct. 3 | do..... | do..... | do..... | 0 |
| 27 | do..... | do..... | do..... | 7.36 |
| July 13 | China Creek..... | do..... | NE $\frac{1}{4}$ sec. 8, T. 14 N., R. 2 W., at Cedar Street Bridge in Centralia. | 1.07 |
| Aug. 7 | do..... | do..... | do..... | .28 |
| Sept. 5 | do..... | do..... | do..... | .64 |
| 23 | do..... | do..... | do..... | .51 |
| Oct. 27 | do..... | do..... | do..... | .29 |
| July 15 | Skookumchuck River. | do..... | NE $\frac{1}{4}$ sec. 5, T. 14 N., R. 2 W., at bridge on Bucoda road at Centralia. | 171 |
| 24 | do..... | do..... | do..... | 76.8 |
| Aug. 7 | do..... | do..... | do..... | 55.6 |
| 18 | do..... | do..... | do..... | 43.9 |
| Sept. 4 | do..... | do..... | do..... | 30.5 |
| 23 | do..... | do..... | do..... | 42.7 |
| Oct. 3 | do..... | do..... | do..... | 11.2 |
| 26 | do..... | do..... | do..... | 18.0 |
| July 10 | Thompson Creek.. | Skookumchuck River. | NE $\frac{1}{4}$ sec. 14, T. 15 N., R. 1 W., at road bridge 5 miles east of Bucoda. | 1.50 |
| Aug. 4 | do..... | do..... | do..... | .30 |
| Sept. 4 | do..... | do..... | do..... | 0 |
| 22 | do..... | do..... | do..... | 0 |
| Oct. 26 | do..... | do..... | do..... | †.18 |
| July 10 | Johnson Creek... | do..... | NE $\frac{1}{4}$ sec. 12, T. 15 N., R. 1 W., at bridge $5\frac{1}{2}$ miles east of Bucoda. | .94 |
| 24 | do..... | do..... | do..... | .65 |
| Aug. 4 | do..... | do..... | do..... | .23 |
| 17 | do..... | do..... | do..... | .08 |
| Sept. 4 | do..... | do..... | do..... | .16 |
| 22 | do..... | do..... | do..... | †.07 |
| Oct. 2 | do..... | do..... | do..... | .46 |
| 26 | do..... | do..... | do..... | .50 |
| July 11 | Hanaford Creek.. | do..... | NE $\frac{1}{4}$ sec. 28, T. 15 N., R. 1 W., 600 feet above Snyder Creek and $6\frac{1}{2}$ miles east of Centralia. | 14.1 |
| 24 | do..... | do..... | do..... | 7.38 |
| Aug. 7 | do..... | do..... | do..... | 5.34 |
| 18 | do..... | do..... | do..... | 4.12 |
| Sept. 4 | do..... | do..... | do..... | 3.79 |
| 22 | do..... | do..... | do..... | 3.36 |
| Oct. 2 | do..... | do..... | do..... | 5.50 |
| 27 | do..... | do..... | do..... | 7.86 |
| July 11 | South Hanaford Creek. | Hanaford Creek.. | SE $\frac{1}{4}$ sec. 26, T. 15 N., R. 2 W., 2,000 feet above bridge and 2 miles northeast of Centralia. | †.30 |
| 24 | do..... | do..... | do..... | †.24 |
| Aug. 7 | do..... | do..... | do..... | .10 |
| 18 | do..... | do..... | do..... | .05 |
| Sept. 4 | do..... | do..... | do..... | 0 |
| 22 | do..... | do..... | do..... | 0 |
| Oct. 2 | do..... | do..... | do..... | 0 |
| 27 | do..... | do..... | do..... | †.08 |
| Sept. 2 | Scammon Creek... | Chehalis River.. | SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 12, T. 14 N., R. 3 W., 1 mile west of Centralia. | †.02 |

† Estimated.

MISCELLANEOUS DISCHARGE MEASUREMENTS

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Chehalis River Basin, Wash.--Continued
(Measurements made July to October 1942)

| Date | Stream | Tributary to or diverting from-- | Locality | Discharge (sec.-ft.) |
|---------|-----------------------------|----------------------------------|---|----------------------|
| July 8 | North Fork of Lincoln Creek | Lincoln Creek... | SE $\frac{1}{4}$ sec. 31, T. 16 N., R. 4 W., 100 feet below bridge and 5 miles southwest of Independence. | 4.64 |
| 22 | do. | do. | do. | 3.24 |
| 30 | do. | do. | do. | 2.61 |
| Aug. 13 | do. | do. | do. | 1.45 |
| Sept. 2 | do. | do. | do. | .87 |
| 21 | do. | do. | do. | .70 |
| Oct. 1 | do. | do. | do. | 1.11 |
| 24 | do. | do. | do. | .86 |
| July 10 | Scatter Creek | Chehalis River... | NE $\frac{1}{4}$ sec. 19, T. 16 N., R. 1 W., 400 feet below bridge on U. S. Highway 99 at north side of Tenino. | 1.15 |
| 24 | do. | do. | do. | .45 |
| Aug. 4 | do. | do. | do. | .05 |
| 4 | do. | do. | do. | .24 |
| 17 | do. | do. | do. | .07 |
| Sept. 3 | do. | do. | do. | †.05 |
| 22 | do. | do. | do. | 0 |
| 30 | do. | do. | do. | 0 |
| Oct. 26 | do. | do. | do. | †.05 |
| July 10 | do. | do. | NE $\frac{1}{4}$ sec. 30 T. 16 N., R. 1 W., 300 feet below bridge on U. S. Highway 99 at south side of Tenino. | .88 |
| 11 | do. | do. | SW $\frac{1}{4}$ sec. 32, T. 16 N., R. 2 W., at bridge on U. S. Highway 99, 3 miles northeast of Grand Mound. | 6.28 |
| 26 | do. | do. | do. | 5.15 |
| Aug. 4 | do. | do. | do. | 3.85 |
| 17 | do. | do. | do. | 3.01 |
| Sept. 3 | do. | do. | do. | 1.91 |
| 22 | do. | do. | do. | .63 |
| 30 | do. | do. | do. | .81 |
| Oct. 26 | do. | do. | do. | .88 |
| July 11 | do. | do. | SW $\frac{1}{4}$ sec. 4, T. 15 N., R. 3 W., $\frac{1}{4}$ mile below bridge on State Highway 9, 1 mile east of Rochester. | 2.93 |
| 11 | do. | do. | do. | 3.93 |
| 25 | do. | do. | do. | 2.80 |
| Aug. 4 | do. | do. | do. | 1.89 |
| 14 | do. | do. | do. | 1.33 |
| Sept. 5 | do. | do. | do. | .28 |
| 21 | do. | do. | do. | 0 |
| 29 | do. | do. | do. | 0 |
| Oct. 21 | do. | do. | do. | 0 |
| July 8 | Independence Creek | do. | NE $\frac{1}{4}$ sec. 21, T. 15 N., R. 4 W., at bridge $1\frac{1}{2}$ miles southwest of Independence. | 1.96 |
| 22 | do. | do. | do. | 1.15 |
| Aug. 1 | do. | do. | do. | .54 |
| 13 | do. | do. | do. | .28 |
| Sept. 2 | do. | do. | do. | †.05 |
| 17 | do. | do. | do. | †.04 |
| Oct. 1 | do. | do. | do. | †.02 |
| 23 | do. | do. | do. | .15 |
| Sept. 3 | Dumpey Creek | Black River... | NE $\frac{1}{4}$ sec. 14, T. 17 N., R. 3 W., at bridge and 4 miles north of Little Rock. | .22 |
| 21 | do. | do. | do. | .23 |
| July 9 | Salmon Creek | do. | SW $\frac{1}{4}$ sec. 19, T. 17 N., R. 2 W., at bridge 2 miles northeast of Little Rock. | 1.28 |
| 23 | do. | do. | do. | 1.02 |
| Aug. 3 | do. | do. | do. | .89 |
| 15 | do. | do. | do. | .81 |
| Sept. 3 | do. | do. | do. | .69 |
| 15 | do. | do. | do. | .37 |
| 29 | do. | do. | do. | .54 |
| Oct. 21 | do. | do. | do. | .54 |
| July 9 | Miller Creek | do. | SE $\frac{1}{4}$ sec. 25, T. 17 N., R. 3 W., at bridge $1\frac{1}{2}$ miles northeast of Little Rock. | 1.06 |
| Aug. 3 | do. | do. | do. | .62 |
| Sept. 3 | do. | do. | do. | .38 |
| 21 | do. | do. | do. | .34 |
| Oct. 21 | do. | do. | do. | .26 |
| July 9 | Madell Creek | do. | SW $\frac{1}{4}$ sec. 34, T. 17 N., R. 3 W., at bridge $1\frac{1}{2}$ miles northwest of Little Rock. | 15.6 |
| 23 | do. | do. | do. | 9.95 |
| Aug. 3 | do. | do. | do. | 8.88 |
| 15 | do. | do. | do. | 6.06 |
| Sept. 3 | do. | do. | do. | 4.66 |
| 15 | do. | do. | do. | 4.58 |
| 29 | do. | do. | do. | 5.41 |
| Oct. 21 | do. | do. | do. | 5.71 |
| July 9 | Beaver Creek | do. | SE $\frac{1}{4}$ sec. 2, T. 16 N., R. 3 W., at bridge on State Highway 1M at south edge of Little Rock | 7.72 |
| 23 | do. | do. | do. | 7.04 |
| Aug. 3 | do. | do. | do. | 6.52 |
| 15 | do. | do. | do. | 5.35 |
| Sept. 3 | do. | do. | do. | 4.45 |

† Estimated.

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Chehalis River Basin, Wash.--Continued
(Measurements made July to October 1942)

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|----------|------------------------|-----------------------------------|--|-------------------------|
| Sept. 15 | Beaver Creek.... | Black River..... | SE $\frac{1}{2}$ sec. 2, T. 16 N., R. 3 W., at bridge on State Highway 1M at south edge of Little Rock. | 8.93 |
| 29 |do..... |do..... |do..... | 3.59 |
| Oct. 21 |do..... |do..... |do..... | 4.10 |
| July 9 | Mima Creek..... |do..... | NE $\frac{1}{2}$ sec. 20, T. 16 N., R. 3 W., at bridge $\frac{3}{4}$ miles southwest of Little Rock. | 3.68 |
| 23 |do..... |do..... |do..... | 2.41 |
| Aug. 3 |do..... |do..... |do..... | 2.47 |
| 15 |do..... |do..... |do..... | 1.11 |
| Sept. 3 |do..... |do..... |do..... | .49 |
| 16 |do..... |do..... |do..... | .90 |
| 30 |do..... |do..... |do..... | 1.20 |
| Oct. 22 |do..... |do..... |do..... | 1.83 |
| July 6 | Garrod Creek.... | Chehalis River.. | NE $\frac{1}{2}$ sec. 9, T. 15 N., R. 5 W., at bridge 4 miles southwest of Oakville. | 8.12 |
| Aug. 1 |do..... |do..... |do..... | 4.80 |
| Sept. 2 |do..... |do..... |do..... | 2.20 |
| 21 |do..... |do..... |do..... | 1.95 |
| Oct. 23 |do..... |do..... |do..... | 2.15 |
| July 6 |do..... |do..... | SE $\frac{1}{2}$ sec. 1, T. 15 N., R. 5 W., at bridge 2 miles south of Oakville. | 17.4 |
| 22 |do..... |do..... |do..... | 13.7 |
| Aug. 1 |do..... |do..... |do..... | 11.3 |
| 13 |do..... |do..... |do..... | 8.51 |
| Sept. 2 |do..... |do..... |do..... | 5.44 |
| 17 |do..... |do..... |do..... | 4.66 |
| Oct. 1 |do..... |do..... |do..... | 5.10 |
| 23 |do..... |do..... |do..... | 5.16 |
| Sept. 2 | Davis Creek.... |do..... | NE $\frac{1}{2}$ sec. 36, T. 16 N., R. 5 W., at bridge $\frac{1}{2}$ miles west of Oakville. | 0 |
| July 6 | Williams Creek.. |do..... | SE $\frac{1}{2}$ sec. 16, T. 16 N., R. 5 W., at bridge 3 miles northwest of Oakville. | 3.26 |
| 22 |do..... |do..... |do..... | 1.23 |
| Aug. 1 |do..... |do..... |do..... | 1.61 |
| 13 |do..... |do..... |do..... | .74 |
| Sept. 2 |do..... |do..... |do..... | .17 |
| 17 |do..... |do..... |do..... | 1.12 |
| Oct. 1 |do..... |do..... |do..... | 1.36 |
| 23 |do..... |do..... |do..... | .45 |
| July 6 | Cedar Creek.... |do..... | NE $\frac{1}{2}$ sec. 14, T. 16 N., R. 5 W., at bridge 3 miles northwest of Oakville. | 34.2 |
| 21 |do..... |do..... |do..... | 26.4 |
| 31 |do..... |do..... |do..... | 24.7 |
| Aug. 14 |do..... |do..... |do..... | 16.4 |
| Sept. 1 |do..... |do..... |do..... | 13.9 |
| 16 |do..... |do..... |do..... | 13.3 |
| 30 |do..... |do..... |do..... | 1.68 |
| Oct. 22 |do..... |do..... |do..... | 14.4 |
| July 6 | Gibson Creek.... |do..... | SE $\frac{1}{2}$ sec. 3, T. 16 N., R. 5 W., at bridge $\frac{4}{5}$ miles northwest of Oakville. | 5.45 |
| 21 |do..... |do..... |do..... | 5.32 |
| 31 |do..... |do..... |do..... | 4.32 |
| Aug. 14 |do..... |do..... |do..... | 3.14 |
| Sept. 1 |do..... |do..... |do..... | 2.38 |
| 16 |do..... |do..... |do..... | 2.28 |
| 30 |do..... |do..... |do..... | 2.20 |
| Oct. 22 |do..... |do..... |do..... | 2.34 |
| Sept. 1 | Mox-Chehalis Creek. |do..... | NE $\frac{1}{2}$ sec. 4, T. 17 N., R. 5 W., at bridge 2 miles north of Malone. | 2.75 |
| 21 |do..... |do..... |do..... | 2.39 |
| July 2 |do..... |do..... | SE $\frac{1}{2}$ sec. 17, T. 17 N., R. 5 W., at bridge on State Highway 9 at Malone. | 10.3 |
| 21 |do..... |do..... |do..... | 8.75 |
| Aug. 1 |do..... |do..... |do..... | 6.90 |
| 14 |do..... |do..... |do..... | 3.78 |
| Sept. 1 |do..... |do..... |do..... | 2.94 |
| 16 |do..... |do..... |do..... | 2.66 |
| Oct. 1 |do..... |do..... |do..... | 3.66 |
| 23 |do..... |do..... |do..... | 3.14 |
| Sept. 1 | Baton Creek.... |do..... | SE $\frac{1}{2}$ sec. 19, T. 17 N., R. 5 W., at culvert $\frac{1}{2}$ miles above mouth and $\frac{1}{2}$ miles southwest of Malone. | .34 |
| July 6 | Delezenne Creek. |do..... | SW $\frac{1}{2}$ sec. 12, T. 17 N., R. 6 W., at bridge 2 miles southeast of Elma. | 7.01 |
| 21 |do..... |do..... |do..... | 6.55 |
| Aug. 12 |do..... |do..... |do..... | 3.82 |
| 26 |do..... |do..... |do..... | 3.07 |
| Sept. 12 |do..... |do..... |do..... | 2.00 |
| 29 |do..... |do..... |do..... | 2.67 |
| Oct. 10 |do..... |do..... |do..... | 2.46 |
| 20 |do..... |do..... |do..... | 2.86 |
| July 8 | Cloqualium Creek |do..... | NE $\frac{1}{2}$ sec. 29, T. 19 N., R. 5 W., at bridge $\frac{2}{3}$ miles southwest of Cloqualium. | 15.6 |
| 21 |do..... |do..... |do..... | 16.5 |
| Aug. 13 |do..... |do..... |do..... | 10.5 |
| 26 |do..... |do..... |do..... | 9.35 |
| Sept. 14 |do..... |do..... |do..... | 7.78 |

† Estimated.

MISCELLANEOUS DISCHARGE MEASUREMENTS

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Chehalis River Basin, Wash.--Continued
(Measurements made July to October 1942)

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|----------|-----------------------------------|----------------------------------|---|----------------------|
| Sept. 30 | Cloquallum Creek | Chehalis River... | NW $\frac{1}{4}$ sec. 29, T. 19 N., R. 5 W., at bridge 2 $\frac{1}{2}$ miles southwest of Cloquallum. | 7.20 |
| Oct. 12 |do..... |do..... |do..... | 9.00 |
| 20 |do..... |do..... |do..... | 7.40 |
| July 8 | Wildcat Creek... | Cloquallum Creek. | SE $\frac{1}{4}$ sec. 19, T. 18 N., R. 5 W., at bridge on U. S. Highway 410, 2 miles northeast of Elma. | 11.5 |
| 21 |do..... |do..... |do..... | 13.2 |
| Aug. 13 |do..... |do..... |do..... | 9.11 |
| 26 |do..... |do..... |do..... | 4.97 |
| Sept. 14 |do..... |do..... |do..... | 4.97 |
| 30 |do..... |do..... |do..... | 5.33 |
| Oct. 10 |do..... |do..... |do..... | 5.54 |
| 20 |do..... |do..... |do..... | 5.55 |
| July 8 | Workman Creek... | Chehalis River... | SW $\frac{1}{4}$ sec. 10, T. 17 N., R. 6 W., at bridge 2 miles south of Elma. | 5.68 |
| 20 |do..... |do..... |do..... | 7.16 |
| Aug. 12 |do..... |do..... |do..... | 3.23 |
| 26 |do..... |do..... |do..... | 2.73 |
| Sept. 14 |do..... |do..... |do..... | 1.94 |
| 29 |do..... |do..... |do..... | 2.06 |
| Oct. 10 |do..... |do..... |do..... | 2.31 |
| 20 |do..... |do..... |do..... | 2.41 |
| Aug. 25 | Vance Creek..... |do..... | SW $\frac{1}{4}$ sec. 34, T. 18 N., R. 6 W., at bridge 0.5 mile south of Elma. | .39 |
| July 8 | Newman Creek.... |do..... | SW $\frac{1}{4}$ sec. 5, T. 17 N., R. 6 W., at bridge 1 mile south of Satsop. | 19.5 |
| 21 |do..... |do..... |do..... | 20.5 |
| Aug. 12 |do..... |do..... |do..... | 16.4 |
| 27 |do..... |do..... |do..... | 14.4 |
| Sept. 14 |do..... |do..... |do..... | 12.0 |
| 30 |do..... |do..... |do..... | 13.7 |
| Oct. 12 |do..... |do..... |do..... | 12.6 |
| 20 |do..... |do..... |do..... | 15.0 |
| July 9 | East Fork of Satsop River. | Satsop River..... | NE $\frac{1}{4}$ sec. 14, T. 20 N., R. 7 W., at bridge 15 miles north of Satsop. | 66.9 |
| 24 |do..... |do..... |do..... | 96.9 |
| Aug. 15 |do..... |do..... |do..... | 44.8 |
| 28 |do..... |do..... |do..... | 35.0 |
| Sept. 15 |do..... |do..... |do..... | 27.0 |
| Oct. 2 |do..... |do..... |do..... | 24.6 |
| 12 |do..... |do..... |do..... | 24.4 |
| 23 |do..... |do..... |do..... | 25.3 |
| July 10 | Cook Creek..... | East Fork of Satsop River. | SE $\frac{1}{4}$ sec. 6, T. 18 N., R. 6 W., at bridge 4 miles north of Satsop. | 2.19 |
| Aug. 14 |do..... |do..... |do..... | 1.25 |
| Sept. 16 |do..... |do..... |do..... | 1.15 |
| Oct. 13 |do..... |do..... |do..... | 142 |
| July 10 | East Middle Fork of Satsop River. |do..... | SW $\frac{1}{4}$ sec. 29, T. 19 N., R. 6 W., at bridge 6 miles north of Satsop. | 126 |
| 23 |do..... |do..... |do..... | 123 |
| Aug. 14 |do..... |do..... |do..... | 102 |
| 27 |do..... |do..... |do..... | 91.9 |
| Sept. 16 |do..... |do..... |do..... | 79.6 |
| Oct. 1 |do..... |do..... |do..... | 84.7 |
| 13 |do..... |do..... |do..... | 73.3 |
| 22 |do..... |do..... |do..... | 71.7 |
| July 9 | Bingham Creek... | East Middle Fork of Satsop River | SW $\frac{1}{4}$ sec. 2, T. 19 N., R. 6 W., at bridge 11 miles northeast of Satsop. | 47.4 |
| 22 |do..... |do..... |do..... | 46.8 |
| Aug. 13 |do..... |do..... |do..... | 37.7 |
| 28 |do..... |do..... |do..... | 31.0 |
| Sept. 14 |do..... |do..... |do..... | 27.7 |
| Oct. 2 |do..... |do..... |do..... | 24.6 |
| 12 |do..... |do..... |do..... | 20.6 |
| 23 |do..... |do..... |do..... | 20.4 |
| July 22 | Spring inflow... | Bingham Creek.... | NW $\frac{1}{4}$ sec. 12, T. 20 N., R. 6 W., at bridge 1 $\frac{1}{2}$ miles east of Matlock. | 3.00 |
| Aug. 28 |do..... |do..... |do..... | 2.12 |
| July 10 | Middle Fork of Satsop River. | East Middle Fork of Satsop River | NE $\frac{1}{4}$ sec. 31, T. 19 N., R. 6 W., at bridge 5 $\frac{1}{2}$ miles north of Satsop. | 92.5 |
| 23 |do..... |do..... |do..... | 87.0 |
| Aug. 14 |do..... |do..... |do..... | 71.4 |
| 27 |do..... |do..... |do..... | 69.3 |
| Sept. 16 |do..... |do..... |do..... | 59.1 |
| Oct. 1 |do..... |do..... |do..... | 59.4 |
| 13 |do..... |do..... |do..... | 52.5 |
| 22 |do..... |do..... |do..... | 52.0 |
| July 9 | Decker Creek.... | Satsop River. | NW $\frac{1}{4}$ sec. 17, T. 20 N., R. 6 W., 150 feet below bridge and 1 $\frac{1}{2}$ miles north of Satsop. | 9.86 |
| 22 |do..... |do..... |do..... | 9.86 |
| Aug. 15 |do..... |do..... |do..... | 7.59 |
| 29 |do..... |do..... |do..... | 7.22 |
| Sept. 15 |do..... |do..... |do..... | 6.69 |
| Oct. 2 |do..... |do..... |do..... | 5.62 |
| 12 |do..... |do..... |do..... | 5.70 |
| 23 |do..... |do..... |do..... | 5.38 |

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Chehalis River Basin, Wash.--Continued
(Measurements made July to October 1942)

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|----------|-----------------------------|--------------------------------|--|----------------------|
| Aug. 28 | Dry Creek..... | Middle Fork of Satsop River. | NE $\frac{1}{2}$ sec. 3, T. 20 N., R. 6 W., at bridge 1 mile northwest of Matlock. | 1.95 |
| July 9 | West Fork of Satsop River. | Satsop River..... | NE $\frac{1}{2}$ sec. 33, T. 20 N., R. 7 W., at bridge 12 miles north of Satsop. | 151 |
| Aug. 24 |do..... |do..... |do..... | 196 |
| Aug. 15 |do..... |do..... |do..... | 84.8 |
| Aug. 29 |do..... |do..... |do..... | 65.0 |
| Sept. 15 |do..... |do..... |do..... | 52.0 |
| Oct. 2 |do..... |do..... |do..... | 52.5 |
| Oct. 14 |do..... |do..... |do..... | 75.0 |
| Oct. 23 |do..... |do..... |do..... | 48.8 |
| July 10 |do..... |do..... | SW $\frac{1}{4}$ sec. 14, T. 18 N., R. 7 W., at bridge 3 miles northwest of Satsop. | 165 |
| Oct. 23 |do..... |do..... |do..... | 231 |
| Aug. 14 |do..... |do..... |do..... | 98.2 |
| Aug. 27 |do..... |do..... |do..... | 75.4 |
| Sept. 16 |do..... |do..... |do..... | 56.7 |
| Oct. 1 |do..... |do..... |do..... | 111 |
| Oct. 13 |do..... |do..... |do..... | 57.2 |
| Oct. 22 |do..... |do..... |do..... | 59.9 |
| Sept. 16 | Unnamed creek... |do..... | SW $\frac{1}{4}$ sec. 24, T. 18 N., R. 7 W., at bridge 2 miles northwest of Satsop. | 1.97 |
| Oct. 10 | Stevens Creek... | Chehalis River... | NE $\frac{1}{4}$ sec. 15, T. 17 N., R. 7 W., at bridge 1 $\frac{1}{2}$ miles southeast of Montesano. | 1.30 |
| Oct. 10 | Camp Creek..... |do..... | NE $\frac{1}{4}$ sec. 9, T. 17 N., R. 7 W., at bridge 1 mile east of Montesano. | 2.08 |
| Oct. 10 | Sylvia Creek..... |do..... | SE $\frac{1}{4}$ sec. 31, T. 18 N., R. 7 W., 500 feet below Sylvia Lake Dam and $\frac{1}{2}$ mile north of Montesano. | 1.46 |
| July 11 | Carter Creek.... | Wynoochee River.. | SE $\frac{1}{4}$ sec. 11, T. 19 N., R. 8 W., 150 feet above bridge and 10 miles north of Montesano. | 5.40 |
| Aug. 24 |do..... |do..... |do..... | 4.59 |
| Aug. 15 |do..... |do..... |do..... | 2.01 |
| Aug. 29 |do..... |do..... |do..... | 1.45 |
| Sept. 15 |do..... |do..... |do..... | 1.08 |
| Oct. 2 |do..... |do..... |do..... | 1.63 |
| Oct. 14 |do..... |do..... |do..... | 2.89 |
| Oct. 23 |do..... |do..... |do..... | 1.17 |
| July 11 | Helm Creek..... |do..... | On line between secs. 28 and 33, T. 19 N., R. 8 W., $\frac{7}{8}$ miles northwest of Montesano. | 6.53 |
| Aug. 24 |do..... |do..... |do..... | 3.77 |
| Aug. 15 |do..... |do..... |do..... | 1.66 |
| Aug. 29 |do..... |do..... |do..... | 1.55 |
| Sept. 15 |do..... |do..... |do..... | 1.44 |
| Oct. 2 |do..... |do..... |do..... | 2.64 |
| Oct. 14 |do..... |do..... |do..... | 5.40 |
| Oct. 23 |do..... |do..... |do..... | 1.83 |
| July 6 | Wadekind Creek.. |do..... | NE $\frac{1}{4}$ sec. 29, T. 18 N., R. 8 W., at bridge $\frac{1}{2}$ miles northwest of Montesano. | 7.27 |
| Aug. 18 |do..... |do..... |do..... | 11.7 |
| Aug. 11 |do..... |do..... |do..... | 4.56 |
| Aug. 25 |do..... |do..... |do..... | 2.92 |
| Sept. 10 |do..... |do..... |do..... | 2.31 |
| Oct. 30 |do..... |do..... |do..... | 3.43 |
| Oct. 15 |do..... |do..... |do..... | 9.29 |
| Oct. 24 |do..... |do..... |do..... | 3.36 |
| July 6 | Mooney Creek.... |do..... | NE $\frac{1}{4}$ sec. 33, T. 18 N., R. 8 W., at bridge 3 miles northwest of Montesano. | 3.32 |
| Aug. 29 |do..... |do..... |do..... | 2.63 |
| Aug. 25 |do..... |do..... |do..... | 1.83 |
| Sept. 15 |do..... |do..... |do..... | 1.16 |
| Oct. 14 |do..... |do..... |do..... | 4.35 |
| June 30 | Black Creek..... |do..... | Center of sec. 26, T. 18 N., R. 8 W., at bridge 2 miles northwest of Montesano. | 24.4 |
| July 18 |do..... |do..... |do..... | 24.8 |
| Aug. 11 |do..... |do..... |do..... | 3.90 |
| Aug. 29 |do..... |do..... |do..... | 3.92 |
| Sept. 15 |do..... |do..... |do..... | 2.72 |
| Oct. 30 |do..... |do..... |do..... | 3.57 |
| Oct. 14 |do..... |do..... |do..... | 6.36 |
| Oct. 24 |do..... |do..... |do..... | 4.34 |
| Sept. 10 | Tide Creek..... | Chehalis River... | SE $\frac{1}{4}$ sec. 14, T. 17 N., R. 8 W., at bridge 1 $\frac{1}{2}$ miles southwest of Montesano. | 9.99 |
| July 17 | Wishkah River... |do..... | NE $\frac{1}{4}$ sec. 22, T. 19 N., R. 9 W., at bridge 5 miles north of Wishkah. | 157 |
| Aug. 28 |do..... |do..... |do..... | 49.9 |
| Aug. 22 |do..... |do..... |do..... | 21.0 |
| Sept. 8 |do..... |do..... |do..... | 17.6 |
| Oct. 18 |do..... |do..... |do..... | 14.8 |
| Oct. 3 |do..... |do..... |do..... | 25.2 |
| Oct. 16 |do..... |do..... |do..... | 24.4 |
| Oct. 26 |do..... |do..... |do..... | 17.6 |
| July 17 | East Fork of Wishkah River. | Wishkah River... | SW $\frac{1}{4}$ sec. 36, T. 19 N., R. 9 W., at bridge 2 $\frac{1}{2}$ miles northeast of Wishkah. | 59.3 |
| Aug. 28 |do..... |do..... |do..... | 23.1 |
| Aug. 22 |do..... |do..... |do..... | 10.4 |
| Sept. 8 |do..... |do..... |do..... | 8.28 |
| Oct. 18 |do..... |do..... |do..... | 7.70 |
| Oct. 3 |do..... |do..... |do..... | 16.1 |

† Estimated.

MISCELLANEOUS DISCHARGE MEASUREMENTS

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Chehalis River Basin, Wash.--Continued
(Measurements made July to October 1942)

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|---------|-----------------------------|--------------------------------|--|----------------------|
| Oct. 16 | East Fork of Wishkah River. | Wishkah River.... | SW $\frac{1}{4}$ sec. 36, T. 19 N., R. 9 W., at bridge $\frac{1}{2}$ miles northeast of Wishkah. | 13.4 |
| 26 |do..... |do..... |do..... | 9.23 |

Hoquiam River Basin, Wash.
(Measurements made July to October 1942)

| | | | | |
|---------|-------------------------------------|-------------------------------|--|------|
| July 16 | Hoquiam River.... | Grays Harbor.... | SW $\frac{1}{4}$ sec. 8, T. 18 N., R. 9 W., 50 feet above Berryman Creek and $\frac{1}{2}$ miles northeast of Hoquiam. | 64.4 |
| 28 |do..... |do..... |do..... | 30.9 |
| Aug. 21 |do..... |do..... |do..... | 22.2 |
| Sept. 8 |do..... |do..... |do..... | 19.2 |
| 18 |do..... |do..... |do..... | 18.1 |
| Oct. 8 |do..... |do..... |do..... | 18.7 |
| 16 |do..... |do..... |do..... | 20.2 |
| 26 |do..... |do..... |do..... | 24.2 |
| July 16 | Berryman Creek.... | Hoquiam River.... | SW $\frac{1}{4}$ sec. 8, T. 18 N., R. 9 W., at bridge $\frac{1}{2}$ miles northeast of Hoquiam. | 2.72 |
| 28 |do..... |do..... |do..... | 1.00 |
| Aug. 21 |do..... |do..... |do..... | .55 |
| Sept. 8 |do..... |do..... |do..... | .40 |
| 18 |do..... |do..... |do..... | .36 |
| Oct. 8 |do..... |do..... |do..... | .63 |
| 16 |do..... |do..... |do..... | .81 |
| 26 |do..... |do..... |do..... | 1.44 |
| July 16 | Folsom Creek.... | West Fork of Hoquiam River. | SW $\frac{1}{4}$ sec. 9, T. 18 N., R. 10 W., at bridge 4 miles north of Hoquiam. | 8.65 |
| 27 |do..... |do..... |do..... | 3.42 |
| Aug. 21 |do..... |do..... |do..... | 2.70 |
| Sept. 3 |do..... |do..... |do..... | 2.32 |
| 19 |do..... |do..... |do..... | 2.13 |
| Oct. 7 |do..... |do..... |do..... | 2.32 |
| 17 |do..... |do..... |do..... | 2.20 |
| 29 |do..... |do..... |do..... | 3.91 |
| Sept. 3 | Bernard Creek.... |do..... | NE $\frac{1}{4}$ sec. 21, T. 18 N., R. 10 W., $\frac{1}{2}$ mile above bridge and $\frac{2}{3}$ miles northwest of Hoquiam. | 1.00 |
| 3 | Middle Fork of Hoquiam River. |do..... | NW $\frac{1}{4}$ sec. 14, T. 18 N., R. 10 W., $\frac{3}{4}$ miles north of Hoquiam. | 6.10 |
| 9 | Little Hoquiam River. | Middle Fork of Hoquiam River. | NE $\frac{1}{4}$ sec. 5, T. 17 N., R. 10 W., $\frac{1}{2}$ miles above North Fork of Little Hoquiam River and 2 miles west of Hoquiam. | 2.60 |
| 4 | North Fork of Little Hoquiam River. | Little Hoquiam River. | On line between secs. 28 and 33, T. 11 N., R. 10 W., 2 miles northwest of Hoquiam. | 1.19 |

Chenosis Creek Basin, Wash.

| | | | | |
|---------|--------------------|------------------|--|------|
| Sept. 2 | Chenosis Creek.... | Grays Harbor.... | On line between secs. 14 and 23, T. 18 N., R. 11 W., 6 miles northwest of Hoquiam. | 13.2 |
| 3 |do..... |do..... | NW $\frac{1}{4}$ sec. 13, T. 18 N., R. 11 W., 6 miles northwest of Hoquiam. | 4.76 |

Rumtulpis River Basin, Wash.
(Measurements made July to October 1942)

| | | | | |
|----------|-------------------|------------------|--|------|
| July 14 | Rumtulpis River. | Grays Harbor.... | SW $\frac{1}{4}$ sec. 28, T. 19 N., R. 11 W., 35 miles above bridge and 2 miles north of Tullips. | 735 |
| Aug. 19 |do..... |do..... |do..... | 296 |
| Sept. 19 |do..... |do..... |do..... | 204 |
| Oct. 19 |do..... |do..... |do..... | 251 |
| July 14 | Stevens Creek.... | Rumtulpis River. | SE $\frac{1}{4}$ sec. 12, T. 20 N., R. 11 W., 300 feet below fish ladder and $1\frac{1}{2}$ miles west of Rumtulpis. | 56.5 |
| 27 |do..... |do..... |do..... | 34.3 |
| Aug. 19 |do..... |do..... |do..... | 18.2 |
| Sept. 5 |do..... |do..... |do..... | 13.9 |
| 19 |do..... |do..... |do..... | 9.85 |
| Oct. 7 |do..... |do..... |do..... | 11.9 |
| 19 |do..... |do..... |do..... | 11.8 |
| 29 |do..... |do..... |do..... | 29.1 |
| July 14 | Big Creek.... |do..... | NW $\frac{1}{4}$ sec. 1, T. 19 N., R. 11 W., at bridge $\frac{1}{2}$ miles southwest of Rumtulpis. | 70.0 |
| 27 |do..... |do..... |do..... | 49.5 |
| Aug. 19 |do..... |do..... |do..... | 34.2 |
| Sept. 5 |do..... |do..... |do..... | 28.8 |
| 19 |do..... |do..... |do..... | 26.5 |
| Oct. 7 |do..... |do..... |do..... | 29.7 |
| 19 |do..... |do..... |do..... | 30.8 |
| 29 |do..... |do..... |do..... | 41.4 |
| Sept. 2 | Burg Slough.... |do..... | SW $\frac{1}{4}$ sec. 5, T. 18 N., R. 11 W., at bridge 8 miles northwest of Hoquiam. | 1.30 |

Bell Creek Basin, Wash.

| | | | | |
|----------|----------------|-------------------------|--|------|
| Sept. 24 | Bell Creek.... | Strait of Juan de Fuca. | NW $\frac{1}{4}$ sec. 22, T. 30 N., R. 3 W., 2 miles east of Sequim. | 4.86 |
|----------|----------------|-------------------------|--|------|

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Salmon Creek Basin, Wash.

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|----------|-------------------|--------------------------------|--|----------------------|
| Aug. 5 | Salmon Creek..... | Discovery Bay... | Lot 2, sec. 23, T. 29 N., R. 2 W., at mouth, at Uncas. | 2.57 |
| Sept. 24 |do..... |do..... |do..... | 1.39 |

Snow Creek Basin, Wash.

| | | | | |
|----------|-----------------|------------------|---|------|
| Oct. 4 | Snow Creek..... | Discovery Bay... | SE $\frac{1}{4}$ sec. 2, T. 29 N., R. 2 W., just below confluence with Crocker Lake Outlet, near Uncas. | 4.78 |
| Sept. 24 |do..... |do..... |do..... | 1.64 |
| Oct. 5 |do..... |do..... | SE $\frac{1}{4}$ sec. 24, T. 29 N., R. 2 W., 75 feet below highway crossing at mouth, at Uncas. | 5.62 |
| Sept. 24 |do..... |do..... |do..... | 2.49 |

Chimacum Creek Basin, Wash.

| | | | | |
|----------|-------------------|--------------------|--|------|
| Sept. 24 | Chimacum Creek... | Port Townsend Bay. | SE $\frac{1}{4}$ sec. 4, T. 28 N., R. 1 W., $\frac{1}{2}$ mile west of center. | 0.80 |
| Oct. 6 |do..... |do..... | SW $\frac{1}{4}$ sec. 2, T. 29 N., R. 1 W., at bridge 1 mile west of Hadlock. | 2.86 |
| Sept. 24 |do..... |do..... |do..... | 3.05 |

Skokomish River Basin, Wash.

| | | | | |
|---------|-------------------------------|------------------|---|-------|
| Aug. 21 | South Fork of Skokomish River | Skokomish River. | NW $\frac{1}{4}$ sec. 17, T. 21 N., R. 4 W., 1 mile above mouth. | 135.3 |
| Sept. 9 |do..... |do..... | SW $\frac{1}{4}$ sec. 9, T. 21 N., R. 4 W., 300 feet above mouth. | 153.9 |
| 24 |do..... |do..... |do..... | 135.3 |

† Furnished by city of Tacoma.

Union River Basin, Wash.

| | | | | |
|----------|------------------|-----------------|---|------|
| June 26 | Union River..... | Hood Canal..... | NE $\frac{1}{4}$ sec. 3, T. 23 N., R. 1 W., at crossing of old Navy Yard Highway, 5 miles northeast of Belfair. | 3.38 |
| Aug. 3 |do..... |do..... |do..... | 1.74 |
| Sept. 26 |do..... |do..... |do..... | 1.27 |
| June 25 |do..... |do..... | SW $\frac{1}{4}$ sec. 20, T. 23 N., R. 1 W., at crossing of old Navy Yard Highway, 1.4 miles north of Belfair. | 22.8 |
| Aug. 3 |do..... |do..... |do..... | 16.1 |
| Sept. 26 |do..... |do..... |do..... | 12.9 |

Dogfish Creek Basin, Wash.

| | | | | |
|----------|-------------------|------------------|--|------|
| Sept. 26 | Dogfish Creek.... | Liberty Bay..... | Sec. 14, T. 26 N., R. 1 E., $\frac{1}{2}$ mile north of Paulsbo. | 3.96 |
|----------|-------------------|------------------|--|------|

McAllister Creek Basin, Wash.

| | | | | |
|---------|-------------------|------------------|---|------|
| Oct. 17 | McAllister Creek. | Puget Sound..... | N $\frac{1}{2}$ sec. 18, T. 18 N., R. 1 E., at first bridge below McAllister Springs, near Nisqually. | 55.0 |
| Apr. 8 |do..... |do..... |do..... | 73.8 |
| May 27 |do..... |do..... |do..... | 132 |
| Sept. 5 |do..... |do..... |do..... | 49.4 |

Unnamed spring, Wash.

| | | | | |
|----------|-------------------|------------------|--|------|
| Sept. 21 | Unnamed spring... | Puget Sound..... | Sec. 22, T. 19 N., R. 1 E., 600 feet north of Dupont Dock and $\frac{1}{2}$ miles northwest of Dupont. | 15.1 |
|----------|-------------------|------------------|--|------|

Chambers Creek Basin, Wash.

| | | | | |
|---------|------------------|------------------|--|------|
| Sept. 1 | Clover Creek.... | Steilacoom Lake. | SE $\frac{1}{4}$ sec. 26, T. 19 N., R. 3 E., at bridge on east line of section near Summit. | 2.01 |
| 1 |do..... |do..... | SW $\frac{1}{4}$ sec. 14, T. 19 N., R. 3 E., at east line of Brookdale Golf Course, near Parkland. | 5.29 |
| 1 |do..... |do..... | SW $\frac{1}{4}$ sec. 15, T. 19 N., R. 3 E., at west line of Brookdale Golf Course, near Parkland. | 4.62 |
| Oct. 2 |do..... |do..... | SE $\frac{1}{4}$ sec. 7, T. 19 N., R. 3 E., just below Spanaway Creek at east edge of McChord Field near Parkland. | 1.09 |
| Apr. 11 |do..... |do..... |do..... | 17.3 |
| May 19 |do..... |do..... |do..... | 9.94 |
| Sept. 1 |do..... |do..... |do..... | 2.78 |
| Oct. 2 |do..... |do..... | NE $\frac{1}{4}$ sec. 18, T. 19 N., R. 3 E., just above Mory Creek, in McChord Field, near Parkland. | 2.02 |
| Apr. 11 |do..... |do..... |do..... | 20.2 |
| May 19 |do..... |do..... |do..... | 12.0 |
| Sept. 1 |do..... |do..... |do..... | 3.51 |
| Oct. 2 |do..... |do..... | SE $\frac{1}{4}$ sec. 12, T. 19 N., R. 2 E., at west edge of McChord Field, near Fort Lewis. | .05 |
| Apr. 11 |do..... |do..... |do..... | 27.2 |

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Chambers Creek Basin, Wash.--Continued

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|---------|------------------|--------------------------------|--|----------------------|
| May 19 | Clover Creek.... | Stellacoom Lake. | SE $\frac{1}{4}$ sec. 12, T. 19 N., R. 2 E., at west edge of McChord Field near Fort Lewis. | 14.9 |
| Sept. 1 |do..... |do..... |do..... | 2.18 |
| Oct. 2 |do..... |do..... | SE $\frac{1}{4}$ sec. 11, T. 19 N., R. 2 E., at crossing of U. S. Highway 99 near Fort Lewis. | 0 |
| Apr. 11 |do..... |do..... |do..... | 22.1 |
| May 19 |do..... |do..... |do..... | 12.0 |
| Sept. 1 |do..... |do..... |do..... | .39 |
| Oct. 2 |do..... |do..... | NE $\frac{1}{4}$ sec. 11, T. 19 N., R. 2 E., at lower end of Dwight Orr property, near Fort Lewis. | 0 |
| Apr. 11 |do..... |do..... |do..... | 22.1 |
| May 19 |do..... |do..... |do..... | 9.85 |
| Sept. 1 |do..... |do..... |do..... | .20 |
| Oct. 2 |do..... |do..... | NE $\frac{1}{4}$ sec. 11, T. 19 N., R. 2 E., at crossing of Gravelly Lake road near Fort Lewis. | 0 |
| Apr. 11 |do..... |do..... |do..... | 20.5 |
| May 19 |do..... |do..... |do..... | 9.97 |
| Sept. 1 |do..... |do..... |do..... | 0 |
| Oct. 2 | Morey Creek.... | Clover Creek.... | NE $\frac{1}{4}$ sec. 18 T. 19 N., R. 3 E., at mouth, in McChord Field, near Fort Lewis. | .78 |
| Apr. 11 |do..... |do..... |do..... | 5.53 |
| May 19 |do..... |do..... |do..... | 3.13 |
| Sept. 1 |do..... |do..... |do..... | .77 |

Puyallup River Basin, Wash.

| | | | | |
|---------|----------------------|------------------|---|-------|
| Mar. 6 | Puyallup River.. | Commencement Bay | SW $\frac{1}{4}$ sec. 33, T. 18 N., R. 5 E., $\frac{3}{4}$ mile east of State Highway 5E at Electron. | 290 |
| 11 |do..... |do..... |do..... | 552 |
| 26 |do..... |do..... |do..... | 346 |
| Apr. 13 |do..... |do..... |do..... | 467 |
| 24 |do..... |do..... |do..... | 491 |
| May 11 |do..... |do..... |do..... | 528 |
| 25 |do..... |do..... |do..... | 1,010 |
| June 17 |do..... |do..... |do..... | 1,480 |
| July 6 |do..... |do..... |do..... | 782 |
| 22 |do..... |do..... |do..... | 885 |
| Aug. 24 |do..... |do..... |do..... | 563 |
| Oct. 10 | South Prairie Creek. | Carbon River.... | SW $\frac{1}{4}$ sec. 7, T. 19 N., R. 6 E., just below highway crossing at South Prairie. | 348 |
| May 23 |do..... |do..... |do..... | 282 |
| Aug. 26 |do..... |do..... |do..... | 70.1 |

Wapato Creek Basin, Wash.

| | | | | |
|---------|------------------|------------------|--|------|
| Oct. 13 | Wapato Creek.... | Commencement Bay | East line of sec. 17, T. 20 N., R. 4 E., near Milton. | 0.73 |
| May 18 |do..... |do..... |do..... | .16 |
| Aug. 31 |do..... |do..... |do..... | .20 |
| Oct. 13 |do..... |do..... | NE $\frac{1}{4}$ sec. 18, T. 20 N., R. 4 E., at road crossing near Fife. | 2.42 |
| May 18 |do..... |do..... |do..... | 1.99 |
| Aug. 31 |do..... |do..... |do..... | .76 |

Rylebos Creek Basin, Wash.

| | | | | |
|---------|------------------|------------------|--|------|
| Oct. 10 | Rylebos Creek... | Commencement Bay | SW $\frac{1}{4}$ sec. 5, T. 20 N., R. 4 E., at crossing of U. S. Highway 99 near Milton. | 15.7 |
| May 18 |do..... |do..... |do..... | 9.25 |
| Aug. 31 |do..... |do..... |do..... | 9.05 |

Duwamish River Basin, Wash.

| | | | | |
|---------|----------------------------|-----------------|--|------|
| Sept. 3 | North Fork of Green River. | Green River.... | SW $\frac{1}{4}$ sec. 11, T. 21 N., R. 8 E., 70 feet below confluence with unnamed tributary near Eagle Gorge. | 12.9 |
| 11 |do..... |do..... |do..... | 13.2 |
| 11 |do..... |do..... | NE $\frac{1}{4}$ sec. 15, T. 21 N., R. 8 E., 3 miles north of Eagle Gorge. | 10.4 |
| 12 |do..... |do..... |do..... | 7.46 |
| 11 |do..... |do..... | NE $\frac{1}{4}$ sec. 22, T. 21 N., R. 8 E., 2 miles north of Eagle Gorge. | 5.96 |
| 11 |do..... |do..... | SE $\frac{1}{4}$ sec. 22, T. 21 N., R. 8 E., 1 mile above mouth, near Eagle Gorge. | 37.8 |
| 3 |do..... |do..... | NE $\frac{1}{4}$ sec. 27, T. 21 N., R. 8 E., 0.6 mile above mouth, near Eagle Gorge. | 46.2 |
| 11 |do..... |do..... |do..... | 40.9 |
| 12 |do..... |do..... |do..... | 27.2 |

Lake Washington Basin, Wash.

| | | | | |
|---------|------------------|-----------------|--|------|
| Sept. 3 | Taylor Creek.... | Cedar River.... | NE $\frac{1}{4}$ sec. 32, T. 22 N., R. 8 E., 100 feet below unnamed tributary, 900 feet above bridge near Sellaek. | 4.60 |
| 11 |do..... |do..... |do..... | 3.80 |

MISCELLANEOUS DISCHARGE MEASUREMENTS

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Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Lake Washington Basin, Wash.--Continued

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|----------|-----------------------------|--------------------------------|--|----------------------|
| Aug. 1 | Taylor Creek... | Cedar River.... | SW $\frac{1}{2}$ sec. 29, T. 22 N., R. 8 E., 600 feet above trestle near Selleck. | 25.0 |
| Sept. 3 |do..... |do..... | SW $\frac{1}{2}$ sec. 29, T. 22 N., R. 8 E., 100 feet above trestle near Selleck. | 17.3 |
| 11 |do..... |do..... |do..... | 16.1 |
| Aug. 1 |do..... |do..... | NE $\frac{1}{2}$ sec. 30, T. 22 N., R. 8 E., 100 feet below trestle near Selleck. | 35.5 |
| Sept. 3 |do..... |do..... |do..... | 24.7 |
| 11 |do..... |do..... |do..... | 25.2 |
| 3 |do..... |do..... | NW $\frac{1}{2}$ sec. 19, T. 22 N., R. 8 E., just above bridge, half a mile above mouth near Selleck. | 29.4 |
| 11 |do..... |do..... |do..... | 27.9 |
| 3 | Unnamed tributary. | Taylor Creek... | NE $\frac{1}{2}$ sec. 32, T. 22 N., R. 8 E., 20 feet above mouth near Selleck. | .22 |
| 11 |do..... |do..... |do..... | .18 |
| 11 | North Fork of Taylor Creek. |do..... | NE $\frac{1}{2}$ sec. 29, T. 22 N., R. 8 E., half a mile above mouth near Selleck. | .72 |
| 3 |do..... |do..... | SE $\frac{1}{2}$ sec. 29, T. 22 N., R. 8 E., just above bridge at mouth near Selleck. | .48 |
| 11 |do..... |do..... |do..... | .10 |
| 3 | Seventeen Creek. |do..... | NW $\frac{1}{2}$ sec. 19, T. 22 N., R. 8 E., at road crossing near Selleck. | 1.90 |
| 11 |do..... |do..... |do..... | 1.47 |
| Oct. 21 | Rock Creek. | Cedar River.... | Landsberg-Issaquah road culvert near Landsberg. | 25.0 |
| Nov. 9 |do..... |do..... |do..... | 14.0 |
| Dec. 20 |do..... |do..... |do..... | 126 |
| Feb. 7 |do..... |do..... |do..... | 44.1 |
| Mar. 20 |do..... |do..... |do..... | 25.7 |
| May 11 |do..... |do..... |do..... | 17.2 |
| 12 |do..... |do..... |do..... | 16.4 |
| June 18 |do..... |do..... |do..... | 54.8 |
| Aug. 5 |do..... |do..... |do..... | 6.46 |
| Sept. 28 |do..... |do..... |do..... | 2.76 |
| June 20 | May Creek. | Lake Washington. | SW $\frac{1}{2}$ sec. 29, T. 24 N., R. 5 E., at crossing of State Highway 2A at Colman. | 10.1 |
| Aug. 3 |do..... |do..... |do..... | 2.97 |
| June 20 | Juanita Creek. |do..... | NW $\frac{1}{2}$ sec. 29, T. 26 N., R. 5 E., at crossing of State Highway 2A, $\frac{1}{2}$ mile north of Juanita. | 4.42 |
| Aug. 3 |do..... |do..... |do..... | 1.63 |
| Oct. 13 | Bear Creek. | Sammamish River. | E $\frac{1}{2}$ sec. 11, T. 25 N., R. 5 E., at mouth near Redmond. | 40.5 |
| Nov. 5 |do..... |do..... |do..... | 36.1 |
| Dec. 15 |do..... |do..... |do..... | 30.4 |
| Feb. 2 |do..... |do..... |do..... | 112 |
| Mar. 13 |do..... |do..... |do..... | 82.6 |
| May 4 |do..... |do..... |do..... | 50.4 |
| June 19 |do..... |do..... |do..... | 70.8 |
| Aug. 3 |do..... |do..... |do..... | 20.2 |
| June 20 | Cottage Lake Creek. | Bear Creek..... | S $\frac{1}{2}$ sec. 30, T. 26 N., R. 6 E., at mouth near Redmond. | 12.0 |
| Aug. 4 |do..... |do..... |do..... | 6.05 |
| June 20 | Evans Creek. |do..... | SE $\frac{1}{2}$ sec. 6, T. 25 N., R. 6 E., $\frac{1}{2}$ mile above mouth near Redmond. | 20.7 |
| Aug. 4 |do..... |do..... |do..... | 6.54 |
| June 20 | Martin Creek. | Evans Creek.... | NW $\frac{1}{2}$ sec. 8, T. 25 N., R. 6 E., at road crossing near Redmond. | .89 |
| Aug. 4 |do..... |do..... |do..... | .49 |
| June 23 | Bear Creek. | Sammamish River. | NE $\frac{1}{2}$ sec. 9, T. 26 N., R. 5 E., at mouth near Woodinville. | 9.22 |
| Aug. 19 |do..... |do..... |do..... | 4.89 |
| June 23 | North Creek. |do..... | NE $\frac{1}{2}$ sec. 5, T. 26 N., R. 5 E., at road crossing near Bothell. | 15.9 |
| Aug. 19 |do..... |do..... |do..... | 6.06 |
| June 23 | Swamp Creek. |do..... | NE $\frac{1}{2}$ sec. 12, T. 26 N., R. 4 E., at crossing of State Highway 2 near Bothell. | 11.5 |
| Aug. 19 |do..... |do..... |do..... | 2.48 |
| June 23 | Lyon Creek. | Lake Washington. | SE $\frac{1}{2}$ sec. 10, T. 26 N., R. 4 E., at crossing of State Highway 2 at Forest Lake Park. | 1.92 |
| Aug. 19 |do..... |do..... |do..... | .84 |
| June 23 | McAlier Creek. |do..... | S $\frac{1}{2}$ sec. 10, T. 26 N., R. 4 E., at crossing of State Highway 2 at Forest Lake Park. | 4.76 |
| Aug. 19 |do..... |do..... |do..... | 2.54 |
| June 24 | Thornton Creek. |do..... | SE $\frac{1}{2}$ sec. 34, T. 26 N., R. 4 E., at mouth at Seattle. | 11.9 |
| Aug. 20 |do..... |do..... |do..... | 3.90 |
| June 24 | Little Brook. | Thornton Creek. | SW $\frac{1}{2}$ sec. 27, T. 26 N., R. 4 E., at mouth at Seattle. | .45 |
| Aug. 20 |do..... |do..... |do..... | .08 |
| June 24 | Mapleleaf Creek. |do..... | NW $\frac{1}{2}$ sec. 33, T. 26 N., R. 4 E., at entrance to Meadow Brook Golf Course at Seattle. | 3.19 |
| Aug. 20 |do..... |do..... |do..... | 2.02 |
| June 24 | Unnamed tributary. |do..... | SE $\frac{1}{2}$ sec. 34, T. 26 N., R. 4 E., at mouth at Seattle. | .48 |
| Aug. 20 |do..... |do..... |do..... | .47 |

MISCELLANEOUS DISCHARGE MEASUREMENTS

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Nooksack River Basin, Wash.

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|---------|----------------------------------|--------------------------------|--|----------------------|
| Oct. 22 | Fishtrap Creek.. | Nooksack River.. | NW $\frac{1}{4}$ sec. 30, T. 40 N., R. 3 E., at crossing of State Highway 1B near Lynden. | 48.2 |
| July 3 |do..... |do..... |do..... | 17.6 |
| Aug. 17 |do..... |do..... |do..... | 9.17 |
| Oct. 22 | Double Ditch Creek. | Fishtrap Creek.. | At confluence of forks near Lynden..... | 8.91 |
| July 3 |do..... |do..... |do..... | 5.21 |
| Aug. 17 |do..... |do..... |do..... | 3.57 |
| Oct. 22 | West Fork of Double Ditch Creek. | Double Ditch Creek.. | W $\frac{1}{4}$ sec. 31, T. 41 N., R. 3 E., at international boundary near Lynden. | 6.90 |
| July 3 |do..... |do..... |do..... | 5.83 |
| Aug. 17 |do..... |do..... |do..... | 5.04 |
| Oct. 22 | East Fork of Double Ditch Creek. |do..... | E $\frac{1}{4}$ sec. 31, T. 41 N., R. 3 E., at international boundary near Lynden. | 3.50 |
| July 3 |do..... |do..... |do..... | 1.49 |
| Aug. 17 |do..... |do..... |do..... | 1.62 |
| Oct. 22 | Bertrand Creek.. | Nooksack River.. | South line of sec. 22, T. 40 N., R. 2 E., near Lynden. | 66.0 |
| July 3 |do..... |do..... |do..... | 18.1 |
| Aug. 17 |do..... |do..... |do..... | 9.76 |
| July 3 | Wiser Creek..... |do..... | SW $\frac{1}{4}$ sec. 3, T. 39 N., R. 2 E., just below bridge near Ferndale. | 3.50 |
| Aug. 17 |do..... |do..... |do..... | 2.09 |
| July 3 | Tennille Creek.. |do..... | SE $\frac{1}{4}$ sec. 13, T. 39 N., R. 2 E., at crossing of State Highway 1B, near Bellingham. | 3.43 |
| Aug. 17 |do..... |do..... |do..... | 1.36 |
| July 3 | Fourmile Creek.. | Tennille Creek.. |do..... | 2.54 |
| Aug. 17 |do..... |do..... |do..... | 2.99 |

California Creek Basin, Wash.

| | | | | |
|--------|------------------|------------------|---|------|
| July 3 | California Creek | Drayton Harbor.. | NW $\frac{1}{4}$ sec. 35, T. 40 N., R. 1 E., $\frac{1}{4}$ mile west of Custer. | 1.14 |
|--------|------------------|------------------|---|------|

Kootenai River Basin, British Columbia

| | | | | |
|---------|------------------|------------------|--|--------|
| Oct. 23 | Kootenai River.. | Columbia River.. | Grohman Narrows, 2 miles below Nelson; referred to gage No. 10 at Nelson; (station 8 N. J. 9 of Dominion Water and Power Bureau, Department of Mines and Resources, Canada). | 20,590 |
| Dec. 16 |do..... |do..... |do..... | 18,410 |
| Feb. 6 |do..... |do..... |do..... | 14,260 |
| Apr. 27 |do..... |do..... |do..... | 28,360 |
| May 21 |do..... |do..... |do..... | 49,190 |
| 29 |do..... |do..... |do..... | 85,080 |
| June 20 |do..... |do..... |do..... | 81,700 |
| Aug. 14 |do..... |do..... |do..... | 26,130 |
| Oct. 22 |do..... |do..... | Glade (station 8 N. J. 1 of Dominion Water and Power Bureau, Department of Mines and Resources, Canada). | 23,820 |
| Dec. 16 |do..... |do..... |do..... | 22,150 |
| Feb. 6 |do..... |do..... |do..... | 16,150 |
| Apr. 27 |do..... |do..... |do..... | 30,830 |
| May 21 |do..... |do..... |do..... | 55,830 |
| 29 |do..... |do..... |do..... | 99,470 |
| June 20 |do..... |do..... |do..... | 92,360 |
| Aug. 14 |do..... |do..... |do..... | 24,550 |
| Oct. 23 | Slocan River.. | Kootenai River.. | Near Crescent Valley (station 8 N. J. 13 of Dominion Water and Power Bureau, Department of Mines and Resources, Canada). | 3,260 |
| Dec. 17 |do..... |do..... |do..... | 1,770 |
| Feb. 7 |do..... |do..... |do..... | 922 |
| Apr. 28 |do..... |do..... |do..... | 2,560 |
| May 21 |do..... |do..... |do..... | 5,330 |
| 30 |do..... |do..... |do..... | 9,330 |
| June 22 |do..... |do..... |do..... | 7,500 |
| Aug. 15 |do..... |do..... |do..... | 2,200 |

Pend Oreille River Basin, Mont.

| | | | | |
|----------|--------------------------------|--------------------------------|--|------|
| May 16 | West Fork of Bitterroot River. | Clark Fork..... | SW $\frac{1}{4}$ sec. 10, T. 2 S., R. 22 W., above reservoir. | 337 |
| Aug. 20 |do..... |do..... |do..... | 54.1 |
| 19 |do..... |do..... | NW $\frac{1}{4}$ sec. 18, T. 2 N., R. 20 W., at Conner..... | 151 |
| 19 | Bitterroot River |do..... | SW $\frac{1}{4}$ sec. 11, T. 4 N., R. 21 W., at Charles siding. | 174 |
| 22 |do..... |do..... | NW $\frac{1}{4}$ sec. 25, T. 6 N., R. 21 W., at Hamilton.... | 106 |
| May 16 | Overwhick Creek. | West Fork of Bitterroot River. | SW $\frac{1}{4}$ sec. 10, T. 2 S., R. 22 W., above sawmill diversion. | 121 |
| Aug. 20 |do..... |do..... |do..... | 11.7 |
| May 17 | Blue Joint Creek |do..... | NW $\frac{1}{4}$ sec. 3, T. 2 S., R. 22 W., below Little Blue Joint Creek. | 170 |
| Aug. 20 |do..... |do..... |do..... | 17.5 |
| Sept. 12 |do..... |do..... |do..... | 22.9 |

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Pend Oreille River Basin, Mont.--Continued

| Date | Stream | Tributary to or diverting from-- | Locality | Discharge (sec.-ft.) |
|----------|-----------------------|----------------------------------|--|----------------------|
| May 16 | Slate Creek.... | West Fork of Bitterroot River. | NW $\frac{1}{4}$ sec. 2, T. 2 S., R. 22 W., at county road.. | 50.7 |
| Aug. 20 |do..... |do..... |do..... | 6.8 |
| Sept. 11 |do..... |do..... |do..... | 6.6 |
| May 16 | Little Boulder Creek. |do..... | SE $\frac{1}{4}$ sec. 26, T. 1 S., R. 22 W., near reservoir. | 16.1 |
| Aug. 20 |do..... |do..... |do..... | 1.9 |
| Mar. 19 | Bull River..... | Clark Fork..... | Sec. 26, T. 27 N., R. 33 W., Montana principal meridian, 600 feet upstream from bridge, 2.9 miles above mouth, and 5 miles northwest of Noxon. | 173 |
| May 7 |do..... |do..... |do..... | 482 |
| June 10 |do..... |do..... |do..... | 806 |
| July 13 |do..... |do..... |do..... | 324 |

Okanogan River Basin, Wash.

| | | | | |
|----------|------------------|--------------------|--|-------|
| Dec. 2 | Palmer Creek.... | Similkameen River. | NE $\frac{1}{4}$ sec. 35, T. 40 N., R. 25 E., at bridge $1\frac{1}{2}$ miles above mouth near Nighthawk. | a76.5 |
| Mar. 19 |do..... |do..... |do..... | a57.0 |
| May 1 |do..... |do..... |do..... | a511 |
| July 20 |do..... |do..... |do..... | a228 |
| Sept. 22 |do..... |do..... |do..... | a32.8 |

a Flow toward Similkameen River.

Methow River Basin, Wash.

| | | | | |
|----------|-----------------------------|----------------------|--|------|
| Aug. 21 | Methow River.... | Columbia River.. | Sec. 25, T. 36 N., R. 19 E., 300 feet below highway bridge and $\frac{1}{4}$ mile west of Mazama. | 76.8 |
| Sept. 25 |do..... |do..... |do..... | 15.4 |
| 25 |do..... |do..... | Sec. 31, T. 36 N., R. 20 E., $1\frac{1}{2}$ miles southeast of Mazama. | 0 |
| Aug. 29 | Big Short ditch. | Methow River.... | Sec. 9, T. 36 N., R. 19 E., 2 miles below heading and 5 miles northwest of Mazama. | .47 |
| 29 | Early Winters ditch. | Early Winters Creek. | Sec. 26, T. 36 N., R. 19 E., at head, 2 miles west of Mazama. | 22.9 |
| 29 | Kagel ditch.... | Methow River.... | Sec. 23, T. 36 N., R. 19 E., at head, $1\frac{1}{2}$ miles northwest of Mazama. | 2.37 |
| 21 | Mazama ditch.... |do..... | Sec. 15, T. 36 N., R. 19 E., at fish screen, 3 miles northwest of Mazama. | 16.0 |
| Sept. 25 |do..... |do..... |do..... | 0 |
| Aug. 21 | Stewart-Graham ditch. |do..... | Sec. 25, T. 35 N., R. 19 E., at fish screen, $\frac{1}{4}$ mile west of Mazama. | 8.48 |
| 29 | Pitt-Dixon ditch |do..... | Sec. 5, T. 35 N., R. 20 E., at fish screen, $2\frac{1}{2}$ miles southeast of Mazama. | 1.77 |
| 28 | Little Holloway-Kumm ditch. |do..... | Sec. 4, T. 35 N., R. 20 E., at head, 3 miles southeast of Mazama. | .68 |
| 28 | McKinney Mountain ditch. |do..... | Sec. 9, T. 35 N., R. 20 E., at head, $3\frac{1}{2}$ miles southeast of Mazama. | 8.86 |
| 28 | Rockview ditch.. |do..... | Sec. 15, T. 35 N., R. 20 E., 200 feet below Fenders mill pond and 5 miles southeast of Mazama. | 28.6 |
| Sept. 29 |do..... |do..... |do..... | 25.3 |
| Aug. 28 | Little Wetzel ditch. |do..... | Sec. 25, T. 35 N., R. 20 E., $\frac{1}{2}$ mile below head and $5\frac{1}{2}$ miles northwest of Winthrop. | 25.7 |
| Sept. 29 |do..... |do..... |do..... | 19.3 |
| Aug. 21 | Dodd-Clark ditch |do..... | Sec. 32, T. 35 N., R. 21 E., at fish screen, 3 miles northwest of Winthrop. | 12.8 |
| 28 | Banker-Wetzel ditch. |do..... | Sec. 33, T. 35 N., R. 21 E., at head, $2\frac{1}{2}$ miles northwest of Winthrop. | 3.51 |
| 28 | Fog Horn ditch.. |do..... | Sec. 3, T. 34 N., R. 21 E., at head, 1 mile west of Winthrop. | 27.8 |
| 20 | Chewack Creek.. |do..... | Sec. 2, T. 35 N., R. 21 E., 300 feet above highway bridge, $6\frac{1}{2}$ miles north of Winthrop. | 59.6 |
| Sept. 25 |do..... |do..... |do..... | 22.6 |
| Aug. 20 | Creveling ditch. | Eightmile Creek. | Sec. 23, T. 36 N., R. 21 E., at fish screen, $6\frac{1}{2}$ miles north of Winthrop. | 1.48 |
| 20 | Eightmile ditch. |do..... | Sec. 23, T. 36 N., R. 21 E., at fish screen, $7\frac{1}{2}$ miles north of Winthrop. | 5.91 |
| 20 | Skyline ditch... | Chewack Creek... | Sec. 35, T. 36 N., R. 21 E., at fish screen, 7 miles north of Winthrop. | 26.6 |
| Sept. 25 |do..... |do..... |do..... | 11.9 |
| Aug. 20 | Jones ditch..... |do..... | Sec. 35, T. 36 N., R. 21 E., at fish screen, 7 miles north of Winthrop. | 11.3 |
| Sept. 25 |do..... |do..... |do..... | 7.40 |
| Aug. 20 | Chewack Canal... |do..... | Sec. 2, T. 35 N., R. 21 E., at fish screen, 6 miles north of Winthrop. | 57.1 |
| Sept. 25 |do..... |do..... |do..... | 24.2 |
| Aug. 20 | Fulton ditch.... |do..... | Sec. 2, T. 34 N., R. 21 E., at fish screen, $\frac{1}{2}$ mile northwest of Winthrop. | 19.3 |
| Sept. 26 |do..... |do..... |do..... | 23.6 |
| Aug. 21 | Barclay ditch.... | Methow River.... | Sec. 24, T. 34 N., R. 21 E., at fish screen, 3 miles southeast of Winthrop. | 50.5 |
| Sept. 28 |do..... |do..... |do..... | 44.6 |
| 29 |do..... |do..... |do..... | 50.2 |
| Aug. 27 | Plummer ditch... |do..... | Sec. 25, T. 33 N., R. 21 E., at fish screen, 4 miles southeast of Winthrop. | 11.2 |
| Sept. 29 |do..... |do..... |do..... | 11.5 |

MISCELLANEOUS DISCHARGE MEASUREMENTS

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Methow River Basin, Wash.--Continued

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|----------------------|---|--------------------------------|--|----------------------|
| Aug. 21 | Methow Valley irrigation district canal | Methow River.... | Sec. 30, T. 34 N., R. 22 E., at fish screen, $3\frac{1}{2}$ miles northwest of Twisp. | 83.0 |
| Sept. 26 |do..... |do..... |do..... | 73.9 |
| Oct. 21 |do..... |do..... | Just above point opposite gaging station on Methow River at Twisp. | 5.93 |
| May 6 |do..... |do..... |do..... | 18.2 |
| June 8 |do..... |do..... |do..... | 58.2 |
| July 25 |do..... |do..... |do..... | 76.9 |
| Aug. 27 | Bolin ditch.... | Canyon Creek.... | Sec. 16, T. 33 N., R. 20 E., at head, $1\frac{1}{2}$ miles west of Twisp. | .83 |
| 26 | Stockdale ditch. | Twisp River.... | Sec. 15, T. 33 N., R. 20 E., below head gate on Bolin Ranch, 10 miles west of Twisp. | 1.68 |
| 26 | Ray Libby ditch. |do..... | Sec. 11, T. 33 N., R. 20 E., at headgate, 9 miles west of Twisp. | 2.79 |
| 26 | Brumbaugh ditch. |do..... | Sec. 12, T. 33 N., R. 20 E., at head, $7\frac{1}{2}$ miles west of Twisp. | 3.63 |
| 27 | Chester Libby ditch. |do..... | Sec. 7, T. 33 N., R. 21 E., at head, 7 miles west of Twisp. | 2.59 |
| 26 | Coon Sawmill ditch. |do..... | Sec. 7, T. 33 N., R. 21 E., at head, at highway bridge, 6 miles west of Twisp. | 5.08 |
| 26 | Burke-Lehman ditch. |do..... | Sec. 8, T. 33 N., R. 21 E., on Roy Cave Ranch at head, $5\frac{1}{2}$ miles west of Twisp. | 19.1 |
| 27 | Tom Salmon ditch |do..... | Sec. 9, T. 33 N., R. 21 E., in flume at head, 5 miles west of Twisp. | a.32 |
| 26 | Brown-Gillilian ditch. |do..... | Sec. 10, T. 33 N., R. 21 E., at Poorman Creek bridge crossing, $3\frac{1}{2}$ miles west of Twisp. | 2.28 |
| 26 | Methow Valley irrigation district canal |do..... | Sec. 11, T. 33 N., R. 21 E., at head, 3 miles west of Twisp. | 36.6 |
| Oct. 21 |do..... |do..... | Sec. 18, T. 33 N., R. 22 E., at road crossing $\frac{1}{2}$ mile west of Twisp. | 11.4 |
| May 6 |do..... |do..... |do..... | 0 |
| June 8 |do..... |do..... |do..... | 35.5 |
| July 25 |do..... |do..... |do..... | 47.6 |
| Sept. 28 |do..... |do..... |do..... | 17.4 |
| Aug. 26 | Broyles ditch.... |do..... | Sec. 11, T. 33 N., R. 21 E., at head, $2\frac{1}{2}$ miles west of Twisp. | .67 |
| 26 | Northside ditch. |do..... | Sec. 12, T. 33 N., R. 21 E., at head, $1\frac{1}{2}$ miles west of Twisp. | 8.64 |
| 25 | Risley ditch.... |do..... | Sec. 18, T. 33 N., R. 22 E., at fish screen, at Twisp. | 13.5 |
| Sept. 28 |do..... |do..... |do..... | 7.37 |
| Oct. 21 |do..... |do..... | NE $\frac{1}{4}$ sec. 18, T. 33 N., R. 22 E., above all diversions in Twisp. | 8.86 |
| May 6 |do..... |do..... |do..... | 0 |
| June 8 |do..... |do..... |do..... | 0 |
| July 25 |do..... |do..... |do..... | 13.7 |
| Aug. 27 | Holmdahl ditch.. | Methow River.... | Sec. 21, T. 33 N., R. 22 E., at fish screen, 2 miles southeast of Twisp. | 3.53 |
| Sept. 24 |do..... |do..... |do..... | 2.71 |
| Aug. 25 | Garrison ditch.. |do..... | Sec. 27, T. 33 N., R. 22 E., at fish screen, 4 miles southeast of Twisp. | .91 |
| Oct. 20 | Beaver Creek.... |do..... | NE $\frac{1}{4}$ sec. 26, T. 34 N., R. 22 E., at bridge on property of W. E. Burns near Twisp. | 12.9 |
| Aug. 29 | Jackson ditch.... |do..... | Sec. 21, T. 32 N., R. 22 E., at fish screen, 7 miles southeast of Twisp. | 5.47 |
| 25 | Averill ditch.... |do..... | Sec. 27, T. 31 N., R. 22 E., at fish screen, 4 miles northwest of Methow. | 6.89 |
| Sept. 24 |do..... |do..... |do..... | 4.97 |
| Aug. 25 | Bolinger ditch.. |do..... | Sec. 35, T. 31 N., R. 22 E., at fish screen, 2 miles northwest of Methow. | 14.5 |
| Sept. 24 |do..... |do..... |do..... | 10.7 |
| Aug. 25 | Larabee ditch.... |do..... | Sec. 30, T. 30 N., R. 23 E., at fish screen, $3\frac{1}{2}$ miles south of Methow. | 14.8 |
| Sept. 24 |do..... |do..... |do..... | 9.50 |
| Aug. 25 | Pateros ditch.... |do..... | Sec. 34, T. 30 N., R. 23 E., at fish screen, 2 miles west of Pateros. | 21.8 |
| Sept. 24 |do..... |do..... |do..... | 21.3 |
| Aug. 25 | China ditch.... |do..... | Sec. 34, T. 30 N., R. 23 E., at fish screen, 2 miles west of Pateros. | 25.3 |
| Sept. 24 |do..... |do..... |do..... | 24.1 |
| a Float measurement. | | | | |

Entiat River Basin, Wash.

| | | | | |
|----------|-----------------------|------------------|---|------|
| Aug. 19 | Entiat River.... | Columbia River.. | Sec. 18, T. 26 N., R. 21 E., 400 feet below Puget Sound Power & Light Co. power plant, 2 miles southwest of Entiat. | 82.3 |
| Sept. 30 |do..... |do..... |do..... | 49.9 |
| Aug. 19 | Roundy ditch.... | Entiat River.... | Sec. 27, T. 27 N., R. 19 E., at fish screen, $13\frac{1}{2}$ miles northwest of Entiat. | 16.0 |
| Sept. 30 |do..... |do..... |do..... | 9.93 |
| Aug. 19 | Macky ditch.... |do..... | Sec. 1, T. 26 N., R. 19 E., at fish screen, $10\frac{1}{2}$ miles northwest of Entiat. | 4.84 |
| 19 | Boner-Rothrock ditch. |do..... | Sec. 7, T. 26 N., R. 20 E., at fish screen, $9\frac{1}{2}$ miles northwest of Entiat. | 3.29 |
| 19 | Vaughn ditch.... |do..... | Sec. 18, T. 26 N., R. 20 E., at fish screen, $8\frac{1}{2}$ miles northwest of Entiat. | 2.91 |

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Entiat River Basin, Wash.--Continued

| Date | Stream | Tributary to or diverting from | Locality | Discharge (sec.-ft.) |
|----------|--------------------------------------|--------------------------------|---|----------------------|
| Aug. 19 | Stanley ditch... | Entiat River... | Sec. 29, T. 26 N., R. 20 E., at fish screen, 7 $\frac{1}{2}$ miles northwest of Entiat. | 5.10 |
| 19 | Gaines-Miller ditch. |do..... | Sec. 29, T. 26 N., R. 20 E., at fish screen, 7 miles northwest of Entiat. | 3.08 |
| 19 | Cannon ditch.... |do..... | Sec. 28, T. 26 N., R. 20 E., at fish screen, 6 $\frac{1}{2}$ miles northwest of Entiat. | 2.63 |
| 19 | Cannon-Gaines-Miller ditch. |do..... | Sec. 33, T. 26 N., R. 20 E., at fish screen, 6 miles northwest of Entiat. | 3.94 |
| 19 | Sines ditch.... |do..... | Sec. 33, T. 26 N., R. 20 E., at fish screen, 6 miles northwest of Entiat. | 3.92 |
| 19 | Martin-Sanders ditch. |do..... | Sec. 33, T. 26 N., R. 20 E., at fish screen, 6 miles northwest of Entiat. | 3.47 |
| 19 | Gaines-Ferris ditch. |do..... | Sec. 33, T. 26 N., R. 20 E., at fish screen, 5 $\frac{1}{2}$ miles northwest of Entiat. | .87 |
| 19 | Martin ditch.... |do..... | Sec. 3, T. 25 N., R. 20 E., at fish screen, 5 miles northwest of Entiat. | 3.60 |
| 19 | Knapwham ditch.. |do..... | Sec. 3, T. 25 N., R. 20 E., at fish screen, 5 miles northwest of Entiat. | 14.2 |
| Sept. 30 |do..... |do..... |do..... | 6.15 |
| Aug. 19 | Jones-Farris' ditch. |do..... | Sec. 10, T. 25 N., R. 20 E., at fish screen, 4 $\frac{1}{2}$ miles west of Entiat. | 72.5 |
| 19 | Detwiler ditch.... |do..... |do..... | 12.6 |
| Sept. 30 |do..... |do..... |do..... | 12.3 |
| Aug. 19 | Entiat irrigation district ditch. |do..... | Sec. 14, T. 25 N., R. 20 E., at fish screen, 5 $\frac{1}{2}$ miles west of Entiat. | 29.4 |
| Sept. 30 |do..... |do..... |do..... | 21.4 |
| Aug. 19 | Puget Sound Power & Light Co. ditch. |do..... | Sec. 14, T. 25 N., R. 20 E., at head, 3 miles west of Entiat. | 52.1 |
| Sept. 30 |do..... |do..... |do..... | 32.0 |

† Estimated.

Wenatchee River Basin, Wash.

| | | | | |
|----------|----------------------------|------------------|--|------|
| Aug. 24 | Wenatchee River. | Columbia River.. | Sec. 9, T. 24 N., R. 17 E., 1.6 miles below Tumwater power plant diversion dam, 2 $\frac{1}{2}$ miles west of Leavenworth. | 221 |
| Sept. 26 |do..... |do..... |do..... | 117 |
| Aug. 18 |do..... |do..... | Sec. 27, T. 24 N., R. 18 E., 700 feet below highway bridge, $\frac{1}{2}$ mile west of Dryden. | 40.4 |
| Sept. 27 |do..... |do..... |do..... | 17.4 |
| Aug. 18 | Chiwawa ditch.... | Chiwawa River.. | Sec. 30, T. 27 N., R. 18 E., at fish screen, 4 miles north of Plain. | 28.5 |
| 18 | Icicle ditch.... | Icicle Creek.... | Sec. 28, T. 24 N., R. 17 E., at fish screen, 4 $\frac{1}{2}$ miles southwest of Leavenworth. | 92.7 |
| 18 | Dryden ditch.... | Wenatchee River. | Sec. 27, T. 24 N., R. 18 E., at highway bridge, 900 feet above power plant at Dryden. | 644 |
| 24 | Jones-Shotwell ditch. |do..... | Sec. 32, T. 24 N., R. 19 E., at fish screen, $\frac{1}{2}$ mile northwest of Cashmere. | 12.7 |
| 24 | Pioneer Water Users ditch. |do..... | Sec. 14, T. 23 N., R. 19 E., at fish screen, $\frac{1}{2}$ mile north of Monitor. | 30.0 |

Yakima River Basin, Wash.

(Includes measurements made in 1935, 1936, 1937, 1940, and 1941)

| | | | | |
|----------|---------------------|------------------|---|------|
| 1941 | Yakima River.... | Columbia River.. | E $\frac{1}{2}$ sec. 11, T. 20 N., R. 13 E., at Bureau of Reclamation gaging station at crossing of U. S. Highway 10 in Easton. | 351 |
| May 16 |do..... |do..... |do..... | 37.8 |
| Sept. 10 |do..... |do..... |do..... | 53.3 |
| 1942 |do..... |do..... |do..... | 6.49 |
| June 28 | Wenas Creek.... | Yakima River.... | E $\frac{1}{2}$ sec. 3, T. 15 N., R. 17 E., $\frac{1}{2}$ mile above reservoir near Wenas. | 171 |
| Jan. 21 |do..... |do..... |do..... | 26.4 |
| Apr. 6 |do..... |do..... |do..... | 9.34 |
| May 11 |do..... |do..... |do..... | 5.66 |
| June 28 |do..... |do..... |do..... | 177 |
| Jan. 21 |do..... |do..... |do..... | 26.9 |
| Apr. 6 |do..... |do..... |do..... | 11.2 |
| May 11 |do..... |do..... |do..... | 11.3 |
| June 28 |do..... |do..... |do..... | 111 |
| 1937 |do..... |do..... |do..... | 3.57 |
| Sept. 21 | Kittitas Canal.. |do..... | Sec. 11, T. 20 N., R. 13 E., at headworks near Easton. | 3.47 |
| 1941 |do..... |do..... |do..... | 540 |
| May 13 |do..... |do..... |do..... | 818 |
| Sept. 10 |do..... |do..... |do..... | 287 |
| 1942 |do..... |do..... |do..... | 663 |
| June 25 |do..... |do..... |do..... | 124 |
| 1941 | Selah Valley Canal. | Naches River.... | NW $\frac{1}{4}$ sec. 36, T. 15 N., R. 16 E., above diversions near Naches. | 126 |
| May 16 |do..... |do..... |do..... | 126 |

MISCELLANEOUS DISCHARGE MEASUREMENTS

Miscellaneous discharge measurements in Pacific slope basins in Washington and upper Columbia River Basin during water year October 1941 to September 1942--Continued

Yakima River Basin, Wash.--Continued
(Includes measurements made in 1935, 1936, 1937, 1940, and 1941)

| Date | Stream | Tributary to or diverting from- | Locality | Discharge (sec.-ft.) |
|----------|----------------------|---------------------------------|---|----------------------|
| 1941 | | | | |
| Sept. 25 | Selah Valley Canal. | Naches River.... | NW $\frac{1}{4}$ sec. 36, T. 15 N., R. 16 E., above diversions near Naches. | 70.2 |
| 1942 | | | | |
| June 24 |do..... |do..... |do..... | 127 |
| 1940 | | | | |
| Oct. 24 | Wapatox power canal. |do..... | NW $\frac{1}{4}$ sec. 36, T. 15 N., R. 16 E., near headworks near Naches. | 393 |
| 1941 | | | | |
| Mar. 6 |do..... |do..... |do..... | 519 |
| May 16 |do..... |do..... |do..... | 548 |
| Sept. 24 |do..... |do..... |do..... | 379 |
| 1942 | | | | |
| Jan. 20 |do..... |do..... |do..... | 429 |
| June 24 |do..... |do..... |do..... | 551 |
| 1937 | | | | |
| Sept. 26 | Tieton Canal.... | Tieton River.... | Sec. 30, T. 14 N., R. 15 E., at former gaging station near Naches. | 276 |
| 1941 | | | | |
| May 15 |do..... |do..... |do..... | 298 |
| Sept. 24 |do..... |do..... |do..... | 155 |
| 1942 | | | | |
| June 23 |do..... |do..... |do..... | 302 |
| 1935 | | | | |
| Apr. 22 | Union Gap Canal. | Yakima River.... | Entrance to Union Gap, 1 mile southeast of town of Union Gap. | 38.9 |
| June 11 |do..... |do..... |do..... | 44.5 |
| Oct. 10 |do..... |do..... |do..... | 18.6 |
| 1936 | | | | |
| Apr. 14 |do..... |do..... |do..... | 29.6 |
| May 5 |do..... |do..... |do..... | 40.8 |
| June 12 |do..... |do..... |do..... | 42.9 |
| July 31 |do..... |do..... |do..... | 42.3 |
| 1937 | | | | |
| May 14 |do..... |do..... |do..... | 42.5 |
| July 30 |do..... |do..... |do..... | 36.6 |
| Sept. 18 |do..... |do..... |do..... | 25.9 |
| 1942 | | | | |
| June 24 |do..... |do..... |do..... | 35.7 |

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