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SURFACE WATER SUPPLY  
*of the* UNITED STATES  
1941

PART 10  
THE GREAT BASIN

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In cooperation with the States of  
CALIFORNIA, IDAHO, NEVADA, OREGON  
UTAH, AND WYOMING  
and other agencies



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## SURFACE WATER SUPPLY OF THE GREAT BASIN, 1941

### 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, 1941. 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 9,120 gaging stations in the United States and also at many gaging stations in Alaska and Hawaii. In July 1941, 4,850 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-feet" 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-feet per square mile" is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the run-off is distributed uniformly both as regards time and area.

"Run-off in inches" is the depth to which an area would be covered if all the water 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 646,517 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. Typical structures in use at gaging stations are shown on plate 1.

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 are used in applying the gage heights to the rating tables.

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.

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 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



A. DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OREG.



B. SEVIER RIVER NEAR JUAB, UTAH.



C. BEAVER RIVER NEAR BEAVER, UTAH.

GAGING-STATION STRUCTURES.

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 a few of the more important lakes and 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.

#### ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily on (1) the permanency of the stage-discharge relation 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.

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., 526 Federal Building.  
 Asheville, N. C., 220 Post Office Building.  
 Atlanta, Ga., 5 North Rhodes Center.  
 Augusta, Maine, Statehouse.  
 Baton Rouge, La., 124 Geology Building, Louisiana State University.  
 Boston, Mass., 945 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., 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., 225 Capitol Building, 410 Asylum Street.  
 Indianapolis, Ind., 511 Board of Trade Building.  
 Jackson, Miss., 208 Millsaps Building.



Louisville, Ky., 652 Federal Building.  
 Madison, Wis., 666 State Office Building.  
 Montgomery, Ala., 507 Post Office Building.  
 Ocala, Fla., 302 Post Office Building.  
 St. Paul, Minn., 808 New Post Office Building.  
 Trenton, N. J., 228 Federal Building.  
 Urbana, Ill., 14 Post Office Annex, Elm Street.

## 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, 508 Hydraulic Laboratory, University of Iowa.  
 Lincoln, Nebr., 1404 Statehouse.  
 Los Angeles, Calif., G-31 United States Post Office and Courthouse.  
 Oklahoma City, Okla., 303 Capitol Office Building.  
 Portland, Oreg., 606 Post Office Building.  
 Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines and Metallurgy.  
 St. Louis, Mo., 926 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., 1100 Washington 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.

Records of flow of streams in the United States have been published in the reports tabulated as follows:

Stream-flow data 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.                  |
| 16th 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.                            |                        |
| 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 75.....     | Monthly discharges.....   | 1901.                  |

Note.— Reports containing records for years after 1901 are given in table on page 6.

The table on the following page gives, by years and drainage basins, the numbers of the papers on surface water supply published from 1899 to 1941. The data for any particular station will, in general, be found in the reports covering the years during

Numbers of water-supply papers containing results of stream measurements, 1899-1941

(For basins included see p. 4)

| Year       | 1                | 2         | 3      | 4       | 5           | 6         | 7           | 8      | 9        | 10        | 11     | 12     | 13     | 14        |
|------------|------------------|-----------|--------|---------|-------------|-----------|-------------|--------|----------|-----------|--------|--------|--------|-----------|
| 1899 a...  | 35               | b35, 36   | 36     | 36      | 36          | c36, 37   | 37          | 37     | 37       | 38, 39    | 38, 39 | 38     | 38     | 38        |
| 1900 g...  | 47, b48          | 48, 49    | 48, 49 | 49      | 49          | 49, 50    | 50          | 50     | 50       | 51        | 51     | 51     | 51     | 51        |
| 1901 e...  | 65, 75           | 65, 75    | 65, 75 | 65, 75  | k65, 66, 75 | 66, 75    | k65, 66, 75 | 66, 75 | 66, 75   | 66, 75    | 66, 75 | 66, 75 | 66, 75 | 66, 75    |
| 1902 e...  | 85, 82           | b85, 83   | 83     | m82, 83 | k83, 85     | 84        | k83, 84     | 84     | 85       | 85        | 85     | 85     | 85     | 85        |
| 1903 e...  | 97               | b97, 98   | 98     | 98      | k98, 99     | 99        | k98, 99     | 99     | 100      | 100       | 100    | 100    | 100    | 100       |
| 1904 e...  | q124, p125, q128 | q126, 127 | 128    | 189     | k128, 130   | 130, r131 | k128, 131   | 132    | 133      | 133, s134 | 134    | 135    | 135    | 135       |
| 1905 e...  | q165, p166, q167 | q167, 168 | 169    | 170     | 171         | 172       | k169, 173   | 174    | 175, 177 | 176, s177 | 177    | 178    | 178    | u177, 178 |
| 1906 e...  | q201, p202, q203 | q203      | 204    | 205     | 206         | 207       | k205, 209   | 210    | 211      | 212, s213 | 213    | 214    | 214    | 214       |
| 1907 e...  | 215              | 216       | 217    | 218     | 219         | 220       | 221         | 222    | 223      | 224, s225 | 225    | 226    | 226    | 226       |
| 1908 e...  | 227              | 228       | 229    | 230     | 231         | 232       | 233         | 234    | 235      | 236, s237 | 237    | 238    | 238    | 238       |
| 1909 e...  | 239              | 240       | 241    | 242     | 243         | 244       | 245         | 246    | 247      | 248, s249 | 249    | 250    | 250    | 250       |
| 1910 e...  | 251              | 252       | 253    | 254     | 255         | 256       | 257         | 258    | 259      | 260, s261 | 261    | 262    | 262    | 262       |
| 1911 e...  | 301              | 302       | 303    | 304     | 305         | 306       | 307         | 308    | 309      | 310       | 311    | 312    | 312    | 312       |
| 1912 e...  | 321              | 322       | 323    | 324     | 325         | 326       | 327         | 328    | 329      | 330       | 331    | 332-A  | 332-B  | 332-C     |
| 1913 e...  | 351              | 352       | 353    | 354     | 355         | 356       | 357         | 358    | 359      | 360       | 361    | 362-A  | 362-B  | 362-C     |
| 1914 e...  | 381              | 382       | 383    | 384     | 385         | 386       | 387         | 388    | 389      | 390       | 391    | 392    | 393    | 394       |
| 1915 e...  | 401              | 402       | 403    | 404     | 405         | 406       | 407         | 408    | 409      | 410       | 411    | 412    | 413    | 414       |
| 1916 e...  | 431              | 432       | 433    | 434     | 435         | 436       | 437         | 438    | 439      | 440       | 441    | 442    | 443    | 444       |
| 1917 e...  | 451              | 452       | 453    | 454     | 455         | 456       | 457         | 458    | 459      | 460       | 461    | 462    | 463    | 464       |
| 1918 e...  | 476              | 477       | 478    | 479     | 480         | 481       | 482         | 483    | 484      | 485       | 486    | 487    | 488    | 489       |
| 1919-20... | 501              | 502       | 503    | 504     | 505         | 506       | 507         | 508    | 509      | 510       | 511    | 512    | 513    | 514       |
| 1921 e...  | 521              | 522       | 523    | 524     | 525         | 526       | 527         | 528    | 529      | 530       | 531    | 532    | 533    | 534       |
| 1922 e...  | 541              | 542       | 543    | 544     | 545         | 546       | 547         | 548    | 549      | 550       | 551    | 552    | 553    | 554       |
| 1923 e...  | 561              | 562       | 563    | 564     | 565         | 566       | 567         | 568    | 569      | 570       | 571    | 572    | 573    | 574       |
| 1924 e...  | 581              | 582       | 583    | 584     | 585         | 586       | 587         | 588    | 589      | 590       | 591    | 592    | 593    | 594       |
| 1925 e...  | 601              | 602       | 603    | 604     | 605         | 606       | 607         | 608    | 609      | 610       | 611    | 612    | 613    | 614       |
| 1926 e...  | 621              | 622       | 623    | 624     | 625         | 626       | 627         | 628    | 629      | 630       | 631    | 632    | 633    | 634       |
| 1927 e...  | 641              | 642       | 643    | 644     | 645         | 646       | 647         | 648    | 649      | 650       | 651    | 652    | 653    | 654       |
| 1928 e...  | 661              | 662       | 663    | 664     | 665         | 666       | 667         | 668    | 669      | 670       | 671    | 672    | 673    | 674       |
| 1929 e...  | 681              | 682       | 683    | 684     | 685         | 686       | 687         | 688    | 689      | 690       | 691    | 692    | 693    | 694       |
| 1930 e...  | 692              | 693       | 694    | 695     | 696         | 697       | 698         | 699    | 700      | 701       | 702    | 703    | 704    | 705       |
| 1931 e...  | 711              | 712       | 713    | 714     | 715         | 716       | 717         | 718    | 719      | 720       | 721    | 722    | 723    | 724       |
| 1932 e...  | 725              | 727       | 728    | 729     | 730         | 731       | 732         | 733    | 734      | 735       | 736    | 737    | 738    | 739       |
| 1933 e...  | 741              | 742       | 743    | 744     | 745         | 746       | 747         | 748    | 749      | 750       | 751    | 752    | 753    | 754       |
| 1934 e...  | 756              | 757       | 758    | 759     | 760         | 761       | 762         | 763    | 764      | 765       | 766    | 767    | 768    | 769       |
| 1935 e...  | 781              | 782       | 783    | 784     | 785         | 786       | 787         | 788    | 789      | 790       | 791    | 792    | 793    | 794       |
| 1936 e...  | 801              | 802       | 803    | 804     | 805         | 806       | 807         | 808    | 809      | 810       | 811    | 812    | 813    | 814       |
| 1937 e...  | 821              | 822       | 823    | 824     | 825         | 826       | 827         | 828    | 829      | 830       | 831    | 832    | 833    | 834       |
| 1938 e...  | 841              | 842       | 843    | 844     | 845         | 846       | 847         | 848    | 849      | 850       | 851    | 852    | 853    | 854       |
| 1939 e...  | 871              | 872       | 873    | 874     | 875         | 876       | 877         | 878    | 879      | 880       | 881    | 882    | 883    | 884       |
| 1940 e...  | 891              | 892       | 893    | 894     | 895         | 896       | 897         | 898    | 899      | 900       | 901    | 902    | 903    | 904       |
| 1941 e...  | 921              | 922       | 923    | 924     | 925         | 926       | 927         | 928    | 929      | 930       | 931    | 932    | 933    | 934       |

a Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply

Paper 35 for monthly discharge for 1899 in 21st Annual Report, part 4.

b James River only.

c Gallatin River.

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 Green River and Schuykill Rivers to James River.

j Scioto River.

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

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

n Hudson Bay only.

o New England rivers only.

p Hudson River to Delaware River, inclusive.

q Susquehanna River to Yorkin River, inclusive.

r Platte and Kansas Rivers.

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

Basins.

t Bearwamp of Gila River.

u Rogue, Umqua, and Siletz Rivers only.

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, 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. 6), 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.

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  | Year ending | State or drainage basin and title  |
| STATE   |             |  |
| 107   | 1903        | Alabama, Water powers of, with an appendix on stream measurements in Mississippi.                              |
| 298   | 1912        | California, Water resources of, part 1, Stream measurements in Sacramento River Basin.                         |
| 299   | 1912        | California, Water resources of, part 2, Stream measurements in San Joaquin River Basin.                        |
| 300   | 1912        | California, Water resources of, part 3, Stream measurements in the Great Basin and Pacific coast River basins. |
| 447   | 1918        | California, southern, Surface water supply of Pacific slope of.  |
| 597-E   | 1927        | California, Surface water supply of Sacramento River Basin.  |
| 636-D   | 1927        | California, Surface water supply of San Joaquin River Basin.   |
| 636-E   | 1927        | California, southern, Surface water supply of Pacific slope basins in.   |
| 637-A   | 1927        | California, Surface water supply of minor San Francisco Bay, northern Pacific, and Great basins in.            |
| 74  | 1900        | Colorado, Water resources of.  |
| 197   | 1905        | Georgia, Water resources of.   |
| 415   | 1915        | Massachusetts, Surface waters of.  |
| 230   | 1906        | Nebraska, Surface water supply of.   |
| 370   | 1910        | Oregon, Surface water supply of.   |
| 550   | 1937        | Texas, Summary of records of surface waters of.  |
| 424   | 1916        | Vermont, Surface waters of.  |
| 492   | 1919        | Washington, Summary of hydrometric data in.  |
| 570   | 1935        | Washington, Summary of records of surface waters of.   |
| 469   | 1921        | Wyoming, Surface waters of, and their utilization.   |
| DRAINAGE BASIN  |             |  |
| 395   | 1914        | Colorado River (Ariz., Colo., N. Mex., Utah, Wyo.) and its utilization.  |
| 617   | 1927        | Colorado River, upper (Colo., Utah), and its utilization.  |
| 517   | 1920        | Great Salt Lake Basin, Water powers of.  |
| 618   | 1926        | Green River (Utah, Wyo.) and its utilization.  |
| 198   | 1906        | Kennebec River Basin (Maine), Water resources of.  |
| 491   | 1917        | Milk River. (See St. Mary and Milk Rivers.)  |
| 526   | 1920        | New-Kanawha River Basin (N. C., Va., W. Va.), Surface Water Supply of.   |
| 279   | 1909        | Penobscot River Basin (Maine), Water resources of.   |
| 192   | 1906        | Potomac River Basin (D. C., Md., W. Va.)   |
| 358   | 1913        | Rio Grande Basin (Colo., N. Mex., Tex.), Water resources of, 1888-1913.  |
| 491   | 1917        | St. Mary and Milk Rivers (Mont., Canada), water supply of.   |
| 109   | 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 table on following page contains a list of these reports.

## State reports containing compilation of records of discharge

| State            | Year ending       | Report   | Issued by  |
|------------------|-------------------|--|--|
| Alabama.....     | 1915              | Bull. 17, Water powers of Alabama....  | Geological Survey of Alabama.  |
| Arkansas.....    | 1928              | Stream-gaging Report 1.....  | Arkansas Geological Survey.  |
| Connecticut..... | 1926              | Bull. 4, Water resources of Connecticut.                                       | State Geological and Natural History Survey.                               |
| Do.....          | 1933 <sup>a</sup> | 5th biennial report.....   | Connecticut State Water Commission.  |
| Georgia.....     | 1906              | Bull. 16, Water powers of Georgia....  | Geological Survey of Georgia.  |
| Do.....          | 1920 <sup>b</sup> | Bull. 36, Water powers of Georgia....  | Do.  |
| Illinois.....    | 1911              | Water resources of Illinois.....   | Rivers and Lakes Commission.   |
| Do.....          | 1934              | Stream-flow data of Illinois.....  | Division of Waterways.   |
| Indiana.....     | 1927              | Pub. 72, Surface water supply of Indiana.                                      | Department of Conservation.  |
| Do.....          | 1930 <sup>c</sup> | Pub. 112, Surface water supply of Indiana.                                     | Do.  |
| Iowa.....        | 1932              | Stream-flow records of Iowa.....   | Iowa State Planning Board.   |
| Kansas.....      | 1919              | Surface waters of Kansas.....  | Kansas Water Commission.   |
| Do.....          | 1924 <sup>d</sup> | .....do.....   | Do.  |
| Do.....          | 1928 <sup>e</sup> | .....do.....   | Kansas State Board of Agriculture.   |
| Do.....          | 1935 <sup>f</sup> | Stream-flow data of Kansas.....  | Do.  |
| Do.....          | 1939 <sup>g</sup> | .....do.....   | Do.  |
| Kentucky.....    | 1920              | Surface waters of Kentucky.....  | Kentucky Geological Survey.  |
| Maryland....     | 1937              | Flow data and draft storage curves for major streams in Maryland.              | State Planning Commission and Water Resources Commission.                  |
| Minnesota...     | 1912              | Water-resources investigation of Minnesota.                                    | State Drainage Commission.   |
| Missouri....     | 1926              | Vol. 20, 2d series, Water resources of Missouri.                               | Missouri Geological Survey and Water Resources.                            |
| Do.....          | 1939 <sup>h</sup> | Vol. 26, 2d series, Surface waters of Missouri.                                | Do.  |
| Nebraska....     | 1914              | 1st hydrographic report.....   | Bureau of Water Power, Irrigation, and Drainage.                           |
| Do.....          | 1928 <sup>i</sup> | 2d hydrographic report.....  | Do.  |
| New Jersey..     | 1928              | Bull. 33, Surface water supply of New Jersey.                                  | Department of Conservation and Development.                                |
| Do.....          | 1934 <sup>j</sup> | Special Report 5, Surface water supply of New Jersey.                          | State Water Policy Commission.   |
| New Mexico..     | 1925              | Surface water supply of New Mexico...  | Office of the State Engineer.  |
| North Carolina.  | 1923              | Bull. 34, Discharge records of North Carolina streams.                         | Department of Conservation and Development.                                |
| Do.....          | 1936 <sup>k</sup> | Bull. 39, Discharge records of North Carolina streams.                         | Do.  |
| North Dakota     | 1920              | Report to Governor of North Dakota on flood control.                           | State chief engineer.  |
| Do.....          | 1927 <sup>l</sup> | Surface water in North Dakota.....   | State Planning Board.  |
| Ohio.....        | 1921 <sup>m</sup> | Bull. 73, Ohio stream flow.....  | Engineering Experiment Station, Ohio State University.                     |
| Do.....          | 1939 <sup>n</sup> | Bull. 200, Compilation of stream-flow records of Ohio.                         | Department of Agriculture, Division of Conservation and Natural Resources. |
| Oregon.....      | 1914              | Bull. 4, Water resources of the State of Oregon.                               | Office of the State Engineer.  |
| Do.....          | 1924 <sup>o</sup> | Bull. 7, Water resources of the State of Oregon.                               | Do.  |
| Do.....          | 1930 <sup>p</sup> | Bull. 8, Water resources of the State of Oregon.                               | Do.  |
| Do.....          | 1936 <sup>q</sup> | Bull. 9, Water resources of the State of Oregon.                               | Do.  |
| Pennsylvania     | 1911              | Report of the Water Supply Commission of Pennsylvania.                         | Water Supply Commission of Pennsylvania.                                   |
| Do.....          | 1932 <sup>r</sup> | Stream-flow records of Pennsylvania..  | Department of Forests and Waters.  |
| Tennessee...     | 1924              | Bull. 34, Water resources of Tennessee.  | Department of Education.   |
| Do.....          | 1930 <sup>s</sup> | Bull. 40, Surface waters of Tennessee.   | Do.  |
| Utah.....        | 1905              | 5th biennial report, State Engineer..  | Office of the State Engineer.  |
| Do.....          | 1910              | 7th biennial report, State Engineer..  | Do.  |
| Do.....          | 1916              | 10th biennial report, State Engineer.  | Do.  |
| Virginia.....    | 1927              | Bull. 31, Water resources of Virginia.   | Conservation Commission.   |
| Washington..     | 1933              | Bull. 5, Monthly and yearly summaries of hydrometric data.                     | Department of Conservation and Development.                                |
| Wisconsin...     | 1914              | 1st report of Railroad Commission of Wisconsin to Legislature on water powers. | Railroad Commission of Wisconsin.  |
| Do.....          | 1923 <sup>t</sup> | 2d report of Railroad Commission of Wisconsin to Legislature on water powers.  | Do.  |

a Includes records of monthly discharge in second-feet per square mile for years 1912-33.

b Includes records for years 1907-18.

c Includes records for years 1927-30.

d Includes records for years 1919-24.

e Includes records for years 1924-28.

f Includes records for years 1928-35.

g Includes records for years 1935-39.

h Includes records for years 1927-39.

i Includes records for years 1914-28.

j Includes records for years 1928-34.

k Includes records for years 1889-1936; records of daily and monthly discharge are not included.

l Includes records for years 1882-1937.

m Includes all available records prior to 1921.

n Includes records for years 1902-39.

o Includes records for years 1914-24.

p Includes records for years 1924-30.

q Includes records for years 1930-36.

r Includes records for years 1928-32.

s Includes average weekly discharge for years 1920-30.

t Includes records for years 1914-23.

Notes.—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, Missouri, Montana, Nebraska, New Mexico, New York (also New York City Board of Water Supply), North Dakota, Oregon, Pennsylvania, Nevada, 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.                        |

#### 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 1940 to September 1941 by agencies other than the Geological Survey. The records for these stations are not contained in publications of the Geological Survey except as noted in footnotes to the table. Records on many canals and ditches and occasional records on several natural streams, none of which are here listed, have also been collected, and some of them have been published in the reports of irrigation projects or of the water commissioner of the drainage basin in which the streams are situated.

Records of discharge collected by agencies other than the Geological Survey

| Stream                         | Location   | Period     | Collected by                                     |
|--------------------------------|--|------------|--|
| Ana River.....                 | About 6 miles northeast of Summer Lake, Oreg.        | 1929-41a   | Oregon State engineer.                           |
| Beaver Creek.....              | Near Logan, Utah, in Logan Canyon                    | 1939-41    | Bureau of Reclamation.                           |
| Big Creek.....                 | Smiths Ranch near Randolph, Utah.                    | 1939-41    | Do.  |
| Center Creek.....              | Near Heber, Utah.....                                | 1940-41    | Do.  |
| Centerville Creek.             | Centerville, Utah, near mouth of canyon.             |            | Intermountain Forest & Range experiment station. |
| Centerville Creek tributaries. | Near Centerville, Utah (at several gaging stations). | 1937-41    | Do.  |
| City Creek.....                | Salt Lake City, Utah, near mouth of canyon.          | 1898-1941b | Salt Lake City.                                  |
| Clarkston Creek...             | Near Clarkston, Utah, above Newton Reservoir.        | 1941       | Bureau of Reclamation                            |
| Do.....                        | Near Clarkston, Utah, below Newton Reservoir.        | 1939-41    | Do.  |

a Records are published in bulletins of the Oregon State engineer (see page 8, "State reports containing compilation of records of discharge") except those subsequent to 1936, which have not been published.

b Records prior to 1913 are contained in water-supply papers published by the Geological Survey; those for 1913-30, in reports published by Salt Lake City.

## Records of daily discharge collected by agencies other than the Geological Survey--Continued

| Stream  | Location  | Period                     | Collected by                                     |
|---|---|----------------------------|--|
| Cottonwood Creek.....   | Salt Lake City, Utah, near mouth of canyon.                             | 1898-1941b                 | Salt Lake City.                                  |
| Do.....   | Sec. 16, T. 12 S., R. 39 E., near Swanlake, Idaho.                      | 1939-41                    | Bureau of Reclamation.                           |
| Do.....   | Near Swanlake, Idaho.....   | 1939-41                    | Do.  |
| Cub River.....  | Near Preston, Idaho, above diversions.                                  | 1940-41                    | Do.  |
| Do.....   | Near Franklin, Idaho, below diversions.                                 | 1940-41                    | Do.  |
| Daniels Creek.....  | Near Heber, Utah.....   | 1940-41                    | Do.  |
| Deer Creek.....   | Near Provo, Utah, in Provo Canyon.                                      | 1938-41                    | Do.  |
| Emigration Creek.....   | Salt Lake City, Utah, near mouth of canyon.                             | 1898-1941b                 | Salt Lake City.                                  |
| Ephraim Creek tributaries.                                      | Near Ephraim, Utah (at two gaging stations).                            | 1914-41                    | Intermountain Forest & Range experiment station. |
| Farlington Creek tributaries                                    | Near Farmington, Utah (at several gaging stations).                     | 1937-41                    | Do.  |
| Honey Creek.....  | Near Flush, Oreg.....   | 1909-15, 1921-22, 1930-41a | Oregon State engineer.                           |
| Lake Creek.....   | Near Heber, Utah.....   | 1940-41                    | Bureau of Reclamation.                           |
| Little Bear River, East Fork of.                                | Near Avon, Utah, at dam site.....                                       | 1939-41                    | Do.  |
| Little Cottonwood Creek.  | Salt Lake City, Utah, near mouth of canyon.                             | 1898-1941b                 | Salt Lake City.                                  |
| Little Pine Creek....   | Near Antwerp, Utah, below reservoir.                                    | 1939-41                    | Bureau of Reclamation.                           |
| Mill Creek.....   | Salt Lake City, Utah, near mouth of canyon.                             | 1898-1941b                 | Salt Lake City.                                  |
| Otter Creek.....  | Rex Ranch, near Randolph, Utah...                                       | 1939-41                    | Bureau of Reclamation.                           |
| Otter Creek outlet.   | Antimony, Utah, at former Geological Survey gaging station near Coyote. | 1920-41c                   | Sevier River water commissioner.                 |
| Parish Creek.....   | Centerville, Utah, near mouth of canyon.                                | 1937-41                    | Intermountain Forest & Range experiment station. |
| Parish Creek tributaries.                                       | Near Centerville, Utah (at several gaging stations).                    | 1937-41                    | Do.  |
| Farleys Creek.....  | Salt Lake City, Utah, near mouth of canyon.                             | 1898-1941b                 | Salt Lake City.                                  |
| Provo River.....  | Below Charleston, Utah, at middle of Deer Creek Reservoir               | 1938-41                    | Bureau of Reclamation.                           |
| Do.....   | Below Deer Creek Dam, in Provo Canyon, Utah.                            | 1938-41                    | Do.  |
| Do.....   | Near Hailstone, Utah.....   | 1940-41                    | Do.  |
| Do.....   | Near Olmsted, Utah, in Provo Canyon, above irrigation diversions.       | 1939-41                    | Do.  |
| Provo River and streams tributary to Deer Creek Reservoir area. | Near Charleston, Utah, above backwater of reservoir.                    | 1938-41                    | Do.  |
| Provo River, North Fork of.                                     | Wildwood, Utah, in Provo Canyon.  | 1938-41                    | Do.  |
| Ross Creek.....   | Near Hailstone, Utah.....   | 1940-41                    | Do.  |
| Sevier River.....   | Delta, Utah, at former Geological Survey gaging station.                | 1920-41c                   | Sevier River water commissioner.                 |
| Silver Creek.....   | Near Atkinson, Utah.....  | 1939-41                    | Bureau of Reclamation.                           |
| Strawberry tunnel outlet.                                       | At West Portal, Utah.....   | 1913-41d                   | Spanish Fork Water Users' Association.           |
| Treasureton canal....   | Sec. 8, T. 12 S., R. 39 E., near Swanlake, Idaho.                       | 1939-41                    | Bureau of Reclamation.                           |
| Woodruff Creek, South Fork of.                                  | Near Woodruff, Utah, at dam site  | 1939-41                    | Do.  |

a Records are published in bulletins of the Oregon State engineer (see page 8, "State reports containing compilation of records of discharge") except those subsequent to 1938, which have not been published.

b Records prior to 1913 are contained in water-supply papers published by the Geological Survey; those for 1913-30, in reports published by Salt Lake City.

c Published in the annual reports of Sevier River water commissioner.

d Published in reports of the Strawberry Valley project and of the Spanish Fork water commissioner.

Note.- Records here listed other than those cited in above notes have not been published. The Soil Conservation Service began in 1938 to make studies of run-off from four areas of less than 800 acres each in the vicinity of Safford, Ariz. Records of these studies are in the files of that organization.

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

California: State Department of Public Works, F. W. Clark, director, and Edward Hyatt, State engineer; San Bernardino and Los Angeles Counties.

Idaho: State Department of Reclamation, James Spofford, commissioner, succeeded by E. V. Berg.

Nevada: Office of State engineer, A. M. Smith.

Oregon: Office of State engineer, C. E. Stricklin.

Utah: Office of State engineer, T. H. Humpherys, succeeded by Ed. H. Watson.

Wyoming: Office of State engineer, L. C. Bishop.

Assistance in collecting records was rendered also by the following organizations and corporations:

California: Walker River Irrigation District.

Idaho: Bureau of Reclamation.

Oregon: Fish and Wildlife Service, Harney and Lake Counties.

Utah: Bureau of Reclamation; Utah Power & Light 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 California (except for stations in Walker Lake and Carson River Basins), H. D. McGlashan; in Idaho (except for stations on Bear River), T. R. Newell; in Oregon, G. H. Canfield, the work being done in collaboration with C. E. Stricklin, State engineer; in Utah and Nevada and for stations in Walker Lake and Carson River Basins in California and on Bear River in Idaho, A. B. Purton; in Wyoming, Robert Follansbee.

The records were reviewed and the manuscript prepared for publication under the direction of B. J. Peterson, engineer in charge, and M. C. Boyer, associate engineer, section of reports.

## GAGING-STATION RECORDS

## GREAT SALT LAKE BASIN

## Gages on Great Salt Lake, Utah

Location.- Water-stage recorder, lat. 40°44'15", long. 112°12'30", in NW¼ sec. 17, T. 1 S., R. 3 W., at Salt Lake County Boat Harbor, on southeast shore of lake, 17 miles west of Salt Lake City; and staff gage, lat. 41°13', long. 112°38', at Midlake, on Lucin cut-off of Southern Pacific Railroad, 30 miles west of Ogden. Datum of Boat Harbor gage is 4,188.85 feet above mean sea level, that of Midlake gage, 4,198.0 feet above mean sea level, adjustment of 1912. To reduce elevations to datum of 1929, add 0.05 foot.

Records available.- September 1875 to December 1899, March to July 1904, and October 1912 to September 1941 in reports of Geological Survey. July 1903 to December 1934 in reports of U. S. Weather Bureau. Diagram showing fluctuations of lake from 1851-1940 is published in Water-Supply Paper 880.

Extremes.- Maximum elevation during year, 4,195.6 feet May 1 at Boat Harbor gage and May 1 and 15 at Midlake gage; minimum, 4,193.65 feet Oct. 15 and Nov. 1 at Boat Harbor gage and Oct. 15 at Midlake gage.

1851-1941: Maximum elevation, 4,211.6 feet in 1873, computed from traditional data by E. C. La Rue (see Water-Supply Paper 880, p. 125); minimum, 4,193.65 feet Oct. 15 and Nov. 1, 1940, at Boat Harbor gage and Oct. 15, 1940, at Midlake gage.

Remarks.- Apparent inconsistencies in readings are probably due largely to the effect of wind, as the two gages are about 40 miles apart. To compensate for wind effect, elevations given for the Boat Harbor gage are taken from a mean slope line defined by several days' gage-height graph preceding and following 12:01 a.m. for the first and fifteenth of each month.

Cooperation.- Records for Boat Harbor gage collected and prepared in cooperation with Thomas C. Adams; those for Midlake gage furnished by Southern Pacific Railroad.

Gage-height, in feet, of Great Salt Lake,  
Utah, water year 1940-41

| Day     | Boat Harbor | Midlake |
|---------|-------------|---------|
| Oct. 1  | 6.9         | -4.25   |
| 15      | 6.8         | -4.35   |
| Nov. 1  | 6.8         | -4.25   |
| 15      | 6.85        | -4.25   |
| Dec. 1  | 7.0         | -4.15   |
| 15      | 7.0         | -4.1    |
| Jan. 1  | 7.4         | -3.9    |
| 15      | 7.45        | -3.75   |
| Feb. 1  | 7.6         | -3.5    |
| 15      | 7.85        | -3.35   |
| Mar. 1  | 8.15        | -3.0    |
| 15      | 8.5         | -2.75   |
| Apr. 1  | 8.35        | -2.65   |
| 15      | 8.6         | -2.5    |
| May 1   | 8.75        | -2.4    |
| 15      | 8.7         | -2.4    |
| June 1  | 8.65        | -2.6    |
| 15      | 8.65        | -2.65   |
| July 1  | 8.4         | -2.8    |
| 15      | 8.15        | -3.1    |
| Aug. 1  | 7.95        | -3.15   |
| 15      | 7.8         | -3.35   |
| Sept. 1 | 7.5         | -3.6    |
| 15      | 7.3         | -3.85   |



Bear River near Evanston, Wyo.

Location.- Water-stage recorder, lat. 41°19', long. 111°01', in sec. 1, T. 15 N., R. 121 W., 300 feet upstream from highway bridge and 3/4 miles northwest of Evanston.

Drainage area.- 645 square miles.

Records available.- October 1913 to September 1941.

Average discharge.- 28 years, 233 second-feet.

Extremes.- Maximum discharge during year, 1,810 second-feet June 10 (gage height, 5.21 feet); minimum daily, 7.0 second-feet Aug. 5, 6.  
1913-41: Maximum discharge, 3,890 second-feet June 14, 1921 (gage height, 6.35 feet), from rating curve extended above 2,700 second-feet; no flow during some periods in 1924, 1931, 1933, 1934, 1939, 1940.

Remarks.- Records excellent except those for Oct. 1 to Mar. 31, which are fair. Some diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May   | June  | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|-------|------|------|-------|
| 1   | 74   | 61   | 34   | 31   | 27   | 50   | 255  | 223   | 542   | 344  | 21   | 31    |
| 2   | 63   | 56   | 36   | 28   | 26   | 58   | 173  | 226   | 534   | 340  | 17   | 27    |
| 3   | 64   | 59   | 35   | 27   | 26   | 52   | 175  | 252   | 558   | 258  | 12   | 27    |
| 4   | 69   | 67   | 36   | 26   | 27   | 50   | 150  | 328   | 652   | 225  | 8.1  | 34    |
| 5   | 56   | 53   | 38   | 26   | 30   | 42   | 205  | 350   | 840   | 187  | 7.0  | 42    |
| 6   | 49   | 55   | 39   | 27   | 32   | 38   | 154  | 324   | 752   | 147  | 7.0  | 36    |
| 7   | 36   | 72   | 39   | 30   | 30   | 42   | 128  | 296   | 770   | 137  | 8.1  | 34    |
| 8   | 34   | 71   | 42   | 33   | 33   | 36   | 137  | 284   | 935   | 139  | 7.5  | 34    |
| 9   | 36   | 66   | 45   | 33   | 35   | 36   | 141  | 390   | 1,440 | 116  | 7.5  | 32    |
| 10  | 53   | 56   | 42   | 33   | 37   | 39   | 161  | 538   | 1,630 | 97   | 30   | 30    |
| 11  | 49   | 45   | 31   | 31   | 41   | 34   | 150  | 729   | 1,440 | 90   | 128  | 26    |
| 12  | 49   | 50   | 28   | 32   | 40   | 29   | 132  | 940   | 1,240 | 116  | 147  | 25    |
| 13  | 50   | *34  | 24   | 32   | 39   | 36   | 154  | 1,250 | 1,350 | 106  | 102  | 22    |
| 14  | 49   | 39   | 24   | 30   | 40   | 50   | 137  | 1,400 | 1,240 | 100  | 69   | 20    |
| 15  | 47   | 52   | 23   | 29   | 41   | 36   | 130  | 1,010 | 1,150 | 90   | 63   | 20    |
| 16  | 45   | 58   | 24   | 28   | 42   | 32   | 141  | 720   | 1,050 | 76   | 66   | 21    |
| 17  | 42   | 61   | 26   | 26   | 40   | 66   | 128  | 670   | 1,040 | 61   | 66   | 17    |
| 18  | 43   | 61   | 28   | 28   | *42  | 168  | 120  | 825   | 1,080 | 46   | 59   | 16    |
| 19  | 45   | 55   | 29   | 29   | 43   | 366  | 118  | 765   | 922   | 42   | 53   | 16    |
| 20  | 47   | 39   | 30   | *28  | 44   | 386  | 120  | 630   | 830   | 90   | 49   | 16    |
| 21  | 47   | 47   | 32   | 29   | 45   | 331  | 124  | 666   | 790   | 91   | 47   | 16    |
| 22  | 38   | 43   | 31   | 28   | 47   | 239  | 118  | 598   | 760   | 69   | 42   | 16    |
| 23  | 38   | 34   | 32   | 28   | 50   | 250  | 122  | 765   | 729   | 52   | 43   | 17    |
| 24  | 36   | 30   | 34   | 27   | 52   | 164  | 128  | 924   | 648   | 38   | 45   | 21    |
| 25  | 38   | 29   | 34   | 28   | 50   | 95   | 126  | 935   | 670   | 47   | 47   | 26    |
| 26  | 38   | 30   | 33   | 29   | 44   | 88   | 139  | 1,060 | 558   | 72   | 64   | 23    |
| 27  | 50   | 28   | 32   | 27   | 40   | 126  | 170  | 1,190 | 447   | 61   | 63   | 21    |
| 28  | 61   | 26   | 30   | 26   | 43   | 234  | 170  | 1,060 | 369   | 52   | 46   | 23    |
| 29  | 61   | 30   | 31   | 25   | -    | 244  | 170  | 734   | 305   | 42   | 34   | 26    |
| 30  | 64   | 34   | 32   | 25   | -    | 208  | 167  | 614   | 302   | 32   | 30   | 23    |
| 31  | 67   | -    | 32   | 25   | -    | 213  | -    | 562   | -     | 29   | 29   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 1,538            | 74      | 34      | 49.6 | 3,050                |
| November.....           | 1,441            | 72      | 26      | 48.0 | 2,860                |
| December.....           | 1,008            | 45      | 23      | 32.5 | 2,000                |
| Calendar year 1940..... | 39,738.4         | 1,100   | 0       | 109  | 78,820               |
| January.....            | 884              | 33      | 25      | 28.5 | 1,750                |
| February.....           | 1,086            | 52      | 26      | 38.8 | 2,150                |
| March.....              | 3,828            | 366     | 29      | 123  | 7,680                |
| April.....              | 4,463            | 255     | 118     | 149  | 8,350                |
| May.....                | 21,239           | 1,400   | 223     | 685  | 42,130               |
| June.....               | 25,653           | 1,630   | 302     | 855  | 50,880               |
| July.....               | 3,390            | 344     | 29      | 109  | 6,720                |
| August.....             | 1,417.2          | 147     | 7.0     | 45.7 | 2,810                |
| September.....          | 734              | 42      | 16      | 24.5 | 1,460                |
| Water year 1940-41..... | 66,681.2         | 1,630   | 7.0     | 183  | 132,200              |

\* Winter discharge measurement made on this day.

Note.- Stage-discharge relation affected by ice Nov. 25 to Dec. 8, Dec. 12, Dec.15 to Mar. 3.

Bear River at Border, Wyo.

Location.- Water-stage recorder, lat. 42°11', long. 111°03', in sec. 15, T. 14 S., R. 46 E., in Idaho, a quarter of a mile west of Wyoming State line and half a mile west of Border. Datum of gage is 6,151.63 feet above mean sea level (unadjusted).

Drainage area.- 2,490 square miles.

Records available.- October 1937 to September 1941.

Extremes.- Maximum discharge during year 1,470 second-feet June 16 (gage height, 5.62 feet); minimum daily, 62 second-feet Oct. 1.  
1937-41: Maximum discharge, 1,950 second-feet Mar. 23, 1939 (gage height, 6.69 feet); minimum daily, 30 second-feet Aug. 18-22, 1940.

Remarks.- Records excellent except those for periods of ice effect, which are fair. Diversions above station for irrigation.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

|     |     |     |     |     |       |
|-----|-----|-----|-----|-----|-------|
| 0.9 | 56  | 2.0 | 230 | 4.0 | 820   |
| 1.0 | 68  | 2.5 | 342 | 5.6 | 1,460 |
| 1.2 | 94  | 3.0 | 480 |     |       |
| 1.6 | 158 | 3.5 | 635 |     |       |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June  | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|-------|------|------|-------|
| 1   | 62   | 140  | 115  | 95   | 90   | 150  | 365  | 304 | 716   | 516  | 214  | 139   |
| 2   | 63   | 140  | 110  | 90   | 90   | 160  | 396  | 308 | 652   | 458  | 186  | 137   |
| 3   | 69   | 142  | 110  | 85   | 90   | 180  | 374  | 323 | 523   | 435  | 190  | 137   |
| 4   | 76   | 142  | 110  | 85   | 90   | 190  | 318  | 350 | 452   | 444  | 190  | 144   |
| 5   | 139  | 142  | 110  | 90   | 90   | 190  | 294  | 382 | 463   | 427  | 196  | 144   |
| 6   | 145  | 142  | 115  | 90   | 90   | 190  | 242  | 358 | 477   | 388  | 187  | 144   |
| 7   | 144  | 144  | 115  | 100  | 95   | 188  | 203  | 337 | 489   | 350  | 179  | 145   |
| 8   | 142  | 144  | 120  | 105  | 90   | 171  | 206  | 325 | 528   | 342  | 171  | 152   |
| 9   | 147  | 148  | 120  | 105  | 100  | 168  | 181  | 311 | 652   | 337  | 169  | 153   |
| 10  | 147  | 145  | 110  | 95   | 105  | 174  | 179  | 320 | 828   | 363  | 166  | 153   |
| 11  | 144  | 128  | 110  | 95   | 110  | 172  | 178  | 332 | 988   | 335  | 166  | 147   |
| 12  | 142  | 100  | 110  | 90   | 115  | 185  | 174  | 355 | 1,190 | 311  | 178  | 121   |
| 13  | 140  | 70   | 105  | 95   | 110  | 158  | 197  | 399 | 1,360 | 290  | 176  | 126   |
| 14  | 137  | *75  | 105  | 100  | 110  | 153  | 208  | 452 | 1,440 | 276  | 166  | 121   |
| 15  | 136  | 85   | 100  | 100  | 115  | 163  | 197  | 489 | 1,450 | 253  | 163  | 121   |
| 16  | 134  | 105  | 100  | 100  | 115  | 145  | 196  | 435 | 1,450 | 254  | 164  | 123   |
| 17  | 134  | 120  | 100  | 100  | 115  | 164  | 199  | 363 | 1,400 | 257  | 168  | 116   |
| 18  | 132  | 125  | 105  | 100  | 120  | 197  | 197  | 342 | 1,350 | 257  | 164  | 120   |
| 19  | 132  | 125  | 105  | 95   | 115  | 335  | 199  | 355 | 1,210 | 250  | 163  | 124   |
| 20  | 132  | 120  | 105  | *93  | *114 | 525  | 197  | 313 | 1,010 | 240  | 171  | 123   |
| 21  | 134  | 115  | 105  | 95   | 115  | 552  | 196  | 290 | 956   | 230  | 171  | 123   |
| 22  | 136  | 105  | 110  | 100  | 120  | 531  | 188  | 272 | 876   | 212  | 160  | 132   |
| 23  | 136  | 100  | 110  | 108  | 120  | 546  | 196  | 288 | 812   | 236  | 165  | 140   |
| 24  | 137  | 95   | 110  | 105  | 125  | 495  | 208  | 250 | 744   | 203  | 150  | 144   |
| 25  | 137  | 105  | 115  | 105  | 130  | 424  | 220  | 289 | 628   | 236  | 153  | 140   |
| 26  | 139  | 105  | 110  | 95   | 135  | 332  | 232  | 308 | 585   | 228  | 153  | 137   |
| 27  | 139  | 115  | 105  | 100  | 140  | 306  | 246  | 323 | 558   | 238  | 148  | 144   |
| 28  | 139  | 115  | 105  | 95   | 145  | 323  | 265  | 337 | 561   | 239  | 136  | 148   |
| 29  | 139  | 120  | 105  | 95   | -    | 368  | 292  | 407 | 528   | 255  | 131  | 147   |
| 30  | 140  | 115  | 100  | 90   | -    | 410  | 290  | 501 | 510   | 230  | 129  | 148   |
| 31  | 140  | -    | 100  | 90   | -    | 388  | -    | 649 | -     | 216  | 128  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 4,013            | 147     | 62      | 129  | 7,960                |
| November.....           | 3,572            | 148     | 70      | 119  | 7,080                |
| December.....           | 3,355            | 120     | 100     | 108  | 6,650                |
| Calendar year 1940..... | 38,057           | 240     | 30      | 104  | 75,490               |
| January.....            | 2,983            | 105     | 85      | 96.2 | 5,920                |
| February.....           | 3,099            | 145     | 90      | 111  | 6,150                |
| March.....              | 8,643            | 552     | 145     | 279  | 17,140               |
| April.....              | 7,033            | 396     | 174     | 234  | 13,950               |
| May.....                | 11,027           | 649     | 250     | 356  | 21,870               |
| June.....               | 25,321           | 1,450   | 452     | 845  | 30,350               |
| July.....               | 9,326            | 516     | 203     | 301  | 18,500               |
| August.....             | 5,161            | 214     | 128     | 166  | 10,220               |
| September.....          | 4,093            | 153     | 116     | 136  | 8,120                |
| Water year 1940-41..... | 87,686           | 1,450   | 62      | 240  | 173,900              |

\* Winter discharge measurement made on this day.  
Note.- Stage-discharge relation affected by ice Nov. 12 to Mar. 6.

Bear River at Harer, Idaho

Location.- Water-stage recorder, lat. 42°11'50", long. 111°10'05", in NW 1/4 sec. 23, T. 14 S., R. 45 E., 400 feet downstream from Sheep Creek, three-quarters of a mile north of Harer siding on Oregon Short Line Railroad, and 5 miles east of Dingle.

Drainage area.- 2,780 square miles.

Records available.- June 1913 to September 1916, January 1919 to September 1941.

Average discharge.- 25 years, 506 second-feet.

Extremes.- Maximum daily discharge during year, 1,580 second-feet June 15; minimum daily, 85 second-feet Oct. 1.

1913-16, 1919-41: Maximum discharge, 3,860 second-feet June 2, 1920 (gage height, 10.51 feet); minimum daily, 26 second-feet Aug. 21-27, 1934.

Remarks.- Records good except those for period of ice effect, which are fair. Many diversions above station for irrigation.

Cooperation.- Records collected by Utah Power & Light Co. under general supervision of Geological Survey, in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June  | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|-------|------|------|-------|
| 1   | 85   | 156  | 135  | 125  | 125  | 190  | 420  | 325 | 740   | 554  | 258  | 158   |
| 2   | 87   | 156  | 135  | 125  | 125  | 200  | 440  | 332 | 740   | 548  | 249  | 167   |
| 3   | 92   | 158  | 140  | 125  | 125  | 229  | 420  | 341 | 654   | 491  | 232  | 172   |
| 4   | 100  | 159  | 140  | 125  | 130  | 245  | 365  | 374 | 564   | 491  | 227  | 172   |
| 5   | 107  | 156  | 140  | 125  | 135  | 240  | 340  | 420 | 589   | 487  | 227  | 174   |
| 6   | 143  | 156  | 140  | 125  | 140  | 240  | 290  | 440 | 543   | 467  | 230  | 174   |
| 7   | 152  | 158  | 140  | 125  | 140  | 240  | 250  | 423 | 550   | 430  | 221  | 177   |
| 8   | 156  | 163  | 140  | 125  | 140  | 215  | 250  | 420 | 593   | 407  | 215  | 179   |
| 9   | 158  | 165  | 140  | 125  | 140  | 210  | 225  | 413 | 643   | 410  | 208  | 181   |
| 10  | 160  | 166  | 145  | 125  | 140  | 215  | 225  | 407 | 824   | 416  | 206  | 184   |
| 11  | 180  | 150  | 145  | 125  | 140  | 215  | 220  | 420 | 930   | 410  | 205  | 184   |
| 12  | 180  | 120  | 145  | 125  | 140  | 225  | 220  | 436 | 1,110 | 397  | 216  | 174   |
| 13  | 158  | 100  | 140  | 125  | 140  | 200  | 245  | 467 | 1,350 | 377  | 216  | 152   |
| 14  | 156  | 100  | 130  | 125  | 135  | 190  | 250  | 512 | 1,580 | 357  | 211  | 152   |
| 15  | 156  | 110  | 125  | 125  | 135  | 190  | 249  | 568 | 1,580 | 345  | 204  | 152   |
| 16  | 154  | 150  | 120  | 125  | 135  | 185  | 240  | 554 | 1,580 | 385  | 201  | 149   |
| 17  | 152  | 140  | 115  | 125  | 135  | 240  | 238  | 498 | 1,550 | 318  | 204  | 152   |
| 18  | 149  | 145  | 115  | 125  | 135  | 250  | 238  | 457 | 1,470 | 313  | 205  | 149   |
| 19  | 149  | 145  | 115  | 125  | 140  | 400  | 238  | 447 | 1,350 | 316  | 201  | 158   |
| 20  | 147  | 145  | 120  | 130  | 140  | 600  | 235  | 486 | 1,140 | 309  | 201  | 156   |
| 21  | 149  | 135  | 125  | 130  | 145  | 625  | 232  | 374 | 998   | 291  | 208  | 158   |
| 22  | 147  | 130  | 125  | 130  | 150  | 600  | 227  | 348 | 934   | 278  | 204  | 156   |
| 23  | 145  | 120  | 125  | 130  | 150  | 600  | 230  | 338 | 883   | 281  | 198  | 172   |
| 24  | 143  | 115  | 125  | 130  | 155  | 550  | 232  | 313 | 797   | 275  | 191  | 177   |
| 25  | 141  | 125  | 130  | 130  | 160  | 475  | 243  | 322 | 728   | 266  | 186  | 179   |
| 26  | 141  | 130  | 130  | 130  | 170  | 400  | 252  | 351 | 685   | 288  | 191  | 179   |
| 27  | 145  | 135  | 130  | 130  | 175  | 375  | 266  | 367 | 607   | 291  | 191  | 184   |
| 28  | 152  | 135  | 125  | 125  | 100  | 400  | 278  | 400 | 593   | 309  | 172  | 186   |
| 29  | 156  | 135  | 125  | 125  | -    | 450  | 303  | 426 | 585   | 329  | 160  | 186   |
| 30  | 156  | 134  | 125  | 125  | -    | 475  | 319  | 501 | 564   | 300  | 158  | 189   |
| 31  | 156  | -    | 125  | 125  | -    | 450  | -    | 607 | -     | 266  | 158  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 4,412            | 160     | 85      | 142  | 8,760                |
| November.....           | 4,170            | 165     | 100     | 139  | 8,270                |
| December.....           | 4,055            | 145     | 115     | 131  | 8,040                |
| Calendar year 1940..... | 48,200           | 227     | 44      | 132  | 95,620               |
| January.....            | 3,918            | 130     | 125     | 126  | 7,770                |
| February.....           | 4,000            | 180     | 125     | 143  | 7,930                |
| March.....              | 10,319           | 625     | 185     | 333  | 20,470               |
| April.....              | 8,180            | 440     | 220     | 273  | 16,220               |
| May.....                | 13,047           | 607     | 313     | 421  | 25,880               |
| June.....               | 27,264           | 1,580   | 529     | 909  | 54,080               |
| July.....               | 11,338           | 554     | 266     | 368  | 22,490               |
| August.....             | 6,355            | 255     | 158     | 205  | 12,600               |
| September.....          | 5,076            | 199     | 149     | 189  | 10,070               |
| Water year 1940-41..... | 102,132          | 1,580   | 85      | 280  | 202,600              |

Note.- Stage-discharge relation affected by ice Nov. 10 to Apr. 14.

## BEAR RIVER BASIN

## Bear River at Alexander, Idaho

Location.- Water-stage recorder, lat. 42°39', long. 111°42', in NW 1/4 sec. 17, T. 9 S., R. 41 E., 600 feet downstream from Soda hydroelectric plant of Utah Power & Light Co., half a mile southeast of Alexander, and 5 miles downstream from Soda Creek.

Drainage area.- 3,840 square miles.

Records available.- March 1911 to September 1916, April 1919 to September 1941.

Average discharge.- 26 years (1911-16, 1919-20, 1921-41), 769 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 1,400 second-feet June 28; minimum daily, 44 second-feet Feb. 9.

1911-16, 1919-41: Maximum discharge, 4,590 second-feet May 9, 1922; maximum gage height, 15.95 feet Dec. 11, 1919; minimum discharge, 28 second-feet at times when reservoir gates are closed.

Remarks.- Records good except those for periods of no gage-height record, which are fair. Many diversions above station for irrigation. Storage in Bear Lake Reservoir and regulation by Soda hydroelectric plant.

Cooperation.- Records collected by Utah Power & Light Co. under general supervision of Geological Survey, in connection with a Federal Power Commission project.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June  | July  | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|-------|-------|------|-------|
| 1                       | 270              | 273  | 56      | 50      | 111  | 179                  | 653  | 100 | 426   | 1,500 | 570  | 366   |
| 2                       | 229              | 183  | 309     | 310     | 47   | 158                  | 532  | 55  | 409   | 1,390 | 530  | 629   |
| 3                       | 224              | 222  | 319     | 350     | 360  | 206                  | 597  | 55  | 436   | 1,320 | 305  | 588   |
| 4                       | 183              | 245  | 225     | 245     | 358  | 202                  | 541  | 100 | 499   | 820   | 770  | 578   |
| 5                       | 96               | 283  | 268     | 50      | 309  | 223                  | 381  | 295 | 517   | 1,170 | 935  | 465   |
| 6                       | 102              | 198  | 275     | 290     | 299  | 220                  | 305  | 55  | 523   | 1,210 | 925  | 473   |
| 7                       | 188              | 187  | 96      | 290     | 204  | 230                  | 523  | 185 | 529   | 1,120 | 985  | 200   |
| 8                       | 307              | 252  | 54      | 225     | 109  | 276                  | 558  | 240 | 511   | 1,100 | 705  | 500   |
| 9                       | 314              | 311  | 236     | 135     | 44   | 192                  | 618  | 315 | 505   | 1,110 | 730  | 515   |
| 10                      | 186              | 283  | 349     | 225     | 386  | 347                  | 589  | 235 | 505   | 1,010 | 375  | 565   |
| 11                      | 186              | 334  | 307     | 135     | 208  | 401                  | 432  | 245 | 511   | 1,090 | 604  | 590   |
| 12                      | 310              | 530  | 333     | 50      | 130  | 416                  | 494  | 490 | 505   | 955   | 675  | 500   |
| 13                      | 102              | 560  | 334     | 265     | 131  | 417                  | 267  | 558 | 511   | 720   | 472  | 290   |
| 14                      | 309              | 443  | 237     | 355     | 137  | 434                  | 368  | 575 | 525   | 1,070 | 635  | 195   |
| 15                      | 275              | 320  | 148     | 290     | 132  | 377                  | 440  | 515 | 578   | 1,200 | 676  | 405   |
| 16                      | 191              | 339  | 364     | 265     | 135  | 344                  | 492  | 445 | 697   | 1,350 | 555  | 425   |
| 17                      | 356              | 77   | 351     | 295     | 334  | 448                  | 302  | 425 | 786   | 1,190 | 251  | 325   |
| 18                      | 142              | 331  | 358     | 182     | 318  | 624                  | 312  | 485 | 797   | 1,210 | 564  | 475   |
| 19                      | 102              | 273  | 340     | 50      | 282  | 580                  | 237  | 580 | 755   | 1,140 | 585  | 460   |
| 20                      | 104              | 281  | 260     | 309     | 214  | 528                  | 143  | 745 | 795   | 895   | 469  | 235   |
| 21                      | 263              | 64   | 262     | 265     | 216  | 441                  | 357  | 635 | 620   | 1,140 | 519  | 195   |
| 22                      | 229              | 321  | 55      | 289     | 176  | 256                  | 292  | 575 | 502   | 1,090 | 513  | 350   |
| 23                      | 223              | 245  | 310     | 238     | 112  | 228                  | 289  | 550 | 962   | 1,020 | 561  | 230   |
| 24                      | 249              | 69   | 240     | 219     | 250  | 506                  | 190  | 490 | 1,040 | 665   | 256  | 230   |
| 25                      | 225              | 337  | 55      | 161     | 216  | 605                  | 230  | 475 | 1,200 | 710   | 546  | 240   |
| 26                      | 94               | 379  | 310     | 52      | 212  | 565                  | 228  | 460 | 1,180 | 715   | 556  | 235   |
| 27                      | 64               | 222  | 290     | 271     | 230  | 596                  | 231  | 520 | 1,270 | 545   | 568  | 220   |
| 28                      | 194              | 234  | 130     | 175     | 207  | 591                  | 91   | 409 | 1,400 | 570   | 550  | 135   |
| 29                      | 204              | 225  | 55      | 185     | -    | 374                  | 145  | 447 | 1,150 | 570   | 555  | 260   |
| 30                      | 219              | 96   | 220     | 243     | -    | 293                  | 150  | 476 | 1,390 | 715   | 420  | 283   |
| 31                      | 240              | -    | 160     | 222     | -    | 478                  | -    | 470 | -     | 630   | 284  | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |       |       |      |       |
| October.....            | 6,389            |      | 356     | 84      | 206  | 12,670               |      |     |       |       |      |       |
| November.....           | 8,197            |      | 560     | 77      | 273  | 16,260               |      |     |       |       |      |       |
| December.....           | 7,378            |      | 364     | 54      | 238  | 14,530               |      |     |       |       |      |       |
| Calendar year 1940..... | 162,808          |      | 1,340   | 36      | 445  | 322,900              |      |     |       |       |      |       |
| January.....            | 6,716            |      | 360     | 50      | 217  | 13,320               |      |     |       |       |      |       |
| February.....           | 5,867            |      | 396     | 44      | 210  | 11,640               |      |     |       |       |      |       |
| March.....              | 11,760           |      | 624     | 158     | 379  | 23,330               |      |     |       |       |      |       |
| April.....              | 11,027           |      | 653     | 91      | 368  | 21,970               |      |     |       |       |      |       |
| May.....                | 12,204           |      | 745     | 55      | 394  | 24,210               |      |     |       |       |      |       |
| June.....               | 22,024           |      | 1,400   | 409     | 734  | 43,680               |      |     |       |       |      |       |
| July.....               | 30,740           |      | 1,390   | 545     | 992  | 60,970               |      |     |       |       |      |       |
| August.....             | 17,634           |      | 985     | 251     | 569  | 34,990               |      |     |       |       |      |       |
| September.....          | 11,206           |      | 629     | 185     | 374  | 22,230               |      |     |       |       |      |       |
| Water year 1940-41..... | 151,142          |      | 1,400   | 44      | 414  | 299,900              |      |     |       |       |      |       |

Note.- No gage-height record Dec. 22 to Jan. 16, Apr. 29 to May 12, May 14-27, June 30 to Aug. 10, Sept. 9-29; discharge computed on basis of output of hydroelectric plant 600 feet above station.

Bear River near Weston, Idaho

Location.- Water-stage recorder, lat. 42°01'50", long. 111°55'15", in SW 1/4 sec. 17, T. 18 S., R. 39 E., at Weston-Fairview highway bridge, 3 miles east of Weston.

Records available.- October 1919 to December 1932, February 1934 to September 1941. October 1889 to January 1917 at site near Preston, 12 miles upstream, published as Bear River near Preston, Idaho.

Average discharge.- 20 years (1919-32, 1934-41), 908 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 1,160 second-feet July 3; minimum daily, 41 second-feet June 6.

1919-32, 1934-41: Maximum discharge, 6,100 second-feet May 8 or 9, 1922 (gage height, 12.1 feet, from floodmarks), from rating curve extended above 4,000 second-feet; minimum daily, 30 second-feet Apr. 29, 1934, and June 27, 1937.

Remarks.- Records fair. West Cache Canal and many irrigation ditches divert water above station. Storage in Bear Lake Reservoir and regulation by power plants above gage.

Cooperation.- Records furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr.  | May | June  | July  | Aug. | Sept. |
|-----|------|------|------|------|------|------|-------|-----|-------|-------|------|-------|
| 1   | 405  | 359  | 350  | 512  | a315 | 418  | 797   | 645 | 80    | 863   | 470  | 411   |
| 2   | 430  | 320  | 249  | b345 | a280 | 492  | 936   | 246 | 179   | 1,010 | 430  | 662   |
| 3   | 496  | 464  | 405  | b410 | a320 | 784  | 1,030 | 486 | 106   | 1,160 | 291  | 675   |
| 4   | 314  | 260  | 445  | b445 | a425 | 828  | 797   | 569 | 380   | 1,010 | 139  | 563   |
| 5   | 515  | 347  | 619  | b390 | a480 | 563  | 1,140 | 616 | 150   | 609   | 764  | 467   |
| 6   | 223  | 473  | 528  | b400 | a520 | 439  | 898   | 706 | 41    | 804   | 804  | 563   |
| 7   | 238  | 473  | 402  | b525 | a540 | 531  | 613   | 473 | 57    | 512   | 723  | 408   |
| 8   | 395  | 365  | 371  | b535 | a500 | 492  | 626   | 622 | 161   | 838   | 537  | 332   |
| 9   | 582  | 299  | 191  | b570 | a310 | 556  | 908   | 398 | 208   | 767   | 395  | 467   |
| 10  | 521  | 317  | 599  | b510 | 165  | 405  | 1,040 | 616 | 132   | 726   | 386  | 502   |
| 11  | 353  | 350  | 480  | b385 | 254  | 696  | 849   | 815 | 127   | 877   | 480  | 392   |
| 12  | 377  | 622  | 675  | b290 | 736  | 702  | 1,110 | 613 | 186   | 560   | 442  | 451   |
| 13  | 263  | 304  | b520 | 243  | 606  | 726  | 891   | 740 | 102   | 369   | 537  | 560   |
| 14  | 228  | 849  | b420 | 596  | 356  | 476  | 801   | 968 | 150   | 726   | 534  | 338   |
| 15  | 377  | 747  | b240 | 436  | 392  | 606  | 944   | 743 | 411   | 870   | 606  | 206   |
| 16  | 317  | 679  | b330 | 476  | 439  | 569  | 572   | 616 | 730   | 1,130 | 457  | 206   |
| 17  | 228  | 326  | b520 | 632  | 257  | 427  | 679   | 505 | 152   | 1,110 | 476  | 341   |
| 18  | 451  | 198  | b610 | 492  | 332  | 808  | 972   | 268 | 260   | 747   | 679  | 606   |
| 19  | 395  | 362  | 524  | 473  | 585  | 777  | 592   | 473 | 464   | 716   | 368  | 655   |
| 20  | 238  | 486  | 692  | 266  | 476  | 549  | 505   | 794 | 489   | 576   | 521  | 392   |
| 21  | 314  | 470  | 550  | 518  | 638  | 825  | 747   | 476 | 308   | 619   | 556  | 294   |
| 22  | 182  | 457  | 460  | 556  | 635  | 679  | 682   | 213 | 296   | 733   | 515  | 122   |
| 23  | 365  | a360 | 499  | 609  | 483  | 632  | 350   | 189 | 170   | 716   | 547  | 198   |
| 24  | 252  | a240 | 480  | 515  | 427  | 480  | 613   | 186 | 299   | 713   | 476  | 362   |
| 25  | 338  | a210 | 476  | 540  | 544  | 702  | 445   | 82  | 457   | 648   | 402  | 257   |
| 26  | 353  | a410 | 344  | 317  | 572  | 821  | 655   | 130 | 835   | 502   | 473  | 288   |
| 27  | 263  | a540 | 398  | 191  | 563  | 774  | 1,110 | 121 | 1,130 | 499   | 579  | 257   |
| 28  | 118  | 635  | 589  | 389  | 515  | 972  | 433   | 215 | 990   | 528   | 576  | 174   |
| 29  | 236  | 619  | 626  | 377  | -    | 632  | 596   | 282 | 635   | 524   | 563  | 215   |
| 30  | 470  | 424  | 464  | 563  | -    | 781  | 383   | 274 | 592   | 685   | 596  | 314   |
| 31  | 467  | -    | 433  | 424  | -    | 457  | -     | 427 | -     | 622   | 537  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 10,704           | 592     | 118     | 345  | 21,230               |
| November.....           | 13,455           | 849     | 198     | 449  | 26,710               |
| December.....           | 14,489           | 692     | 191     | 467  | 28,740               |
| Calendar year 1940..... | 182,539          | 1,200   | 46      | 499  | 362,100              |
| January.....            | 13,920           | 632     | 191     | 449  | 27,610               |
| February.....           | 12,665           | 736     | 165     | 452  | 25,120               |
| March.....              | 19,399           | 972     | 405     | 642  | 39,470               |
| April.....              | 22,684           | 1,140   | 350     | 756  | 44,990               |
| May.....                | 14,487           | 958     | 82      | 467  | 28,730               |
| June.....               | 10,277           | 1,130   | 41      | 343  | 20,380               |
| July.....               | 22,789           | 1,160   | 389     | 735  | 45,200               |
| August.....             | 15,859           | 804     | 139     | 512  | 31,460               |
| September.....          | 11,655           | 675     | 122     | 398  | 25,120               |
| Water year 1940-41..... | 182,893          | 1,160   | 41      | 501  | 362,800              |

a No gage-height record, discharge computed on basis of unpublished records for station at Onida.  
 b Stage-discharge relation affected by ice.

Bear River near Collinston, Utah

Location.- Water-stage recorder, lat. 41°50', long. 112°03', in NW $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 27, T. 13 N., R. 2 W., 800 feet downstream from Cutler plant of Utah Power & Light Co., 2,000 feet downstream from Cutler Dam, and 5 $\frac{1}{2}$  miles north of Collinston.

Drainage area.- 6,000 square miles.

Records available.- July 1889 to September 1941.

Extremes.- Maximum discharge during year, 3,610 second-feet (regulated) Feb. 21 (gage height, 4.73 feet); minimum daily discharge, 15 second-feet (regulated) May 29, June 8, Aug. 13, 14.

1889-1941: Maximum discharge observed, 11,600 second-feet June 7-10, 1909 (gage height, 7.70 feet, site and datum then in use); practically no flow (result of regulation) at midnight Aug. 6, 1920.

Remarks.- Records good. Many canals divert above station. Flow regulated by reservoirs and power plants above station.

Cooperation.- Five discharge measurements furnished by Utah Power & Light Co.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

|     |    |     |     |     |       |     |       |
|-----|----|-----|-----|-----|-------|-----|-------|
| 0.2 | 7  | 0.8 | 70  | 2.0 | 591   | 4.0 | 2,640 |
| .3  | 10 | 1.0 | 115 | 2.3 | 819   | 4.5 | 3,290 |
| .4  | 16 | 1.3 | 211 | 2.6 | 1,080 | 5.0 | 3,990 |
| .5  | 25 | 1.5 | 297 | 3.0 | 1,470 | 5.5 | 4,720 |
| .6  | 37 | 1.8 | 460 | 3.5 | 2,030 |     |       |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.  | May   | June | July | Aug. | Sept. |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|-------|
| 1   | 459   | 434   | 344   | 530   | 754   | 1,650 | 1,250 | 1,140 | 27   | 29   | 20   | 20    |
| 2   | 652   | 449   | 587   | 1,050 | 808   | 1,740 | 1,590 | 1,300 | 32   | 23   | 20   | 20    |
| 3   | 994   | 357   | 509   | 1,040 | 591   | 2,060 | 1,440 | 1,130 | 29   | 25   | 20   | 20    |
| 4   | 1,060 | 1,100 | 950   | 724   | 598   | 2,230 | 1,430 | 450   | 42   | 24   | 20   | 22    |
| 5   | 1,070 | 712   | 1,040 | 229   | 580   | 2,260 | 2,290 | 2,010 | 17   | 27   | 20   | 23    |
| 6   | 230   | 435   | a750  | 681   | 356   | 2,170 | 1,320 | 2,040 | 18   | 27   | 20   | 24    |
| 7   | 888   | 729   | a650  | 599   | 562   | 1,380 | 1,790 | 1,920 | 17   | 26   | 20   | 24    |
| 8   | 578   | 778   | 289   | 714   | 833   | 1,060 | 1,850 | 1,750 | 15   | 27   | 20   | 24    |
| 9   | 279   | 840   | 1,020 | 1,020 | 493   | 788   | 1,590 | 1,290 | 348  | 23   | 22   | 25    |
| 10  | 923   | 125   | 909   | 851   | 648   | 1,280 | 1,490 | 1,110 | 460  | 22   | 19   | 24    |
| 11  | 983   | 943   | 1,200 | 977   | 1,240 | 1,410 | 1,390 | 220   | 918  | 21   | 18   | 24    |
| 12  | 632   | 1,350 | 1,650 | 466   | 1,780 | 1,240 | 1,400 | 1,850 | 404  | 21   | 16   | 23    |
| 13  | 904   | 1,220 | 1,150 | 1,190 | 2,000 | 1,710 | 1,070 | 1,720 | 147  | 21   | 15   | 23    |
| 14  | 319   | 1,270 | 1,090 | 820   | 2,300 | 1,400 | 1,530 | 2,210 | 428  | 13   | 15   | 23    |
| 15  | 575   | 1,760 | 1,390 | 544   | 1,590 | 1,340 | 1,870 | 1,350 | 81   | 24   | 16   | 23    |
| 16  | 496   | 993   | 889   | 696   | 316   | 705   | 1,650 | 1,700 | 20   | 21   | 18   | 22    |
| 17  | 517   | 371   | 366   | 555   | 1,740 | 1,320 | 1,600 | 1,050 | 89   | 20   | 19   | 22    |
| 18  | 811   | 672   | 618   | 230   | 1,140 | 539   | 1,870 | 1,110 | 22   | 20   | 19   | 22    |
| 19  | 535   | 560   | 768   | 370   | 1,100 | 971   | 1,420 | 1,070 | 95   | 21   | 20   | 22    |
| 20  | 315   | 974   | 1,150 | 983   | 1,220 | 1,200 | 716   | 195   | 24   | 19   | 20   | 26    |
| 21  | 89    | 406   | 700   | 817   | 2,390 | 1,490 | 1,630 | 37    | 30   | 20   | 20   | 23    |
| 22  | 639   | 706   | 944   | 949   | 2,510 | 1,200 | 1,450 | 68    | 27   | 20   | 20   | 59    |
| 23  | 359   | 886   | 1,110 | 992   | 2,060 | 1,420 | 1,400 | 26    | 21   | 20   | 20   | 640   |
| 24  | 298   | 654   | 808   | 1,250 | 2,220 | 1,660 | 1,200 | 20    | 22   | 20   | 19   | 624   |
| 25  | 359   | 823   | 86    | 1,080 | 2,080 | 1,300 | 1,140 | 21    | 24   | 20   | 20   | 751   |
| 26  | 862   | 712   | 658   | 688   | 1,760 | 1,520 | 1,560 | 18    | 29   | 20   | 262  | 527   |
| 27  | 121   | 972   | 503   | 663   | 1,600 | 1,120 | 1,050 | 20    | 27   | 20   | 419  | 80    |
| 28  | 670   | 1,180 | 458   | 869   | 1,770 | 1,330 | 1,600 | 20    | 25   | 20   | 474  | 208   |
| 29  | 772   | 931   | 575   | 608   | -     | 1,120 | 1,410 | 15    | 29   | 20   | 504  | 598   |
| 30  | 674   | 881   | 1,510 | 798   | -     | 365   | 1,510 | 22    | 26   | 21   | 27   | 701   |
| 31  | 815   | -     | 1,160 | 908   | -     | 1,620 | -     | 29    | -    | 26   | 18   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean  | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October.....            | 18,848           | 1,070   | 89      | 608   | 37,380               |
| November.....           | 24,230           | 1,760   | 125     | 808   | 48,060               |
| December.....           | 26,359           | 1,660   | 86      | 850   | 52,280               |
| Calendar year 1940..... | 228,141          | 2,130   | 18      | 623   | 452,500              |
| January.....            | 23,971           | 1,230   | 229     | 773   | 47,550               |
| February.....           | 37,029           | 2,510   | 316     | 1,322 | 73,450               |
| March.....              | 42,498           | 2,260   | 365     | 1,371 | 84,290               |
| April.....              | 44,596           | 2,290   | 716     | 1,480 | 88,060               |
| May.....                | 26,891           | 2,210   | 15      | 867   | 53,340               |
| June.....               | 3,383            | 818     | 15      | 113   | 6,710                |
| July.....               | 688              | 29      | 19      | 22.2  | 1,360                |
| August.....             | 2,181            | 504     | 15      | 70.4  | 4,330                |
| September.....          | 4,660            | 751     | 20      | 156   | 9,240                |
| Water year 1940-41..... | 255,134          | 2,510   | 15      | 699   | 506,000              |

a No gage-height record; discharge computed on basis of output of power plant.

Thomas Fork near Geneva, Idaho

Location.- Water-stage recorder, lat. 42°23'30", long. 110°59'00", in NE¼ sec. 28, T. 28 N., R. 119 W., 0.8 mile upstream from Salt Creek, 3.7 miles east of Idaho-Wyoming State line, and 5.4 miles northeast of Geneva post office.

Records available.- October 1939 to September 1941.

Extremes.- Maximum discharge during year, 63 second-feet May 4 (gage height, 2.77 feet); minimum not determined.  
1939-41: Maximum discharge, that of May 4, 1941; minimum not determined.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Practically no diversions above station; no regulation. Many diversions below station, near State line, for irrigation.

Cooperation.- Water-stage recorder inspected by John H. Boehme, post master at Geneva.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct.                    | Nov. | Dec. | Jan. | Feb. | Mar.             | Apr.    | May     | June | July                 | Aug. | Sept. |
|-----|-------------------------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1   | 2.5                     | 2.4  |      |      |      | bl.8             | 19      | 46      | 22   | 10                   | 4.1  | 3.3   |
| 2   | 2.2                     | 2.4  |      |      |      | bl.8             | 17      | 51      | 21   | 9.7                  | 3.8  | 3.3   |
| 3   | 6.2                     | 2.5  |      |      |      | bl.8             | 14      | 53      | 19   | 9.2                  | 3.6  | 3.3   |
| 4   | 3.8                     | 2.4  |      |      |      | bl.8             | 11      | 57      | 19   | 8.7                  | 3.6  | 3.3   |
| 5   | 2.5                     | 1.9  |      |      |      | 2.0              | 20      | 53      | 24   | 8.2                  | 3.6  | 3.3   |
| 6   | 2.2                     | 2.2  |      |      |      | 2.0              | 14      | 51      | 21   | 7.7                  | 3.6  | 3.3   |
| 7   | 2.0                     | 2.4  |      |      |      | 1.8              | 9.7     | 49      | 21   | 8.2                  | 3.6  | 3.3   |
| 8   | 2.9                     | 2.4  |      |      |      | b2.2             | 11      | 47      | 22   | 8.7                  | 3.6  | 3.4   |
| 9   | 2.0                     | 2.2  |      |      |      | 2.2              | 14      | 47      | 21   | 7.2                  | 4.1  | 3.3   |
| 10  | 2.0                     | 1.9  |      |      |      | b2.2             | 17      | 51      | 20   | 6.9                  | 5.2  | 3.3   |
| 11  | 2.0                     | bl.6 |      |      |      | b2.2             | 14      | 51      | 17   | 6.9                  | 15   | 3.1   |
| 12  | 2.2                     | bl.4 |      |      |      | b2.2             | 17      | 51      | 17   | 7.2                  | 6.5  | 3.1   |
| 13  | 1.8                     | bl.3 |      |      |      | b2.0             | 22      | 49      | 17   | 6.9                  | 5.2  | 3.1   |
| 14  | 1.9                     | bl.5 |      |      |      | b2.2             | 15      | 46      | 16   | 6.9                  | 4.1  | 3.1   |
| 15  | 2.0                     | bl.7 |      |      |      | b2.4             | 17      | 42      | 15   | 6.5                  | 4.5  | 3.1   |
| 16  | 2.0                     | bl.7 |      |      |      | b2.0             | 22      | 37      | 15   | 6.2                  | 4.5  | 3.1   |
| 17  | 2.0                     | bl.8 |      |      |      | b2.4             | 13      | 35      | 14   | 5.8                  | 4.8  | 2.9   |
| 18  | 2.0                     | 2.0  |      |      |      | 2.9              | 11      | 34      | 13   | 5.5                  | 5.2  | 3.3   |
| 19  | 2.0                     | 1.9  |      |      |      | 3.4              | 11      | 32      | 12   | 5.8                  | 4.1  | 3.3   |
| 20  | 2.0                     | 1.9  |      |      |      | 3.3              | 13      | 30      | a12  | 6.9                  | 3.8  | 3.1   |
| 21  | 2.0                     | bl.8 |      |      |      | 3.8              | 15      | 29      | a11  | 5.8                  | 3.6  | 3.1   |
| 22  | 2.0                     | bl.5 |      |      |      | 4.8              | 21      | 28      | a11  | 5.5                  | 3.6  | 3.1   |
| 23  | 2.0                     | bl.3 |      |      |      | 5.8              | 25      | 27      | a11  | 5.2                  | 3.6  | 3.4   |
| 24  | 2.0                     | bl.5 |      |      |      | 5.2              | 25      | 26      | a11  | 4.8                  | 3.6  | 3.1   |
| 25  | 2.0                     | bl.9 |      |      |      | 3.3              | 28      | 27      | a10  | 5.5                  | 4.1  | 3.1   |
| 26  | 2.2                     | bl.7 |      |      |      | 5.3              | 32      | 28      | a10  | 5.8                  | 5.5  | 3.1   |
| 27  | 2.9                     | bl.5 |      |      |      | 5.2              | 35      | 29      | a10  | 5.5                  | 4.1  | 4.8   |
| 28  | 2.7                     | bl.7 |      |      |      | 7.2              | 44      | 32      | a10  | 4.8                  | 3.6  | 3.6   |
| 29  | 2.4                     | b2.0 |      |      |      | 9.7              | 47      | 26      | 11   | 4.5                  | 3.4  | 3.3   |
| 30  | 2.5                     | bl.8 |      |      |      | 15               | 46      | 24      | 10   | 4.5                  | 3.3  | 3.1   |
| 31  | 2.4                     | -    |      |      |      | 21               | -       | 23      | -    | 4.1                  | 3.3  | -     |
|     | Month                   |      |      |      |      | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |      |       |
|     | October.....            |      |      |      |      | 72.4             | 6.2     | 1.8     | 2.34 | 144                  |      |       |
|     | November.....           |      |      |      |      | 56.2             | 2.5     | 1.3     | 1.87 | 111                  |      |       |
|     | December.....           |      |      |      |      | 52.7             | -       | -       | 1.70 | 105                  |      |       |
|     | Calendar year 1940..... |      |      |      |      | 1,302.2          | 12      | -       | 3.56 | 2,580                |      |       |
|     | January.....            |      |      |      |      | 49.6             | -       | -       | 1.60 | 98                   |      |       |
|     | February.....           |      |      |      |      | 44.8             | -       | -       | 1.60 | 89                   |      |       |
|     | March.....              |      |      |      |      | 125.9            | 21      | 1.8     | 4.15 | 256                  |      |       |
|     | April.....              |      |      |      |      | 617.7            | 47      | 9.7     | 20.6 | 1,230                |      |       |
|     | May.....                |      |      |      |      | 1,211            | 57      | 23      | 39.1 | 2,400                |      |       |
|     | June.....               |      |      |      |      | 463              | 24      | 10      | 15.4 | 918                  |      |       |
|     | July.....               |      |      |      |      | 205.1            | 10      | 4.1     | 6.62 | 407                  |      |       |
|     | August.....             |      |      |      |      | 132.2            | 15      | 3.3     | 4.46 | 274                  |      |       |
|     | September.....          |      |      |      |      | 98.0             | 4.8     | 2.9     | 3.27 | 194                  |      |       |
|     | Water year 1940-41..... |      |      |      |      | 3,137.6          | 57      | -       | 8.60 | 6,230                |      |       |

\* Winter discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

## Salt Creek near Geneva, Idaho

Location.- Water-stage recorder, lat. 42°24'00", long. 110°59'30", in NW¼ sec. 21, T. 28 N., R. 119 W., in Wyoming, 800 feet upstream from bridge on U. S. Highway 89, 1,000 feet upstream from mouth, 3.0 miles east of Idaho-Wyoming State line, and 4½ miles northeast of Geneva post office.

Records available.- October 1939 to September 1941.

Extremes.- Maximum discharge during year, 110 second-feet May 12 (gage height, 3.02 feet); minimum not determined, occurred during winter.  
1939-41: Maximum discharge during period of record, that of May 12, 1941; minimum, 0.5 second-foot Aug. 18, 1940 (gage height, 1.05 feet).

Remarks.- Records good except those for periods of ice effect which are fair. Several small irrigation diversions from stream and tributaries above station. No diversion between station and Thomas Fork.

Cooperation.- Water-stage recorder inspected by John H. Boehme, postmaster at Geneva.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 2.8              | 2.8  | bl.8    |         |      |                      | 10   | 61  | 29   | 16   | 5.7  | 4.4   |
| 2                       | 2.6              | 3.0  | 1.9     |         |      |                      | 11   | 72  | 29   | 15   | 5.4  | 4.4   |
| 3                       | 4.8              | 3.1  | bl.9    |         |      |                      | 10   | 83  | 28   | 14   | 5.2  | 4.4   |
| 4                       | 3.8              | 3.0  | bl.9    |         |      |                      | 9.7  | 94  | 28   | 13   | 4.8  | 4.6   |
| 5                       | 3.3              | 2.8  | bl.8    |         |      |                      | 13   | 96  | 32   | 13   | 4.8  | 4.6   |
| 6                       | 3.0              | 2.7  | 1.9     |         |      |                      | 11   | 94  | 28   | 12   | 4.6  | 4.6   |
| 7                       | 2.8              | 2.6  | bl.8    |         |      |                      | 10   | 79  | 27   | 12   | 4.8  | 4.4   |
| 8                       | 2.6              | 2.6  | bl.8    |         |      | b2.1                 | 11   | 71  | 27   | 14   | 4.8  | 4.8   |
| 9                       | 2.6              | 2.6  | bl.8    |         |      |                      | 12   | 75  | 28   | 12   | 5.7  | 4.6   |
| 10                      | 2.4              | 2.4  | bl.6    |         |      | (*)                  | 12   | 88  | 29   | 11   | 5.7  | 4.6   |
| 11                      | 2.4              | bl.9 | bl.5    |         |      |                      | 12   | 94  | 28   | 11   | 6.4  | 4.2   |
| 12                      | 2.3              | bl.6 | bl.4    |         |      |                      | 12   | 98  | 25   | 11   | 6.4  | 4.2   |
| 13                      | 2.3              | bl.5 | bl.4    |         |      |                      | 14   | 94  | 26   | 10   | 6.1  | 4.2   |
| 14                      | 2.2              | 1.8  | *bl.5   |         |      |                      | 13   | 86  | 25   | 10   | 5.4  | 4.2   |
| 15                      | 2.2              | 1.9  | bl.6    | bl.8    | bl.8 | b2.5                 | 14   | 74  | 25   | 9.4  | 5.2  | 4.2   |
| 16                      | 2.2              | 1.9  | bl.7    |         |      | b2.7                 | 15   | 64  | 23   | 9.1  | 6.8  | 4.2   |
| 17                      | 2.2              | 2.2  | bl.8    |         |      | b3.2                 | 13   | 59  | 22   | 8.5  | 6.6  | 4.2   |
| 18                      | 2.2              | 2.3  | bl.8    |         |      | 3.5                  | 12   | 56  | 22   | 7.9  | 6.6  | 4.8   |
| 19                      | 2.0              | 2.2  | bl.9    |         |      | 3.8                  | 12   | 51  | 21   | 9.1  | 5.9  | 5.0   |
| 20                      | 2.2              | 2.0  |         |         |      | 4.0                  | 12   | 47  | 20   | 10   | 5.2  | 4.4   |
| 21                      | 2.2              | 1.9  |         |         |      | 4.4                  | 14   | 44  | 20   | 9.1  | 4.8  | 4.4   |
| 22                      | 2.2              | bl.8 |         |         |      | 5.0                  | 16   | 42  | 18   | 7.6  | 4.8  | 4.6   |
| 23                      | 2.0              | bl.5 |         |         |      | 5.4                  | 20   | 39  | 18   | 7.1  | 5.0  | 5.2   |
| 24                      | 2.0              | 1.7  |         |         |      | 4.4                  | 22   | 38  | 10   | 7.1  | 4.8  | 5.0   |
| 25                      | 2.0              | 2.2  | bl.8    |         |      | 4.0                  | 27   | 37  | 17   | 8.2  | 5.2  | 4.6   |
| 26                      | 2.4              | 1.9  |         |         |      | b4.0                 | 32   | 37  | 16   | 8.5  | 5.7  | 4.4   |
| 27                      | 3.0              | 1.7  |         |         |      | 5.0                  | 34   | 38  | 16   | 7.6  | 5.2  | 5.7   |
| 28                      | 2.8              | 2.0  |         |         |      | 5.7                  | 42   | 41  | 16   | 6.8  | 4.6  | 5.0   |
| 29                      | 2.7              | 2.3  |         |         | -    | 6.8                  | 54   | 35  | 17   | 6.6  | 4.4  | 4.6   |
| 30                      | 2.7              | 2.0  |         |         | -    | 9.5                  | 61   | 32  | 16   | 6.1  | 4.4  | 4.4   |
| 31                      | 2.7              | -    |         | (*)     | -    | 9.4                  | -    | 31  | -    | 5.9  | 4.6  | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 79.6             |      | 4.8     | 2.0     | 2.57 | 168                  |      |     |      |      |      |       |
| November.....           | 65.9             |      | 3.1     | 1.5     | 2.20 | 131                  |      |     |      |      |      |       |
| December.....           | 54.4             |      | 1.9     | -       | -    | 108                  |      |     |      |      |      |       |
| Calendar year 1940..... | 1,899.0          |      | 31      | 0.7     | 5.19 | 3,770                |      |     |      |      |      |       |
| January.....            | 55.8             |      | -       | -       | 1.80 | 111                  |      |     |      |      |      |       |
| February.....           | 50.4             |      | -       | -       | 1.80 | 100                  |      |     |      |      |      |       |
| March.....              | 111.3            |      | 9.4     | -       | 3.59 | 221                  |      |     |      |      |      |       |
| April.....              | 560.7            |      | 61      | 9.7     | 18.7 | 1,110                |      |     |      |      |      |       |
| May.....                | 1,930            |      | 98      | 31      | 62.3 | 3,830                |      |     |      |      |      |       |
| June.....               | 692              |      | 32      | 16      | 25.1 | 1,370                |      |     |      |      |      |       |
| July.....               | 308.6            |      | 16      | 5.9     | 9.95 | 612                  |      |     |      |      |      |       |
| August.....             | 165.6            |      | 8.8     | 4.4     | 5.34 | 328                  |      |     |      |      |      |       |
| September.....          | 136.9            |      | 5.7     | 4.2     | 4.56 | 272                  |      |     |      |      |      |       |
| Water year 1940-41..... | 4,211.2          |      | 98      | -       | 11.5 | 8,350                |      |     |      |      |      |       |

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.



Montpelier Creek near Montpelier, Idaho

Location.- Water-stage recorder, lat. 42°21', long. 111°11', in NE¼ sec. 34, T. 12 S., R. 45 E., 150 feet upstream from bridge on U. S. Highway 89, 275 feet upstream from South Fork, and 6.8 miles northeast of Montpelier. Datum of gage is 6,427.46 feet above mean sea level, adjustment of 1912.

Drainage area.- 28.2 square miles.

Records available.- November 1939 to September 1941.

Extremes.- Maximum discharge during year, 42 second-feet May 1 (gage height, 2.06 feet), from rating curve extended above 30 second-feet; minimum not determined, probably less than 2.0 second-feet sometime during period of ice effect.  
1939-41: Maximum discharge, that of May 1, 1941; minimum not determined, occurred in 1941.

Remarks.- Records good except those for periods of ice effect, which are fair. One irrigation diversion from tributary about 2 miles above station. Many irrigation diversions below.

Cooperation.- Water-stage recorder inspected by employee of the local irrigation association.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 4.2  | 5.0  | b4.4 |      | (*)  |      | 11   | 35  | 24   | 16   | 7.5  | 6.6   |
| 2   | 4.2  | 5.0  | 4.5  |      |      |      | 11   | 35  | 23   | 15   | 7.5  | 6.4   |
| 3   | 5.9  | 5.2  | b4.5 |      |      |      | 10   | 35  | 23   | 14   | 7.3  | 6.6   |
| 4   | 6.1  | 5.2  | b4.4 |      |      |      | 11   | 35  | 23   | 13   | 7.1  | 6.4   |
| 5   | 5.2  | 4.1  | b4.0 |      |      |      | 13   | 36  | 23   | 13   | 7.1  | 6.2   |
| 6   | 4.8  | 4.7  | b4.0 |      |      |      | 11   | 35  | 22   | 12   | 7.1  | 6.2   |
| 7   | 4.7  | 4.5  | b3.9 |      |      |      | 11   | 32  | 24   | 12   | 7.1  | 6.2   |
| 8   | 4.7  | 4.5  | b3.6 |      |      |      | 11   | 30  | 24   | 12   | 7.1  | 6.4   |
| 9   | 4.5  | 4.5  | b3.4 |      |      | b3.0 | 12   | 29  | 22   | 11   | 7.1  | 6.4   |
| 10  | 4.4  | 4.0  | b3.0 |      |      | (*)  | 13   | 29  | 22   | 11   | 8.7  | 6.4   |
| 11  | 4.2  | b3.2 | b2.5 |      |      |      | 14   | 28  | 20   | 10   | 8.7  | 6.4   |
| 12  | 4.1  | b2.7 | b2.2 |      |      |      | 14   | 29  | 19   | 11   | 13   | 6.4   |
| 13  | 4.1  | b2.6 | b2.0 |      |      |      | 17   | 29  | 19   | 11   | 10   | 6.4   |
| 14  | 4.1  | b2.9 | *2.4 |      |      |      | 16   | 29  | 19   | 11   | 9.2  | 6.4   |
| 15  | 4.1  | 3.5  |      | b3.0 | b3.0 |      | 16   | 28  | 21   | 11   | 8.4  | 6.2   |
| 16  | 4.1  | 3.7  |      |      |      |      | 17   | 27  | 20   | 10   | 8.4  | 6.2   |
| 17  | 4.1  | 3.7  |      |      |      | 3.5  | 16   | 26  | 18   | 9.5  | 6.4  | 6.1   |
| 18  | 4.1  | 3.7  |      |      |      | 3.8  | 15   | 26  | 18   | 9.2  | 6.7  | 6.2   |
| 19  | 4.1  | 3.3  |      |      |      | 4.0  | 15   | 26  | 17   | 10   | 8.4  | 6.2   |
| 20  | 4.1  | 4.0  |      |      |      | 4.2  | 15   | 24  | 17   | 11   | 7.5  | 6.2   |
| 21  | 4.1  | 4.0  |      |      |      | 4.4  | a16  | 24  | 17   | 9.7  | 7.3  | 6.1   |
| 22  | 4.2  | b3.8 | b3.2 |      |      | 5.0  | a18  | 24  | 16   | 8.7  | 7.8  | 6.2   |
| 23  | 4.4  | b3.1 |      |      |      | 5.7  | a21  | 24  | 16   | 8.4  | 7.1  | 7.1   |
| 24  | 4.4  | 3.3  |      |      |      | 5.2  | a24  | 24  | 16   | 8.2  | 7.1  | 6.4   |
| 25  | 4.4  | 4.1  |      |      |      | 4.7  | a27  | 24  | 16   | 8.9  | 7.3  | 6.2   |
| 26  | 4.7  | b3.5 |      |      |      | 4.7  | a30  | 26  | 16   | 9.5  | 7.3  | 6.1   |
| 27  | 5.2  | 3.8  |      |      |      | 5.7  | 33   | 27  | 15   | 10   | 7.5  | 7.1   |
| 28  | 5.2  | 4.1  |      |      |      | 6.6  | 35   | 29  | 16   | 9.2  | 7.1  | 6.2   |
| 29  | 4.8  | 4.2  |      |      |      | 7.3  | 36   | 25  | 17   | 6.9  | 6.8  | 6.1   |
| 30  | 4.8  | 4.2  |      |      |      | 9.5  | 35   | 24  | 17   | 8.7  | 6.5  | 5.9   |
| 31  | 4.8  | -    |      |      |      | 11   | -    | 24  | -    | 8.2  | 6.8  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 140.6            | 6.1     | 4.1     | 4.54 | 279                  |
| November.....           | 118.6            | 5.2     | 2.6     | 3.95 | 255                  |
| December.....           | 103.2            | 4.5     | -       | 3.33 | 205                  |
| Calendar year 1940..... | 2,715.0          | 23      | -       | 7.42 | 5,380                |
| January.....            | 93.0             | -       | -       | 3.00 | 194                  |
| February.....           | 84.0             | -       | -       | 3.00 | 167                  |
| March.....              | 133.3            | 11      | -       | 4.30 | 264                  |
| April.....              | 547              | 38      | 10      | 18.2 | 1,080                |
| May.....                | 891              | 38      | 24      | 28.7 | 1,770                |
| June.....               | 580              | 24      | 15      | 19.3 | 1,150                |
| July.....               | 331.1            | 16      | 8.2     | 10.7 | 687                  |
| August.....             | 245.5            | 15      | 6.8     | 7.95 | 485                  |
| September.....          | 169.9            | 7.1     | 5.9     | 6.33 | 377                  |
| Water year 1940-41..... | 3,455.4          | 38      | -       | 9.47 | 6,350                |

\* Winter discharge measurement made on this day.  
a No gage-height record; discharge interpolated.  
b Stage-discharge relation affected by ice.

## Georgetown Creek near Georgetown, Idaho

Location.- Water-stage recorder, lat. 42°30', long. 111°19', in NE¼ sec. 4, T. 11 S., R. 44 E., 150 feet downstream from Little Right Hand Fork and 3 miles northeast of Georgetown.

Drainage area.- 22.2 square miles.

Records available.- November 1939 to September 1941. October 1911 to September 1914, fragmentary records collected at site 0.7 mile downstream just below power plant (now inoperative).

Extremes.- Maximum discharge during year, 43 second-feet Aug. 12 (gage height, 1.67 feet), from rating curve extended above 30 second-feet; minimum daily, 18 second-feet many days during period February to May.  
1939-41: Maximum discharge, that of Aug. 12, 1941; minimum daily, 18 second-feet many days during period February to May 1941.

Remarks.- Records good. No diversions above station; many irrigation diversions below. At one time a small storage reservoir was operated about 1½ miles above station but dam is now breached and no longer operative.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |         |         |      |                      |
|-------------------------|------------------|------|------|------|------|------|------|-----|------|------|------|-------|---------|---------|------|----------------------|
| 1                       | 24               | 22   | 21   | 20   | 19   | 18   | 19   | 18  | 31   | 29   | 28   | 26    |         |         |      |                      |
| 2                       | 24               | 22   | 21   | 20   | 19   | 18   | 19   | 18  | 30   | 29   | 28   | 26    |         |         |      |                      |
| 3                       | 26               | 22   | 21   | 20   | 19   | 18   | 18   | 18  | 30   | 28   | 27   | 26    |         |         |      |                      |
| 4                       | 24               | 22   | 21   | 20   | 19   | 18   | 18   | 19  | 30   | 28   | 27   | 26    |         |         |      |                      |
| 5                       | 24               | 22   | 21   | 20   | 19   | 19   | 19   | 20  | 31   | 28   | 26   | 26    |         |         |      |                      |
| 6                       | 24               | 22   | 21   | 20   | 19   | 19   | 18   | 21  | 31   | 27   | 26   | 26    |         |         |      |                      |
| 7                       | 24               | 22   | 21   | 20   | 19   | 18   | 18   | 21  | 31   | 28   | 26   | 26    |         |         |      |                      |
| 8                       | 24               | 22   | 21   | 19   | 19   | 18   | 18   | 22  | 30   | 28   | 27   | 26    |         |         |      |                      |
| 9                       | 24               | 22   | 21   | 19   | 19   | 18   | 18   | 22  | 32   | 28   | 26   | 26    |         |         |      |                      |
| 10                      | 24               | 22   | 21   | 19   | 19   | 18   | 18   | 21  | 30   | 28   | 26   | 26    |         |         |      |                      |
| 11                      | 24               | 22   | 20   | 19   | 19   | 18   | 18   | 22  | 30   | 28   | 27   | 26    |         |         |      |                      |
| 12                      | 24               | 22   | 20   | 19   | 19   | 18   | 18   | 23  | 30   | 28   | 29   | 26    |         |         |      |                      |
| 13                      | 24               | 22   | 20   | 19   | 19   | 18   | 18   | 24  | 30   | 28   | 28   | 26    |         |         |      |                      |
| 14                      | 24               | 22   | 20   | 19   | 19   | 18   | 18   | 27  | 29   | 28   | 27   | 26    |         |         |      |                      |
| 15                      | 23               | 22   | 20   | 19   | 18   | 18   | 18   | 27  | 29   | 27   | 26   | 25    |         |         |      |                      |
| 16                      | 23               | 22   | 20   | 19   | 18   | 18   | 18   | 27  | 29   | 26   | 27   | 25    |         |         |      |                      |
| 17                      | 23               | 22   | 20   | 19   | 18   | 18   | 18   | 28  | 29   | 26   | 26   | 25    |         |         |      |                      |
| 18                      | 23               | 22   | 20   | 19   | 18   | 18   | 18   | 29  | 29   | 26   | 26   | 25    |         |         |      |                      |
| 19                      | 23               | 22   | 20   | 19   | 18   | 18   | 18   | 29  | 29   | 27   | 27   | 25    |         |         |      |                      |
| 20                      | 23               | 22   | 19   | 19   | 19   | 18   | 18   | 29  | 29   | 27   | 26   | 25    |         |         |      |                      |
| 21                      | 23               | 22   | 19   | 19   | 19   | 18   | 18   | 29  | 29   | 27   | 27   | 25    |         |         |      |                      |
| 22                      | 23               | 21   | 19   | 19   | 18   | 18   | 18   | 29  | 28   | 27   | 26   | 25    |         |         |      |                      |
| 23                      | 24               | 21   | 19   | 19   | 18   | 18   | 18   | 30  | 28   | 27   | 26   | 25    |         |         |      |                      |
| 24                      | 23               | 21   | 19   | 19   | 18   | 18   | 18   | 30  | 28   | 28   | 26   | 25    |         |         |      |                      |
| 25                      | 23               | 21   | 19   | 19   | 18   | 18   | 18   | 30  | 29   | 28   | 26   | 25    |         |         |      |                      |
| 26                      | 23               | 21   | 19   | 19   | 18   | 18   | 18   | 31  | 29   | 28   | 26   | 25    |         |         |      |                      |
| 27                      | 23               | 21   | 19   | 19   | 18   | 18   | 18   | 32  | 29   | 28   | 26   | 26    |         |         |      |                      |
| 28                      | 22               | 21   | 19   | 19   | 18   | 18   | 18   | 32  | 29   | 28   | 26   | 25    |         |         |      |                      |
| 29                      | 22               | 21   | 19   | 19   | -    | 18   | 18   | 32  | 29   | 27   | 26   | 25    |         |         |      |                      |
| 30                      | 23               | 21   | 20   | 19   | -    | 18   | 18   | 31  | 29   | 28   | 26   | 25    |         |         |      |                      |
| 31                      | 23               | -    | 20   | 19   | -    | 19   | -    | 31  | -    | 28   | 26   | -     |         |         |      |                      |
| Month                   | Second-foot-days |      |      |      |      |      |      |     |      |      |      |       | Maximum | Minimum | Mean | Run-off in acre-feet |
| October.....            | 728              |      |      |      |      |      |      |     |      |      |      |       | 26      | 22      | 23.5 | 1,440                |
| November.....           | 651              |      |      |      |      |      |      |     |      |      |      |       | 22      | 21      | 21.7 | 1,290                |
| December.....           | 620              |      |      |      |      |      |      |     |      |      |      |       | 21      | 19      | 20.0 | 1,230                |
| Calendar year 1940..... | 8,437            |      |      |      |      |      |      |     |      |      |      |       | 32      | 19      | 23.1 | 16,730               |
| January.....            | 596              |      |      |      |      |      |      |     |      |      |      |       | 20      | 19      | 19.2 | 1,180                |
| February.....           | 520              |      |      |      |      |      |      |     |      |      |      |       | 19      | 18      | 18.6 | 1,030                |
| March.....              | 563              |      |      |      |      |      |      |     |      |      |      |       | 19      | 18      | 18.2 | 1,120                |
| April.....              | 543              |      |      |      |      |      |      |     |      |      |      |       | 19      | 18      | 18.1 | 1,080                |
| May.....                | 802              |      |      |      |      |      |      |     |      |      |      |       | 32      | 18      | 25.9 | 1,590                |
| June.....               | 886              |      |      |      |      |      |      |     |      |      |      |       | 32      | 28      | 29.5 | 1,760                |
| July.....               | 856              |      |      |      |      |      |      |     |      |      |      |       | 29      | 26      | 27.6 | 1,700                |
| August.....             | 827              |      |      |      |      |      |      |     |      |      |      |       | 29      | 26      | 26.7 | 1,640                |
| September.....          | 766              |      |      |      |      |      |      |     |      |      |      |       | 26      | 25      | 25.5 | 1,520                |
| Water year 1940-41..... | 8,358            |      |      |      |      |      |      |     |      |      |      |       | 32      | 18      | 22.9 | 16,580               |

Stauffer Creek near Nounan, Idaho

Location.- Water-stage recorder, lat. 42°28', long. 111°25', in N $\frac{1}{2}$  sec. 15, T. 11 S., R. 43 E., 0.5 mile downstream from check dam, 0.6 mile upstream from mouth, 2 miles east of Nounan post office, and 2 $\frac{1}{2}$  miles west of Georgetown.

Records available.- November 1939 to September 1941.

Extremes.- Maximum discharge during year, 150 second-feet May 28 (gage height, 3.85 feet), from rating curve extended above 50 second-feet; practically no flow at times July 12-14.

1939-41: Maximum discharge, that of May 28, 1941; minimum, that of July 12-14, 1941.

Remarks.- Record good except those for periods of ice effect, which are poor. Many irrigation diversions from stream and tributaries above station; none below. A substantial check dam has been constructed 0.5 mile above station which is used to irrigate meadows above by flooding. During periods of operation, effects of check-dam operation are pronounced.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.  | Apr. | May | June | July | Aug. | Sept. |                  |         |         |      |                      |
|--------------------|------|------|------|------|------|-------|------|-----|------|------|------|-------|------------------|---------|---------|------|----------------------|
| 1                  | 2.0  | 3.2  |      |      | (*)  | 4.0   | 48   | 29  | 35   | 4.0  | 1.6  | 1.6   |                  |         |         |      |                      |
| 2                  | 2.0  | 3.0  |      |      |      | 4.2   | 46   | 29  | 31   | 4.4  | 1.8  | 1.8   |                  |         |         |      |                      |
| 3                  | 2.4  | 3.6  |      |      |      | 4.8   | 38   | 30  | 28   | 4.6  | 1.6  | 1.6   |                  |         |         |      |                      |
| 4                  | 2.6  | 3.8  |      |      |      | b5.0  | 29   | 31  | 28   | 3.8  | 1.4  | 1.8   |                  |         |         |      |                      |
| 5                  | 2.2  | b2.8 |      |      |      | b6.0  | 33   | 35  | 27   | .6   | 1.3  | 1.6   |                  |         |         |      |                      |
| 6                  |      |      |      |      |      |       |      |     |      |      |      |       |                  |         |         |      |                      |
| 7                  |      |      |      |      |      | 5.8   | 31   | 35  | 25   | .3   | 1.3  | 1.6   |                  |         |         |      |                      |
| 8                  |      |      |      |      |      | b7.0  | 23   | 33  | 27   | .2   | 1.3  | 1.8   |                  |         |         |      |                      |
| 9                  | 2.0  | 4.6  |      |      |      | b8.0  | 19   | 33  | 48   | .3   | 1.5  | 2.0   |                  |         |         |      |                      |
| 9                  |      |      |      |      |      | *b9.0 | 18   | 38  | 45   | .2   | 2.0  | 2.0   |                  |         |         |      |                      |
| 10                 | 2.1  | 3.2  |      |      |      | b11.0 | 21   | 36  | 40   | .1   | 2.2  | 2.0   |                  |         |         |      |                      |
| 11                 |      |      |      |      |      |       |      |     |      |      |      |       |                  |         |         |      |                      |
| 11                 | 2.2  |      |      |      |      | b12   | 23   | 37  | 29   | .1   | 2.4  | 1.8   |                  |         |         |      |                      |
| 12                 | 2.4  |      |      |      |      | b13   | 19   | 39  | 22   | 0.1  | 2.7  | 1.8   |                  |         |         |      |                      |
| 13                 | 2.4  |      |      |      |      | b14   | 31   | 42  | 21   | 0    | 2.4  | 2.0   |                  |         |         |      |                      |
| 14                 | 2.2  |      |      | (*)  |      | b15   | 33   | 46  | 20   | 1.3  | 2.3  | 2.0   |                  |         |         |      |                      |
| 15                 | 2.2  |      |      |      |      | b14   | 23   | 51  | 20   | 9.6  | 2.7  | 2.1   |                  |         |         |      |                      |
| 16                 |      |      | b3.5 | b3.5 | b3.5 |       |      |     |      |      |      |       |                  |         |         |      |                      |
| 16                 | 2.4  |      |      |      |      | 13    | 27   | 46  | 18   | 2.0  | 2.7  | 2.1   |                  |         |         |      |                      |
| 17                 | 2.4  |      |      |      |      | 12    | 30   | 39  | 14   | 1.5  | 2.8  | 2.2   |                  |         |         |      |                      |
| 18                 | 2.6  |      |      |      |      | 13    | 22   | 36  | 12   | 1.5  | 3.2  | 2.6   |                  |         |         |      |                      |
| 19                 | 2.4  |      |      |      |      | b18   | 18   | 37  | 10   | 2.4  | 2.8  | 2.6   |                  |         |         |      |                      |
| 20                 | 2.4  |      |      |      |      | b20   | 16   | 35  | 9.6  | 3.2  | 3.0  | 2.6   |                  |         |         |      |                      |
| 21                 |      | b3.5 |      |      |      |       |      |     |      |      |      |       |                  |         |         |      |                      |
| 21                 | 2.4  |      |      |      |      | b23   | 16   | 34  | 8.4  | 4.0  | 2.7  | 2.4   |                  |         |         |      |                      |
| 22                 | 2.6  |      |      |      |      | b26   | 18   | 34  | 6.5  | 4.4  | 2.6  | 2.7   |                  |         |         |      |                      |
| 23                 | 2.4  |      |      |      |      | b30   | 17   | 33  | 6.2  | 2.6  | 2.2  | 3.2   |                  |         |         |      |                      |
| 24                 | 2.4  |      |      |      |      | 28    | 19   | 31  | 5.5  | 2.0  | 2.2  | 3.8   |                  |         |         |      |                      |
| 25                 | 2.4  |      |      |      |      | 24    | 21   | 33  | 3.8  | 1.8  | 2.4  | 3.4   |                  |         |         |      |                      |
| 26                 |      |      |      |      |      |       |      |     |      |      |      |       |                  |         |         |      |                      |
| 26                 | 2.6  |      |      |      |      | 23    | 23   | 30  | 2.8  | 3.8  | 2.6  | 2.8   |                  |         |         |      |                      |
| 27                 | 3.0  |      |      |      |      | 18    | 38   | 9.0 | 3.2  | 3.2  | 2.4  | 3.0   |                  |         |         |      |                      |
| 28                 | 3.6  |      |      |      |      | 25    | 33   | 67  | 3.4  | 2.6  | 2.2  | 3.0   |                  |         |         |      |                      |
| 29                 | 3.2  |      |      |      |      | 35    | 31   | 78  | 3.0  | 2.4  | 2.0  | 3.0   |                  |         |         |      |                      |
| 30                 | 3.0  |      |      |      |      | 50    | 31   | 47  | 3.4  | 2.1  | 1.8  | 3.0   |                  |         |         |      |                      |
| 31                 | 3.0  |      |      |      |      | 55    | -    | 37  | -    | 1.6  | 1.8  | -     |                  |         |         |      |                      |
| Month              |      |      |      |      |      |       |      |     |      |      |      |       | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
| October            |      |      |      |      |      |       |      |     |      |      |      |       | 75.3             | 3.6     | 1.8     | 2.43 | 149                  |
| November           |      |      |      |      |      |       |      |     |      |      |      |       | 104.8            | -       | -       | 3.49 | 208                  |
| December           |      |      |      |      |      |       |      |     |      |      |      |       | 108.5            | -       | -       | 3.80 | 215                  |
| Calendar year 1940 |      |      |      |      |      |       |      |     |      |      |      |       | 2,788.7          | 51      | .2      | 7.62 | 5,530                |
| January            |      |      |      |      |      |       |      |     |      |      |      |       | 108.5            | -       | -       | 3.80 | 215                  |
| February           |      |      |      |      |      |       |      |     |      |      |      |       | 98.0             | -       | -       | 3.80 | 194                  |
| March              |      |      |      |      |      |       |      |     |      |      |      |       | 548.6            | 55      | 4.0     | 17.6 | 1,080                |
| April              |      |      |      |      |      |       |      |     |      |      |      |       | 752              | 49      | 16      | 25.4 | 1,570                |
| May                |      |      |      |      |      |       |      |     |      |      |      |       | 1,188.0          | 78      | 9.0     | 37.7 | 2,320                |
| June               |      |      |      |      |      |       |      |     |      |      |      |       | 555.8            | 48      | 2.8     | 18.5 | 1,100                |
| July               |      |      |      |      |      |       |      |     |      |      |      |       | 82.4             | 13      | 0       | 2.66 | 163                  |
| August             |      |      |      |      |      |       |      |     |      |      |      |       | 67.9             | 3.2     | 1.3     | 2.19 | 135                  |
| September          |      |      |      |      |      |       |      |     |      |      |      |       | 69.7             | 3.8     | 1.6     | 2.32 | 158                  |
| Water year 1940-41 |      |      |      |      |      |       |      |     |      |      |      |       | 3,776.5          | 78      | 0       | 10.3 | 7,460                |

\* Winter discharge measurements made on this day.  
 b Stage-discharge relation affected by ice.

## BEAR RIVER BASIN

## Skinner Creek at Nounan, Idaho

Location.- Staff gage, lat. 42°29', long. 111°28', in SW¼ sec. 8, T. 11 S., R. 43 E., 330 feet downstream from point where flow through Minnig Mill is returned to creek and three-quarters of a mile west of Nounan post office.

Drainage area.- 5.1 square miles.

Records available.- October 1939 to September 1941.

Extremes.- Maximum discharge observed during year, 32 second-feet May 12, 13 (gage height, 1.60 feet); minimum observed, 0.4 second-foot July 26, 27 (gage height, 0.60 foot).  
1939-41: Maximum discharge observed, that of May 12, 13, 1941; minimum observed, 0.2 second-foot Aug. 4, 1940 (gage height, 0.48 foot).

Remarks.- Records good except those for periods of ice effect, which are fair. Gage read twice daily. One small irrigation diversion about half a mile above station; many below. Water which operates Minnig mill is diverted a third of a mile above station and returned to creek above. Possibly some regulation at low stages but observations are made when none is effective. There are facilities to permit a small diversion from Coop Creek to Skinner Creek about 2½ miles above the station to augment low-water supply for Minnig mill. None was so diverted during 1941.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb.  | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|-------|----------------------|------|-----|------|------|------|-------|
| 1                       | 1.5              | 1.8  | 1.5     | 1.4     | *bl.7 | 1.2                  | 2.3  | 6.4 | 11   | 4.7  | 2.2  | 1.3   |
| 2                       | 1.5              | 1.7  | 1.5     | 1.5     | 1.5   | 1.4                  | 2.5  | 12  | 11   | 3.9  | 2.1  | 1.8   |
| 3                       | 1.9              | 1.9  | 1.5     | 1.5     | 1.5   | 1.4                  | 2.5  | 12  | 11   | 3.8  | 2.0  | 1.8   |
| 4                       | 1.5              | 1.7  | 1.5     | 1.5     | bl.4  | 1.4                  | 2.5  | 11  | 9.8  | 3.8  | 1.8  | 1.2   |
| 5                       | 1.5              | 1.6  | 1.4     | 1.5     | bl.4  | 1.4                  | 3.6  | 10  | 9.8  | 3.6  | 1.8  | 1.6   |
| 6                       | 1.4              | 1.6  | 1.5     | 1.5     | bl.4  | 1.4                  | 2.6  | 11  | 9.5  | 3.2  | 1.8  | 1.6   |
| 7                       | 1.4              | 1.9  | 1.5     | 1.5     | bl.4  | 1.4                  | 2.5  | 9.5 | 14   | 3.1  | 1.8  | 2.0   |
| 8                       | 1.4              | 1.9  | 1.5     | 1.5     | 1.4   | bl.5                 | 2.5  | 11  | 10   | 2.9  | 1.8  | 1.9   |
| 9                       | 1.4              | 1.7  | 1.5     | 1.5     | 1.4   | 1.4                  | 2.8  | 14  | 9.5  | 3.1  | 2.1  | 1.7   |
| 10                      | 1.4              | 1.7  | bl.4    | 1.5     | 1.4   | *1.9                 | 3.2  | 16  | 9.5  | 1.8  | 2.1  | 1.8   |
| 11                      | 1.4              | bl.6 | bl.3    | 1.5     | 1.4   | bl.5                 | 2.9  | 24  | 8.1  | 2.6  | 1.8  | 1.6   |
| 12                      | 1.4              | bl.5 | bl.2    | 1.5     | 1.5   | bl.5                 | 3.3  | 28  | 7.9  | 2.4  | 2.0  | 1.6   |
| 13                      | 1.4              | bl.6 | bl.2    | 1.5     | 1.4   | bl.5                 | 3.5  | 28  | 7.4  | 2.8  | 2.1  | 1.5   |
| 14                      | 1.3              | 1.7  | bl.2    | 1.5     | 1.3   | bl.5                 | 3.2  | 27  | 7.4  | 2.5  | 1.7  | 1.6   |
| 15                      | 1.4              | 1.7  | *bl.2   | 1.5     | 1.3   | bl.5                 | 2.6  | 24  | 7.1  | 2.4  | 1.7  | 1.5   |
| 16                      | 1.3              | 1.5  | bl.4    | 1.5     | 1.3   | 1.4                  | 2.4  | 23  | 6.6  | 2.3  | 1.7  | 1.5   |
| 17                      | 1.4              | 1.7  | 1.5     | 1.5     | 1.3   | 1.4                  | 2.2  | 20  | 6.3  | 2.4  | 2.8  | 1.5   |
| 18                      | 1.4              | 1.6  | 1.5     | 1.5     | 1.3   | 1.5                  | 2.4  | 16  | 6.3  | 2.4  | 1.8  | 2.1   |
| 19                      | 1.4              | 1.6  | 1.4     | 1.4     | 1.3   | 1.5                  | 2.6  | 15  | 5.6  | 2.6  | 1.7  | 1.5   |
| 20                      | 1.4              | 1.3  | 1.4     | 1.4     | 1.3   | 1.7                  | 2.4  | 11  | 5.4  | 2.6  | 1.8  | 1.6   |
| 21                      | 1.4              | 1.4  | 1.4     | 1.4     | 1.3   | 1.7                  | 2.3  | 12  | 3.8  | 2.4  | 1.8  | 1.6   |
| 22                      | 1.4              | 1.5  | 1.4     | 1.4     | 1.3   | 1.7                  | 2.4  | 13  | 2.4  | 2.4  | 1.7  | 1.6   |
| 23                      | 1.4              | bl.4 | 1.4     | 1.4     | 1.3   | 1.7                  | 2.5  | 12  | 2.2  | 2.1  | 1.5  | 1.8   |
| 24                      | 1.4              | bl.4 | 1.4     | 1.4     | 1.3   | 1.5                  | 2.4  | 12  | 3.3  | 2.3  | 1.6  | 1.6   |
| 25                      | 1.5              | 1.5  | 1.4     | 1.4     | 1.3   | 1.5                  | 3.3  | 14  | 4.5  | 2.3  | 1.8  | 1.7   |
| 26                      | 1.6              | 1.5  | 1.4     | 1.4     | bl.3  | 1.7                  | 4.1  | 14  | 4.5  | 1.4  | 2.2  | 1.5   |
| 27                      | 1.8              | 1.8  | 1.5     | 1.4     | bl.3  | 2.0                  | 4.7  | 15  | 4.5  | 1.5  | 1.6  | 2.4   |
| 28                      | 1.6              | 1.4  | 1.4     | 1.4     | 1.2   | 2.1                  | 5.8  | 15  | 4.5  | 2.0  | 1.7  | 1.6   |
| 29                      | 1.5              | 1.8  | 1.3     | 1.5     | -     | 2.4                  | 5.0  | 15  | 5.4  | 1.7  | .6   | 1.8   |
| 30                      | 1.5              | 1.5  | 1.5     | 1.4     | -     | 2.6                  | 7.6  | 13  | 4.7  | 2.0  | 1.6  | 1.5   |
| 31                      | 1.7              | -    | 1.4     | 1.4     | -     | 3.3                  | -    | 12  | -    | 1.9  | 1.7  | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean  | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 45.5             |      | 1.9     | 1.3     | 1.47  | 90                   |      |     |      |      |      |       |
| November.....           | 48.5             |      | 1.9     | 1.3     | 1.62  | 96                   |      |     |      |      |      |       |
| December.....           | 43.6             |      | 1.5     | 1.2     | 1.41  | 86                   |      |     |      |      |      |       |
| Calendar year 1940..... | 1,088.6          |      | 19      | .4      | 2.97  | 2,160                |      |     |      |      |      |       |
| January.....            | 45.2             |      | 1.5     | 1.4     | 1.46  | 90                   |      |     |      |      |      |       |
| February.....           | 38.2             |      | 1.7     | 1.2     | 1.36  | 76                   |      |     |      |      |      |       |
| March.....              | 51.6             |      | 3.3     | 1.2     | 1.66  | 102                  |      |     |      |      |      |       |
| April.....              | 94.6             |      | 7.6     | 2.2     | 3.15  | 188                  |      |     |      |      |      |       |
| May.....                | 477.3            |      | 28      | 8.4     | 15.4  | 948                  |      |     |      |      |      |       |
| June.....               | 213.0            |      | 14      | 2.2     | 7.10  | 422                  |      |     |      |      |      |       |
| July.....               | 80.9             |      | 4.7     | 1.4     | 2.61  | 160                  |      |     |      |      |      |       |
| August.....             | 56.4             |      | 2.8     | .6      | 1.82  | 112                  |      |     |      |      |      |       |
| September.....          | 49.3             |      | 2.4     | 1.3     | 1.64  | 98                   |      |     |      |      |      |       |
| Water year 1940-41..... | 1,244.7          |      | 28      | .6      | 3.41  | 2,470                |      |     |      |      |      |       |

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Cottonwood Creek near Cleveland, Idaho

Location.- Staff gage, lat. 42°20', long. 111°46', in sec. 34, T. 12 S., R. 40 E., 500 feet upstream from Cleveland irrigation canal, 2½ miles west of Cleveland, and 4 miles downstream from proposed Cottonwood Dam.

Records available.- November 1938 to September 1941.

Extremes.- Maximum discharge observed during year, 197 second-feet May 4 (gage height, 2.44 feet), from rating curve extended above 130 second-feet; minimum observed, 2.3 second-foot Aug. 6 (gage height, 0.68 foot).

1938-41: Maximum discharge observed, 330 second-feet Apr. 1, 1939 (gage height, 3.00 feet), from rating curve extended above 130 second-foot; minimum observed, 0.5 second-foot Aug. 17, 1940 (gage height, 0.46 foot).

Remarks.- Records fair. Several irrigation diversions in upper valley above proposed Cottonwood Dam. Gage read once daily.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec.  | Jan.  | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|-------|------|------|------|-----|------|------|------|-------|
| 1   | 7.3  | 6.7  | 7.3   | b5.4  |      | 13   | 67   | 176 | 24   | 9.7  | 5.0  | 5.6   |
| 2   | 7.3  | 7.0  | 7.9   | b5.2  |      | 18   | 72   | 165 | 17   | 9.7  | 5.0  | 7.3   |
| 3   | 7.9  | 7.6  | 7.9   | b5.0  |      | 16   | 72   | 186 | 16   | 7.6  | 4.8  | 7.9   |
| 4   | 7.9  | 7.3  | 7.3   | b5.0  | b6.0 | 9.0  | 685  | 197 | 14   | 6.4  | a3.7 | 8.6   |
| 5   | 8.6  | 7.3  | 6.7   | b5.5  |      | 14   | all0 | 145 | 12   | 5.9  | 2.6  | 4.6   |
| 6   |      | 7.3  | 8.2   | b6.5  |      | 13   | 86   | 145 | 12   | 4.8  | 2.3  | 4.2   |
| 7   |      | 7.3  | 5.6   | 7.6   |      | 9.0  | 86   | 126 | 14   | 4.4  | 2.6  | 5.9   |
| 8   |      | 7.3  | 5.0   | 7.9   | b6.8 | 8.3  | 83   | 128 | 15   | 4.0  | 3.7  | 5.3   |
| 9   |      | 6.7  | 4.2   | 7.9   | b6.0 | 13   | all0 | 156 | 12   | 4.0  | 5.0  | 5.0   |
| 10  |      | 5.9  | 3.7   | 8.6   | b9.0 | 20   | 136  | 118 | 12   | 3.5  | 7.9  | 4.6   |
| 11  |      | 6.2  | b3.3  | 9.0   | 9.7  | 8.3  | 118  | 126 | 10   | 4.0  | 8.6  | 4.6   |
| 12  | a6.5 | 5.6  | b3.0  | 9.7   | 11   | 9.7  | 106  | 126 | 9.7  | 4.2  | 7.9  | 4.4   |
| 13  |      | 5.0  | b3.0  | 9.3   | 10   | 19   | 118  | 126 | 22   | 7.3  | 6.2  | 4.6   |
| 14  |      | 5.0  | b3.5  | 7.6   | 11   | 12   | 136  | 126 | 10   | 3.7  | 5.6  | 4.6   |
| 15  |      | 5.0  | *b5.0 | 7.9   | 10   | 13   | 155  | 106 | 11   | 3.7  | 4.2  | 5.0   |
| 16  |      | 5.6  | b5.0  | 7.3   | 10   | 16   | 118  | 99  | 11   | 6.2  | 5.6  | 5.0   |
| 17  |      | 5.9  | b5.8  | 7.6   | 9.7  | 14   | 103  | 103 | 8.3  | 6.2  | 4.2  | 5.0   |
| 18  | 5.3  | 5.9  | b6.0  | 7.3   | 10   | 22   | 93   | 103 | 7.6  | 5.6  | 17   | 4.6   |
| 19  | 5.3  | 6.2  | 6.7   | 9.0   | 9.7  | 26   | 99   | a72 | 6.4  | 7.3  | 23   | 4.6   |
| 20  | 5.3  | 5.0  | 8.7   | 7.9   | d9.6 | 25   | 99   | 41  | 7.6  | 8.3  | 10   | 5.0   |
| 21  | 5.6  | 6.7  | 6.2   | 7.6   | 10   | 32   | 98   | 36  | 19   | 7.0  | 8.6  | 4.6   |
| 22  | 5.6  | 7.0  | 8.7   | 7.3   | 10   | 33   | 101  | 30  | 12   | 5.9  | 12   | 4.6   |
| 23  | 5.6  | 5.9  | 6.7   | 7.3   | 11   | 35   | 118  | 28  | 7.6  | 6.4  | 15   | 5.0   |
| 24  | 5.6  | 6.4  | 7.3   | d7.6  | 11   | 29   | 136  | 27  | 5.3  | 6.4  | 12   | 6.2   |
| 25  | 5.9  | 6.2  | 6.7   | d8.0  | 9.7  | 25   | 176  | 27  | 5.3  | 7.0  | 10   | 5.6   |
| 26  | 6.2  | 6.7  | 6.2   | d8.5  | b9.0 | 27   | 155  | 27  | 4.8  | 7.0  | 11   | 5.9   |
| 27  | 6.4  | 5.0  | b6.2  | d7.6  | d8.5 | 35   | 165  | 28  | 4.8  | 7.6  | 9.7  | 6.7   |
| 28  | 6.4  | 6.7  | b6.2  | d7.0  | 12   | 38   | 176  | 32  | 5.3  | 6.7  | 9.0  | 6.2   |
| 29  | 6.7  | 6.2  | b6.0  | b6.6  | -    | 49   | 176  | 30  | 7.6  | 5.6  | 8.6  | 5.6   |
| 30  | 8.7  | 6.7  | b6.0  | b6.4  | -    | 64   | 186  | 28  | 7.6  | 5.6  | 8.6  | 5.0   |
| 31  | 6.7  | -    | b6.0  | *b6.2 | -    | 54   | -    | 25  | -    | 4.6  | 9.0  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 199.1            | 8.6     | 5.3     | 6.42 | 395                  |
| November.....           | 189.3            | 7.6     | 5.0     | 6.31 | 375                  |
| December.....           | 179.7            | 7.9     | 3.0     | 5.80 | 356                  |
| Calendar year 1940..... | 5,212.1          | 186     | 0.5     | 14.2 | 10,340               |
| January.....            | 227.3            | 9.7     | 5.0     | 7.33 | 451                  |
| February.....           | 247.7            | 12      | -       | 8.85 | 491                  |
| March.....              | 717.3            | 64      | 8.3     | 23.1 | 1,420                |
| April.....              | 3,539            | 186     | 67      | 118  | 7,020                |
| May.....                | 2,866            | 197     | 28      | 92.6 | 5,690                |
| June.....               | 330.9            | 24      | 4.8     | 11.0 | 686                  |
| July.....               | 186.3            | 9.7     | 3.5     | 6.01 | 370                  |
| August.....             | 246.4            | 23      | 2.3     | 7.95 | 489                  |
| September.....          | 164.8            | 8.6     | 4.2     | 5.49 | 327                  |
| Water year 1940-41..... | 9,093.8          | 197     | 2.3     | 24.9 | 18,030               |

\* Winter discharge measurements made on this day.

a No gage-height record; discharge computed on basis of unpublished record for Cottonwood Valley station furnished by U. S. Bureau of Reclamation, or interpolated.

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed on basis of unpublished record for Cottonwood Valley station.

## BEAR RIVER BASIN

## Little Bear River near Paradise, Utah

Location.- Water-stage recorder, lat. 41°35'25", long. 111°51'10", in SE¼ sec. 20, T. 10 N., R. 1 E., 1 mile upstream from backwater of Hyrum Reservoir, 2 miles northwest of Paradise, and 5 miles downstream from East Fork.

Drainage area.- 203 square miles.

Records available.- October 1938 to September 1941 in reports of Geological Survey.  
January 1936 to October 1939 (fragmentary) in reports of Little Bear River water commissioner.

Extremes.- Maximum discharge during year, 416 second-feet Apr. 6 (gage height, 2.86 feet); minimum, 6 second-feet Aug. 6.  
1938-41: Maximum discharge, 491 second-feet Apr. 4, 1939 (gage height, 3.17 feet); minimum, 4 second-feet Aug. 14, 1940.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Several diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec. | Jan.    | Feb. | Mar. | Apr.    | May | June | July | Aug. | Sept. |                      |  |  |
|-------------------------|------------------|------|------|---------|------|------|---------|-----|------|------|------|-------|----------------------|--|--|
| 1                       | 12               | 28   | 40   | 34      | b33  | 81   | 116     | 236 | 39   | 15   | 10   | 9     |                      |  |  |
| 2                       | 12               | 30   | 39   | b28     | b30  | 98   | 105     | 236 | 34   | 14   | 10   | 9     |                      |  |  |
| 3                       | 15               | 36   | 39   | b24     | b31  | 83   | 114     | 228 | 28   | 15   | 9    | 10    |                      |  |  |
| 4                       | 20               | 38   | 39   | b22     | b31  | 67   | 96      | 221 | 27   | 14   | 9    | 10    |                      |  |  |
| 5                       | 22               | 37   | 38   | b28     | b31  | 61   | 263     | 206 | 28   | 14   | 9    | 10    |                      |  |  |
| 6                       | 20               | 38   | 38   | 29      | b32  | 55   | 182     | 193 | 27   | 14   | 8    | 10    |                      |  |  |
| 7                       | 21               | 35   | 37   | 29      | 36   | a55  | 140     | 168 | 32   | 14   | 8    | 9     |                      |  |  |
| 8                       | 22               | 35   | 37   | 28      | 36   | a56  | 122     | 146 | 36   | 12   | 9    | 10    |                      |  |  |
| 9                       | 23               | 34   | 37   | 28      | 36   | a62  | 116     | 163 | 49   | 14   | 9    | 8     |                      |  |  |
| 10                      | 23               | 34   | 34   | 27      | 37   | a51  | 191     | 174 | 46   | 13   | 9    | 8     |                      |  |  |
| 11                      | 24               | 34   | 33   | 27      | 46   | a52  | 151     | 188 | 43   | 12   | 10   | 7     |                      |  |  |
| 12                      | 25               | 34   | 35   | 28      | 45   | a48  | 138     | 197 | 39   | 10   | 10   | 8     |                      |  |  |
| 13                      | 25               | 29   | b32  | 32      | 47   | a52  | 172     | 203 | 32   | 12   | 10   | 8     |                      |  |  |
| 14                      | 25               | 32   | b29  | 33      | 45   | a56  | 132     | 193 | 28   | 12   | 10   | 8     |                      |  |  |
| 15                      | 26               | 33   | b28  | 35      | 41   | 44   | 126     | 153 | 27   | 12   | 10   | 9     |                      |  |  |
| 16                      | 27               | 36   | b30  | 35      | 40   | 44   | 155     | 126 | 23   | 12   | 10   | 9     |                      |  |  |
| 17                      | 27               | 38   | b32  | 34      | 40   | 46   | 151     | 112 | 23   | 12   | 10   | 9     |                      |  |  |
| 18                      | 27               | 37   | 33   | 34      | 40   | 52   | 161     | 118 | 22   | 11   | 9    | 8     |                      |  |  |
| 19                      | 29               | 36   | 33   | 34      | 41   | 61   | 136     | 107 | 23   | 12   | 9    | 8     |                      |  |  |
| 20                      | 30               | 33   | 34   | 33      | 41   | 67   | 124     | 81  | 20   | 12   | 9    | 9     |                      |  |  |
| 21                      | 27               | 37   | 33   | 33      | 47   | 62   | 118     | 68  | 18   | 11   | 9    | 9     |                      |  |  |
| 22                      | 27               | 36   | 34   | 34      | 52   | 71   | 126     | 67  | 18   | 10   | 9    | 9     |                      |  |  |
| 23                      | 28               | 32   | 35   | 34      | 67   | 78   | 144     | 75  | 18   | 10   | 9    | 10    |                      |  |  |
| 24                      | 27               | 38   | 39   | 34      | 68   | 70   | 161     | 71  | 16   | 11   | 8    | 10    |                      |  |  |
| 25                      | 27               | 38   | 38   | 35      | 62   | 65   | 174     | 61  | 16   | 12   | 8    | 10    |                      |  |  |
| 26                      | 30               | 38   | 36   | 36      | 54   | a62  | 195     | 67  | 15   | 11   | 10   | 10    |                      |  |  |
| 27                      | 30               | 37   | 38   | 36      | 52   | a68  | 210     | 73  | 12   | 11   | 10   | 12    |                      |  |  |
| 28                      | 30               | 40   | 38   | 35      | 57   | a80  | 223     | 67  | 14   | 10   | 9    | 15    |                      |  |  |
| 29                      | 30               | 41   | 38   | 35      | -    | 90   | 230     | 54  | 14   | 10   | 9    | 15    |                      |  |  |
| 30                      | 30               | 41   | 39   | 35      | -    | 103  | 236     | 49  | 14   | 10   | 9    | 15    |                      |  |  |
| 31                      | 30               | -    | 38   | 35      | -    | 111  | -       | 46  | -    | 10   | 9    | -     |                      |  |  |
| Month                   |                  |      |      |         |      |      |         |     |      |      |      |       |                      |  |  |
|                         | Second-foot-days |      |      | Maximum |      |      | Minimum |     |      | Mean |      |       | Run-off in acre-feet |  |  |
| October.....            | 771              |      |      | 30      |      |      | 12      |     |      | 24.9 |      |       | 1,530                |  |  |
| November.....           | 1,063            |      |      | 41      |      |      | 28      |     |      | 35.4 |      |       | 2,110                |  |  |
| December.....           | 1,101            |      |      | 40      |      |      | 28      |     |      | 35.5 |      |       | 2,180                |  |  |
| Calendar year 1940..... | 15,328           |      |      | 287     |      |      | 5       |     |      | 42.0 |      |       | 30,400               |  |  |
| January.....            | 984              |      |      | 36      |      |      | 22      |     |      | 31.7 |      |       | 1,960                |  |  |
| February.....           | 1,234            |      |      | 69      |      |      | 30      |     |      | 44.1 |      |       | 2,450                |  |  |
| March.....              | 2,051            |      |      | 111     |      |      | 44      |     |      | 66.2 |      |       | 4,070                |  |  |
| April.....              | 4,698            |      |      | 263     |      |      | 96      |     |      | 157  |      |       | 9,320                |  |  |
| May.....                | 4,147            |      |      | 236     |      |      | 46      |     |      | 134  |      |       | 8,230                |  |  |
| June.....               | 780              |      |      | 49      |      |      | 12      |     |      | 26.0 |      |       | 1,550                |  |  |
| July.....               | 372              |      |      | 15      |      |      | 10      |     |      | 12.0 |      |       | 738                  |  |  |
| August.....             | 286              |      |      | 10      |      |      | 8       |     |      | 9.2  |      |       | 667                  |  |  |
| September.....          | 291              |      |      | 15      |      |      | 7       |     |      | 9.7  |      |       | 577                  |  |  |
| Water year 1940-41..... | 17,778           |      |      | 263     |      |      | 7       |     |      | 48.7 |      |       | 35,270               |  |  |

a No gage-height record; discharge computed on basis of records for Spanish Fork at Castilla.  
b Stage-discharge relation affected by ice.

Hyrum Reservoir near Hyrum, Utah

Location.- Mercury indicating gage, lat. 41°37'30", long. 111°52'30", in SE¼ sec. 7, T. 10 N., R. 1 E., at Hyrum Dam on Little Bear River 1 mile southwest of Hyrum. Datum of gage is at mean sea level.

Drainage area.- 220 square miles.

Records available.- October 1938 to September 1941.

Extremes.- Maximum contents during year, 18,680 acre-feet Apr. 29 to June 16 (elevation, 4,672.0 feet); minimum, 4,250 acre-feet Oct. 5 (elevation, 4,634.7 feet).

1938-41: Maximum contents, 18,680 acre-feet for periods in each year (elevation, 4,672.0 feet); minimum, that of Oct. 5, 1940.

Remarks.- Reservoir is formed by earth-fill dam; storage began in 1935. Capacity, 18,680 acre-feet between elevations 4,590 feet (bottom of reservoir) and 4,672 feet (top of spillway gates) above mean sea level. Dead storage, 3,370 acre-feet (below elevation 4,629.6 feet, sill of outlet canal). Figures given herein represent total contents. Elevation of spillway crest is 4,660 feet. Water is used for irrigation on the Hyrum project.

Contents, in acre-feet, water year October 1940 to September 1941

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

Monthly elevation and contents, water year October 1940 to September 1941

| Date                    | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30.....           | 4,634.9          | 4,570                | -   |
| Oct. 31.....            | 4,636.3          | 4,930                | +360  |
| Nov. 30.....            | 4,640.1          | 5,970                | +1,040                                      |
| Dec. 31.....            | 4,646.4          | 7,960                | +1,990                                      |
| Calendar year 1940..... | -                | -                    | -1,910                                      |
| Jan. 31.....            | 4,651.9          | 9,940                | +1,980                                      |
| Feb. 28.....            | 4,658.2          | 12,450               | +2,510                                      |
| Mar. 31.....            | 4,662.9          | 14,460               | +2,010                                      |
| Apr. 30.....            | 4,672.0          | 18,680               | +4,220                                      |
| May 31.....             | 4,672.0          | 18,680               | 0   |
| June 30.....            | 4,668.3          | 16,920               | -1,760                                      |
| July 31.....            | 4,688.3          | 12,490               | -4,430                                      |
| Aug. 31.....            | 4,647.6          | 8,380                | -4,110                                      |
| Sept. 30.....           | 4,636.3          | 5,460                | -2,920                                      |
| Water year 1940-41..... | -                | -                    | +890  |

## Little Bear River near Hyrum, Utah

Location.- Water-stage recorder, lat. 41°38'00", long. 111°53'15", in NW¼SW¼ sec. 6, T. 10 N., R. 1 E., 800 feet upstream from bridge, 1¼ miles downstream from Hyrum Dam, and 2 miles west of Hyrum.

Drainage area.- 222 square miles.

Records available.- October 1938 to September 1941.

Extremes (regulated).- Maximum discharge during year, 258 second-feet Apr. 30 and May 1 (gage height, 2.79 feet); minimum, 1 second-foot or less for several days during year. 1938-41: Maximum discharge, 421 second-foot Mar. 25, 1939 (gage height, 3.38 feet); minimum, 1 second-foot or less for periods in each year.

Remarks.- Records good except those below 5 second-feet, which are fair. Flow affected by many irrigation diversions above and regulated by Hyrum Reservoir (see preceding page).

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 3                | 4    | 1       | 4       | 1    | 6                    | 7    | 256 | 10   | 2    | 1    | 4     |
| 2                       | 4                | 4    | 1       | 4       | 2    | 6                    | 7    | 251 | 6    | 1    | 1    | 2     |
| 3                       | 5                | 4    | 1       | 4       | 4    | 6                    | 7    | 232 | 4    | 2    | 1    | 2     |
| 4                       | 4                | 4    | 1       | 4       | 4    | 6                    | 7    | 225 | 4    | 2    | 1    | 2     |
| 5                       | 4                | 4    | 1       | 4       | 4    | 6                    | S    | 221 | 4    | 2    | 1    | 2     |
| 6                       | 6                | 4    | 1       | 4       | 4    | 6                    | S    | 211 | 3    | 2    | 1    | 2     |
| 7                       | 6                | 4    | 1       | 4       | 4    | 9                    | 8    | 169 | 3    | 2    | 1    | 2     |
| 8                       | 6                | 6    | 1       | 4       | 4    | 24                   | 8    | 78  | 2    | 2    | 1    | 2     |
| 9                       | 5                | 7    | 1       | 4       | 4    | 42                   | 8    | 21  | 3    | 1    | 1    | 2     |
| 10                      | 5                | 7    | 1       | 4       | 4    | 47                   | S    | 100 | 3    | 1    | 1    | 2     |
| 11                      | 4                | 7    | 1       | 4       | 5    | 50                   | 8    | 156 | 4    | 1    | 1    | 2     |
| 12                      | 5                | 7    | 1       | 3       | 6    | 50                   | 25   | 156 | 6    | 1    | 1    | 2     |
| 13                      | 5                | 7    | 1       | 3       | 5    | 50                   | 54   | 140 | 4    | 1    | 2    | 2     |
| 14                      | 5                | 8    | 1       | 3       | 5    | 48                   | 62   | 117 | 3    | 1    | 1    | 2     |
| 15                      | 4                | 14   | 1       | 3       | 5    | 47                   | 87   | 153 | 2    | 1    | 1    | 1     |
| 16                      | 4                | 14   | 1       | 3       | 5    | 47                   | 86   | 120 | 4    | 1    | 1    | 2     |
| 17                      | 4                | 15   | 1       | 3       | 5    | 47                   | 100  | 49  | 2    | 1    | 1    | 3     |
| 18                      | 4                | 16   | 1       | 3       | 5    | 50                   | 164  | 17  | 2    | 1    | 1    | 2     |
| 19                      | 4                | 16   | 4       | 3       | 5    | 56                   | 165  | 15  | 1    | 1    | 1    | 2     |
| 20                      | 4                | 16   | 4       | 3       | 5    | 63                   | 151  | 14  | 1    | 1    | 1    | 2     |
| 21                      | 4                | 9    | 4       | 3       | 5    | 67                   | 135  | 7   | 1    | 2    | 1    | 2     |
| 22                      | 5                | 2    | 4       | 3       | 6    | 71                   | 135  | 7   | 1    | 1    | 1    | 1     |
| 23                      | 6                | 2    | 4       | 3       | 7    | 81                   | 135  | 8   | 2    | 1    | 1    | 4     |
| 24                      | 6                | 1    | 4       | 3       | 6    | 87                   | 137  | 6   | 2    | 1    | 1    | 7     |
| 25                      | 5                | 1    | 4       | 3       | 6    | 83                   | 137  | 7   | 2    | 1    | 1    | 5     |
| 26                      | 4                | 1    | 4       | 4       | 6    | 74                   | 151  | S   | 2    | 1    | 1    | 2     |
| 27                      | 4                | 1    | 4       | 4       | 6    | 52                   | 176  | 12  | 2    | 1    | 1    | 2     |
| 28                      | 4                | 1    | 4       | 3       | 5    | S                    | 203  | 42  | 2    | 1    | 1    | 2     |
| 29                      | 4                | 1    | 4       | 3       | -    | 8                    | 213  | 10  | 2    | 1    | 1    | 2     |
| 30                      | 4                | 1    | 4       | 3       | -    | 7                    | 242  | 32  | 2    | 1    | 1    | 5     |
| 31                      | 4                | -    | 4       | 3       | -    | 7                    | -    | 9   | -    | 1    | 1    | -     |
| Month                   |                  |      |         |         |      |                      |      |     |      |      |      |       |
|                         | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 141              |      | 6       | 3       | 4.5  | 280                  |      |     |      |      |      |       |
| November.....           | 186              |      | 16      | 1       | 6.3  | 373                  |      |     |      |      |      |       |
| December.....           | 70               |      | 4       | 1       | 2.3  | 139                  |      |     |      |      |      |       |
| Calendar year 1940..... | 6,212            |      | 195     | 1       | 17.0 | 12,320               |      |     |      |      |      |       |
| January.....            | 106              |      | 4       | 3       | 3.4  | 210                  |      |     |      |      |      |       |
| February.....           | 133              |      | 7       | 1       | 4.8  | 264                  |      |     |      |      |      |       |
| March.....              | 1,211            |      | 87      | 6       | 39.1 | 2,400                |      |     |      |      |      |       |
| April.....              | 2,645            |      | 242     | 7       | 88.2 | 5,250                |      |     |      |      |      |       |
| May.....                | 2,852            |      | 256     | 6       | 92.0 | 5,660                |      |     |      |      |      |       |
| June.....               | 89               |      | 10      | 1       | 3.0  | 177                  |      |     |      |      |      |       |
| July.....               | 39               |      | 2       | 1       | 1.3  | 77                   |      |     |      |      |      |       |
| August.....             | 36               |      | 4       | 1       | 1.2  | 71                   |      |     |      |      |      |       |
| September.....          | 73               |      | 7       | 1       | 2.4  | 145                  |      |     |      |      |      |       |
| Water year 1940-41..... | 7,583            |      | 256     | 1       | 20.8 | 15,040               |      |     |      |      |      |       |



BEAR RIVER BASIN

Logan River above State Dam, near Logan, Utah

Location.- Water-stage recorder and concrete control, lat. 41°44'40", long. 111°47'00", in NE ¼ Sec. 36, T. 12 N., R. 1 E., at Logan plant of Utah Power & Light Co., 125 feet upstream from tailrace, half a mile upstream from State Dam, and 2½ miles east of Logan.

Drainage area.- 218 square miles.

Records available.- May 1913 to September 1941. June 1896 to December 1912 at site a quarter of a mile downstream; flow at present site plus that of tailrace equivalent to flow at former site.

Average discharge.- 28 years (1913-41), 112 second-feet.

Extremes.- Maximum discharge during year, 402 second-feet May 23 (gage height, 2.75 feet); minimum daily, 8 second-feet Oct. 31, Nov. 1, 2, 4.  
1913-41: Maximum discharge, 2,000 second-feet Mar. 21, 1916 (gage height, 5.6 feet, datum then in use), from rating curve extended above 1,000 second-feet; minimum daily, 6 second-feet Nov. 7, 1940.

Remarks.- Records good except those for periods of doubtful gage-height record, which are fair. Water diverted from river and springs above station for power, irrigation, and municipal supply. Flow regulated by power plants above station.

Cooperation.- Water-stage recorder graph and five discharge measurements furnished by Utah Power & Light Co.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

|     |      |     |     |     |     |
|-----|------|-----|-----|-----|-----|
| 0.6 | 4    | 1.4 | 75  | 2.2 | 254 |
| .9  | 10.5 | 1.6 | 114 | 2.5 | 333 |
| 1.0 | 19   | 1.8 | 157 | 2.7 | 388 |
| 1.2 | 43   | 2.0 | 204 | 2.8 | 416 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May  | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1   | 11   | 8    | 9    | 9    | 9    | 10   | 18   | 26   | 75   | 14   | 15   | 12    |
| 2   | 11   | 8    | 9    | 9    | 10   | 11   | 21   | 56   | 58   | 14   | 14   | 12    |
| 3   | 13   | 9    | 9    | 9    | 9    | 12   | 21   | 79   | 56   | 14   | 12   | 13    |
| 4   | 12   | 8    | 9    | 9    | 9    | 11   | 20   | 94   | 52   | 14   | 12   | 13    |
| 5   | 9    | 9    | 9    | 10   | 9    | 11   | 17   | 77   | 58   | 14   | 12   | 12    |
| 6   | 10   | 9    | 9    | 9    | 9    | 11   | 16   | 63   | 56   | 14   | 13   | 12    |
| 7   | 9    | 9    | 9    | 9    | 9    | 10   | 16   | 46   | 61   | 14   | 13   | 12    |
| 8   | 9    | 10   | 9    | 9    | 9    | 10   | 15   | 24   | 61   | 14   | 15   | 13    |
| 9   | 9    | 9    | 9    | 9    | 10   | 10   | 16   | 35   | 54   | 14   | 16   | 13    |
| 10  | 9    | 9    | 9    | 9    | 10   | 10   | 16   | 81   | 44   | 14   | 15   | 12    |
| 11  | 10   | 9    | 9    | 9    | 10   | 10   | 15   | 100  | 33   | 14   | 16   | 12    |
| 12  | 10   | 9    | 9    | 9    | 11   | 10   | 15   | 95   | 27   | 14   | 16   | 12    |
| 13  | 10   | 9    | 9    | 9    | 10   | 10   | 19   | 116  | 30   | 14   | 26   | 12    |
| 14  | 9    | 9    | 9    | 9    | 11   | 10   | 16   | 124  | 28   | 14   | 13   | 12    |
| 15  | 9    | 9    | 9    | 9    | 11   | 16   | 80   | 480  | 20   | 14   | 13   | 12    |
| 16  | 9    | 10   | 9    | 9    | 10   | 13   | 104  | 460  | 20   | 14   | 13   | 15    |
| 17  | 9    | 10   | 9    | 9    | 10   | 12   | 106  | 480  | 19   | 14   | 14   | 13    |
| 18  | 9    | 9    | 9    | 9    | 10   | 11   | 102  | d100 | 19   | 14   | 13   | 12    |
| 19  | 9    | 9    | 10   | 9    | 10   | 11   | 96   | 94   | 18   | 22   | 13   | 12    |
| 20  | 10   | 9    | 9    | 9    | 10   | 10   | 90   | 52   | 18   | 27   | 13   | 12    |
| 21  | 10   | 9    | 9    | 9    | 11   | 10   | 88   | 34   | 16   | 23   | 13   | 12    |
| 22  | 9    | 9    | 9    | 9    | 10   | 10   | 88   | 58   | 16   | 23   | 13   | 12    |
| 23  | 9    | 9    | 9    | 9    | 11   | 10   | 94   | 113  | 15   | 23   | 12   | d12   |
| 24  | 9    | 9    | 9    | 9    | 10   | 10   | 76   | 98   | 14   | 24   | 11   | d12   |
| 25  | 9    | 10   | 9    | 9    | 10   | 13   | 24   | 83   | 14   | 23   | 12   | 12    |
| 26  | 10   | 9    | 9    | 9    | 10   | 12   | 38   | 114  | 14   | 23   | 13   | 10    |
| 27  | 9    | 9    | 9    | 9    | 10   | 15   | 54   | 153  | 15   | 22   | 11   | 11    |
| 28  | 9    | 9    | 9    | 9    | 10   | 16   | 29   | d140 | 15   | 20   | 12   | 11    |
| 29  | 9    | 9    | 9    | 9    | -    | 17   | 18   | d100 | 15   | 21   | 12   | 11    |
| 30  | 9    | 9    | 9    | 9    | -    | 17   | 28   | 94   | 15   | 16   | 12   | 11    |
| 31  | 8    | -    | 9    | 9    | -    | 18   | -    | 86   | -    | 14   | 12   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 298              | 13      | 8       | 9.6  | 591                  |
| November.....           | 271              | 10      | 8       | 9.0  | 538                  |
| December.....           | 250              | 10      | 9       | 9.0  | 555                  |
| Calendar year 1940..... | 9,674            | 310     | 8       | 26.4 | 19,150               |
| January.....            | 280              | 10      | 9       | 9.0  | 555                  |
| February.....           | 279              | 11      | 9       | 10.0 | 553                  |
| March.....              | 337              | 15      | 10      | 11.8 | 723                  |
| April.....              | 1,356            | 106     | 15      | 45.2 | 2,690                |
| May.....                | 2,548            | 153     | 24      | 82.2 | 5,060                |
| June.....               | 956              | 75      | 14      | 31.9 | 1,900                |
| July.....               | 533              | 27      | 14      | 17.2 | 1,060                |
| August.....             | 446              | 42      | 11      | 14.4 | 886                  |
| September.....          | 362              | 15      | 10      | 12.1 | 718                  |
| Water year 1940-41..... | 7,976            | 153     | 8       | 21.9 | 15,820               |

d Intake to stilling well clogged; discharge computed on basis of records for Weber River near Oakley and other nearby streams.

Note.- Discharge computed from mean of twice-daily gage readings Nov. 8 to Jan. 26 and Sept. 30.

## Utah Power &amp; Light Co.'s tailrace near Logan, Utah

Location.- Water-stage recorder and wooden control, lat. 41°44'40", long. 111°47'00", in NE $\frac{1}{4}$  sec. 36, T. 12 N., R. 1 E., 100 feet downstream from powerhouse of Utah Power & Light Co. and 2 $\frac{1}{2}$  miles east of Logan.

Records available.- May 1913 to September 1941.

Average discharge.- 28 years, 103 second-feet.

Extremes.- Maximum daily discharge during year, 186 second-feet May 31 and June 1 (gage height, 2.64 feet); no flow Apr. 17-23.  
1914-41: Maximum daily discharge, 194 second-feet Apr. 15, 1926; no flow for periods during several years.

Remarks.- Records excellent. Flow regulated by power plant above gage. Power canal diverts water from right bank of Logan River, in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 29, T. 12 N., R. 2 E. Water returned to river 125 feet below gaging station on Logan River above State Dam.

Cooperation.- Water-stage recorder graph and eight discharge measurements furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 81               | 80   | 71      | 61      | 60   | 65                   | 84   | 173 | 186  | 146  | 90   | 74    |
| 2                       | 81               | 79   | 69      | 57      | 59   | 68                   | 86   | 176 | 184  | 143  | 89   | 71    |
| 3                       | 88               | 81   | 69      | 52      | 56   | 68                   | 84   | 177 | 184  | 139  | 90   | 72    |
| 4                       | 81               | 80   | 69      | 51      | 57   | 69                   | 86   | 182 | 184  | 130  | 90   | 74    |
| 5                       | 90               | 80   | 68      | 59      | 59   | 67                   | 89   | 183 | 184  | 127  | 87   | 75    |
| 6                       | 90               | 78   | 69      | 70      | 60   | 65                   | 88   | 183 | 184  | 127  | 86   | 72    |
| 7                       | 89               | 78   | 69      | 68      | 59   | 67                   | 91   | 183 | 184  | 126  | 83   | 72    |
| 8                       | 89               | 78   | 68      | 66      | 61   | 66                   | 90   | 183 | 184  | 120  | 83   | 72    |
| 9                       | 84               | 78   | 69      | 63      | 65   | 66                   | 88   | 183 | 183  | 120  | 86   | 72    |
| 10                      | 84               | 79   | 68      | 61      | 60   | 67                   | 89   | 182 | 183  | 119  | 87   | 67    |
| 11                      | 84               | 77   | 62      | 61      | 63   | 66                   | 90   | 182 | 183  | 120  | 87   | 66    |
| 12                      | 86               | 74   | 59      | 61      | 75   | 65                   | 90   | 182 | 183  | 120  | 89   | 68    |
| 13                      | 83               | 69   | 53      | 62      | 72   | 64                   | 92   | 165 | 183  | 120  | 88   | 68    |
| 14                      | 83               | 68   | 52      | 62      | 68   | 65                   | 94   | 176 | 183  | 120  | 84   | 68    |
| 15                      | 84               | 75   | 48      | 63      | 65   | 55                   | 27   | 182 | 182  | 119  | 82   | 68    |
| 16                      | 83               | 76   | 50      | 64      | 63   | 62                   | 2    | 182 | 177  | 116  | 81   | 64    |
| 17                      | 79               | 77   | 63      | 64      | 63   | 62                   | 0    | 182 | 177  | 110  | 81   | 66    |
| 18                      | 74               | 79   | 66      | 61      | 63   | 63                   | 0    | 183 | 176  | 101  | 80   | 68    |
| 19                      | 74               | 77   | 67      | 61      | 64   | 69                   | 0    | 183 | 176  | 96   | 82   | 66    |
| 20                      | 77               | 76   | 67      | 61      | 62   | 75                   | 0    | 183 | 172  | 96   | 81   | 65    |
| 21                      | 76               | 75   | 65      | 61      | 63   | 75                   | 0    | 183 | 169  | 96   | 81   | 67    |
| 22                      | 78               | 72   | 60      | 62      | 66   | 78                   | 0    | 183 | 170  | 96   | 81   | 65    |
| 23                      | 81               | 66   | 62      | 62      | 67   | 79                   | 0    | 172 | 170  | 95   | 81   | 76    |
| 24                      | 81               | 63   | 66      | 62      | 68   | 79                   | 22   | 183 | 166  | 96   | 77   | 82    |
| 25                      | 78               | 74   | 67      | 62      | 68   | 80                   | 95   | 183 | 159  | 96   | 78   | 82    |
| 26                      | 80               | 76   | 66      | 62      | 66   | 75                   | 95   | 183 | 155  | 96   | 78   | 83    |
| 27                      | 84               | 70   | 64      | 62      | 65   | 75                   | 96   | 183 | 152  | 96   | 79   | 83    |
| 28                      | 84               | 64   | 66      | 58      | 66   | 79                   | 119  | 184 | 155  | 96   | 78   | 81    |
| 29                      | 84               | 75   | 66      | 55      | -    | 82                   | 156  | 184 | 152  | 96   | 74   | 76    |
| 30                      | 82               | 75   | 66      | 59      | -    | 84                   | 169  | 184 | 152  | 96   | 75   | 79    |
| 31                      | 81               | -    | 66      | 61      | -    | 83                   | -    | 186 | -    | 96   | 72   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 2,562            |      | 91      | 74      | 82.6 | 5,080                |      |     |      |      |      |       |
| November.....           | 2,248            |      | 81      | 65      | 75.0 | 4,460                |      |     |      |      |      |       |
| December.....           | 1,990            |      | 71      | 48      | 64.2 | 3,950                |      |     |      |      |      |       |
| Calendar year 1940..... | 37,506           |      | 183     | 48      | 102  | 74,380               |      |     |      |      |      |       |
| January.....            | 1,894            |      | 70      | 51      | 61.1 | 3,760                |      |     |      |      |      |       |
| February.....           | 1,780            |      | 75      | 56      | 63.6 | 3,530                |      |     |      |      |      |       |
| March.....              | 2,133            |      | 84      | 55      | 70.4 | 4,330                |      |     |      |      |      |       |
| April.....              | 2,022            |      | 169     | 0       | 67.4 | 4,010                |      |     |      |      |      |       |
| May.....                | 5,613            |      | 186     | 165     | 181  | 11,130               |      |     |      |      |      |       |
| June.....               | 5,236            |      | 186     | 152     | 175  | 10,390               |      |     |      |      |      |       |
| July.....               | 3,470            |      | 146     | 95      | 112  | 6,880                |      |     |      |      |      |       |
| August.....             | 2,560            |      | 90      | 72      | 82.6 | 5,080                |      |     |      |      |      |       |
| September.....          | 2,161            |      | 83      | 64      | 72.0 | 4,290                |      |     |      |      |      |       |
| Water year 1940-41..... | 33,720           |      | 186     | 0       | 92.4 | 66,890               |      |     |      |      |      |       |

Logan, Hycé Park & Smithfield Canal near Logan, Utah

Location.- Water-stage recorder and concrete rating flume, lat. 41°44'45", long. 111°47'05", in SE¼ sec. 25, T. 12 N., R. 1 E., 1¼ miles downstream from head of canal and 2½ miles east of Logan.

Records available.- June 1904 to December 1907, January 1909 to September 1941.

Average discharge.- 18 years (1923-41), 29.2 second-feet.

Extremes.- Maximum daily discharge during year, 124 second-feet May 24; no flow at times. 1906, 1924-41: Maximum daily discharge, 136 second-feet May 30, 31, 1930; no flow during periods of practically every year.

Remarks.- Records excellent except those for periods of no gage-height record, which are I&T. No diversions above gage. Flow regulated by head gates at diversion works. Canal diverts water from Logan River in NE¼NE¼ sec. 31, T. 12 N., R. 2 E., for irrigation and domestic supply in territory north of Logan.

Cooperation.- Six discharge measurements furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 13   | 5    | 5    | 5    | 4    | 5    | 0    |     | 92   | 36   | 26   | 20    |
| 2   | 12   | 5    | 5    | 5    | 4    |      | 0    |     | 91   | 36   | 26   | 20    |
| 3   | 10   | 5    | 5    | 5    | 4    |      | 0    |     | 90   | 36   | 26   | 20    |
| 4   | 7    | 5    | 5    | 5    | 4    |      | 0    |     | 91   | 36   | 26   | 20    |
| 5   | 5    | 5    | 5    | 5    | 4    |      | 0    | 20  | 88   | 37   | 26   | 20    |
| 6   | 5    | 5    | 5    | 5    | 5    |      | 0    |     | 83   | 37   | 27   | 20    |
| 7   | 5    | 5    | 5    | 5    | 5    |      | 0    |     | 71   | 35   | 27   | 20    |
| 8   | 5    | 5    | 5    | 5    | 5    |      | 5    |     | 65   | 35   | 26   | 20    |
| 9   | 5    | 5    | 5    | 5    | 5    |      | 0    |     | 52   | 35   | 27   | 20    |
| 10  | 5    | 5    | 5    | 5    | 5    |      | 0    |     | 65   | 53   | 32   | 28    |
| 11  | 5    | 5    | 5    | 5    | 5    |      | 0    | 75  | 52   | 30   | 24   | 20    |
| 12  | 5    | 5    | 5    | 5    | 5    |      | 0    | 82  | 54   | 30   | 0    | 16    |
| 13  | 5    | 5    | 5    | 5    | 5    |      | 0    | 95  | 56   | 30   | 12   | 16    |
| 14  | 5    | 5    | 5    | 5    | 5    |      | 0    | 108 | 60   | 30   | 25   | 16    |
| 15  | 5    | 5    | 5    | 5    | 5    |      | 0    | 111 | 65   | 30   | 24   | 17    |
| 16  | 5    | 5    | 5    | 5    | 5    | 0    | 0    | 109 | 68   | 30   | 23   | 17    |
| 17  | 5    | 5    | 5    | 4    | 4    | 0    | 0    | 114 | 64   | 29   | 22   | 17    |
| 18  | 7    | 5    | 6    | 4    | 5    | 0    | 0    | 123 | 59   | 28   | 22   | 17    |
| 19  | 9    | 5    | 6    | 4    | 4    | 5    | 6    | 119 | 52   | 29   | 22   | 17    |
| 20  | 9    | 5    | 5    | 4    | 5    |      | 12   | 113 | 47   | 29   | 22   | 17    |
| 21  | 9    | 5    | 5    | 4    | 5    | 5    | 16   | 110 | 46   | 28   | 22   | 17    |
| 22  | 7    | 5    | 5    | 4    | 5    |      | 16   | 113 | 44   | 27   | 22   | 17    |
| 23  | 5    | 5    | 5    | 4    | 5    |      | 16   | 119 | 41   | 25   | 22   | 5     |
| 24  | 5    | 5    | 6    | 4    | 5    |      | 16   | 124 | 38   | 24   | 22   | 3     |
| 25  | 5    | 6    | 6    | 4    | 5    |      | 16   | 120 | 37   | 26   | 22   | 5     |
| 26  | 5    | 5    | 5    | 4    | 5    | 0    |      | 116 | 37   | 27   | 22   | 5     |
| 27  | 5    | 5    | 5    | 4    | 5    | 0    |      | 79  | 37   | 27   | 23   | 4     |
| 28  | 5    | 5    | 5    | 4    | 5    | 0    | 18   | 68  | 35   | 27   | 23   | 4     |
| 29  | 5    | 5    | 5    | 4    | -    | 0    |      | 90  | 34   | 27   | 22   | 4     |
| 30  | 5    | 5    | 5    | 4    | -    | 0    |      | 91  | 35   | 26   | 20   | 4     |
| 31  | 5    | -    | 5    | 4    | -    | 0    | -    | 90  | -    | 26   | 20   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 193              | 13      | 5       | 6.2  | 383                  |
| November.....           | 150              | 5       | 5       | 5.0  | 298                  |
| December.....           | 159              | 6       | 5       | 5.1  | 315                  |
| Calendar year 1940..... | 5,486            | 131     | 0       | 23.2 | 16,850               |
| January.....            | 140              | 5       | 4       | 4.5  | 278                  |
| February.....           | 136              | 6       | 4       | 4.9  | 270                  |
| March.....              | 120              | -       | 0       | 3.9  | 236                  |
| April.....              | 188              | -       | 0       | 6.3  | 373                  |
| May.....                | 2,457            | 124     | -       | 79.3 | 4,870                |
| June.....               | 1,743            | 92      | 34      | 58.1 | 3,460                |
| July.....               | 940              | 37      | 24      | 30.3 | 1,860                |
| August.....             | 701              | 28      | 0       | 22.6 | 1,390                |
| September.....          | 439              | 20      | 3       | 14.6 | 869                  |
| Water year 1940-41..... | 7,365            | 124     | 0       | 20.2 | 14,600               |

Notes.- No gage-height record Nov. 27 to Dec. 3, Jan. 5-25, Mar. 2 to May 8; discharge interpolated or computed on basis of records for Utah Power & Light Co.'s tailrace and Logan River near Logan.

Blacksmith Fork above Utah Power & Light Co.'s dam near Hyrum, Utah

Location.- Water-stage recorder, lat. 41°37'20", long. 111°44'25", in NE¼ sec. 8, T. 10 N., R. 2 E., three-quarters of a mile upstream from diversion dam, 3¼ miles upstream from power plant of Utah Power & Light Co., and 6 miles east of Hyrum.

Drainage area.- 260 square miles.

Records available.- July 1900 to December 1902, November 1913 to September 1941.

Average discharge.- 27 years (1914-41), 122 second-feet.

Extremes.- Maximum discharge during year, 106 second-feet May 4 (gage height, 1.68 feet); minimum daily, 40 second-feet Dec. 15.  
1913-41: Maximum discharge, 1,620 second-feet May 15, 1917 (gage height, 6.5 feet, site and datum then in use), from rating curve extended above 600 second-feet; minimum daily, 29 second-feet Jan. 3, 1935.

Remarks.- Records good. Several small diversions above station for irrigation. Low flow may be affected by power plant above station.

Cooperation.- Water-stage recorder graph and six discharge measurements furnished by Utah Power & Light Co.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

|     |    |     |    |     |     |
|-----|----|-----|----|-----|-----|
| 1.0 | 36 | 1.4 | 70 | 1.8 | 123 |
| 1.2 | 51 | 1.6 | 95 | 2.0 | 154 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 46               | 49   | 49      | 47      | 45   | 56                   | 56   | 87  | 64   | 53   | 47   | 44    |
| 2                       | 46               | 49   | 49      | 45      | 45   | 59                   | 56   | 92  | 63   | 53   | 46   | 44    |
| 3                       | 50               | 49   | 49      | 43      | 45   | 56                   | 56   | 96  | 61   | 50   | 46   | 45    |
| 4                       | 52               | 49   | 49      | 43      | 45   | 54                   | 55   | 99  | 62   | 49   | 46   | 45    |
| 5                       | 48               | 48   | 46      | 49      | 45   | 52                   | 63   | 99  | 63   | 49   | 46   | 45    |
| 6                       | 48               | 48   | 48      | 49      | 46   | 52                   | 65   | 96  | 62   | 48   | 45   | 44    |
| 7                       | 48               | 49   | 48      | 48      | 48   | 52                   | 65   | 92  | 64   | 48   | 45   | 44    |
| 8                       | 48               | 48   | 47      | 48      | 47   | 51                   | 60   | 88  | 64   | 48   | 46   | 44    |
| 9                       | 48               | 48   | 47      | 46      | 47   | 51                   | 59   | 87  | 64   | 47   | 47   | 44    |
| 10                      | 48               | 48   | 47      | 46      | 48   | 49                   | 62   | 86  | 63   | 47   | 47   | 44    |
| 11                      | 49               | 49   | 45      | 46      | 49   | 49                   | 61   | 92  | 60   | 47   | 47   | 44    |
| 12                      | 49               | 49   | 45      | 46      | 61   | 47                   | 60   | 94  | 59   | 48   | 48   | 44    |
| 13                      | 49               | 45   | 42      | 46      | 54   | 49                   | 62   | 98  | 58   | 48   | 48   | 44    |
| 14                      | 48               | 45   | a41     | 47      | 51   | 48                   | 62   | 96  | 57   | 48   | 48   | 44    |
| 15                      | 49               | 46   | a40     | 47      | 49   | 48                   | 61   | 92  | 57   | 48   | 47   | 44    |
| 16                      | 49               | 48   | a42     | 47      | 48   | 47                   | 63   | 90  | 56   | 47   | 47   | 44    |
| 17                      | 49               | 49   | a46     | 47      | 47   | 49                   | 64   | 86  | 56   | 47   | 46   | 44    |
| 18                      | 48               | 49   | 49      | 47      | 47   | 49                   | 63   | 82  | 56   | 46   | 47   | 44    |
| 19                      | 48               | 49   | 49      | 46      | 47   | 51                   | 62   | 80  | 56   | 48   | 47   | 44    |
| 20                      | 49               | 49   | 49      | 45      | 47   | 49                   | 59   | 80  | 56   | 51   | 45   | 44    |
| 21                      | 49               | 49   | 49      | 45      | 49   | 51                   | 62   | 76  | 55   | 48   | 45   | 44    |
| 22                      | 49               | 49   | 48      | 45      | 51   | 52                   | 61   | 70  | 54   | 47   | 45   | 42    |
| 23                      | 49               | 49   | 49      | 45      | 53   | 52                   | 61   | 69  | 53   | 47   | 45   | 42    |
| 24                      | 49               | 49   | 50      | 45      | 57   | 52                   | 65   | 68  | 53   | 47   | 45   | 43    |
| 25                      | 49               | 48   | 49      | 46      | 56   | 51                   | 71   | 71  | 52   | 49   | 45   | 44    |
| 26                      | 50               | 48   | 48      | 46      | 53   | 50                   | 77   | 72  | 52   | 51   | 45   | 42    |
| 27                      | 52               | 49   | 49      | 45      | 49   | 51                   | 81   | 72  | 52   | 50   | 45   | 41    |
| 28                      | 51               | 49   | 49      | 47      | 54   | 51                   | 81   | 72  | 52   | 49   | 45   | 42    |
| 29                      | 51               | 49   | 50      | 48      | -    | 52                   | 86   | 72  | 53   | 47   | 45   | 43    |
| 30                      | 53               | 49   | 49      | 47      | -    | 56                   | 87   | 68  | 52   | 46   | 44   | 42    |
| 31                      | 52               | -    | 49      | 46      | -    | 56                   | -    | 63  | -    | 47   | 44   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 1,523            |      | 53      | 48      | 49.1 | 3,020                |      |     |      |      |      |       |
| November.....           | 1,451            |      | 49      | 45      | 48.4 | 2,880                |      |     |      |      |      |       |
| December.....           | 1,468            |      | 50      | 40      | 47.4 | 2,910                |      |     |      |      |      |       |
| Calendar year 1940..... | 21,947           |      | 106     | 40      | 60.0 | 43,530               |      |     |      |      |      |       |
| January.....            | 1,433            |      | 49      | 43      | 46.2 | 2,840                |      |     |      |      |      |       |
| February.....           | 1,383            |      | 61      | 45      | 49.4 | 2,740                |      |     |      |      |      |       |
| March.....              | 1,592            |      | 59      | 47      | 51.4 | 3,160                |      |     |      |      |      |       |
| April.....              | 1,946            |      | 87      | 55      | 64.9 | 3,560                |      |     |      |      |      |       |
| May.....                | 2,555            |      | 99      | 63      | 83.4 | 5,130                |      |     |      |      |      |       |
| June.....               | 1,729            |      | 64      | 52      | 57.6 | 3,450                |      |     |      |      |      |       |
| July.....               | 1,498            |      | 53      | 46      | 48.3 | 2,970                |      |     |      |      |      |       |
| August.....             | 1,424            |      | 48      | 44      | 45.9 | 2,820                |      |     |      |      |      |       |
| September.....          | 1,308            |      | 45      | 41      | 43.6 | 2,590                |      |     |      |      |      |       |
| Water year 1940-41..... | 19,340           |      | 99      | 40      | 53.0 | 38,350               |      |     |      |      |      |       |

a No gage-height record; discharge computed on basis of records for Spanish Fork at Castilla and weather records.

## West Side Canal near Collinston, Utah

Location.- Water-stage recorder, lat. 49°50', long. 112°04', in SW¼ sec. 27, T. 13 N., R. 2 W., 4,200 feet downstream from Cutler Dam and 4 miles north of Collinston.

Records available.- June 1912 to September 1941.

Average discharge.- 29 years, 224 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 709 second-feet June 20; no flow Mar. 7 to Apr. 30.

1912-41: Maximum daily discharge, that of June 20, 1941; no flow during periods of each year except 1914.

Remarks.- Records good except those for period when recorder was not operating, which are fair. Canal diverts from west side of Bear River in NW¼SW¼ sec. 26, T. 13 N., R. 2 W., at dam at which Hammond (East Side) Canal and intake of Cutler power plant also divert. Water used for irrigation in eastern Box Elder County.

Cooperation.- Water-stage recorder graph and four discharge measurements furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 79   | 74   | 51   |      | 17   |      |      | 62  | 459  | 661  | 493  | 554   |
| 2   | 74   | 74   | 51   |      |      |      |      | 126 | 511  | 657  | 517  | 582   |
| 3   | 42   | 74   | 52   |      |      |      |      | 144 | 562  | 613  | 535  | 529   |
| 4   | 61   | 76   | 52   |      |      |      |      | 54  | 552  | 571  | 565  | 490   |
| 5   | 80   | 74   | 52   |      |      |      |      | 83  | 495  | 617  | 571  | 483   |
| 6   | 80   | 72   |      |      |      | 7    |      | 63  | 537  | 629  | 575  | 469   |
| 7   | 80   | 72   |      |      |      |      |      | 52  | 468  | 629  | 575  | 464   |
| 8   | 75   | 72   |      |      |      |      |      | 51  | 186  | 629  | 567  | 465   |
| 9   | 94   | 72   |      |      |      |      |      | 112 | 195  | 629  | 544  | 465   |
| 10  | 86   | 71   | 52   |      |      |      |      | 180 | 195  | 633  | 526  | 465   |
| 11  | 103  | 72   |      |      |      |      |      | 266 | 195  | 631  | 455  | 465   |
| 12  | 104  | 72   |      |      |      | 0    |      | 305 | 247  | 631  | 488  | 465   |
| 13  | 126  | 71   |      |      |      | 0    |      | 307 | 315  | 629  | 495  | 465   |
| 14  | 127  | 70   |      |      | 15   | 0    |      | 263 | 345  | 629  | 495  | 467   |
| 15  | 128  | 69   |      |      |      | 0    |      | 377 | 366  | 619  | 490  | 465   |
| 16  | 129  | 64   | 35   | 18   |      | 0    |      | 408 | 504  | 617  | 488  | 465   |
| 17  | 129  | 63   |      |      |      | 0    |      | 448 | 588  | 617  | 483  | 465   |
| 18  | 129  | 62   |      |      |      | 0    |      | 522 | 611  | 617  | 464  | 465   |
| 19  | 128  | 60   |      |      |      | 0    |      | 535 | 655  | 501  | 488  | 459   |
| 20  | 162  | 60   |      |      |      | 0    |      | 562 | 709  | 539  | 501  | 442   |
| 21  | 190  | 59   |      |      |      | 0    |      | 577 | 694  | 406  | 476  | 433   |
| 22  | 182  | 56   |      |      |      | 0    |      | 623 | 641  | 455  | 476  | 571   |
| 23  | 168  | 48   |      |      |      | 0    |      | 684 | 657  | 511  | 477  | 346   |
| 24  | 164  | 48   |      |      |      | 0    |      | 694 | 659  | 467  | 477  | 317   |
| 25  | 149  | 48   | 20   |      |      | 0    |      | 690 | 682  | 440  | 477  | 297   |
| 26  | 99   | 48   |      |      |      | 0    |      | 613 | 678  | 459  | 477  | 298   |
| 27  | 75   | 49   |      |      | 7    | 0    |      | 502 | 677  | 413  | 493  | 314   |
| 28  | 75   | 49   |      |      |      | 0    |      | 408 | 682  | 488  | 519  | 327   |
| 29  | 75   | 50   |      |      |      | 0    |      | 403 | 680  | 517  | 520  | 315   |
| 30  | 74   | 50   |      |      |      | 0    |      | 455 | 667  | 476  | 560  | 300   |
| 31  | 74   | -    |      |      |      | 0    |      | 457 | -    | 472  | 556  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 3,341            | 190     | 42      | 108  | 6,630                |
| November.....           | 1,689            | 76      | 48      | 53.3 | 3,770                |
| December.....           | 1,062            | -       | -       | 35.2 | 2,170                |
| Calendar year 1940..... | 84,709           | 700     | 0       | 231  | 168,000              |
| January.....            | 558              | -       | -       | 18   | 1,110                |
| February.....           | 398              | -       | -       | 14.2 | 789                  |
| March.....              | 77               | -       | -       | 2.5  | 153                  |
| April.....              | 0                | -       | -       | 0    | 0                    |
| May.....                | 11,129           | 694     | 62      | 369  | 22,070               |
| June.....               | 15,426           | 709     | 186     | 514  | 30,600               |
| July.....               | 17,342           | 661     | 406     | 569  | 34,400               |
| August.....             | 16,613           | 575     | 455     | 510  | 31,360               |
| September.....          | 13,077           | 571     | 297     | 436  | 25,940               |
| Water year 1940-41..... | 80,152           | 709     | 0       | 220  | 169,000              |

Notes.- No gage-height record Nov. 25 to Mar. 11; discharge computed on basis of one discharge measurement, one daily gage reading, and power plant operator's notes on changes at head gates.

## Hammond (East Side) Canal near Collinston, Utah

Location.- Water-stage recorder, lat. 41°50', long. 112°03', in SE $\frac{1}{4}$  sec. 27, T. 13 N., R. 2 W., 3,600 feet downstream from Cutler Dam and 4 miles north of Collinston.

Records available.- June 1912 to September 1941.

Average discharge.- 24 years (1917-41), 51.2 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 161 second-feet June 26; no flow Nov. 20 to Apr. 30.  
1912-41: Maximum daily discharge, 162 second-feet June 28, July 1, 1932, June 27, 28, 1933; no flow for periods during each year.

Remarks.- Records good. Canal diverts from east side of Bear River in NW $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 26, T. 13 N., R. 2 W., at dam at which West Side Canal and intake of Cutler power plant also divert. Water used for irrigation in eastern Box Elder County.

Cooperation.- Water-stage recorder graph and three discharge measurements furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                      | Oct.             | Nov.    | Dec.    | Jan. | Feb.                 | Mar. | Apr. | May | June | July | Aug. | Sept. |
|--------------------------|------------------|---------|---------|------|----------------------|------|------|-----|------|------|------|-------|
| 1                        |                  |         |         |      |                      |      |      | 49  | 59   | 156  | 150  | 125   |
| 2                        | 10               | 9       |         |      |                      |      |      | 62  | 95   | 157  | 140  | 124   |
| 3                        | 8                | 9       |         |      |                      |      |      | 42  | 120  | 149  | 144  | 119   |
| 4                        | a6               | 9       |         |      |                      |      |      | 29  | 117  | 144  | 148  | 109   |
| 5                        | 6                | 8       |         |      |                      |      |      | 28  | 104  | 140  | 148  | 103   |
| 6                        | 4                | 7       |         |      |                      |      |      | 28  | 125  | 138  | 145  | 99    |
| 7                        | 11               | 7       |         |      |                      |      |      | 27  | 80   | 140  | 144  | 99    |
| 8                        | 15               | 7       |         |      |                      |      |      | 27  | 12   | 150  | 142  | 102   |
| 9                        | 13               | 7       |         |      |                      |      |      | 30  | 2    | 150  | 139  | 101   |
| 10                       | 14               | 7       |         |      |                      |      |      | 37  | 3    | 148  | 140  | 101   |
| 11                       | 13               | 7       |         |      |                      |      |      | 72  | 3    | 148  | 127  | 102   |
| 12                       | 14               | 7       |         |      |                      |      |      | 97  | 6    | 148  | 134  | 111   |
| 13                       | 21               | 7       |         |      |                      |      |      | 96  | 57   | 148  | 135  | 110   |
| 14                       | 22               | 6       |         |      |                      |      |      | 32  | 98   | 147  | 135  | 110   |
| 15                       | 26               | 6       |         |      |                      |      |      | 33  | 95   | 146  | 125  | 109   |
| 16                       | 23               | 5       |         |      |                      |      |      | 101 | 115  | 146  | 120  | 108   |
| 17                       | 23               | 5       |         |      |                      |      |      | 116 | 141  | 146  | 115  | 110   |
| 18                       | 23               | 5       |         |      |                      |      |      | 134 | 153  | 146  | 104  | 117   |
| 19                       | 38               | 2       |         |      |                      |      |      | 108 | 159  | 123  | 106  | 115   |
| 20                       | 53               | 0       |         |      |                      |      |      | 127 | 160  | 103  | 106  | 108   |
| 21                       | 54               | 0       |         |      |                      |      |      | 141 | 157  | 101  | 106  | 102   |
| 22                       | 53               | 0       |         |      |                      |      |      | 146 | 150  | 103  | 106  | 91    |
| 23                       | 50               | 0       |         |      |                      |      |      | 152 | 159  | 116  | 105  | 68    |
| 24                       | 50               | 0       |         |      |                      |      |      | 152 | 160  | 120  | 105  | 80    |
| 25                       | 43               | 0       |         |      |                      |      |      | 148 | 160  | 122  | 105  | 58    |
| 26                       | 21               | 0       |         |      |                      |      |      | 120 | 161  | 125  | 111  | 58    |
| 27                       | 11               | 0       |         |      |                      |      |      | 84  | 160  | 120  | 128  | 64    |
| 28                       | 9                | 0       |         |      |                      |      |      | 58  | 159  | 123  | 123  | 69    |
| 29                       | 9                | 0       |         |      |                      |      |      | 58  | 160  | 140  | 125  | 67    |
| 30                       | 9                | 0       |         |      |                      |      |      | 58  | 157  | 131  | 118  | 62    |
| 31                       | 10               | -       |         |      |                      |      |      | 59  | -    | 128  | 113  | -     |
| Month                    |                  |         |         |      |                      |      |      |     |      |      |      |       |
| October.....             | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |      |      |     |      |      |      |       |
| October.....             | 687              | 54      | 4       | 21.5 | 1,320                |      |      |     |      |      |      |       |
| November.....            | 129              | 9       | 0       | 4.3  | 256                  |      |      |     |      |      |      |       |
| December.....            | 0                | 0       | 0       | 0    | 0                    |      |      |     |      |      |      |       |
| Calendar year 1940 ..... | 18,086           | 165     | 0       | 49.4 | 35,880               |      |      |     |      |      |      |       |
| January.....             | 0                | 0       | 0       | 0    | 0                    |      |      |     |      |      |      |       |
| February.....            | 0                | 0       | 0       | 0    | 0                    |      |      |     |      |      |      |       |
| March.....               | 0                | 0       | 0       | 0    | 0                    |      |      |     |      |      |      |       |
| April.....               | 0                | 0       | 0       | 0    | 0                    |      |      |     |      |      |      |       |
| May.....                 | 2,549            | 152     | 27      | 82.2 | 5,060                |      |      |     |      |      |      |       |
| June.....                | 3,275            | 161     | 2       | 109  | 6,500                |      |      |     |      |      |      |       |
| July.....                | 4,202            | 157     | 101     | 136  | 8,330                |      |      |     |      |      |      |       |
| August.....              | 3,872            | 148     | 104     | 125  | 7,680                |      |      |     |      |      |      |       |
| September.....           | 2,879            | 125     | 58      | 96.0 | 5,710                |      |      |     |      |      |      |       |
| Water year 1940-41.....  | 17,873           | 161     | 0       | 48.1 | 34,860               |      |      |     |      |      |      |       |

a No gage-height record; discharge interpolated.

## Malad River below springs near Malad, Idaho

Location.- Water-stage recorder, lat. 42°13', long. 112°22', in sec. 10, T. 14 S., R. 35 E., half a mile downstream from springs which form river, 1 3/8 miles upstream from Samaria Dam, 8 1/4 miles upstream from Little Malad River, and 5 1/4 miles northwest of Malad.

Records available.- November 1940 to September 1941. November 1931 to September 1932 at site 1 1/4 miles downstream.

Extremes.- Maximum discharge during period, 19 second-feet Aug. 18 (gage height, 1.84 feet); minimum discharge observed, 5.8 second-feet Nov. 24 (gage height, 0.95 foot). 1931-32, 1940-41: Maximum discharge, that of Aug. 18, 1941; minimum, 4.4 second-feet Nov. 3, 1931 (discharge measurement).

Remarks.- Records good. No diversion or regulation above station.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                 | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                   |                  | -    | 5.9     | 7.2     | 8.4  | 9.7                  | 12   | 14  | 12   | 11   | 8.4  | 8.0   |
| 2                   |                  | -    | 5.9     | 7.3     | 8.4  | 9.5                  | 12   | 14  | 12   | 10   | 8.4  | 8.0   |
| 3                   |                  | -    | 6.0     | 7.4     | 8.4  | 9.4                  | 12   | 14  | 12   | 10   | 8.3  | 8.0   |
| 4                   |                  | -    | 6.0     | 7.4     | 8.4  | 9.5                  | 12   | 14  | 12   | 10   | 8.3  | 7.9   |
| 5                   |                  | -    | 6.0     | 7.5     | 8.6  | 9.5                  | 12   | 14  | 12   | 10   | 8.3  | 8.0   |
| 6                   |                  | -    | 6.0     | 7.6     | 8.6  | 9.5                  | 12   | 14  | 12   | 9.9  | 8.3  | 8.0   |
| 7                   |                  | -    | 6.1     | 7.7     | 8.6  | 9.7                  | 13   | 14  | 12   | 9.8  | 8.3  | 8.0   |
| 8                   |                  | -    | 6.1     | 7.8     | 8.6  | 9.8                  | 13   | 14  | 11   | 9.7  | 8.7  | 8.0   |
| 9                   |                  | -    | 6.1     | 7.8     | 8.7  | 9.7                  | 13   | 14  | 11   | 9.5  | 8.3  | 8.0   |
| 10                  |                  | -    | 6.1     | 7.9     | 8.8  | 9.8                  | 13   | 14  | 11   | 9.4  | 8.2  | 8.0   |
| 11                  |                  | -    | 6.2     | 8.0     | 9.0  | 10                   | 13   | 14  | 11   | 9.4  | 8.2  | 8.0   |
| 12                  |                  | -    | 6.2     | 8.0     | 8.9  | 10                   | 13   | 14  | 11   | 9.3  | 9.5  | 8.1   |
| 13                  |                  | -    | 6.2     | 8.0     | 8.8  | 10                   | 13   | 14  | 11   | 9.2  | 8.1  | 8.2   |
| 14                  |                  | -    | 6.2     | 8.0     | 8.9  | 10                   | 13   | 14  | 11   | 9.2  | 8.1  | 8.2   |
| 15                  |                  | -    | 6.2     | 8.0     | 8.9  | 10                   | 13   | 13  | 11   | 9.2  | 8.1  | 8.2   |
| 16                  |                  | -    | 6.2     | 8.0     | 8.9  | 11                   | 13   | 13  | 11   | 9.2  | 8.1  | 8.1   |
| 17                  |                  | -    | 6.4     | 8.0     | 9.0  | 11                   | 13   | 13  | 10   | 9.0  | 8.6  | 8.1   |
| 18                  |                  | -    | 6.4     | 8.0     | 9.0  | 11                   | 13   | 13  | 10   | 9.0  | 8.8  | 8.2   |
| 19                  |                  | -    | 6.3     | 8.0     | 9.0  | 11                   | 13   | 13  | 10   | 9.0  | 8.1  | 8.1   |
| 20                  |                  | -    | 6.4     | 8.0     | 9.0  | 11                   | 13   | 13  | 10   | 8.9  | 8.0  | 8.1   |
| 21                  |                  | -    | 6.4     | 8.0     | 9.2  | 11                   | 14   | 13  | 10   | 8.9  | 8.0  | 8.0   |
| 22                  |                  | -    | 6.5     | 8.1     | 9.2  | 11                   | 14   | 13  | 10   | 8.9  | 8.2  | 8.1   |
| 23                  |                  | -    | 6.6     | 8.1     | 9.3  | 11                   | 14   | 13  | 10   | 8.9  | 8.0  | 8.1   |
| 24                  |                  | 5.8  | 6.8     | 8.2     | 9.3  | 11                   | 14   | 12  | 10   | 8.8  | 8.0  | 8.2   |
| 25                  |                  | 5.8  | 6.9     | 8.2     | 9.2  | 11                   | 14   | 12  | 9.8  | 8.8  | 8.0  | 8.1   |
| 26                  |                  | 5.8  | 7.0     | 8.2     | 9.2  | 11                   | 14   | 12  | 9.8  | 8.7  | 8.0  | 8.2   |
| 27                  |                  | 5.8  | 7.0     | 8.2     | 9.2  | 12                   | 14   | 12  | 9.7  | 8.7  | 8.0  | 8.1   |
| 28                  |                  | 5.8  | 7.0     | 8.4     | 9.3  | 12                   | 14   | 12  | 9.5  | 8.6  | 8.0  | 8.1   |
| 29                  |                  | 5.9  | 7.1     | 8.4     | -    | 12                   | 14   | 12  | 9.4  | 8.6  | 8.0  | 8.1   |
| 30                  |                  | 5.9  | 7.2     | 8.4     | -    | 12                   | 14   | 12  | 10   | 8.6  | 7.9  | 8.2   |
| 31                  |                  | -    | 7.2     | 8.4     | -    | 12                   | -    | 12  | -    | 8.4  | 8.0  | -     |
| Month               | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....        | -                |      | -       | -       | -    | -                    |      |     |      |      |      |       |
| November 24-31..... | 40.8             |      | 5.9     | 5.8     | 5.83 | 61                   |      |     |      |      |      |       |
| December.....       | 198.6            |      | 7.2     | 5.9     | 6.41 | 394                  |      |     |      |      |      |       |
| Calendar year ..... | -                |      | -       | -       | -    | -                    |      |     |      |      |      |       |
| January.....        | 246.2            |      | 8.4     | 7.2     | 7.94 | 488                  |      |     |      |      |      |       |
| February.....       | 248.8            |      | 9.3     | 6.4     | 8.89 | 493                  |      |     |      |      |      |       |
| March.....          | 327.1            |      | 12      | 9.4     | 10.6 | 649                  |      |     |      |      |      |       |
| April.....          | 394              |      | 14      | 12      | 13.1 | 781                  |      |     |      |      |      |       |
| May.....            | 409              |      | 14      | 12      | 13.2 | 811                  |      |     |      |      |      |       |
| June.....           | 321.2            |      | 12      | 9.4     | 10.7 | 637                  |      |     |      |      |      |       |
| July.....           | 286.6            |      | 11      | 8.4     | 9.25 | 568                  |      |     |      |      |      |       |
| August.....         | 255.2            |      | 9.5     | 7.9     | 8.23 | 506                  |      |     |      |      |      |       |
| September.....      | 242.4            |      | 8.2     | 7.9     | 8.06 | 481                  |      |     |      |      |      |       |
| The period.....     | -                |      | -       | -       | -    | 5,890                |      |     |      |      |      |       |

Note.- No recorder record Nov. 24 to Jan. 27; discharge interpolated on basis of several staff-gage readings.

## Malad River near Samaria, Idaho

Location.- Water-stage recorder, lat. 42°08', long. 112°20', in sec. 11, T. 15 S., R. 35 E., at Lewis Waldron Ranch, a quarter of a mile upstream from bridge on Malad-Samaria highway, three-eighths of a mile downstream from Gwenford Mill ditch, and 1½ miles north of Samaria.

Records available.- December 1940 to September 1941.

Extremes.- Maximum discharge during period, 64 second-feet Aug. 17 (gage height, 2.19 feet), from rating curve extended above 15 second-feet; minimum, 0.2 second-foot May 10, July 13; minimum gage height, 0.36 foot May 10.

Remarks.- Records fair except those prior to Jan. 29, which are poor. Flow regulated by Samaria Reservoir and waste from Malad River bypass channel and Warm Springs Canal. Many diversions above and below station for irrigation.

## Discharge, in second-feet, water year October 1940 to September 1941

| Day                 | Oct.             | Nov. | Dec.    | Jan.    | Feb.  | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|---------------------|------------------|------|---------|---------|-------|----------------------|------|-----|------|------|------|-------|
| 1                   |                  |      | -       | 8.4     | 7.7   | 12                   | 6.6  | 6.1 | 0.4  | 1.7  | 3.7  | 4.1   |
| 2                   |                  |      | -       | 8.2     | 7.7   | 18                   | 8.2  | 5.7 | .6   | .6   | 3.7  | 4.3   |
| 3                   |                  |      | -       | 8.3     | 7.7   | 12                   | 6.9  | 5.9 | .8   | .9   | 3.6  | 4.8   |
| 4                   |                  |      | -       | 8.4     | 7.7   | 8.7                  | 11   | 6.4 | 1.4  | 2.4  | 3.2  | 4.8   |
| 5                   |                  |      | -       | 8.4     | 7.7   | 8.2                  | 10   | 5.9 | 1.6  | 3.2  | 2.5  | 3.4   |
| 6                   |                  |      | -       | 8.4     | 7.4   | 7.7                  | 9.9  | 6.6 | 1.7  | 3.9  | 2.4  | 3.0   |
| 7                   |                  |      | -       | 7.6     | 7.4   | 7.4                  | 9.9  | 6.1 | 2.5  | 3.9  | 2.5  | 1.8   |
| 8                   |                  |      | -       | 6.9     | 7.4   | 7.4                  | 9.3  | 5.9 | 2.1  | .9   | 2.7  | 1.6   |
| 9                   |                  |      | -       | 6.5     | 7.4   | 7.1                  | 5.9  | 4.1 | 3.4  | .8   | 3.6  | 1.7   |
| 10                  |                  |      | -       | 6.1     | 7.7   | 6.9                  | 6.1  | 1.8 | 3.7  | 1.1  | 3.7  | 1.4   |
| 11                  |                  |      | -       | 6.1     | 8.7   | 6.9                  | 5.9  | .6  | 2.1  | 1.1  | 3.2  | 1.4   |
| 12                  |                  |      | -       | 6.1     | 11    | 6.9                  | 5.7  | .8  | 1.0  | 2.0  | 6.6  | .8    |
| 13                  |                  |      | -       | 6.1     | 7.7   | 7.1                  | 6.6  | .8  | 1.6  | 2.5  | 3.7  | .5    |
| 14                  |                  |      | -       | 6.2     | 7.4   | 6.9                  | 6.1  | 1.2 | 2.4  | .4   | 3.4  | .6    |
| 15                  |                  |      | -       | 6.4     | 6.6   | 6.9                  | 6.1  | .9  | 2.5  | .4   | 2.4  | .8    |
| 16                  |                  |      | 7.9     | 6.6     | 7.1   | 6.9                  | 6.6  | .9  | 2.1  | .4   | 2.2  | .8    |
| 17                  |                  |      | 7.9     | 6.9     | 6.9   | 6.9                  | 5.9  | .9  | 1.5  | .8   | 9.1  | .8    |
| 18                  |                  |      | 7.6     | 7.0     | 7.4   | 7.7                  | 5.7  | 1.0 | 1.6  | 1.7  | 3.6  | .9    |
| 19                  |                  |      | 7.4     | 7.0     | 7.4   | 7.7                  | 5.9  | 1.2 | 2.5  | 3.2  | 3.2  | 1.0   |
| 20                  |                  |      | 7.2     | 7.1     | 8.2   | 7.9                  | 5.7  | 1.7 | 2.4  | 3.0  | 3.2  | 1.1   |
| 21                  |                  |      | 7.1     | 7.6     | 9.3   | 7.4                  | 5.4  | .9  | 2.5  | 3.2  | 3.2  | 1.2   |
| 22                  |                  |      | 7.6     | 8.2     | 10    | 7.7                  | 5.4  | .6  | 3.4  | 2.9  | 3.2  | 1.6   |
| 23                  |                  |      | 8.2     | 8.3     | 13    | 8.7                  | 5.7  | .4  | 2.5  | 3.0  | 3.4  | 2.2   |
| 24                  |                  |      | 8.9     | 8.4     | 14    | 8.2                  | 7.1  | .3  | 2.0  | 3.7  | 3.4  | 2.0   |
| 25                  |                  |      | 9.6     | 8.5     | 13    | 7.9                  | 7.4  | .5  | 2.4  | 4.1  | 3.2  | 2.0   |
| 26                  |                  |      | 9.6     | 8.6     | 10    | 7.9                  | 7.7  | 2.0 | 2.9  | 5.0  | 3.2  | 2.4   |
| 27                  |                  |      | 9.6     | 8.6     | 9.6   | 7.1                  | 7.7  | 2.2 | 1.8  | 3.0  | 3.2  | 3.4   |
| 28                  |                  |      | 9.4     | 8.7     | 9.3   | 5.4                  | 7.1  | .6  | 2.5  | 2.7  | 3.4  | 3.2   |
| 29                  |                  |      | 9.3     | 7.9     | -     | 5.4                  | 6.6  | .5  | 3.0  | 3.2  | 3.4  | 3.2   |
| 30                  |                  |      | 9.0     | 7.9     | -     | 5.4                  | 6.4  | .4  | 3.0  | 3.0  | 3.9  | 3.2   |
| 31                  |                  |      | 8.7     | 7.9     | -     | 5.9                  | -    | .5  | -    | 3.2  | 3.9  | -     |
| Month               | Second-foot-days |      | Maximum | Minimum | Mean  | Run-off in acre-feet |      |     |      |      |      |       |
| October.....        | -                | -    | -       | -       | -     | -                    |      |     |      |      |      |       |
| November.....       | -                | -    | -       | -       | -     | -                    |      |     |      |      |      |       |
| December 16-31..... | 135.0            | 9.6  | 7.1     | 8.44    | 268   |                      |      |     |      |      |      |       |
| Calendar year.....  | -                | -    | -       | -       | -     |                      |      |     |      |      |      |       |
| January.....        | 233.3            | 8.7  | 6.1     | 7.53    | 463   |                      |      |     |      |      |      |       |
| February.....       | 242.4            | 14   | 6.6     | 8.66    | 431   |                      |      |     |      |      |      |       |
| March.....          | 244.2            | 18   | 5.4     | 7.88    | 484   |                      |      |     |      |      |      |       |
| April.....          | 210.5            | 11   | 5.4     | 7.02    | 418   |                      |      |     |      |      |      |       |
| May.....            | 73.4             | 6.6  | .3      | 2.37    | 146   |                      |      |     |      |      |      |       |
| June.....           | 63.9             | 3.7  | .4      | 2.13    | 127   |                      |      |     |      |      |      |       |
| July.....           | 71.9             | 5.0  | .4      | 2.32    | 143   |                      |      |     |      |      |      |       |
| August.....         | 109.6            | 9.1  | 2.2     | 3.54    | 217   |                      |      |     |      |      |      |       |
| September.....      | 64.0             | 4.8  | .5      | 2.13    | 127   |                      |      |     |      |      |      |       |
| The period.....     | -                | -    | -       | -       | 2,870 |                      |      |     |      |      |      |       |

Note.- No gage-height record Dec. 16 to Jan. 28; discharge interpolated on basis of several staff-gage readings.



## Malad River at Woodruff, Idaho

Location.- Staff gage, lat. 42°02', long. 112°14', in sec. 15, T. 16 S., R. 36 E., at bridge on county road at Woodruff, 2½ miles north of Idaho-Utah State line.

Records available.- November 1938 to September 1941.

Extremes.- Maximum discharge observed during year, 360 second-feet Mar. 2 (gage height, 6.70 feet), from rating curve extended above 250 second-feet; minimum observed, 16 second-feet July 18-24; minimum gage height observed, 2.01 foot July 3.  
1938-41: Maximum discharge observed, 360 second-feet Mar. 20, 21, 1939, Mar. 2, 1941 (gage height, 6.70 feet), from rating curve extended above 250 second-feet; minimum observed, 15 second-feet July 15, 16, 1940; minimum gage height observed, 1.98 feet May 20, 1939, July 16, 1940.

Remarks.- Records good. Gage read once daily. Flow regulated by several small reservoirs above station. Many diversions above station for irrigation.

## Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |                  |         |         |      |                      |
|-------------------------|------|------|------|------|------|------|------|-----|------|------|------|-------|------------------|---------|---------|------|----------------------|
| 1                       | 20   | 38   | 50   | 59   | 53   | 255  | 65   | 77  | 28   | 24   | 17   | 22    |                  |         |         |      |                      |
| 2                       | 20   | 38   | 50   | 53   | 48   | 360  | 71   | 77  | 27   | 22   | 17   | 22    |                  |         |         |      |                      |
| 3                       | 20   | 48   | 50   | 48   | 48   | 305  | 80   | 74  | 27   | 19   | 20   | 22    |                  |         |         |      |                      |
| 4                       | 20   | 53   | 50   | 48   | 48   | 279  | 80   | 71  | 27   | 19   | 20   | 22    |                  |         |         |      |                      |
| 5                       | 24   | 53   | 50   | 48   | 48   | 239  | 83   | 65  | 27   | 19   | 21   | 22    |                  |         |         |      |                      |
| 6                       | 26   | 56   | 50   | 48   | 48   | 223  | 97   | 59  | 27   | 19   | 21   | 22    |                  |         |         |      |                      |
| 7                       | 26   | 48   | 50   | 48   | 48   | 199  | 86   | 59  | 27   | 18   | 22   | 22    |                  |         |         |      |                      |
| 8                       | 29   | 46   | 50   | 48   | 48   | 175  | 86   | 56  | 29   | 18   | 23   | 22    |                  |         |         |      |                      |
| 9                       | 29   | 48   | 50   | 48   | 53   | 139  | 97   | 59  | 32   | 18   | 23   | 22    |                  |         |         |      |                      |
| 10                      | 29   | 48   | 50   | 48   | 53   | 118  | 104  | 59  | 32   | 18   | 22   | 22    |                  |         |         |      |                      |
| 11                      | 30   | 48   | 50   | 48   | 74   | 100  | 116  | 59  | 32   | 18   | 41   | 21    |                  |         |         |      |                      |
| 12                      | 30   | 42   | 46   | 48   | 139  | 94   | 111  | 59  | 32   | 18   | 56   | 21    |                  |         |         |      |                      |
| 13                      | 30   | 42   | 48   | 46   | 153  | 83   | 118  | 59  | 32   | 17   | 56   | 21    |                  |         |         |      |                      |
| 14                      | 30   | 43   | 46   | 48   | 175  | 80   | 125  | 59  | 32   | 17   | 56   | 21    |                  |         |         |      |                      |
| 15                      | 31   | 42   | 46   | 48   | 167  | 80   | 146  | 62  | 31   | 17   | 53   | 21    |                  |         |         |      |                      |
| 16                      | 31   | 42   | 48   | 48   | 167  | 80   | 199  | 59  | 30   | 17   | 53   | 21    |                  |         |         |      |                      |
| 17                      | 31   | 46   | 48   | 48   | 139  | 77   | 199  | 59  | 26   | 17   | 53   | 22    |                  |         |         |      |                      |
| 18                      | 30   | 48   | 40   | 48   | 132  | 77   | 199  | 59  | 26   | 16   | 48   | 22    |                  |         |         |      |                      |
| 19                      | 29   | 50   | 46   | 48   | 146  | 77   | 153  | 31  | 26   | 16   | 46   | 22    |                  |         |         |      |                      |
| 20                      | 29   | 50   | 46   | 48   | 139  | 77   | 139  | 29  | 26   | 16   | 46   | 22    |                  |         |         |      |                      |
| 21                      | 30   | 50   | 48   | 48   | 175  | 77   | 125  | 28  | 25   | 16   | 48   | 22    |                  |         |         |      |                      |
| 22                      | 30   | 53   | 48   | 50   | 191  | 77   | 111  | 28  | 25   | 16   | 48   | 23    |                  |         |         |      |                      |
| 23                      | 30   | 53   | 53   | 50   | 215  | 86   | 85   | 25  | 25   | 16   | 48   | 24    |                  |         |         |      |                      |
| 24                      | 31   | 53   | 53   | 50   | 279  | 104  | 71   | 25  | 25   | 16   | 48   | 24    |                  |         |         |      |                      |
| 25                      | 31   | 53   | 56   | 53   | 296  | 100  | 68   | 25  | 25   | 19   | 48   | 24    |                  |         |         |      |                      |
| 26                      | 32   | 48   | 59   | 59   | 287  | 90   | 68   | 24  | 25   | 19   | 28   | 24    |                  |         |         |      |                      |
| 27                      | 34   | 46   | 71   | 62   | 263  | 77   | 83   | 25  | 25   | 19   | 22   | 25    |                  |         |         |      |                      |
| 28                      | 45   | 46   | 71   | 59   | 255  | 71   | 71   | 28  | 25   | 19   | 22   | 25    |                  |         |         |      |                      |
| 29                      | 41   | 48   | 65   | 53   | -    | 74   | 71   | 28  | 24   | 18   | 22   | 25    |                  |         |         |      |                      |
| 30                      | 39   | 48   | 74   | 53   | -    | 71   | 71   | 27  | 24   | 18   | 22   | 25    |                  |         |         |      |                      |
| 31                      | 36   | -    | 65   | 53   | -    | 71   | -    | 27  | -    | 17   | 22   | -     |                  |         |         |      |                      |
| Month                   |      |      |      |      |      |      |      |     |      |      |      |       | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
| October.....            |      |      |      |      |      |      |      |     |      |      |      |       | 923              | 43      | 20      | 29.5 | 1,830                |
| November.....           |      |      |      |      |      |      |      |     |      |      |      |       | 1,427            | 56      | 33      | 47.6 | 2,830                |
| December.....           |      |      |      |      |      |      |      |     |      |      |      |       | 1,629            | 74      | 40      | 52.5 | 3,230                |
| Calendar year 1940..... |      |      |      |      |      |      |      |     |      |      |      |       | 17,379           | 199     | 15      | 47.5 | 34,470               |
| January.....            |      |      |      |      |      |      |      |     |      |      |      |       | 1,564            | 62      | 46      | 50.5 | 3,100                |
| February.....           |      |      |      |      |      |      |      |     |      |      |      |       | 3,887            | 296     | 48      | 139  | 7,710                |
| March.....              |      |      |      |      |      |      |      |     |      |      |      |       | 4,015            | 360     | 71      | 130  | 7,960                |
| April.....              |      |      |      |      |      |      |      |     |      |      |      |       | 3,178            | 199     | 65      | 106  | 6,300                |
| May.....                |      |      |      |      |      |      |      |     |      |      |      |       | 1,484            | 77      | 24      | 47.9 | 2,940                |
| June.....               |      |      |      |      |      |      |      |     |      |      |      |       | 824              | 32      | 24      | 27.5 | 1,630                |
| July.....               |      |      |      |      |      |      |      |     |      |      |      |       | 556              | 24      | 16      | 17.9 | 1,100                |
| August.....             |      |      |      |      |      |      |      |     |      |      |      |       | 1,092            | 56      | 17      | 35.2 | 2,170                |
| September.....          |      |      |      |      |      |      |      |     |      |      |      |       | 676              | 25      | 21      | 22.5 | 1,340                |
| Water year 1940-41..... |      |      |      |      |      |      |      |     |      |      |      |       | 21,254           | 360     | 16      | 56.2 | 42,140               |

## Warm Springs Canal near Samaria, Idaho

Location.- Water-stage recorder, lat. 42°09', long. 112°21', in sec. 3, T. 15 S., R. 35 E., at Elmer Price Ranch, 50 feet downstream from Malad River bypass channel crossing, a quarter of a mile south of Malad-Pleasantview highway, 0.6 mile southwest of Pleasantview School, and 2½ miles northwest of Samaria.

Records available.- December 1940 to September 1941.

Extremes.- Maximum discharge during period, 19 second-feet Aug. 17; maximum gage height, 1.29 feet May 1; minimum discharge, 2.8 second-feet Apr. 7; minimum gage height, 0.32 foot Mar. 7.

Remarks.- Records fair. Warm Springs Canal diverts water from springs in NE¼ sec. 3, T. 15 S., R. 35 E., for irrigation in east half of T. 15 S., R. 35 E., above and below Samaria. Diversion may be made to or from Malad River bypass channel, which crosses canal above station.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                 | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.             | Apr.    | May     | June | July                 | Aug. | Sept. |
|---------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1                   |      |      |      | 12   | 8.1  | 6.8              | 7.4     | 13      | 11   | 12                   | 8.6  | 7.6   |
| 2                   |      |      |      | 12   | 8.0  | 7.4              | 6.8     | 11      | 12   | 9.9                  | 8.6  | 7.6   |
| 3                   |      |      |      | 11   | 8.0  | 7.8              | 9.9     | 8.7     | 13   | 9.2                  | 8.7  | 7.6   |
| 4                   |      |      |      | 9.6  | 8.1  | 7.2              | 4.2     | 8.2     | 13   | 8.5                  | 8.7  | 8.1   |
| 5                   |      |      |      | 8.1  | 8.2  | 6.6              | 3.3     | 7.7     | 12   | 8.5                  | 8.5  | 8.2   |
| 6                   |      |      |      | 7.9  | 8.1  | 5.7              | 3.1     | 8.0     | 11   | 8.0                  | 8.2  | 8.5   |
| 7                   |      |      |      | 7.7  | 8.2  | 5.6              | 2.9     | 8.7     | 9.4  | 7.7                  | 7.1  | 8.9   |
| 8                   |      |      |      | 7.4  | 8.3  | 5.7              | 3.5     | 10      | 8.5  | 7.4                  | 7.2  | 9.4   |
| 9                   |      |      |      | 7.1  | 8.6  | 5.6              | 5.7     | 11      | 8.2  | 8.0                  | 7.8  | 10    |
| 10                  |      |      |      | 7.1  | 8.6  | 5.7              | 6.5     | 12      | 7.6  | 7.8                  | 9.2  | 11    |
| 11                  |      |      |      | 7.1  | 8.9  | 5.6              | 6.5     | 13      | 7.4  | 8.1                  | 9.7  | 12    |
| 12                  |      |      |      | 7.0  | 9.4  | 5.6              | 6.8     | 14      | 7.1  | 8.2                  | 10   | 12    |
| 13                  |      |      |      | 6.9  | 9.9  | 5.6              | 6.7     | 15      | 7.3  | 9.0                  | 10   | 12    |
| 14                  |      |      |      | 7.0  | 9.9  | 5.7              | 6.5     | 15      | 8.3  | 8.7                  | 10   | 12    |
| 15                  |      |      |      | 7.1  | 10   | 5.4              | 6.5     | 15      | 10   | 8.6                  | 8.5  | 13    |
| 16                  |      |      | 9.0  | 7.1  | 11   | 5.6              | 6.7     | 11      | 10   | 8.5                  | 8.7  | 13    |
| 17                  |      |      | 9.4  | 7.1  | 11   | 5.9              | 6.7     | 12      | 9.4  | 8.1                  | 13   | 13    |
| 18                  |      |      | 9.7  | 7.0  | 11   | 5.6              | 6.8     | 12      | 8.0  | 8.0                  | 14   | 14    |
| 19                  |      |      | 10   | 6.9  | 11   | 5.3              | 6.9     | 14      | 8.3  | 9.2                  | 13   | 12    |
| 20                  |      |      | 10   | 7.1  | 11   | 5.1              | 7.8     | 14      | 10   | 10                   | 12   | 12    |
| 21                  |      |      | 10   | 7.3  | 11   | 5.0              | 8.9     | 14      | 10   | 10                   | 12   | 12    |
| 22                  |      |      | 12   | 7.4  | 10   | 5.0              | 9.0     | 12      | 9.7  | 9.9                  | 10   | 12    |
| 23                  |      |      | 12   | 7.6  | 9.4  | 4.8              | 8.7     | 10      | 8.5  | 10                   | 8.6  | 13    |
| 24                  |      |      | 11   | 7.8  | 9.0  | 4.7              | 7.8     | 10      | 8.5  | 9.0                  | 8.6  | 13    |
| 25                  |      |      | 11   | 8.0  | 8.7  | 4.6              | 8.0     | 11      | 7.6  | 8.9                  | 8.2  | 12    |
| 26                  |      |      | 11   | 8.1  | 8.6  | 4.7              | 8.2     | 10      | 7.6  | 8.0                  | 8.1  | 11    |
| 27                  |      |      | 11   | 8.2  | 8.2  | 5.6              | 8.6     | 9.7     | 8.3  | 8.5                  | 7.7  | 12    |
| 28                  |      |      | 11   | 8.1  | 6.5  | 7.1              | 8.7     | 9.7     | 8.9  | 8.5                  | 7.1  | 14    |
| 29                  |      |      | 12   | 8.1  | -    | 6.9              | 9.3     | 9.6     | 10   | 8.3                  | 6.9  | 13    |
| 30                  |      |      | 12   | 8.1  | -    | 6.9              | 9.0     | 11      | 10   | 9.7                  | 7.2  | 13    |
| 31                  |      |      | 12   | 8.1  | -    | 7.2              | -       | 10      | -    | 8.6                  | 7.4  | -     |
| Month               |      |      |      |      |      | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |      |       |
| October.....        |      |      |      |      |      | -                | -       | -       | -    | -                    |      |       |
| November.....       |      |      |      |      |      | -                | -       | -       | -    | -                    |      |       |
| December 16-31..... |      |      |      |      |      | 175.1            | 12      | 9.0     | 10.8 | 343                  |      |       |
| Calendar year ..... |      |      |      |      |      | -                | -       | -       | -    | -                    |      |       |
| January.....        |      |      |      |      |      | 247.0            | 12      | 6.9     | 7.97 | 490                  |      |       |
| February.....       |      |      |      |      |      | 256.7            | 11      | 6.5     | 9.17 | 509                  |      |       |
| March.....          |      |      |      |      |      | 182.0            | 7.8     | 4.6     | 5.87 | 351                  |      |       |
| April.....          |      |      |      |      |      | 207.4            | 9.9     | 2.9     | 6.91 | 411                  |      |       |
| May.....            |      |      |      |      |      | 348.3            | 15      | 7.7     | 11.2 | 691                  |      |       |
| June.....           |      |      |      |      |      | 280.6            | 13      | 7.1     | 9.35 | 587                  |      |       |
| July.....           |      |      |      |      |      | 272.8            | 12      | 7.4     | 8.80 | 541                  |      |       |
| August.....         |      |      |      |      |      | 253.3            | 14      | 6.9     | 9.14 | 562                  |      |       |
| September.....      |      |      |      |      |      | 336.9            | 14      | 7.6     | 11.2 | 668                  |      |       |
| The period.....     |      |      |      |      |      | -                | -       | -       | -    | 5,130                |      |       |

Note.- Discharge interpolated between frequent staff-gage readings Dec. 16 to Jan. 27.

Little Malad River above Elkhorn Reservoir, near Malad, Idaho

Location.- Water-stage recorder, lat. 42°20', long. 112°26', on line between sections 35 and 36, T. 12 S., R. 34 E., three quarters of a mile upstream from county bridge, 2 miles downstream from Wright Creek, 2½ miles downstream from springs, 2½ miles upstream from Elkhorn Dam, and 14 miles northwest of Malad.

Records available.- October 1931 to September 1932, November 1940 to September 1941.

Extremes.- Maximum discharge during period, 118 second-feet Mar. 17 (gage height, 2.17 feet); minimum daily, 11 second-feet Dec. 13, 15, 16.  
1931-32, 1940-41: Maximum discharge, that of Mar. 17, 1941; minimum daily, 11 second-feet Oct. 1 to Nov. 16, 1931, Mar. 13, 1932, Dec. 13, 15, 16, 1940.

Remarks.- Records good except those for period of no gage-height record, which are fair. Small diversions from upstream tributaries for irrigation.

Rating table, Nov. 8 to Sept. 30 (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used June 11 to Sept. 30)

|     |      |     |      |
|-----|------|-----|------|
| 0.4 | 9.8  | 1.0 | 38   |
| .6  | 17.9 | 1.2 | 49.5 |
| .8  | 27.6 |     |      |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   |      | -    | a13  | 12   | 13   | 28   | 36   | 17  | 18   | 15   | 15   | 14    |
| 2   |      | -    | a13  | 12   | 13   | 45   | 33   | 18  | 15   | 15   | 15   | 14    |
| 3   |      | -    | a13  | 12   | 13   | 26   | 27   | 18  | 15   | 14   | 13   | 14    |
| 4   |      | -    | a13  | 12   | 13   | 23   | 22   | 18  | 15   | 14   | 12   | 14    |
| 5   |      | -    | 14   | 12   | 13   | 21   | 23   | 18  | 15   | 14   | 12   | 14    |
| 6   |      | -    | 13   | 12   | 12   | 23   | 20   | 18  | 15   | 14   | 12   | 14    |
| 7   |      | -    | 13   | 12   | 13   | 21   | 20   | 18  | 15   | 14   | 12   | 14    |
| 8   |      | h14  | 13   | 13   | 12   | 24   | 19   | 18  | 17   | 14   | 16   | 14    |
| 9   |      |      | 13   | 14   | 13   | 20   | 19   | 18  | 16   | 14   | 24   | 14    |
| 10  |      |      | 12   | 14   | 13   | 17   | 21   | 18  | 16   | 14   | 13   | 14    |
| 11  |      |      | 12   | 15   | 14   | 16   | 21   | 18  | 15   | 15   | 17   | 14    |
| 12  |      |      | 12   | 15   | 16   | 15   | 21   | 18  | 14   | 15   | 22   | 13    |
| 13  |      |      | 11   | 14   | 15   | 16   | 24   | 19  | 16   | 15   | 14   | 13    |
| 14  |      |      | 12   | 14   | 14   | 16   | 24   | 19  | 16   | 14   | 13   | 14    |
| 15  |      |      | 11   | 14   | 14   | 17   | 23   | 19  | 16   | 14   | 13   | 14    |
| 16  |      | a12  | 11   | 14   | 13   | 24   | 22   | 18  | 16   | 14   | 13   | 14    |
| 17  |      |      | 12   | 14   | 13   | 44   | 21   | 18  | 15   | 14   | 14   | 14    |
| 18  |      |      | 12   |      | 13   | 40   | 20   | 17  | 15   | 14   | 21   | 14    |
| 19  |      |      | 12   |      | 12   | 33   | 19   | 18  | 15   | 15   | 13   | 14    |
| 20  |      |      | 12   |      | 12   | 37   | 19   | 17  | 16   | 16   | 12   | 14    |
| 21  |      |      | 13   |      | 13   | 27   | 18   | 17  | 15   | 15   | 12   | 14    |
| 22  |      |      | 13   |      | 14   | 26   | 18   | 17  | 14   | 14   | 12   | 14    |
| 23  |      |      | 14   | a14  | 14   | 25   | 17   | 17  | 14   | 14   | 13   | 14    |
| 24  |      | h12  | 13   |      | 17   | 20   | 17   | 17  | 14   | 14   | 13   | 14    |
| 25  |      |      | 13   |      | 18   | 18   | 16   | 18  | 13   | 15   | 13   | 14    |
| 26  |      |      | 13   |      | 15   | 18   | 17   | 19  | 13   | 15   | 14   | 14    |
| 27  |      | a13  | 13   |      | 14   | 21   | 17   | 19  | 13   | 15   | 13   | 13    |
| 28  |      |      | 13   |      | 15   | 27   | 17   | 18  | 14   | 14   | 13   | 13    |
| 29  |      |      | 13   | 14   | -    | 33   | 17   | 17  | 14   | 14   | 13   | 13    |
| 30  |      |      | 13   | 14   | -    | 45   | 17   | 17  | 14   | 14   | 14   | 13    |
| 31  |      | -    | 14   | 14   | -    | 42   | -    | 16  | -    | 14   | 14   | -     |

| Month              | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|--------------------|------------------|---------|---------|------|----------------------|
| October.....       | 284              | -       | -       | -    | -                    |
| November 8-30..... | -                | -       | -       | 12.3 | 563                  |
| December.....      | 392              | 14      | 11      | 12.6 | 778                  |
| Calendar year..... | -                | -       | -       | -    | -                    |
| January.....       | 421              | -       | -       | 13.6 | 935                  |
| February.....      | 383              | 18      | 12      | 13.7 | 760                  |
| March.....         | 809              | 48      | 15      | 26.1 | 1,600                |
| April.....         | 625              | 36      | 16      | 20.8 | 1,240                |
| May.....           | 552              | 19      | 16      | 17.8 | 1,090                |
| June.....          | 450              | 13      | 13      | 15.0 | 893                  |
| July.....          | 448              | 16      | 14      | 14.4 | 885                  |
| August.....        | 436              | 24      | 12      | 14.1 | 865                  |
| September.....     | 414              | 14      | 13      | 13.6 | 821                  |
| The period.....    | -                | -       | -       | -    | 10,330               |

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

h Computed from staff-gage readings.

## BEAR RIVER BASIN

## Elkhorn Reservoir near Malad, Idaho

Location.- Staff gage, lat. 42°18', long. 112°25', in sec. 7, T. 13 S., R. 35 E., 50 feet upstream from left end of partly constructed dam on Little Malad River, 4½ miles downstream from Wright Creek, and 11½ miles northwest of Malad.

Records available.- December 1940 to September 1941.

Extremes.- Maximum gage height observed during period, 11.00 feet Apr. 2; minimum observed, -1.54 feet May 10.

Remarks.- Reservoir is formed by partly constructed multiple-arch concrete dam. Capacity, 7,620 acre-feet between gage-heights -3.6 feet (outlet sill) and 50 feet. Regulation has been limited to a very small range due to large losses by leakage.

Gage height, in feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. |
|-----|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
| 1   |      |      | -    | 5.84 | 5.57 | 7.34  | 10.93 | 3.90  | -0.36 | -0.80 | -0.34 | 4.96  |
| 2   |      |      | -    | 5.60 | 5.68 | 8.59  | 11.00 | -     | -0.38 | -1.18 | -0.34 | 4.92  |
| 3   |      |      | -    | 5.40 | 5.59 | 9.03  | 10.88 | +9.0  | -4.2  | -1.18 | -4.0  | 3.50  |
| 4   |      |      | -    | 5.45 | 5.60 | 9.10  | 10.59 | -9.6  | -7.2  | -1.12 | -1.8  | 4.00  |
| 5   |      |      | 6.64 | 5.51 | 5.62 | 9.02  | 10.31 | -1.08 | -6.4  | -1.18 | -1.2  | 4.40  |
| 6   |      |      | -    | 5.54 | 5.64 | 9.06  | 10.03 | -1.26 | -6.8  | -1.22 | -1.0  | 4.61  |
| 7   |      |      | 6.80 | 5.58 | 5.69 | 9.04  | 9.68  | -1.24 | -4.2  | -1.20 | -2.6  | 3.86  |
| 8   |      |      | 6.89 | 5.59 | 5.71 | 8.99  | 9.33  | -1.14 | -2.6  | -1.20 | -2.2  | 3.52  |
| 9   |      |      | 6.94 | 5.60 | 5.71 | 9.11  | 8.93  | -1.23 | +3.8  | -1.18 | +5.00 | 4.86  |
| 10  |      |      | 7.04 | 5.58 | 5.80 | 8.98  | 8.4   | -1.54 | .00   | -1.18 | 6.38  | +4.06 |
| 11  |      |      | 7.05 | 5.58 | 5.89 | 8.85  | 8.16  | -1.32 | -3.6  | -1.16 | 4.16  | -4.4  |
| 12  |      |      | 6.88 | 5.59 | 6.10 | 8.65  | 7.77  | -9.0  | -4.4  | -1.16 | 5.48  | -9.2  |
| 13  |      |      | 6.74 | 5.58 | 6.32 | 8.45  | 7.46  | -3.2  | -4.2  | -1.14 | 5.28  | -4.6  |
| 14  |      |      | 6.50 | 5.62 | 6.54 | 8.27  | 7.35  | +1.4  | -4.4  | -1.16 | -     | +7.7  |
| 15  |      |      | -    | 5.65 | 6.31 | 8.08  | 7.17  | .72   | -2.4  | -1.16 | -     | 1.04  |
| 16  |      |      | -    | 5.64 | 6.27 | 8.05  | 7.05  | .12   | -3.2  | -1.10 | 3.46  | 1.18  |
| 17  |      |      | 6.18 | 5.58 | 6.22 | 8.39  | 6.91  | +0.4  | -2.8  | -1.12 | 3.42  | 1.56  |
| 18  |      |      | 6.10 | 5.54 | 6.20 | 9.45  | 6.60  | -1.0  | -3.6  | -1.12 | -     | 1.66  |
| 19  |      |      | 6.06 | 5.54 | 6.19 | 10.08 | 6.38  | +3.2  | -3.4  | -1.06 | 5.52  | 1.88  |
| 20  |      |      | 5.96 | 5.54 | 6.18 | 10.35 | 6.31  | .10   | -2.8  | -0.2  | 4.88  | 1.84  |
| 21  |      |      | 5.95 | 5.54 | 6.22 | 10.53 | 6.06  | +0.6  | -2.0  | +0.2  | 3.66  | 2.16  |
| 22  |      |      | 5.96 | 5.58 | 6.31 | 10.57 | 5.88  | -3.0  | -3.4  | -0.6  | 4.46  | 2.04  |
| 23  |      |      | 6.01 | 5.58 | 6.52 | 10.62 | 5.69  | -3.4  | -3.4  | -0.8  | 3.88  | 2.04  |
| 24  |      |      | 6.14 | 5.60 | 6.68 | 10.60 | 5.16  | -2.2  | -3.0  | -3.6  | 4.54  | 2.18  |
| 25  |      |      | 6.16 | 5.60 | 7.31 | 10.38 | 4.42  | -1.18 | -3.2  | -2.4  | 4.40  | 2.40  |
| 26  |      |      | 6.07 | 5.62 | 7.56 | 10.17 | 3.50  | -7.0  | -2.2  | -2.4  | 5.06  | 2.12  |
| 27  |      |      | 6.07 | 5.50 | 7.47 | 10.05 | 5.06  | -4.6  | -2.0  | -4.6  | 3.62  | 2.50  |
| 28  |      |      | 6.05 | 5.54 | 7.40 | 9.86  | 4.82  | +0.4  | -1.8  | -5.0  | 4.16  | 2.30  |
| 29  |      |      | 6.01 | 5.57 | -    | 9.91  | 4.44  | -4.8  | +4.4  | -5.6  | 4.58  | 2.52  |
| 30  |      |      | 6.04 | 5.61 | -    | 10.29 | 4.06  | -5.2  | +1.9  | -3.8  | 4.75  | 1.22  |
| 31  |      |      | 6.02 | 5.62 | -    | 10.77 | 4.06  | -3.6  | -     | -3.6  | 4.82  | -     |

Little Malad River below Elkhorn Reservoir, near Malad, Idaho

Location.- Water-stage recorder, lat. 42°18', long. 112°25', sec. 7, T. 13 S., R. 35 E., just downstream from Elkhorn Dam, 4½ miles downstream from Wright Creek, and 1½ miles northwest of Malad. Prior to Sept. 5, at sharp-crested weir 50 feet upstream, at datum 4.36 feet higher.

Records available.- December 1940 to September 1941 (fragmentary).

Extremes.- Maximum daily discharge during period, 26 second-feet August 11, 13; no flow when Reservoir gates were closed Mar. 18-24.

Remarks.- Records fair. Flow partly regulated by Elkhorn Reservoir (see preceding page). Small diversions from upstream tributaries for irrigation.

Rating tables, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

| Dec. 5 to Sept. 5 |     |      |      |      |      | Sept. 6-30 |      |      |      |
|-------------------|-----|------|------|------|------|------------|------|------|------|
| 1.10              | 1.9 | 1.20 | 5.5  | 1.35 | 14.9 | 1.06       | 10.8 | 1.14 | 13.3 |
| 1.12              | 2.4 | 1.23 | 7.0  | 1.39 | 18.0 | 1.08       | 11.4 | 1.16 | 13.9 |
| 1.14              | 3.0 | 1.26 | 8.8  | 1.43 | 21.2 | 1.10       | 12.0 | 1.18 | 14.7 |
| 1.16              | 3.8 | 1.29 | 10.7 |      |      | 1.12       | 12.7 | 1.20 | 15.3 |
| 1.18              | 4.6 | 1.32 | 12.8 |      |      |            |      |      |      |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   |      |      | -    | 6.0  | 5.5  | 4.6  | 1.6  | 17  | 16   | -    | 12   | 13    |
| 2   |      |      | -    | 6.0  | 5.0  | 4.6  | 4.2  | 19  | -    | -    | 12   | 16    |
| 3   |      |      | -    | 6.0  | 5.0  | 4.6  | 7.0  | 20  | -    | 14   | 12   | 14    |
| 4   |      |      | -    | 6.0  | 5.0  | 4.6  | 7.0  | 17  | -    | 14   | 12   | 12    |
| 5   |      |      | 3.0  | 6.0  | 5.0  | 4.6  | 6.5  | -   | -    | 14   | 12   | 12    |
| 6   |      |      | 3.0  | 6.0  | 5.0  | 4.6  | 6.5  | -   | 16   | 13   | 12   | 15    |
| 7   |      |      | 3.0  | 6.0  | 5.0  | 4.6  | 6.5  | h17 | 19   | 13   | 12   | 14    |
| 8   |      |      | 3.0  | 5.5  | 5.0  | 4.6  | 7.6  | -   | 21   | 13   | 13   | 11    |
| 9   |      |      | 3.0  | 5.5  | 5.0  | 4.6  | 11   | h17 | -    | 13   | 20   | 13    |
| 10  |      |      | 3.4  | 5.5  | 5.0  | 4.6  | 15   | -   | -    | 12   | 22   | 14    |
| 11  |      |      | 5.0  | 5.5  | 5.0  | 4.6  | 15   | -   | -    | 13   | 26   | -     |
| 12  |      |      | 6.5  | 5.5  | 5.0  | 4.6  | 14   | -   | -    | 13   | 21   | -     |
| 13  |      |      | 6.0  | 5.5  | 4.6  | 4.6  | 14   | -   | 14   | -    | 26   | -     |
| 14  |      |      | 5.5  | 5.5  | 4.6  | 5.0  | 14   | -   | -    | -    | 14   | h12   |
| 15  |      |      | 5.5  | 5.0  | 4.6  | 3.8  | 15   | -   | -    | -    | 14   | -     |
| 16  |      |      | 5.5  | 5.0  | 4.6  | 3.0  | 15   | h19 | -    | -    | 14   | -     |
| 17  |      |      | 5.0  | 5.0  | 4.6  | 3.0  | 14   | -   | -    | -    | 14   | -     |
| 18  |      |      | 4.6  | 5.0  | 4.6  | 1.1  | 14   | -   | -    | 13   | 15   | -     |
| 19  |      |      | 5.0  | 5.0  | 4.6  | 0    | 14   | 17  | -    | 13   | 19   | -     |
| 20  |      |      | 5.0  | 5.0  | 4.6  | 0    | 14   | 17  | 14   | 14   | 19   | -     |
| 21  |      |      | 5.0  | 4.6  | 4.6  | 0    | 14   | 17  | 14   | 14   | 13   | h12   |
| 22  |      |      | 5.0  | 4.6  | 4.6  | 0    | 14   | 17  | 14   | 13   | 14   | -     |
| 23  |      |      | 5.0  | 5.0  | 4.6  | 0    | 14   | 16  | -    | 13   | 14   | -     |
| 24  |      |      | 5.0  | 5.0  | 4.6  | .8   | 18   | -   | -    | 13   | 11   | -     |
| 25  |      |      | 5.5  | 5.0  | 4.6  | 1.9  | 17   | -   | -    | 13   | 12   | -     |
| 26  |      |      | 5.5  | 5.5  | 4.6  | 1.9  | 17   | -   | -    | 14   | 16   | -     |
| 27  |      |      | 5.5  | 5.5  | 4.6  | 1.9  | 17   | -   | -    | 13   | 14   | -     |
| 28  |      |      | 5.5  | 5.5  | 4.6  | 1.9  | 17   | -   | 14   | 13   | 12   | h12   |
| 29  |      |      | 5.5  | 5.5  | -    | 1.9  | 16   | -   | 14   | -    | 12   | -     |
| 30  |      |      | 5.5  | 5.5  | -    | 1.6  | 16   | 16  | -    | -    | 12   | -     |
| 31  |      |      | 5.5  | 5.5  | -    | 1.6  | 16   | 16  | -    | -    | 12   | -     |

| Month               | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|---------------------|------------------|---------|---------|------|----------------------|
| October.....        | -                | -       | -       | -    | -                    |
| November.....       | -                | -       | -       | -    | -                    |
| December 5-31.....  | 130.5            | 6.5     | 3.0     | 4.83 | 259                  |
| Calendar year ..... | -                | -       | -       | -    | -                    |
| January.....        | 167.7            | 6.0     | 4.6     | 5.41 | 333                  |
| February.....       | 134.1            | 5.5     | 4.6     | 4.79 | 266                  |
| March.....          | 89.2             | 5.0     | 0       | 2.88 | 177                  |
| April.....          | 375.9            | 18      | 1.6     | 12.5 | 746                  |
| May.....            | -                | -       | -       | -    | -                    |
| June.....           | -                | -       | -       | -    | -                    |
| July.....           | -                | -       | -       | -    | -                    |
| August.....         | 463              | 26      | 11      | 14.9 | 918                  |
| September.....      | -                | -       | -       | -    | -                    |
| Water year .....    | -                | -       | -       | -    | -                    |

a No gage-height record; discharge interpolated.  
 h Computed from staff-gage readings.

## Devil Creek above Campbell Creek, near Malad, Idaho

Location.- Staff gage, lat. 42°18', long. 112°12', in sec. 12, T. 13 S., R. 36 E., 0.6 mile upstream from proposed dam, 1.3 miles upstream from highway crossing of Campbell Creek, 4.5 miles upstream from Evans Dividers, and 7½ miles northeast of Malad.

Records available.- November 1938 to September 1941.

Extremes.- Maximum discharge observed during year, 42 second-feet Apr. 14 (gage height, 1.16 feet); minimum observed, 5.2 second-feet Oct. 9-17, 24; minimum gage height observed, 0.56 foot Aug. 9.

1938-41: Maximum discharge observed, about 90 second-feet Mar. 27, 1940 (gage height, about 1.65 feet, from floodmark), from rating curve extended above 35 second-feet; minimum observed, 4.1 second-feet July 5, 1939, Aug. 18-19, 1940 (gage height, 0.54 foot).

Remarks.- Records good except those for Mar. 15 to May 15, which are fair. Gage read once daily. Small diversions above station for irrigation. Stream receives part of flow of Birch Creek above station. Malad power plant and its small reservoir on Birch Creek may cause slight diurnal fluctuations.

## Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec. | Jan.    | Feb.    | Mar. | Apr.                 | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|------|---------|---------|------|----------------------|-----|------|------|------|-------|
| 1                       | 5.4              | 7.0  | 7.0  | 7.3     | 7.6     | 8.8  | 19                   | 13  | 12   | 7.6  | 7.0  | 6.1   |
| 2                       | 5.4              | 7.0  | 6.4  | 7.6     | 7.9     | 8.8  | 19                   | 13  | 11   | 7.3  | 7.0  | 6.4   |
| 3                       | 5.4              | 7.6  | 6.4  | 7.6     | 6.7     | 8.2  | 19                   | 13  | 12   | 7.3  | 7.0  | 6.4   |
| 4                       | 5.4              | 7.6  | 6.4  | 7.6     | 7.9     | 7.9  | 18                   | 16  | 11   | 7.3  | 7.0  | 6.4   |
| 5                       | 5.4              | 7.0  | 6.4  | 7.9     | 7.9     | 7.9  | 18                   | 13  | 11   | 7.3  | 7.0  | 6.4   |
| 6                       | 5.4              | 7.0  | 6.4  | 7.6     | 7.9     | 7.9  | 12                   | 14  | 11   | 7.3  | 7.0  | 6.1   |
| 7                       | 5.4              | 7.0  | 6.4  | 7.3     | 7.9     | 7.6  | 12                   | 14  | 13   | 7.0  | 6.4  | 6.1   |
| 8                       | 5.4              | 7.0  | 7.0  | 7.3     | 7.9     | 7.9  | 12                   | 13  | 11   | 6.4  | 5.8  | 6.4   |
| 9                       | 5.2              | 7.0  | 7.6  | 7.3     | 7.6     | 7.6  | 11                   | 14  | 9.7  | 6.4  | 5.4  | 6.4   |
| 10                      | 5.2              | 7.0  | 7.0  | 7.3     | 7.9     | 7.6  | 19                   | 14  | 9.7  | 6.4  | 7.0  | 6.4   |
| 11                      | 5.2              | 7.0  | 6.4  | 7.3     | 7.9     | 7.6  | 12                   | 14  | 9.7  | 6.4  | 7.0  | 6.4   |
| 12                      | 5.2              | 7.0  | 6.4  | 7.6     | 8.2     | 7.6  | 21                   | 16  | 9.2  | 6.4  | 7.0  | 6.4   |
| 13                      | 5.2              | 7.0  | 6.4  | 7.3     | 7.6     | 7.9  | 22                   | 19  | 9.2  | 6.4  | 7.0  | 6.4   |
| 14                      | 5.2              | 7.0  | 6.4  | 7.3     | 7.6     | 7.6  | 42                   | 21  | 9.2  | 6.4  | 7.0  | 6.4   |
| 15                      | 5.2              | 7.0  | 7.0  | 7.3     | 7.9     | 8.2  | 14                   | 19  | 8.8  | 6.4  | 7.0  | 6.4   |
| 16                      | 5.2              | 7.0  | 7.3  | 7.6     | 7.6     | 8.5  | 22                   | 14  | 8.8  | 6.4  | 7.0  | 6.4   |
| 17                      | 5.2              | 7.0  | 7.6  | 7.6     | 7.6     | 9.7  | 22                   | 14  | 8.2  | 6.4  | 7.6  | 6.4   |
| 18                      | 5.6              | 7.0  | 7.6  | 7.6     | 7.6     | 12   | 16                   | 15  | 8.2  | 6.4  | 7.0  | 6.1   |
| 19                      | 5.6              | 7.0  | 7.6  | 7.6     | 7.3     | 13   | 16                   | 14  | 8.2  | 6.1  | 7.0  | 6.1   |
| 20                      | 5.6              | 7.0  | 7.6  | 7.3     | 7.3     | 13   | 14                   | 14  | 8.8  | 8.2  | 7.0  | 6.1   |
| 21                      | 5.6              | 7.0  | 7.6  | 7.3     | 7.9     | 14   | 13                   | 14  | 8.2  | 7.0  | 7.0  | 7.0   |
| 22                      | 5.6              | 7.0  | 7.3  | 7.3     | 7.9     | 13   | 12                   | 13  | 8.2  | 7.0  | 7.0  | 7.0   |
| 23                      | 5.6              | 7.0  | 8.2  | 7.6     | 7.6     | 11   | 12                   | 13  | 7.6  | 7.0  | 7.0  | 7.0   |
| 24                      | 5.2              | 7.0  | 8.2  | 7.9     | 7.6     | 11   | 12                   | 13  | 7.6  | 7.0  | 7.0  | 7.0   |
| 25                      | 5.4              | 6.4  | 8.2  | 7.9     | 7.6     | 11   | 12                   | 13  | 7.6  | 7.0  | 7.0  | 7.0   |
| 26                      | 5.4              | 6.4  | 8.2  | 7.6     | 7.3     | 12   | 12                   | 14  | 7.0  | 7.0  | 7.0  | 7.0   |
| 27                      | 5.4              | 7.6  | 8.2  | 7.6     | 7.3     | 16   | 14                   | 14  | 7.0  | 7.0  | 7.0  | 7.0   |
| 28                      | 6.4              | 8.2  | 7.6  | 7.6     | 7.6     | 18   | 14                   | 13  | 7.0  | 7.0  | 7.0  | 7.0   |
| 29                      | 6.4              | 6.4  | 7.6  | 7.6     | -       | 19   | 13                   | 13  | 7.0  | 7.0  | 7.0  | 7.0   |
| 30                      | 6.4              | 6.4  | 7.6  | 7.3     | -       | 14   | 13                   | 12  | 7.0  | 7.0  | 6.4  | 7.0   |
| 31                      | 6.4              | -    | 7.3  | 7.6     | -       | 19   | -                    | 12  | -    | 7.0  | 6.4  | -     |
| Month                   | Second-foot-days |      |      | Maximum | Minimum | Mean | Run-off in acre-feet |     |      |      |      |       |
| October.....            | 170.6            | 6.4  | 5.2  | 5.50    | 338     |      |                      |     |      |      |      |       |
| November.....           | 210.6            | 8.2  | 6.4  | 7.02    | 418     |      |                      |     |      |      |      |       |
| December.....           | 223.3            | 8.2  | 6.4  | 7.20    | 443     |      |                      |     |      |      |      |       |
| Calendar year 1940..... | 2,834.1          | 51   | 4.1  | 7.74    | 5,620   |      |                      |     |      |      |      |       |
| January.....            | 232.6            | 7.9  | 7.3  | 7.50    | 461     |      |                      |     |      |      |      |       |
| February.....           | 214.6            | 8.2  | 6.7  | 7.86    | 426     |      |                      |     |      |      |      |       |
| March.....              | 335.3            | 19   | 7.6  | 10.8    | 661     |      |                      |     |      |      |      |       |
| April.....              | 487              | 42   | 11   | 16.2    | 966     |      |                      |     |      |      |      |       |
| May.....                | 440              | 21   | 12   | 14.2    | 873     |      |                      |     |      |      |      |       |
| June.....               | 275.9            | 13   | 7.0  | 9.13    | 543     |      |                      |     |      |      |      |       |
| July.....               | 212.8            | 8.2  | 6.1  | 6.86    | 422     |      |                      |     |      |      |      |       |
| August.....             | 213.0            | 7.6  | 5.4  | 6.87    | 422     |      |                      |     |      |      |      |       |
| September.....          | 196.2            | 7.0  | 6.1  | 6.54    | 389     |      |                      |     |      |      |      |       |
| Water year 1940-41..... | 3,207.9          | 42   | 5.2  | 8.79    | 6,360   |      |                      |     |      |      |      |       |

Devil Creek above Evans dividers, near Malad, Idaho

Location.- Water-stage recorder, lat. 42°15', long. 112°13', in sec. 35, T. 13 S., R. 36 E., at Evans Ranch, 500 feet upstream from Evans dividers, 3.2 miles downstream from Campbell Creek, and 3.5 miles northeast from Malad.

Records available.- December 1940 to September 1941.

Extremes.- Maximum discharge during period, 100 second-feet Aug. 17 (gage height, 2.15 feet); minimum discharge recorded, 2.5 second-feet Sept. 21 (gage height, 0.44 foot).

Remarks.- Records good except those for periods of ice effect and those for periods of fragmentary or no gage-height record, which are fair. Several diversions above station for irrigation. Stream receives part of flow of Birch Creek above station. Malad power plant and its small reservoir on Birch Creek may cause diurnal fluctuations.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   |      |      | -    |      |      | 9.6  | 20   | a23 | 13   | -    | a8.0 | 7.5   |
| 2   |      |      | -    |      |      | 11   | 30   | a23 | 14   | 10   | h8.2 | 7.2   |
| 3   |      |      | -    |      |      | 10   | 20   | a23 | 13   | 10   | a8.0 | 7.2   |
| 4   |      |      | -    |      |      | 10   | 17   | a23 | 13   | 9.2  | a8.0 | 7.2   |
| 5   |      |      | -    |      | b8.0 | 9.6  | 25   | 25  | 12   | 8.6  | a7.0 | 7.2   |
| 6   |      |      | 7.5  |      |      | 10   | 15   | 24  | 11   | 9.6  | a5.0 | 6.9   |
| 7   |      |      | 7.5  |      |      | 10   | 14   | 22  | 11   | 6.3  | 5.8  | 6.9   |
| 8   |      |      | 7.8  |      |      | 10   | 14   | 20  | h11  | 6.0  | 4.0  | 4.2   |
| 9   |      |      | 7.8  |      | h7.8 | 10   | 14   | 21  | -    | 6.3  | 4.2  | 4.2   |
| 10  |      |      | 7.5  |      | 8.6  | 9.6  | 26   | 21  | -    | 6.3  | 7.8  | 4.2   |
| 11  |      |      |      |      | 8.6  | 9.6  | 22   | 23  | -    | 6.6  | 6.9  | 6.0   |
| 12  |      |      |      | b7.5 | 9.2  | 9.2  | 17   | 27  | -    | -    | 7.8  | 7.2   |
| 13  |      |      |      |      | 8.6  | 9.2  | 34   | 28  | -    | 6.3  | 7.2  | 7.5   |
| 14  |      |      |      |      | 8.6  | 9.2  | 39   | 31  | -    | 7.5  | 6.6  | 7.2   |
| 15  |      |      |      |      | 7.8  | 9.2  | 33   | 29  | h12  | 8.2  | 6.6  | 7.5   |
| 16  |      |      |      |      | 7.8  | 10   | 34   | 25  | -    | -    | 6.9  | 7.2   |
| 17  |      |      |      |      | 7.8  | 11   | 29   | 22  | -    | -    | 17   | 6.9   |
| 18  |      |      |      |      | 8.2  | 13   | 24   | 20  | -    | -    | 8.9  | 6.7   |
| 19  |      |      |      |      | 8.2  | 16   | 20   | 22  | h8.9 | -    | 4.8  | 6.9   |
| 20  |      |      |      |      | 8.2  | 16   | 18   | 17  | -    | -    | 3.8  | 4.0   |
| 21  |      |      | b7.5 |      | 8.6  | 16   | 18   | 18  | -    | h5.2 | 4.2  | 4.0   |
| 22  |      |      |      |      | 8.6  | 17   | 16   | 16  | h6.9 | h6.9 | 5.4  | 5.7   |
| 23  |      |      |      |      | 9.6  | 16   | 16   | 16  | h7.8 | -    | 7.5  | 6.2   |
| 24  |      |      |      |      | 9.2  | 13   | 18   | 16  | -    | -    | 7.5  | 7.5   |
| 25  |      |      |      | h7.5 | 8.6  | 12   | 23   | 18  | -    | -    | 7.5  | 7.5   |
| 26  |      |      |      |      | h8.6 | 8.2  | 13   | 23  | -    | -    | 7.5  | 7.2   |
| 27  |      |      |      |      | 7.8  | 8.2  | 16   | 23  | 27   | -    | h6.6 | 8.2   |
| 28  |      |      |      |      | 8.6  | 19   | 22   | 23  | -    | -    | 7.8  | 7.2   |
| 29  |      |      |      |      | -    | 19   | 22   | 20  | h14  | -    | 8.2  | 7.2   |
| 30  |      |      |      | 88.0 | -    | 23   | 23   | 18  | -    | -    | 7.8  | 6.9   |
| 31  |      |      |      |      | -    | 20   | -    | 16  | -    | -    | 7.5  | -     |

| Month               | Second-foot-days | Maximum | Minimum | Mean  | Run-off in acre-feet |
|---------------------|------------------|---------|---------|-------|----------------------|
| October.....        | -                | -       | -       | -     | -                    |
| November.....       | -                | -       | -       | -     | -                    |
| December 6-31.....  | 195.6            | -       | -       | 7.52  | 388                  |
| Calendar year ..... | -                | -       | -       | -     | -                    |
| January.....        | 235.9            | -       | -       | 7.61  | 468                  |
| February.....       | 235.0            | 9.6     | -       | 6.32  | 462                  |
| March.....          | 397.2            | 23.6    | 9.2     | 12.8  | 768                  |
| April.....          | 665              | 39      | 14      | 22.3  | 1,330                |
| May.....            | 680              | 31      | 16      | 21.9  | 1,350                |
| June.....           | 300              | -       | -       | e10.0 | 595                  |
| July.....           | 248              | -       | -       | e8.0  | 492                  |
| August.....         | 219.6            | 17      | 3.8     | 7.08  | 436                  |
| September.....      | 197.7            | 8.2     | 4.0     | 6.59  | 392                  |
| The period.....     | -                | -       | -       | -     | 6,700                |

a No gage-height record; discharge computed on basis of weather records, recorded range in stage, and records for station above Campbell Creek and others nearby.  
 b Stage-discharge relation affected by ice.  
 c Computed on basis of occasional figures of daily discharge and weather records.  
 d Computed from staff-gage readings.

## Deep Creek below First Creek, near Malad, Idaho

Location.- Water-stage recorder and wooden control, lat. 42°14', long. 112°11', in sec. 7, T. 14 S., R. 37 E., just downstream from site of proposed reservoir, 1 mile north and 3/8 miles east of Malad, and 12 miles upstream from mouth. Prior to Dec. 16 staff gage at same site and datum.

Records available.- October 1931 to September 1941.

Average discharge.- 10 years, 8.39 second-feet.

Extremes.- Maximum discharge observed during year, 103 second-feet Aug. 17 (gage height, 2.38 feet, from floodmark), from rating curve extended above 50 second-feet; minimum observed, 1.2 second-feet Dec. 15, 16; minimum gage height, 0.16 foot Dec. 16.

1931-41: Maximum discharge observed, 172 second-feet July 8, 1937, from rating curve extended above 40 second-feet by logarithmic plotting; minimum observed, 0.3 second-foot Aug. 29, 1934.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Small diversions above station. Flow regulated at reservoir 2 1/2 miles above station. Gage read once daily Oct. 1 to Dec. 15.

Rating table, Mar. 1 to Sept. 30 (gage height, in feet, and discharge, in second-feet)

|     |     |     |      |     |      |
|-----|-----|-----|------|-----|------|
| 0.3 | 4.0 | 0.7 | 11.2 | 1.4 | 35.5 |
| .4  | 5.5 | .8  | 13.7 | 1.6 | 46   |
| .5  | 7.2 | 1.0 | 19.3 |     |      |
| .6  | 9.0 | 1.2 | 26.5 |     |      |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 1.5  | 2.1  | 2.5  |      | a2.4 | 16   | 10   | a20 | 25   | a12  | 9.0  | a5.5  |
| 2   | 2.0  | 2.4  | 2.4  |      | a2.4 | 11   | 10   | a22 | 24   | 11   | 7.9  | 5.2   |
| 3   | 2.2  | 2.6  | 2.5  |      | b2.3 | 9.0  | 9.9  | a24 | 23   | 15   | 6.7  | 5.8   |
| 4   | 1.9  | 2.5  | 2.6  |      | a2.3 | 5.5  | 9.2  | 26  | 23   | 16   | 5.7  | 5.8   |
| 5   | 2.2  | 2.4  | 2.3  |      | b2.2 | 8.3  | 10   | 27  | 22   | 16   | 6.7  | 5.3   |
| 6   | 2.0  | 2.3  | 2.4  | a2.3 | a2.5 | 8.1  | 9.7  | 26  | 22   | 16   | 7.0  | 5.2   |
| 7   | 1.9  | 2.2  | 2.5  |      | a3.0 | 8.5  | 9.0  | 28  | 22   | 16   | 6.7  | 5.2   |
| 8   | 2.2  | 2.0  | 2.4  |      | 3.5  | 7.9  | 8.5  | 31  | 21   | 14   | 6.5  | 4.1   |
| 9   | 2.3  | 1.8  | 2.5  |      | 3.5  | 7.6  | 8.6  | 32  | 21   | 13   | 6.7  | 4.0   |
| 10  | 2.4  | 1.7  | 2.4  |      | 3.6  | 7.0  | 10   | 32  | 20   | a13  | 7.0  | 4.7   |
| 11  | 2.3  | 1.7  | b2.2 |      | 4.6  | 7.0  | 12   | 35  | 20   | 15   | 6.0  | 4.4   |
| 12  | 2.2  | 1.8  | 2.0  | 2.7  | 6.0  | 6.5  | 12   | 42  | 20   | 14   | 8.8  | 4.4   |
| 13  | 1.9  | 1.7  | 1.8  | 2.8  | 4.6  | 8.9  | 15   | 45  | 20   | 16   | 6.5  | 4.4   |
| 14  | 2.0  | 1.8  | 1.5  | 2.8  | 4.2  | 6.8  | 19   | a44 | 20   | 16   | 5.2  | a4.6  |
| 15  | 1.9  | 1.7  | 1.2  | 2.8  | 4.2  | 7.2  | 19   | 42  | 19   | 15   | 5.2  | 4.7   |
| 16  | 1.9  | 1.8  | 1.3  | 2.8  | 4.2  | 7.6  | 20   | 40  | 19   | 14   | 4.7  | 4.7   |
| 17  | 1.8  | 1.6  | 1.3  | 2.8  | 4.2  | 8.3  | 20   | 37  | 19   | 13   |      | 4.6   |
| 18  | 1.9  | 1.7  | 1.3  | 2.8  | 4.2  | 8.5  | 19   | 36  | 19   | 13   |      | 4.4   |
| 19  | 1.9  | 1.5  | 1.4  | 3.0  | 4.2  | 8.1  | 18   | 35  | 19   | a12  |      | 4.4   |
| 20  | 1.8  | 2.0  | 1.6  | 3.1  | 4.8  | 8.1  | 17   | 34  | 19   | 10   |      | 4.4   |
| 21  | 1.9  | 1.9  | 1.7  | 3.0  | 5.4  | 7.6  | 16   | 32  | 19   | 9.2  |      | 4.6   |
| 22  | 2.0  | 2.2  | 1.7  | 3.1  | 5.7  | 7.4  | 16   | 30  | 18   | 8.8  |      | 4.7   |
| 23  | 2.2  | 1.9  | 2.0  | 3.0  | 6.4  | 8.3  | 16   | 28  | a17  | 8.8  |      | 5.2   |
| 24  | 2.2  | 2.0  | 2.5  | 3.0  | 6.4  | 8.1  | 16   | 27  | a16  | 9.0  | a11  | 5.0   |
| 25  | 2.3  | 1.9  | 2.4  | 3.1  | 5.5  | 8.1  | 16   | 26  | a16  | 9.0  |      | 4.7   |
| 26  | 1.9  | 2.0  | 2.3  | 2.8  | 5.7  | 7.9  | 16   | 26  | a15  | 9.2  |      | 4.6   |
| 27  | 2.3  | 1.9  | 2.4  | 2.7  | 6.5  | 7.7  | a18  | 27  | a15  | a10  |      | 4.7   |
| 28  | 2.2  | 2.0  | 2.3  | a2.6 | 14   | 7.9  | a20  | 28  | a14  | 11   |      | 5.0   |
| 29  | 2.0  | 2.3  | 2.2  | a2.5 | -    | 9.0  | a20  | 27  | a13  | 10   |      | 5.0   |
| 30  | 2.2  | 2.4  | 2.4  | b2.6 | -    | 9.7  | a20  | 26  | a13  | 9.9  |      | 5.0   |
| 31  | 2.0  | -    | 2.5  | b2.5 | -    | 10   | -    | 26  | -    | 9.2  | 5.8  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 65.7             | 2.4     | 1.8     | 2.05 | 126                  |
| November.....           | 59.8             | 2.6     | 1.5     | 1.99 | 119                  |
| December.....           | 64.5             | 2.6     | 1.2     | 2.08 | 128                  |
| Calendar year 1940..... | 2,122.8          | 21      | 1.2     | 5.80 | 4,210                |
| January.....            | 81.8             | 3.1     | -       | 2.64 | 162                  |
| February.....           | 129.5            | 14      | -       | 4.59 | 255                  |
| March.....              | 258.5            | 16      | .b      | 8.34 | 513                  |
| April.....              | 440.2            | 20      | 8.6     | 14.7 | 873                  |
| May.....                | 961              | 45      | 20      | 31.0 | 1,910                |
| June.....               | 573              | 25      | 13      | 19.1 | 1,140                |
| July.....               | 382.1            | 16      | 8.8     | 12.3 | 758                  |
| August.....             | 266.1            | -       | 4.7     | 8.58 | 528                  |
| September.....          | 144.3            | 5.8     | 4.0     | 4.81 | 266                  |
| Water year 1940-41..... | 3,423.5          | 45      | 1.2     | 9.38 | 6,800                |

a Fragmentary or no gage-height record; discharge interpolated or computed on basis of records for nearby stations.

b Stage-discharge relation affected by ice.



Weber River near Oakley, Utah

Location.- Water-stage recorder, lat. 40°44'10", long. 111°14'45", in NE¼ sec. 15, T. 1 S., R. 6 E., near mouth of canyon, 2 miles downstream from South Fork, 3 miles northeast of Oakley, and 6 miles upstream from Beaver Creek.

Drainage area.- 163 square miles.

Records available.- October 1904 to September 1941.

Average discharge.- 35 years (1906-41) 233 second-feet.

Extremes.- Maximum discharge during year, 1,160 second-feet June 18 (gage height, 3.34 feet); minimum recorded, 16 second-feet Mar. 12, but may have been lower during periods of ice effect.

1904-41: Maximum discharge observed, 4,010 second-feet July 6, 1907, June 5-7, 1909; minimum, that of Mar. 12, 1941.

Remarks.- Records good except those for periods of ice effect, which are fair. Several small diversions above station for irrigation. Flow regulated slightly by several small lakes on headwaters and a small reservoir on Smith and Morehouse Creek. Total capacity of all reservoirs, about 3,200 acre-feet.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May   | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|------|------|------|-------|
| 1   | 80   | 59   |      |      |      | 46   | 82   | 210   | 592  | 275  | 94   | 79    |
| 2   | 75   | 59   |      |      |      | 51   | 77   | 223   | 640  | 250  | 92   | 71    |
| 3   | 92   | 63   |      |      |      | 49   | 77   | 242   | 700  | 229  | 86   | 75    |
| 4   | 90   | 64   |      |      |      | 48   | 71   | 256   | 747  | 220  | 88   | 77    |
| 5   | 82   | 59   |      |      |      | 48   | 86   | 255   | 755  | 204  | 88   | 79    |
| 6   | 79   | 61   |      |      |      | *48  | 77   | 250   | 655  | 195  | 88   | 82    |
| 7   | 75   | 63   |      |      |      | 44   | 75   | 239   | 739  | 187  | 95   | 82    |
| 8   | 75   | 63   |      |      |      | 48   | 75   | 264   | 715  | 195  | 120  | 84    |
| 9   | 95   | 63   |      |      |      | 52   | 77   | 328   | 678  | 176  | 133  | 90    |
| 10  | 94   | 59   |      |      |      | 44   | 86   | 434   | 592  | 165  | 142  | 84    |
| 11  | 92   |      |      |      |      | 42   | 79   | 571   | 578  | 165  | 140  | 75    |
| 12  | 88   |      |      |      |      | 52   | 79   | 804   | 678  | 165  | 129  | 73    |
| 13  | 86   |      |      |      |      | 52   | 82   | 990   | 822  | 157  | 118  | 71    |
| 14  | 84   |      |      |      |      | 48   | 80   | 952   | 885  | 147  | 114  | 71    |
| 15  | 80   |      |      |      |      | 42   | 84   | 723   | 904  | 140  | 111  | 68    |
| 16  | 77   |      | b52  | b50  | b47  | 51   | 88   | 648   | 914  | 133  | 111  | 68    |
| 17  | 73   |      |      |      |      | 49   | 82   | 723   | 961  | 133  | 114  | 66    |
| 18  | 70   |      |      |      |      | 56   | 77   | 867   | 961  | 129  | 114  | 66    |
| 19  | 64   |      |      |      |      | 61   | 79   | 662   | 822  | 142  | 105  | 61    |
| 20  | 66   |      |      |      |      | 63   | 77   | 527   | 755  | 145  | 97   | 59    |
| 21  | 66   | b55  |      |      |      | 63   | 80   | 602   | 715  | 136  | 92   | 61    |
| 22  | 64   |      |      |      |      | 63   | 88   | 606   | 633  | 129  | 90   | 63    |
| 23  | 63   |      |      |      |      | 66   | 94   | 804   | 571  | 124  | 86   | 66    |
| 24  | 61   |      |      |      |      | 61   | 97   | 779   | 508  | 120  | 84   | 66    |
| 25  | 61   |      |      |      |      | 59   | 99   | 831   | 487  | 124  | 105  | 64    |
| 26  | 64   |      |      |      |      | (*)  | 105  | 1,020 | 373  | 131  | 94   | 64    |
| 27  | 70   |      |      |      |      | 64   | 120  | 1,000 | 323  | 124  | 94   | 73    |
| 28  | 68   |      |      |      |      | 71   | 133  | 813   | 306  | 114  | 92   | 68    |
| 29  | 63   |      |      |      |      | 71   | 155  | 685   | 298  | 103  | 86   | 59    |
| 30  | 64   |      |      |      |      | 75   | 187  | 606   | 290  | 101  | 88   | 58    |
| 31  | 61   | -    |      |      |      | 79   | -    | 606   | -    | 97   | 86   | -     |

  

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 2,322            | 95      | 61      | 74.9 | 4,610                |
| November.....           | 1,713            | 64      | 55      | 57.1 | 3,400                |
| December.....           | 1,612            | 52      | 52      | 52   | 3,200                |
| Calendar year 1940..... | 46,228           | 1,070   | 40      | 126  | 91,700               |
| January.....            | 1,550            | 50      | 50      | 50   | 3,070                |
| February.....           | 1,316            | 49      | 44      | 47   | 2,610                |
| March.....              | 1,722            | 66      | 42      | 55.5 | 3,420                |
| April.....              | 2,748            | 187     | 71      | 91.6 | 5,460                |
| May.....                | 18,418           | 1,020   | 210     | 594  | 36,530               |
| June.....               | 19,577           | 961     | 290     | 653  | 38,830               |
| July.....               | 4,853            | 275     | 97      | 187  | 9,630                |
| August.....             | 3,174            | 142     | 84      | 102  | 6,300                |
| September.....          | 2,123            | 90      | 58      | 70.8 | 4,210                |
| Water year 1940-41..... | 61,128           | 1,020   | 42      | 167  | 121,300              |

\* Winter discharge measurement made on this day.

b Stage-discharge relation affected by ice.

## Weber River near Coalville, Utah

Location.- Water-stage recorder, lat. 40°53'40", long. 111°24'00", in NE½ sec. 20, T. 2 N., R. 5 E., at bridge 1½ miles upstream from high-water contour for Echo Reservoir, 1½ miles south of Coalville, and 6 miles downstream from Silver Creek.

Drainage area.- 438 square miles.

Records available.- April 1927 to September 1941.

Average discharge.- 14 years, 201 second-feet.

Extremes.- Maximum discharge during year, 1,560 second-feet June 10 (gauge height, 4.07 feet); minimum daily, 40 second-feet Dec. 14.

1927-41: Maximum discharge observed, 1,960 second-feet June 17, 1929 (gauge height, 4.30 feet); minimum discharge, 6 second-feet Sept. 20, 1934, -0.23 foot).

Remarks.- Records good except those for periods of ice effect and for periods when once-daily gage readings were used, which are fair. Many diversions above station for irrigation. No diversions between station and Echo Reservoir. Records do not include water diverted from Weber River Basin through Weber-Provo diversion canal. Flow slightly regulated by several small reservoirs above station.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan.             | Feb.    | Mar.    | Apr. | May                  | June  | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|-------|------|------|-------|
| 1                       | 41   | 70   | 134  |                  | b70     | 210     | 144  | 215                  | 493   | 134  | 66   | 64    |
| 2                       | 49   | 67   | 130  |                  | b70     | 215     | 134  | 210                  | 506   | 136  | 63   | 62    |
| 3                       | 58   | 67   | 120  |                  | b70     | 168     | 128  | 184                  | 543   | 113  | 59   | 67    |
| 4                       | 66   | 94   | 94   |                  | b70     | 144     | 122  | 184                  | 588   | 89   | 56   | 78    |
| 5                       | 61   | 83   | 88   |                  | b70     | 142     | 157  | 194                  | 640   | 80   | 57   | 71    |
| 6                       | 56   | 94   | 86   |                  | b70     | 132     | 152  | 175                  | 561   | 67   | 59   | 76    |
| 7                       | 57   | 92   | 80   |                  | b60     | 126     | 134  | 157                  | 715   | 67   | 146  | 71    |
| 8                       | 63   | 84   | 77   |                  | b65     | 122     | 122  | 148                  | 772   | 84   | 113  | 67    |
| 9                       | 77   | 83   | 75   |                  | b65     | 134     | 117  | 175                  | 1,280 | 69   | 107  | 67    |
| 10                      | 83   | 84   | 70   |                  | b90     | 111     | 136  | 228                  | 1,070 | 57   | 144  | b66   |
| 11                      | 77   | 88   | b60  |                  | b150    | 117     | 152  | 313                  | 630   | 51   | 144  | 57    |
| 12                      | 76   | 89   | b50  |                  | 202     | 97      | 152  | 513                  | 615   | 61   | 155  | 56    |
| 13                      | 74   | b73  | b45  |                  | 144     | 104     | 134  | 742                  | 695   | 56   | 126  | 56    |
| 14                      | 70   | b90  | b40  |                  | 132     | 122     | 117  | 781                  | 754   | 53   | 120  | 57    |
| 15                      | 66   | b105 | b45  |                  | 126     | 100     | 120  | 628                  | 759   | 50   | 128  | 56    |
| 16                      | 63   | b122 | b60  | b60              | 126     | 111     | 148  | 509                  | 742   | 50   | 134  | 56    |
| 17                      | 57   | b124 | b75  |                  | 126     | 136     | 157  | 485                  | 705   | 46   | 155  | 50    |
| 18                      | 55   | b130 | b100 |                  | 120     | 175     | 135  | 620                  | 715   | 44   | 124  | 52    |
| 19                      | 53   | b150 | b100 |                  | 126     | 202     | 134  | 625                  | 597   | 76   | 113  | 56    |
| 20                      | 53   | b111 | b100 |                  | 136     | 215     | 128  | 459                  | 497   | 111  | 102  | 50    |
| 21                      | 57   | b128 | b100 |                  | 144     | 184     | 122  | 409                  | 439   | 39   | 88   | 49    |
| 22                      | 56   | b106 | b100 |                  | 168     | 166     | 122  | 446                  | 387   | 53   | 82   | 52    |
| 23                      | 55   | b89  | b100 |                  | 180     | 166     | 130  | 602                  | 333   | 76   | 78   | 57    |
| 24                      | 53   | b90  | b100 |                  | 187     | 148     | 134  | 630                  | 288   | 74   | 77   | 62    |
| 25                      | 55   | b100 | b100 |                  | 177     | 134     | 140  | 700                  | 276   | 109  | 86   | 58    |
| 26                      | 62   | b95  | b100 |                  | 130     | 122     | 142  | 994                  | 212   | 152  | 85   | 57    |
| 27                      | 76   | 118  | b100 |                  | 115     | 138     | 157  | 1,050                | 155   | 146  | 77   | 58    |
| 28                      | 76   | 120  | b100 |                  | 146     | 140     | 163  | 852                  | 126   | 115  | 73   | 61    |
| 29                      | 71   | 130  | b100 |                  | -       | 140     | 166  | 665                  | 113   | 92   | 69   | 64    |
| 30                      | 70   | 140  | b100 |                  | -       | 146     | 189  | 566                  | 146   | 53   | 67   | 61    |
| 31                      | 71   | -    | b100 |                  | -       | 142     | -    | 517                  | -     | 74   | 64   | -     |
| Month                   |      |      |      | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |       |      |      |       |
| October.....            |      |      |      | 1,957            | 83      | 41      | 63.1 | 3,880                |       |      |      |       |
| November.....           |      |      |      | 3,013            | 150     | 67      | 100  | 5,980                |       |      |      |       |
| December.....           |      |      |      | 2,732            | 134     | 40      | 88.1 | 5,420                |       |      |      |       |
| Calendar year 1940..... |      |      |      | 44,236           | 898     | 12      | 121  | 87,740               |       |      |      |       |
| January.....            |      |      |      | 2,480            | -       | -       | 60   | 4,920                |       |      |      |       |
| February.....           |      |      |      | 3,365            | 202     | 70      | 121  | 6,730                |       |      |      |       |
| March.....              |      |      |      | 4,508            | 215     | 97      | 145  | 8,940                |       |      |      |       |
| April.....              |      |      |      | 4,196            | 189     | 117     | 140  | 8,520                |       |      |      |       |
| May.....                |      |      |      | 15,003           | 1,050   | 148     | 484  | 29,760               |       |      |      |       |
| June.....               |      |      |      | 16,357           | 1,280   | 113     | 545  | 32,440               |       |      |      |       |
| July.....               |      |      |      | 2,687            | 152     | 44      | 83.5 | 5,130                |       |      |      |       |
| August.....             |      |      |      | 3,020            | 155     | 56      | 97.4 | 5,990                |       |      |      |       |
| September.....          |      |      |      | 1,813            | 76      | 49      | 60.4 | 3,600                |       |      |      |       |
| Water year 1940-41..... |      |      |      | 61,062           | 1,280   | 40      | 167  | 121,100              |       |      |      |       |

b Stage-discharge relation affected by ice.

n Discharge computed from once-daily gage readings.

WEBER RIVER BASIN

Echo Reservoir at Echo, Utah

Location.- Staff gage, lat. 40°57'50", long. 111°26'00" in NW¼ sec. 30, T. 3 N., R 5 E., near outlet works at left end of Echo Dam on Weber River, 1 mile southeast of Echo. Datum of gage is at mean sea level (surveys of Bureau of Reclamation).

Drainage area.- 732 square miles.

Records available.- October 1930 to September 1941.

Extremes.- Maximum contents during year, 74,240 acre-feet June 18-21 (elevation, 5,560.2 feet); minimum, 2,440 acre-feet Oct. 25, Nov. 13, 14 (elevation, 5,477.5 feet). 1930-41: Maximum contents, 74,460 acre-feet (revised) May 31, 1937 (elevation, 5,560.35 feet); no storage Sept. 12 to Dec. 3, 1931, and Sept. 24 to Nov. 2, 1934.

Remarks.- Reservoir is formed by earth-fill, rock-faced dam; storage began in October 1930; dam completed in 1931. Capacity, 73,940 acre-feet (revised) between elevation 5,450 feet (bottom of outlet tunnel) and 5,560 feet (top of radial gates in spillway) above mean sea level. Dead storage negligible. Elevation of spillway crest is 5,543 feet. Water is used for irrigation on the Echo project. Gage read to half tenths about 6 a.m. daily; contents are as of that time.

Capacity table, revised as of Oct. 1, 1940, (elevation, in feet, and contents, in acre-feet) (Furnished by U. S. Bureau of Reclamation)

|       |     |       |       |       |        |       |        |       |        |
|-------|-----|-------|-------|-------|--------|-------|--------|-------|--------|
| 5,450 | 0   | 5,475 | 1,780 | 5,500 | 11,650 | 5,525 | 31,180 | 5,550 | 59,880 |
| 5,455 | 54  | 5,480 | 3,080 | 5,505 | 14,920 | 5,530 | 36,100 | 5,555 | 66,740 |
| 5,460 | 153 | 5,485 | 4,720 | 5,510 | 18,480 | 5,535 | 41,440 | 5,560 | 73,940 |
| 5,465 | 389 | 5,490 | 6,750 | 5,515 | 22,390 | 5,540 | 47,200 |       |        |
| 5,470 | 894 | 5,495 | 9,110 | 5,520 | 26,620 | 5,545 | 53,380 |       |        |

Contents, in acre-feet, water year October 1940 to September 1941

| Day | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  |
|-----|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 2,490 | 2,500 | 2,680 | 2,950 | 3,340 | 8,910  | 18,980 | 28,860 | 57,560 | 63,220 | 47,140 | 28,580 |
| 2   | 2,460 | 2,500 | 2,670 | 2,870 | 3,400 | 9,390  | 19,320 | 29,400 | 57,890 | 67,730 | 46,550 | 27,810 |
| 3   | 2,500 | 2,490 | 2,660 | 2,870 | 3,480 | 9,890  | 19,620 | 29,870 | 58,410 | 67,160 | 45,780 | 27,190 |
| 4   | 2,500 | 2,520 | 2,610 | 2,840 | 3,330 | 10,260 | 19,950 | 30,380 | 58,940 | 66,600 | 44,900 | 26,870 |
| 5   | 2,520 | 2,550 | 2,590 | 2,870 | 3,590 | 10,590 | 20,200 | 30,650 | 59,480 | 65,900 | 44,090 | 26,050 |
| 6   | 2,520 | 2,550 | 2,600 | 2,970 | 3,660 | 10,890 | 20,600 | 31,370 | 60,280 | 65,130 | 43,240 | 25,490 |
| 7   | 2,500 | 2,560 | 2,610 | 2,970 | 3,720 | 11,170 | 20,950 | 31,840 | 60,950 | 64,370 | 42,440 | 24,970 |
| 8   | 2,500 | 2,560 | 2,640 | 3,000 | 3,760 | 11,480 | 21,370 | 32,280 | 62,440 | 63,540 | 41,770 | 24,420 |
| 9   | 2,540 | 2,530 | 2,670 | 3,000 | 3,940 | 11,660 | 21,550 | 32,660 | 64,440 | 62,790 | 41,050 | 23,920 |
| 10  | 2,570 | 2,500 | 2,720 | 3,000 | 3,900 | 11,970 | 21,790 | 33,200 | 67,730 | 61,900 | 40,440 | 23,460 |
| 11  | 2,570 | 2,480 | 2,740 | 3,000 | 4,020 | 12,180 | 22,150 | 33,890 | 70,010 | 60,950 | 40,120 | 23,050 |
| 12  | 2,540 | 2,460 | 2,740 | 3,000 | 4,470 | 12,440 | 22,470 | 34,230 | 71,530 | 60,080 | 39,740 | 22,560 |
| 13  | 2,530 | 2,440 | 2,720 | 3,010 | 4,940 | 12,620 | 22,600 | 36,350 | 72,840 | 59,140 | 39,360 | 22,110 |
| 14  | 2,490 | 2,440 | 2,760 | 3,000 | 5,110 | 12,860 | 23,130 | 36,290 | 73,560 | 58,150 | 38,880 | 21,620 |
| 15  | 2,490 | 2,480 | 2,760 | 3,000 | 5,250 | 13,110 | 23,380 | 40,170 | 73,940 | 57,160 | 38,340 | 21,150 |
| 16  | 2,480 | 2,530 | 2,780 | 2,990 | 5,380 | 13,320 | 23,670 | 41,550 | 74,090 | 56,250 | 37,920 | 20,670 |
| 17  | 2,450 | 2,570 | 2,820 | 2,940 | 5,540 | 13,540 | 24,040 | 42,720 | 74,160 | 55,280 | 37,500 | 20,240 |
| 18  | 2,450 | 2,590 | 2,870 | 2,930 | 5,680 | 13,800 | 24,380 | 45,580 | 74,240 | 54,320 | 37,080 | 19,730 |
| 19  | 2,450 | 2,650 | 2,940 | 2,960 | 5,840 | 14,270 | 24,680 | 44,790 | 74,240 | 53,350 | 36,670 | 19,380 |
| 20  | 2,450 | 2,640 | 2,970 | 2,990 | 5,990 | 14,730 | 24,970 | 45,780 | 74,240 | 52,920 | 36,150 | 18,960 |
| 21  | 2,450 | 2,610 | 3,000 | 3,030 | 6,170 | 15,230 | 25,270 | 46,430 | 74,240 | 52,220 | 35,640 | 18,450 |
| 22  | 2,450 | 2,590 | 3,000 | 3,000 | 6,430 | 15,700 | 25,530 | 46,810 | 74,160 | 51,560 | 35,040 | 18,000 |
| 23  | 2,450 | 2,500 | 3,010 | 2,970 | 6,780 | 16,120 | 25,830 | 46,780 | 73,650 | 50,980 | 34,440 | 17,590 |
| 24  | 2,450 | 2,460 | 3,080 | 2,940 | 7,220 | 16,470 | 26,100 | 47,580 | 73,060 | 50,240 | 33,840 | 17,340 |
| 25  | 2,440 | 2,460 | 3,050 | 2,990 | 7,640 | 16,850 | 26,440 | 46,540 | 72,400 | 49,500 | 33,250 | 17,230 |
| 26  | 2,450 | 2,520 | 3,000 | 3,040 | 8,040 | 17,120 | 26,750 | 49,440 | 71,750 | 48,950 | 32,660 | 17,010 |
| 27  | 2,490 | 2,540 | 2,990 | 3,090 | 8,310 | 17,410 | 27,100 | 51,250 | 71,020 | 48,520 | 32,040 | 16,870 |
| 28  | 2,500 | 2,570 | 2,970 | 3,180 | 8,580 | 17,700 | 27,500 | 53,110 | 70,280 | 48,460 | 31,370 | 16,720 |
| 29  | 2,500 | 2,640 | 2,940 | 3,280 | -     | 18,040 | 27,950 | 54,640 | 69,440 | 48,340 | 30,710 | 16,580 |
| 30  | 2,500 | 2,670 | 2,940 | 3,210 | -     | 18,340 | 28,310 | 55,730 | 68,790 | 48,100 | 29,980 | 16,440 |
| 31  | 2,500 | -     | 2,960 | 3,270 | -     | 18,670 | -      | 56,580 | -      | 47,680 | 29,270 | -      |

Monthly elevation and contents, water year October 1940 to September 1941

| Date               | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|--------------------|------------------|----------------------|---|
| Oct. 1             | 5,478.0          | 2,490                | +10   |
| Nov. 1             | 5,478.05         | 2,600                | +180  |
| Dec. 1             | 5,478.7          | 2,680                | +250  |
| Calendar year 1940 | -                | -                    | +1,120                                      |
| Jan. 1             | 5,479.55         | 2,930                | +410  |
| Feb. 1             | 5,480.9          | 3,340                | +5,870                                      |
| Mar. 1             | 5,494.8          | 8,910                | +10,070                                     |
| Apr. 1             | 5,510.65         | 18,980               | +9,380                                      |
| May 1              | 5,525.5          | 28,860               | +28,500                                     |
| June 1             | 5,548.1          | 57,560               | +10,860                                     |
| July 1             | 5,556.05         | 63,220               | -21,080                                     |
| Aug. 1             | 5,539.95         | 47,140               | -18,560                                     |
| Sept. 1            | 5,522.2          | 28,580               | -12,220                                     |
| Oct. 1             | 5,507.0          | 18,900               | -   |
| Water year 1940-41 | -                | -                    | +15,810                                     |

## Weber River at Echo, Utah

Location.- Water-stage recorder, lat. 40°58'05", long. 111°26'15", in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 25, T. 3 N., R. 4 E., 600 feet upstream from Echo Creek, 2,400 feet downstream from Echo Dam, and 3,200 feet southeast of Echo.

Drainage area.- 732 square miles.

Records available.- April 1927 to September 1941.

Average discharge.- 14 years, 254 second-feet.

Extremes (regulated).- Maximum discharge during year, 922 second-feet June 16 and 17 (gauge height, 3.92 feet); minimum daily, 3 second-feet for several days in February and March. 1927-41: Maximum discharge, 2,330 second-feet May 30, 31, 1937 (gauge height, 5.83 feet); practically no flow when reservoir gates are closed.

Remarks.- Records excellent. Many diversions for irrigation above and below station. One small diversion between gage and Echo Dam. Flow regulated by Echo Reservoir (see preceding page).

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 68   | 93   | 167  | 125  | 63   | 19   | 4    | 4   | 275  | 450  | 392  | 400   |
| 2   | 68   | 93   | 167  | 93   | 63   | 8    | 4    | 4   | 326  | 450  | 446  | 407   |
| 3   | 80   | 93   | 167  | 84   | 63   | 3    | 4    | 4   | 367  | 446  | 517  | 392   |
| 4   | 90   | 101  | 145  | 67   | 63   | 3    | 4    | 4   | 404  | 450  | 517  | 364   |
| 5   | 90   | 111  | 114  | 59   | 63   | 3    | 4    | 4   | 339  | 478  | 530  | 356   |
| 6   | 90   | 111  | 107  | 91   | 63   | 12   | 4    | 4   | 329  | 490  | 544  | 350   |
| 7   | 84   | 118  | 97   | 109  | 72   | 22   | 4    | 4   | 160  | 504  | 512  | 350   |
| 8   | 78   | 123  | 83   | 109  | 85   | 22   | 4    | 5   | 62   | 506  | 503  | 322   |
| 9   | 90   | 123  | 87   | 109  | 83   | 17   | 4    | 5   | 45   | 530  | 499  | 303   |
| 10  | 111  | 123  | 72   | 109  | 76   | 13   | 4    | 5   | 44   | 535  | 486  | 294   |
| 11  | 118  | 123  | 65   | 109  | 64   | 13   | 4    | 5   | 44   | 544  | 450  | 290   |
| 12  | 116  | 123  | 59   | 109  | 65   | 13   | 4    | 5   | 159  | 566  | 423  | 294   |
| 13  | 116  | 105  | 50   | 120  | 83   | 13   | 4    | 5   | 526  | 571  | 434  | 300   |
| 14  | 104  | 97   | 47   | 125  | 96   | 13   | 4    | 5   | 612  | 553  | 423  | 303   |
| 15  | 97   | 111  | 47   | 126  | 88   | 13   | 4    | 27  | 922  | 553  | 404  | 300   |
| 16  | 97   | 131  | 47   | 125  | 76   | 13   | 4    | 45  | 912  | 548  | 396  | 290   |
| 17  | 87   | 141  | 63   | 109  | 77   | 13   | 4    | 97  | 640  | 535  | 396  | 284   |
| 18  | 80   | 158  | 70   | 102  | 70   | 6    | 4    | 149 | 763  | 517  | 392  | 284   |
| 19  | 77   | 165  | 91   | 102  | 73   | 3    | 4    | 174 | 715  | 486  | 374  | 294   |
| 20  | 73   | 165  | 102  | 102  | 75   | 3    | 4    | 234 | 580  | 466  | 359  | 284   |
| 21  | 73   | 163  | 112  | 125  | 70   | 3    | 4    | 283 | 580  | 427  | 392  | 284   |
| 22  | 73   | 163  | 118  | 131  | 27   | 3    | 4    | 454 | 635  | 427  | 404  | 284   |
| 23  | 73   | 135  | 123  | 131  | 4    | 3    | 4    | 392 | 690  | 470  | 407  | 213   |
| 24  | 73   | 118  | 137  | 107  | 4    | 3    | 4    | 350 | 700  | 474  | 404  | 148   |
| 25  | 69   | 118  | 141  | 87   | 3    | 3    | 4    | 356 | 695  | 454  | 400  | 179   |
| 26  | 67   | 118  | 141  | 67   | 16   | 3    | 4    | 316 | 655  | 427  | 415  | 154   |
| 27  | 84   | 118  | 143  | 83   | 15   | 11   | 4    | 242 | 560  | 290  | 423  | 147   |
| 28  | 93   | 118  | 143  | 73   | 19   | 10   | 4    | 212 | 566  | 290  | 423  | 147   |
| 29  | 93   | 139  | 143  | 65   | -    | 4    | 4    | 209 | 530  | 248  | 434  | 147   |
| 30  | 93   | 163  | 143  | 63   | -    | 4    | 4    | 186 | 478  | 322  | 427  | 147   |
| 31  | 93   | -    | 143  | 63   | -    | 4    | -    | 217 | -    | 360  | 411  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 2,698            | 118     | 67      | 87.0 | 5,350                |
| November.....           | 3,761            | 165     | 93      | 125  | 7,460                |
| December.....           | 3,339            | 167     | 47      | 108  | 6,620                |
| Calendar year 1940..... | 55,000           | 548     | 2       | 150  | 110,100              |
| January.....            | 3,098            | 131     | 59      | 99.9 | 6,140                |
| February.....           | 1,622            | 96      | 3       | 57.9 | 3,220                |
| March.....              | 276              | 22      | 3       | 9.9  | 547                  |
| April.....              | 120              | 4       | 4       | 4.0  | 238                  |
| May.....                | 4,006            | 454     | 4       | 129  | 7,950                |
| June.....               | 14,733           | 922     | 44      | 491  | 29,220               |
| July.....               | 14,299           | 571     | 220     | 461  | 29,360               |
| August.....             | 13,572           | 544     | 374     | 438  | 26,920               |
| September.....          | 8,311            | 407     | 147     | 277  | 16,480               |
| Water year 1940-41..... | 69,640           | 922     | 3       | 191  | 138,500              |

Note.- Discharge Nov. 23 to May 15, May 19-29 computed on basis of once-daily or more frequent gage readings and records of gate operations at Echo Dam.

Weber River at Devils Slide, Utah

Location.- Water-stage recorder, lat. 41°03'40", long. 111°34'25", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec. 23, T. 4 N., R. 3 E., 500 feet downstream from highway underpass on U. S. Highway 306, 1 $\frac{1}{2}$  miles west of Devils Slide, and 1 $\frac{1}{4}$  miles downstream from Lost Creek.

Drainage area.- 1,100 square miles.

Records available.- February 1905 to September 1941.

Average discharge.- 36 years, 456 second-feet.

Extremes (regulated).- Maximum discharge during year, 982 second-feet-June 15 (gage height, 3.86 feet); minimum, 37 second-feet Mar. 13.

1905-41: Maximum discharge observed, 6,000 second-feet May 22, 1920; minimum discharge, 18 second-feet Sept. 23, 1934.

Remarks.- Records excellent except those for periods of ice effect, which are good. Many diversions above station for irrigation and domestic supply. Flow regulated by Echo Reservoir (see p. 47).

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

|     |    |     |     |     |     |
|-----|----|-----|-----|-----|-----|
| 0.9 | 36 | 1.4 | 79  | 2.4 | 285 |
| 1.0 | 42 | 1.6 | 107 | 2.6 | 345 |
| 1.1 | 49 | 1.8 | 143 | 3.0 | 502 |
| 1.2 | 57 | 2.0 | 185 | 3.4 | 705 |
| 1.3 | 67 | 2.2 | 232 | 3.9 | 990 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 77   | 106  | 196  | b150 | b65  | 74   | 59   | 199 | 272  | 457  | 379  | 416   |
| 2   | 77   | 104  | 196  | b120 | b85  | 75   | 57   | 213 | 333  | 457  | 416  | 409   |
| 3   | 84   | 110  | 196  | b105 | b85  | 58   | 57   | 227 | 362  | 453  | 498  | 409   |
| 4   | 95   | 116  | 183  | b90  | b85  | 51   | 56   | 232 | 416  | 449  | 502  | 379   |
| 5   | 95   | 126  | 143  | b80  | b85  | 45   | 64   | 227 | 383  | 466  | 516  | 372   |
| 6   | 95   | 130  | 132  | b110 | b85  | 45   | 69   | 222 | 359  | 490  | 526  | 365   |
| 7   | 94   | 134  | 122  | b125 | b105 | 68   | 64   | 192 | 273  | 488  | 516  | 365   |
| 8   | 91   | 143  | 112  | b125 | 119  | 58   | 62   | 208 | 130  | 498  | 498  | 348   |
| 9   | 98   | 143  | 107  | b125 | 119  | 59   | 63   | 222 | 112  | 502  | 488  | 320   |
| 10  | 116  | 145  | 98   | b125 | 114  | 51   | 69   | 206 | 119  | 512  | 550  | 314   |
| 11  | 130  | 147  | b90  | b125 | 96   | 51   | 71   | 192 | 116  | 516  | 540  | 311   |
| 12  | 132  | 141  | b85  | b125 | 143  | 47   | 69   | 161 | 154  | 551  | 490  | 308   |
| 13  | 134  | 135  | b75  | b140 | 134  | 46   | 72   | 115 | 546  | 550  | 449  | 311   |
| 14  | 128  | 116  | b70  | 145  | 132  | 49   | 71   | 83  | 826  | 540  | 441  | 314   |
| 15  | 117  | 132  | b70  | 147  | 128  | 46   | 69   | 60  | 918  | 540  | 424  | 308   |
| 16  | 116  | 151  | b75  | 143  | 119  | 48   | 77   | 53  | 900  | 536  | 412  | 300   |
| 17  | 104  | 163  | b85  | b135 | 116  | 50   | 82   | 82  | 948  | 545  | 409  | 291   |
| 18  | 94   | 185  | b95  | b120 | 112  | 51   | 79   | 128 | 782  | 540  | 405  | 291   |
| 19  | 92   | 192  | b115 | b120 | 121  | 50   | 75   | 155 | 732  | 516  | 396  | 297   |
| 20  | 87   | 192  | b125 | b120 | 128  | 60   | 74   | 206 | 590  | 490  | 401  | 302   |
| 21  | 88   | 194  | b135 | 130  | 132  | 69   | 71   | 333 | 575  | 449  | 409  | 294   |
| 22  | 88   | 190  | b145 | 147  | 110  | 63   | 71   | 436 | 600  | 428  | 416  | 297   |
| 23  | 89   | 174  | b160 | 147  | 73   | 62   | 74   | 409 | 650  | 453  | 420  | 266   |
| 24  | 89   | 151  | b160 | 134  | 75   | 59   | 84   | 348 | 650  | 466  | 416  | 145   |
| 25  | 87   | 141  | 163  | 102  | 72   | 56   | 92   | 362 | 661  | 457  | 409  | 199   |
| 26  | 87   | 141  | 163  | 102  | 61   | 51   | 102  | 336 | 635  | 424  | 420  | 170   |
| 27  | 95   | 141  | 163  | 101  | 56   | 51   | 124  | 266 | 560  | 329  | 432  | 157   |
| 28  | 107  | 145  | b163 | 95   | 58   | 63   | 151  | 235 | 550  | 327  | 432  | 157   |
| 29  | 107  | 161  | b163 | b85  | -    | 55   | 181  | 245 | 516  | 237  | 441  | 159   |
| 30  | 107  | 190  | b163 | b85  | -    | 54   | 194  | 201 | 488  | 317  | 445  | 157   |
| 31  | 106  | -    | 163  | b85  | -    | 55   | -    | 227 | -    | 345  | 432  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 3,106            | 134     | 77      | 100  | 6,160                |
| November.....           | 4,437            | 194     | 104     | 148  | 8,300                |
| December.....           | 4,101            | 196     | 70      | 132  | 8,130                |
| Calendar year 1940..... | 64,130           | 561     | 47      | 175  | 127,800              |
| January.....            | 3,688            | 150     | 80      | 119  | 7,320                |
| February.....           | 2,833            | 143     | 56      | 101  | 5,620                |
| March.....              | 1,710            | 75      | 45      | 55.2 | 3,390                |
| April.....              | 2,503            | 194     | 56      | 85.4 | 4,960                |
| May.....                | 6,782            | 436     | 53      | 219  | 13,450               |
| June.....               | 15,056           | 918     | 112     | 502  | 29,860               |
| July.....               | 14,188           | 550     | 237     | 468  | 28,140               |
| August.....             | 13,908           | 550     | 379     | 449  | 27,590               |
| September.....          | 8,731            | 416     | 145     | 291  | 17,320               |
| Water year 1940-41..... | 81,040           | 918     | 45      | 220  | 161,700              |

b Stage-discharge relation affected by ice.

## WEBER RIVER BASIN

## Weber River at Gateway, Utah

Location.- Water-stage recorder, lat. 41°08', long. 111°50', in NW¼ sec. 27, T. 5 N., R. 1 E., 800 feet downstream from Union Pacific Railroad bridge, 2,500 feet downstream from Strawberry Creek, and 2,500 feet east of section house and Gateway.

Drainage area.- 1,610 square miles.

Records available.- June 1919 to September 1941. October 1889 to July 1903 at site 1 mile downstream, published as Weber River near Uinta.

Average discharge.- 21 years (1920-41), 584 second-feet.

Extremes.- Maximum discharge during year, 1,050 second-feet (regulated) June 15 and 16 (gage height, 2.74 feet); minimum, 110 second-feet (regulated) Dec. 14 and 15. 1889-1903, 1919-41: Maximum discharge observed, 7,980 second-feet May 31, 1896; minimum, 45 second-feet Sept. 24, 1934.

Remarks.- Records excellent except those for periods of ice effect, which are fair. Several diversions for irrigation above and below station. Flow partly regulated by East Canyon Creek and Echo Reservoirs (see pp. 53 , 47 ).

Cooperation.- Three discharge measurements furnished by Utah Power & Light Co.

Rating tables, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Mar. 16 to Apr. 30)

| Oct. 1 to Apr. 30 |     |     |     |     | May 1 to Sept. 30 |     |     |     |       |
|-------------------|-----|-----|-----|-----|-------------------|-----|-----|-----|-------|
| 0.4               | S3  | 1.2 | 291 | 2.0 | 645               | 1.0 | 213 | 2.0 | 627   |
| .6                | 118 | 1.4 | 365 | 2.4 | 970               | 1.2 | 279 | 2.2 | 735   |
| .8                | 165 | 1.6 | 448 | 2.8 | 1,110             | 1.4 | 353 | 2.4 | 850   |
| 1.0               | 224 | 1.8 | 542 |     |                   | 1.6 | 435 | 2.6 | 970   |
|                   |     |     |     |     |                   | 1.8 | 526 | 2.8 | 1,090 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June  | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|-------|------|------|-------|
| 1   | 127  | 158  | 237  | 193  | b125 | 218  | 247  | 708 | 493   | 606  | 385  | 487   |
| 2   | 122  | 155  | 237  | b170 | b125 | 267  | 231  | 787 | 526   | 580  | 406  | 439   |
| 3   | 122  | 160  | 234  | b150 | b125 | 254  | 240  | 790 | 512   | 575  | 488  | 483   |
| 4   | 133  | 168  | 237  | b130 | b125 | 185  | 215  | 790 | 546   | 565  | 512  | 418   |
| 5   | 136  | 173  | 212  | b120 | b125 | 162  | 649  | 768 | 585   | 575  | 517  | 410   |
| 6   | 133  | 179  | 190  | 142  | b125 | 155  | 350  | 762 | 512   | 580  | 531  | 406   |
| 7   | 138  | 185  | 187  | 165  | 131  | 155  | 284  | 664 | 606   | 575  | 526  | 406   |
| 8   | 136  | 193  | 171  | 176  | 140  | 160  | 260  | 730 | 461   | 585  | 526  | 401   |
| 9   | 142  | 196  | 165  | 168  | 148  | 165  | 254  | 850 | 444   | 580  | 517  | 369   |
| 10  | 152  | 196  | 160  | 173  | 155  | 152  | 305  | 874 | 427   | 596  | 575  | 369   |
| 11  | 165  | 199  | 139  | 173  | 158  | 160  | 302  | 862 | 395   | 601  | 575  | 361   |
| 12  | 171  | 196  | 122  | 185  | 240  | 133  | 284  | 838 | 369   | 611  | 560  | 361   |
| 13  | 171  | 182  | b115 | 179  | 250  | 129  | 284  | 808 | 580   | 580  | 517  | 369   |
| 14  | 171  | 171  | b110 | 190  | 251  | 131  | 267  | 724 | 974   | 570  | 512  | 369   |
| 15  | 160  | 168  | b110 | 193  | 221  | 125  | 260  | 575 | 1,030 | 565  | 488  | 369   |
| 16  | 160  | 196  | b115 | 190  | 215  | 127  | 302  | 457 | 1,040 | 565  | 470  | 357   |
| 17  | 158  | 205  | b120 | 162  | 221  | 148  | 309  | 397 | 974   | 565  | 470  | 358   |
| 18  | 142  | 224  | b130 | 176  | 208  | 179  | 291  | 427 | 880   | 560  | 456  | 358   |
| 19  | 140  | 234  | 140  | 171  | 212  | 199  | 277  | 448 | 820   | 570  | 439  | 354   |
| 20  | 138  | 231  | 160  | 171  | 231  | 224  | 267  | 431 | 696   | 531  | 435  | 345   |
| 21  | 136  | 237  | 162  | 179  | 267  | 227  | 260  | 439 | 638   | 507  | 448  | 345   |
| 22  | 136  | 231  | 179  | 202  | 281  | 215  | 267  | 575 | 627   | 470  | 444  | 365   |
| 23  | 136  | 221  | 190  | 199  | 250  | 212  | 295  | 648 | 664   | 470  | 448  | 369   |
| 24  | 135  | 197  | 205  | 199  | 247  | 182  | 338  | 611 | 659   | 498  | 444  | 259   |
| 25  | 129  | 193  | 212  | 171  | 250  | 162  | 393  | 627 | 675   | 517  | 439  | 283   |
| 26  | 133  | 193  | 205  | 162  | 187  | 158  | 439  | 638 | 669   | 502  | 435  | 259   |
| 27  | 138  | 187  | 221  | 160  | 173  | 173  | 489  | 611 | 675   | 470  | 444  | 242   |
| 28  | 148  | 196  | 215  | 152  | 176  | 190  | 562  | 591 | 669   | 304  | 435  | 239   |
| 29  | 150  | 202  | 221  | b125 | -    | 208  | 645  | 546 | 664   | 283  | 439  | 235   |
| 30  | 155  | 227  | 224  | b125 | -    | 237  | 711  | 498 | 627   | 330  | 484  | 232   |
| 31  | 158  | -    | 224  | b125 | -    | 281  | -    | 475 | -     | 361  | 475  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 4,469            | 171     | 122     | 144  | 8,860                |
| November.....           | 5,843            | 237     | 155     | 195  | 11,590               |
| December.....           | 5,538            | 237     | 110     | 179  | 10,980               |
| Calendar year 1940..... | 104,755          | 748     | 105     | 286  | 207,700              |
| January.....            | 5,196            | 202     | 120     | 168  | 10,310               |
| February.....           | 5,348            | 281     | 125     | 191  | 10,600               |
| March.....              | 5,653            | 281     | 125     | 182  | 11,210               |
| April.....              | 10,177           | 711     | 215     | 339  | 20,190               |
| May.....                | 19,919           | 874     | 397     | 643  | 39,510               |
| June.....               | 19,355           | 1,040   | 369     | 645  | 38,390               |
| July.....               | 16,247           | 611     | 283     | 524  | 32,230               |
| August.....             | 14,550           | 575     | 335     | 476  | 29,450               |
| September.....          | 10,497           | 457     | 232     | 350  | 20,820               |
| Water year 1940-41..... | 123,086          | 1,040   | 110     | 337  | 244,100              |

b Stage-discharge relation affected by ice.

Weber River near Plain City, Utah

Location.- Chain gage, lat. 41°16'42", long. 112°05'30", in ~~W~~ sec. 8, T. 6 N., R. 2 W., at county highway bridge, 1 mile downstream from Fourmile Creek, 1 1/2 miles south of Plain City, and 6 miles upstream from mouth.

Drainage area.- 2,060 square miles.

Records available.- May 1905 to September 1941. Records collected in 1904 by State engineer.

Extremes.- Maximum discharge observed during year, 1,220 second-feet (regulated) May 7 (gage height, 9.00 feet); minimum observed, 25 second-feet (regulated) July 23, 1904-41; Maximum discharge observed, 7,590 second-feet June 6, 1909 (gage height, 19.1 feet); practically no flow during latter part of several summers since 1915.

Remarks.- Records fair. In summer practically entire flow of Weber River is diverted above station for irrigation. Flow is partly regulated by Echo, East Canyon Creek, and Pine View Reservoirs (see pp. 47, 53, 56). Gage read once daily.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov.    | Dec.    | Jan.    | Feb.                 | Mar.  | Apr. | May   | June | July | Aug. | Sept.   |
|-------------------------|------------------|---------|---------|---------|----------------------|-------|------|-------|------|------|------|---------|
| 1                       | 46               | 154     | 329     | 359     | 265                  | 465   | 817  | 1,010 | 175  | 73   | 31   | 45      |
| 2                       | 46               | 154     | 345     | 316     | 256                  | 589   | 556  | 1,080 | 142  | 65   | 33   | 51      |
| 3                       | 76               | 154     | 349     | 242     | 265                  | 668   | 629  | 1,150 | 123  | 56   | 30   | 53      |
| 4                       | 108              | 158     | 347     | 222     | 276                  | 619   | 500  | 1,110 | 123  | 68   | 30   | 53      |
| 5                       | 120              | 164     | 330     | 282     | 259                  | 527   | 810  | 1,200 | 115  | 60   | 27   | 60      |
| 6                       | 94               | 170     | 321     | 366     | 242                  | 502   | 940  | 1,150 | 121  | 38   | 27   | 61      |
| 7                       | 92               | 170     | 252     | 329     | 256                  | 465   | 706  | 1,220 | 168  | 47   | 35   | 55      |
| 8                       | 108              | 178     | 278     | 414     | 221                  | 461   | 871  | 1,140 | 434  | 40   | 33   | 53      |
| 9                       | 110              | 184     | 265     | 411     | 270                  | 461   | 534  | 1,190 | 477  | 44   | 56   | 58      |
| 10                      | 116              | 193     | 248     | 411     | 373                  | 437   | 623  | 1,170 | 422  | 31   | 27   | 56      |
| 11                      | 161              | 195     | 237     | 357     | 432                  | 411   | 675  | 1,100 | 459  | 31   | 40   | 55      |
| 12                      | 170              | 208     | 224     | 319     | 451                  | 396   | 671  | 1,180 | 401  | 33   | 55   | 55      |
| 13                      | 155              | 215     | 219     | 313     | 532                  | 389   | 596  | 1,020 | 317  | 43   | 92   | 54      |
| 14                      | 155              | 223     | 181     | 352     | 449                  | 392   | 560  | 755   | 630  | 55   | 70   | 49      |
| 15                      | 155              | 228     | 192     | 321     | 450                  | 396   | 543  | 770   | 758  | 34   | 71   | 48      |
| 16                      | 155              | 244     | 219     | 311     | 400                  | 374   | 632  | 359   | 830  | 35   | 67   | 49      |
| 17                      | 155              | 266     | 230     | 278     | 411                  | 355   | 655  | 256   | 647  | 31   | 56   | 54      |
| 18                      | 144              | 324     | 239     | 280     | 400                  | 407   | 556  | 175   | 445  | 31   | 56   | 50      |
| 19                      | 137              | 355     | 259     | 295     | 411                  | 430   | 600  | 114   | 338  | 65   | 58   | 50      |
| 20                      | 111              | 345     | 276     | 302     | 371                  | 441   | 534  | 69    | 219  | 63   | 28   | 49      |
| 21                      | 101              | 329     | 255     | 322     | 465                  | 445   | 525  | 52    | 79   | 62   | 49   | 50      |
| 22                      | 100              | 308     | 292     | 357     | 451                  | 443   | 435  | 52    | 65   | 32   | 53   | 54      |
| 23                      | 101              | 285     | 403     | 354     | 540                  | 463   | 407  | 73    | 45   | 25   | 52   | 221     |
| 24                      | 108              | 279     | 378     | 357     | 426                  | 471   | 619  | 117   | 60   | 30   | 53   | 226     |
| 25                      | 106              | 273     | 366     | 325     | 593                  | 405   | 632  | 127   | 54   | 42   | 53   | 156     |
| 26                      | 111              | 287     | 354     | 303     | 485                  | 394   | 551  | 202   | 69   | 66   | 56   | 35      |
| 27                      | 125              | 269     | 375     | 322     | 449                  | 405   | 750  | 300   | 51   | 75   | 55   | 53      |
| 28                      | 117              | 273     | 398     | 413     | 453                  | 435   | 810  | 279   | 69   | 75   | 53   | 54      |
| 29                      | 135              | 298     | 437     | 300     | -                    | 463   | 675  | 245   | 81   | 62   | 52   | 53      |
| 30                      | 145              | 311     | 477     | 288     | -                    | 491   | 938  | 245   | 82   | 58   | 35   | 50      |
| 31                      | 148              | -       | 430     | 278     | -                    | 504   | -    | 221   | -    | 48   | 45   | -       |
| Month                   |                  |         |         |         |                      |       |      |       |      |      |      |         |
| October.....            |                  |         |         | 3,711   |                      | 170   |      | 46    |      | 120  |      | 7,360   |
| November.....           |                  |         |         | 7,179   |                      | 355   |      | 154   |      | 239  |      | 14,240  |
| December.....           |                  |         |         | 9,564   |                      | 477   |      | 151   |      | 309  |      | 18,970  |
| Calendar year 1940..... |                  |         |         | 85,428  |                      | 1,060 |      | 8     |      | 228  |      | 165,500 |
| January.....            |                  |         |         | 10,099  |                      | 414   |      | 222   |      | 326  |      | 20,030  |
| February.....           |                  |         |         | 10,932  |                      | 593   |      | 242   |      | 390  |      | 21,680  |
| March.....              |                  |         |         | 14,134  |                      | 668   |      | 374   |      | 455  |      | 28,030  |
| April.....              |                  |         |         | 19,079  |                      | 940   |      | 407   |      | 636  |      | 37,540  |
| May.....                |                  |         |         | 19,111  |                      | 1,220 |      | 52    |      | 618  |      | 37,910  |
| June.....               |                  |         |         | 8,062   |                      | 830   |      | 45    |      | 269  |      | 15,990  |
| July.....               |                  |         |         | 1,518   |                      | 75    |      | 25    |      | 49.0 |      | 3,010   |
| August.....             |                  |         |         | 1,486   |                      | 92    |      | 27    |      | 47.9 |      | 2,950   |
| September.....          |                  |         |         | 2,070   |                      | 226   |      | 45    |      | 69.0 |      | 4,110   |
| Water year 1940-41..... |                  |         |         | 106,945 |                      | 1,220 |      | 25    |      | 293  |      | 212,100 |
| Month                   | Second-foot-days | Maximum | Minimum | Mean    | Run-off in acre-feet |       |      |       |      |      |      |         |

## Chalk Creek at Coalville, Utah

Location.- Water-stage recorder, lat. 40°55'10", long. 111°23'55", in SE¼ sec. 8, T. 2 N., R. 5 E., 300 feet upstream from bridge on U. S. Highway 189 in Coalville, a third of a mile upstream from mouth and 7½ miles downstream from Silver Creek.

Drainage area.- 253 square miles.

Records available.- October 1904 to December 1905, April 1927 to September 1941.

Average discharge.- 14 years (1927-41), 49.7 second-feet.

Extremes.- Maximum discharge during year, 574 second-feet Aug. 6 (gage height, 2.49 feet); minimum daily, 2 second-feet Aug. 23-26.  
1927-41: Maximum discharge, 884 second-feet Aug. 21, 1940 (gage height, 3.41 feet); minimum, less than 1 second-foot for several days during June to November 1934.

Remarks.- Records good. Flow affected by diversions above station for irrigation; no diversions below.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb.   | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|--------|----------------------|------|-----|------|------|------|-------|
| 1                       | 6                | 5    | 14      | 8       | 10     | 28                   | 25   | 44  | 62   | 45   | 22   | 8     |
| 2                       | 5                | 6    | 16      | 10      | 10     | 27                   | 24   | 45  | 53   | 41   | 21   | 8     |
| 3                       | 6                | 8    | 14      | 10      | 10     | 21                   | 24   | 48  | 49   | 38   | 19   | 8     |
| 4                       | 6                | 10   | 13      | 9       | 10     | 16                   | 24   | 62  | 45   | 35   | 17   | 8     |
| 5                       | 5                | 10   | 10      | 10      | 10     | 16                   | 25   | 59  | 49   | 50   | 16   | 8     |
| 6                       | 5                | 10   | 12      | 10      | 10     | 17                   | 25   | 55  | 52   | 27   | 34   | 7     |
| 7                       | 5                | 12   | 11      | 11      | 11     | 15                   | 22   | 50  | 69   | 25   | 31   | 6     |
| 8                       | 6                | 12   | 10      | 12      | 12     | 15                   | 21   | 59  | 88   | 24   | 24   | 6     |
| 9                       | 10               | 12   | 11      | 10      | 12     | 22                   | 19   | 83  | 254  | 23   | 46   | 6     |
| 10                      | 11               | 12   | 6       | 10      | 12     | 13                   | 21   | 105 | 212  | 20   | 154  | 6     |
| 11                      | 9                | 11   | 6       | 10      | 26     | 16                   | 22   | 131 | 199  | 18   | 111  | 6     |
| 12                      | 8                | 10   | 8       | 10      | 57     | 12                   | 21   | 159 | 224  | 19   | 65   | 6     |
| 13                      | 8                | 6    | 6       | 11      | 24     | 12                   | 20   | 212 | 260  | 17   | 47   | 6     |
| 14                      | 8                | 11   | 6       | 11      | 18     | 16                   | 20   | 203 | 241  | 18   | 41   | 5     |
| 15                      | 8                | 13   | 5       | 12      | 16     | 11                   | 19   | 144 | 203  | 16   | 36   | 6     |
| 16                      | 8                | 14   | 5       | 11      | 17     | 15                   | 23   | 105 | 180  | 16   | 35   | 6     |
| 17                      | 7                | 18   | 5       | 10      | 15     | 21                   | 25   | 105 | 126  | 16   | 35   | 5     |
| 18                      | 7                | 19   | 6       | 11      | 18     | 25                   | 22   | 116 | 95   | 16   | 41   | 5     |
| 19                      | 6                | 17   | 7       | 11      | 18     | 50                   | 21   | 97  | 77   | 20   | 26   | 5     |
| 20                      | 4                | 10   | 8       | 12      | 17     | 53                   | 22   | 85  | 65   | 23   | 20   | 5     |
| 21                      | 4                | 13   | 10      | 12      | 22     | 47                   | 21   | 86  | 55   | 21   | 18   | 4     |
| 22                      | 3                | 8    | 10      | 12      | 25     | 35                   | 21   | 86  | 52   | 19   | 17   | 5     |
| 23                      | 2                | 8    | 11      | 12      | 25     | 33                   | 23   | 86  | 45   | 18   | 19   | 6     |
| 24                      | 2                | 9    | 12      | 12      | 25     | 28                   | 25   | 85  | 44   | 18   | 19   | 5     |
| 25                      | 2                | 14   | 12      | 13      | 22     | 23                   | 27   | 81  | 52   | 32   | 21   | 5     |
| 26                      | 2                | 13   | 11      | 13      | 13     | 20                   | 28   | 106 | 48   | 39   | 20   | 5     |
| 27                      | 3                | 12   | 12      | 11      | 13     | 21                   | 28   | 126 | 42   | 43   | 17   | 4     |
| 28                      | 3                | 15   | 10      | 8       | 21     | 25                   | 30   | 106 | 37   | 34   | 14   | 5     |
| 29                      | 3                | 16   | 12      | 10      | -      | 25                   | 32   | 88  | 36   | 31   | 11   | 5     |
| 30                      | 4                | 16   | 13      | 10      | -      | 25                   | 34   | 77  | 38   | 30   | 10   | 5     |
| 31                      | 4                | -    | 12      | 11      | -      | 25                   | -    | 65  | 3    | 25   | 9    | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean   | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 170              | 11   | 2       | 5.5     | 357    |                      |      |     |      |      |      |       |
| November.....           | 350              | 19   | 5       | 11.7    | 694    |                      |      |     |      |      |      |       |
| December.....           | 304              | 16   | 5       | 9.8     | 603    |                      |      |     |      |      |      |       |
| Calendar year 1940..... | 7,284            | 150  | 2       | 19.9    | 14,440 |                      |      |     |      |      |      |       |
| January.....            | 333              | 13   | 8       | 10.7    | 660    |                      |      |     |      |      |      |       |
| February.....           | 499              | 57   | 10      | 17.8    | 990    |                      |      |     |      |      |      |       |
| March.....              | 728              | 53   | 11      | 23.5    | 1,440  |                      |      |     |      |      |      |       |
| April.....              | 714              | 34   | 19      | 23.8    | 1,420  |                      |      |     |      |      |      |       |
| May.....                | 2,951            | 212  | 44      | 95.2    | 5,850  |                      |      |     |      |      |      |       |
| June.....               | 3,020            | 260  | 36      | 101     | 5,990  |                      |      |     |      |      |      |       |
| July.....               | 793              | 43   | 16      | 28.6    | 1,570  |                      |      |     |      |      |      |       |
| August.....             | 1,014            | 154  | 9       | 32.7    | 2,010  |                      |      |     |      |      |      |       |
| September.....          | 175              | 8    | 4       | 5.6     | 347    |                      |      |     |      |      |      |       |
| Water year 1940-41..... | 11,051           | 260  | 2       | 30.3    | 21,910 |                      |      |     |      |      |      |       |



## East Canyon Reservoir near Morgan, Utah

Location.- Staff gage, lat. 40°55'20", long. 111°35'50", in NE¼ sec. 10, T. 2 N., R. 3 E., 500 Feet east of East Canyon Dam and 9 miles southeast of Morgan.

Drainage area.- 144 square miles.

Records available.- October 1937 to September 1941 in reports of Geological Survey. November 1931 to September 1941 in reports of Weber River water commissioner.

Extremes.- Maximum contents observed during year, 22,500 acre-feet June 19 (gage height, 128.25); minimum observed, 5,320 acre-feet Oct. 1.  
1931-41: Maximum contents, 28,730 acre-feet May 25 to June 25, 1937, and June 4-25, 1938 (gage height, 140.83 feet); no storage Nov. 1, 1931, Sept. 2 to Nov. 1, 1934, Sept. 11 to Oct. 18, 1937.

Remarks.- Reservoir was formed in 1896 by a 58-foot rock-filled dam (capacity, 3,850 acre-feet) which was raised 25 feet in 1900 (capacity, 9,000 acre-feet), was raised 12 more feet in 1902 (capacity, 14,000 acre-feet), and later was replaced by present concrete dam, which formed a reservoir having a capacity of 28,730 acre-feet between gage height 0.0 foot, (bottom of outlet tunnel) and 140.8 feet (top of flashboards in spillway). Spillway crest is at gage height 135 feet. No dead storage. Water is used for irrigation in Davis and Weber Counties.

Contents, in acre-feet, water year October 1940 to September 1941

| Day | Oct.   | Nov.   | Dec.   | Jan.   | Feb.    | Mar.    | Apr.    | May     | June    | July   | Aug.   | Sept.  |
|-----|--------|--------|--------|--------|---------|---------|---------|---------|---------|--------|--------|--------|
| 1   | 5,320  | -      | 6,720  | -      | -       | -       | -       | 16,640  | -       | -      | 17,560 | 16,540 |
| 2   | -      | -      | -      | 7,800  | -       | -       | -       | -       | -       | -      | -      | 16,490 |
| 3   | 5,320  | 5,710  | -      | -      | -       | -       | 13,480  | -       | -       | -      | 17,460 | 16,420 |
| 4   | -      | -      | -      | -      | -       | -       | -       | -       | 20,910  | 20,720 | -      | 17,390 |
| 5   | -      | -      | -      | -      | -       | -       | -       | -       | -       | -      | 17,340 | 16,360 |
| 6   | -      | -      | -      | -      | 8,970   | 10,710  | -       | -       | -       | -      | 17,300 | 16,310 |
| 7   | -      | -      | -      | -      | -       | -       | -       | -       | -       | -      | 17,300 | 16,240 |
| 8   | -      | -      | 7,000  | -      | -       | -       | -       | 17,910  | -       | -      | 17,260 | 16,230 |
| 9   | -      | -      | -      | 7,990  | -       | -       | -       | -       | -       | -      | 17,230 | 16,140 |
| 10  | 5,340  | 5,950  | -      | -      | -       | -       | 14,240  | -       | -       | 19,140 | 17,190 | 16,120 |
| 11  | -      | -      | -      | -      | -       | -       | -       | -       | -       | -      | 17,190 | 16,080 |
| 12  | -      | -      | -      | -      | -       | -       | -       | -       | 21,960  | -      | 17,150 | 16,040 |
| 13  | -      | -      | -      | -      | 9,320   | 11,080  | -       | -       | -       | -      | 17,160 | 15,960 |
| 14  | -      | -      | -      | -      | -       | -       | -       | -       | -       | -      | 17,150 | 15,900 |
| 15  | -      | -      | 7,130  | -      | -       | -       | -       | 18,660  | -       | -      | 17,150 | -      |
| 16  | -      | -      | -      | 8,280  | -       | -       | -       | -       | -       | 18,420 | 17,120 | 15,820 |
| 17  | -      | 6,170  | -      | -      | -       | -       | -       | -       | -       | 18,340 | 17,110 | 15,800 |
| 18  | -      | -      | -      | -      | -       | -       | -       | -       | -       | -      | 17,120 | 15,780 |
| 19  | -      | -      | -      | -      | -       | -       | -       | -       | 22,500  | -      | 17,110 | 15,750 |
| 20  | 5,430  | -      | -      | -      | 9,690   | 11,650  | 15,330  | 19,410  | -       | -      | 17,050 | 15,720 |
| 21  | -      | -      | -      | -      | -       | -       | -       | -       | -       | -      | 17,060 | 15,720 |
| 22  | -      | -      | 7,370  | -      | -       | -       | -       | 19,530  | -       | -      | 17,010 | 15,680 |
| 23  | -      | -      | -      | 8,500  | -       | -       | -       | -       | -       | -      | 16,960 | 15,660 |
| 24  | -      | 6,450  | -      | -      | -       | -       | 15,680  | -       | -       | 17,600 | 16,910 | 15,640 |
| 25  | -      | -      | -      | -      | -       | -       | -       | -       | -       | 17,720 | 16,870 | 15,630 |
| 26  | -      | -      | -      | -      | -       | -       | -       | -       | 22,380  | -      | 16,820 | 15,630 |
| 27  | 5,520  | -      | -      | -      | 10,100  | 12,540  | -       | -       | -       | 17,610 | 16,770 | 15,630 |
| 28  | -      | -      | -      | -      | a10,190 | -       | -       | -       | -       | 17,610 | 16,730 | 15,630 |
| 29  | -      | -      | 7,730  | -      | -       | -       | -       | -       | -       | 17,600 | 16,660 | 15,630 |
| 30  | -      | a6,680 | -      | 8,710  | -       | -       | a16,500 | 20,280  | a21,550 | 17,680 | 16,610 | 15,630 |
| 31  | a5,630 | -      | a7,760 | a5,750 | -       | a13,080 | -       | a20,460 | -       | 17,560 | 16,570 | -      |

Monthly gage height and contents, water year October 1940 to September 1941

| Date                    | Gage height (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|--------------------|----------------------|---|
| Sept. 30.....           | -                  | a5,360               | -   |
| Oct. 31.....            | -                  | a5,630               | +270  |
| Nov. 30.....            | -                  | a6,680               | +1,050                                      |
| Dec. 31.....            | -                  | a7,760               | +1,080                                      |
| Calendar year 1940..... | -                  | -                    | -8,390                                      |
| Jan. 31.....            | -                  | a8,750               | +990  |
| Feb. 28.....            | -                  | a10,190              | +1,440                                      |
| Mar. 31.....            | -                  | a13,080              | +2,890                                      |
| Apr. 30.....            | -                  | a16,500              | +3,420                                      |
| May 31.....             | -                  | a20,460              | +3,960                                      |
| June 30.....            | -                  | a21,550              | +1,090                                      |
| July 31.....            | 115.17             | 17,560               | -3,990                                      |
| Aug. 31.....            | 112.13             | 16,570               | -890  |
| Sept. 30.....           | 109.17             | 15,630               | -940  |
| Water year 1940-41..... | -                  | -                    | +10,270                                     |

a No gage-height record; contents interpolated.

## East Canyon Creek near Morgan, Utah

Location.- Water-stage recorder and Lyman rectangular weir, lat. 40°55'20", long. 111°36'20", in NW¼ sec. 10, T. 2 N., R. 3 E., 2,500 feet downstream from East Canyon Dam, 2½ miles upstream from Sheep Canyon, and 9 miles southeast of Morgan.

Drainage area.- 145 square miles.

Records available.- October 1937 to September 1941 in reports of Geological Survey. October 1931 to September 1941 in reports of Weber River water commissioner.

Extremes (regulated).- Maximum daily discharge during year, 130 second-feet June 27-28 (gage height, 1.05 feet); minimum daily, 6 second-feet Oct. 19, Oct. 27 to Mar. 22, 1931-41; Maximum daily discharge, 412 second-feet Apr. 23, 1936; minimum daily, 5 second-feet Jan. 20 to Apr. 10, Nov. 4-19, 1935.

Remarks.- Records good. No diversion between station and East Canyon Reservoir (see preceding page), which completely regulates flow.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |                  |         |         |      |                      |
|-------------------------|------|------|------|------|------|------|------|-----|------|------|------|-------|------------------|---------|---------|------|----------------------|
| 1                       | 16   | 6    | 6    | 6    | 6    | 6    | 7    | 10  | 13   | 129  | 27   | 37    |                  |         |         |      |                      |
| 2                       | 16   | 6    | 6    | 6    | 6    | 6    | 7    | 10  | 13   | 127  | 36   | 37    |                  |         |         |      |                      |
| 3                       | 13   | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 14   | 127  | 36   | 37    |                  |         |         |      |                      |
| 4                       | 11   | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 14   | 125  | 36   | 37    |                  |         |         |      |                      |
| 5                       | 11   | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 125  | 35   | 37    |                  |         |         |      |                      |
| 6                       | 10   | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 123  | 35   | 37    |                  |         |         |      |                      |
| 7                       | 10   | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 123  | 35   | 37    |                  |         |         |      |                      |
| 8                       | 10   | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 121  | 36   | 37    |                  |         |         |      |                      |
| 9                       | 10   | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 119  | 36   | 37    |                  |         |         |      |                      |
| 10                      | 10   | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 117  | 36   | 37    |                  |         |         |      |                      |
| 11                      | 9    | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 117  | 28   | 37    |                  |         |         |      |                      |
| 12                      | 8    | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 84   | 25   | 37    |                  |         |         |      |                      |
| 13                      | 8    | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 81   | 25   | 37    |                  |         |         |      |                      |
| 14                      | 8    | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 62   | 25   | 37    |                  |         |         |      |                      |
| 15                      | 8    | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 67   | 25   | 37    |                  |         |         |      |                      |
| 16                      | 8    | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 67   | 24   | 37    |                  |         |         |      |                      |
| 17                      | 7    | 6    | 6    | 6    | 6    | 6    | 8    | 10  | 13   | 62   | 24   | 37    |                  |         |         |      |                      |
| 18                      | 7    | 6    | 6    | 6    | 6    | 6    | 9    | 10  | 13   | 58   | 24   | 33    |                  |         |         |      |                      |
| 19                      | 6    | 6    | 6    | 6    | 6    | 6    | 9    | 10  | 13   | 58   | 27   | 28    |                  |         |         |      |                      |
| 20                      | 7    | 6    | 6    | 6    | 6    | 6    | 9    | 10  | 13   | 58   | 30   | 28    |                  |         |         |      |                      |
| 21                      | 7    | 6    | 6    | 6    | 6    | 6    | 9    | 11  | 17   | 58   | 32   | 28    |                  |         |         |      |                      |
| 22                      | 7    | 6    | 6    | 6    | 6    | 6    | 10   | 11  | 31   | 58   | 37   | 28    |                  |         |         |      |                      |
| 23                      | 7    | 6    | 6    | 6    | 6    | 6    | 7    | 10  | 11   | 31   | 38   | 28    |                  |         |         |      |                      |
| 24                      | 7    | 6    | 6    | 6    | 6    | 6    | 7    | 10  | 11   | 31   | 58   | 40    | 28               |         |         |      |                      |
| 25                      | 7    | 6    | 6    | 6    | 6    | 6    | 7    | 10  | 11   | 31   | 58   | 40    | 24               |         |         |      |                      |
| 26                      | 7    | 6    | 6    | 6    | 6    | 7    | 10   | 11  | 81   | 56   | 40   | 20    |                  |         |         |      |                      |
| 27                      | 6    | 6    | 6    | 6    | 6    | 7    | 10   | 12  | 130  | 30   | 40   | 20    |                  |         |         |      |                      |
| 28                      | 6    | 6    | 6    | 6    | 6    | 7    | 10   | 12  | 130  | 26   | 37   | 20    |                  |         |         |      |                      |
| 29                      | 6    | 6    | 6    | 6    | 6    | 7    | 10   | 12  | 129  | 26   | 36   | 20    |                  |         |         |      |                      |
| 30                      | 6    | 6    | 6    | 6    | 6    | 7    | 10   | 13  | 129  | 26   | 37   | 20    |                  |         |         |      |                      |
| 31                      | 6    | -    | 6    | 6    | 6    | 7    | -    | 13  | -    | 26   | 35   | -     |                  |         |         |      |                      |
| Month                   |      |      |      |      |      |      |      |     |      |      |      |       | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
| October.....            |      |      |      |      |      |      |      |     |      |      |      |       | 265              | 16      | 6       | 8.6  | 526                  |
| November.....           |      |      |      |      |      |      |      |     |      |      |      |       | 180              | 6       | 6       | 6.0  | 357                  |
| December.....           |      |      |      |      |      |      |      |     |      |      |      |       | 186              | 6       | 6       | 6.0  | 369                  |
| Calendar year 1940..... |      |      |      |      |      |      |      |     |      |      |      |       | 13,211           | 6       | 6       | 36.1 | 26,200               |
| January.....            |      |      |      |      |      |      |      |     |      |      |      |       | 186              | 6       | 6       | 6.0  | 369                  |
| February.....           |      |      |      |      |      |      |      |     |      |      |      |       | 168              | 6       | 6       | 6.0  | 333                  |
| March.....              |      |      |      |      |      |      |      |     |      |      |      |       | 195              | 7       | 6       | 6.3  | 387                  |
| April.....              |      |      |      |      |      |      |      |     |      |      |      |       | 260              | 10      | 7       | 8.7  | 516                  |
| May.....                |      |      |      |      |      |      |      |     |      |      |      |       | 328              | 13      | 10      | 10.6 | 651                  |
| June.....               |      |      |      |      |      |      |      |     |      |      |      |       | 1,002            | 130     | 13      | 33.4 | 1,990                |
| July.....               |      |      |      |      |      |      |      |     |      |      |      |       | 2,410            | 129     | 26      | 77.7 | 4,780                |
| August.....             |      |      |      |      |      |      |      |     |      |      |      |       | 1,017            | 40      | 24      | 32.5 | 2,020                |
| September.....          |      |      |      |      |      |      |      |     |      |      |      |       | 954              | 37      | 20      | 31.5 | 1,890                |
| Water year 1940-41..... |      |      |      |      |      |      |      |     |      |      |      |       | 7,151            | 130     | 6       | 19.6 | 14,190               |

## South Fork of Ogden River near Huntsville, Utah

Location.- Water-stage recorder, lat. 41°16', long. 111°40', in SE $\frac{1}{4}$  sec. 12, T. 6 N., R. 2 E., half a mile downstream from Magpie Creek, 1 mile upstream from Huntsville Mountain Canal, and 5 $\frac{1}{2}$  miles east of Huntsville.

Drainage area.- 148 square miles.

Records available.- March 1921 to September 1941.

Average discharge.- 20 years, 103 second-feet.

Extremes.- Maximum discharge during year, 353 second-feet May 2 (gage height, 2.60 feet); minimum, 22 second-feet Nov. 23.

1921-41: Maximum discharge, 1,780 second-feet May 4, 1936 (gage height, 5.45 feet), from rating curve extended above 900 second-feet; minimum observed, 20 second-feet Nov. 25, 1931, July 28, 1934.

Remarks.- Records good except those for periods of ice effect, which are fair. Only small diversions above station.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

|     |    |     |     |     |     |
|-----|----|-----|-----|-----|-----|
| 0.7 | 22 | 1.4 | 72  | 2.4 | 290 |
| .8  | 25 | 1.6 | 102 | 2.6 | 353 |
| .9  | 29 | 1.8 | 140 | 2.8 | 423 |
| 1.0 | 34 | 2.0 | 184 |     |     |
| 1.2 | 50 | 2.2 | 234 |     |     |

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr.             | May     | June    | July | Aug.                 | Sept. |
|-------------------------|------|------|------|------|------|------|------------------|---------|---------|------|----------------------|-------|
| 1                       | 31   | 32   | 31   | b28  | b28  | 53   | 86               | 321     | 79      | a41  | 30                   | 28    |
| 2                       | 30   | 32   | 31   | b27  | b28  | 62   | 80               | 327     | 71      | a40  | 30                   | 28    |
| 3                       | 31   | 34   | 31   | b26  | b26  | 60   | 79               | 334     | 71      | a39  | 30                   | 30    |
| 4                       | 31   | 34   | 31   | b25  | b28  | 55   | 75               | 327     | 67      | a38  | 30                   | 30    |
| 5                       | 30   | 32   | 31   | b30  | b28  | 52   | 116              | 316     | 70      | 37   | 30                   | 30    |
| 6                       | 30   | 32   | 31   | b31  | b28  | 50   | 109              | 302     | 70      | 36   | 29                   | 29    |
| 7                       | 30   | 32   | 30   | b31  | b30  | 51   | 99               | 270     | 75      | 35   | 30                   | 29    |
| 8                       | 30   | 32   | 30   | b30  | b30  | 53   | 97               | 276     | 72      | 35   | 32                   | 29    |
| 9                       | 31   | 32   | 30   | b30  | b31  | 54   | 97               | 318     | 79      | 35   | 33                   | 29    |
| 10                      | 31   | 32   | 30   | b29  | 32   | 52   | 107              | 337     | 78      | 34   | 34                   | 29    |
| 11                      | 31   | 33   | b29  | b30  | 34   | 50   | 104              | 340     | 73      | 34   | 32                   | 29    |
| 12                      | 32   | 32   | b28  | b31  | 38   | 48   | 104              | 331     | 71      | 34   | 34                   | 29    |
| 13                      | 33   | 32   | b28  | 32   | 35   | 46   | 113              | 318     | 72      | 32   | 32                   | 27    |
| 14                      | 27   | 32   | b27  | 32   | 35   | 46   | 104              | 284     | 70      | 33   | 30                   | 28    |
| 15                      | 30   | 32   | b26  | 32   | 35   | 44   | 102              | 245     | 67      | 33   | 31                   | 29    |
| 16                      | 30   | 32   | b28  | 32   | 36   | 45   | 118              | 211     | 66      | 32   | 30                   | 29    |
| 17                      | 30   | 32   | b28  | 32   | 37   | 47   | 111              | 194     | 64      | 32   | 30                   | 29    |
| 18                      | 30   | 32   | 30   | 31   | 38   | 53   | 104              | 182     | 61      | 32   | 31                   | 29    |
| 19                      | 30   | 32   | 29   | 31   | 39   | 59   | 99               | 166     | 59      | 34   | 30                   | 29    |
| 20                      | 30   | 32   | 29   | 31   | 40   | 64   | 96               | 146     | 56      | 33   | 30                   | 30    |
| 21                      | 30   | 32   | 29   | 31   | 44   | 67   | 94               | 130     | 53      | 32   | 30                   | 30    |
| 22                      | 30   | 32   | 29   | 32   | 45   | 65   | 100              | 120     | 51      | 32   | 30                   | 30    |
| 23                      | 30   | 29   | 30   | 32   | 51   | 70   | 124              | 118     | 48      | 32   | 29                   | 31    |
| 24                      | 30   | 30   | 31   | 32   | 56   | 65   | 159              | 111     | 47      | 32   | 29                   | 30    |
| 25                      | 30   | 32   | 30   | 32   | 54   | 59   | 182              | 102     | 46      | 34   | 29                   | 30    |
| 26                      | 32   | 31   | 30   | 32   | 48   | 57   | 203              | 104     | 45      | 36   | 29                   | 30    |
| 27                      | 35   | 30   | 31   | 31   | 46   | 60   | 229              | 100     | 43      | 44   | 28                   | 30    |
| 28                      | 33   | 32   | 30   | 30   | 47   | 65   | 264              | 102     | 43      | 33   | 28                   | 30    |
| 29                      | 32   | 32   | 31   | b30  | -    | 68   | 290              | 92      | 42      | 32   | 28                   | 30    |
| 30                      | 33   | 32   | 31   | b30  | -    | 73   | 309              | 82      | 41      | 32   | 29                   | 30    |
| 31                      | 32   | -    | 31   | b29  | -    | 79   | -                | 82      | -       | 31   | 30                   | -     |
| Month                   |      |      |      |      |      |      | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |       |
| October.....            |      |      |      |      |      |      | 955              | 35      | 27      | 30.8 | 1,890                |       |
| November.....           |      |      |      |      |      |      | 957              | 34      | 29      | 31.9 | 1,900                |       |
| December.....           |      |      |      |      |      |      | 921              | 31      | 26      | 29.7 | 1,830                |       |
| Calendar year 1940..... |      |      |      |      |      |      | 21,684           | 271     | 26      | 59.2 | 43,010               |       |
| January.....            |      |      |      |      |      |      | 942              | 32      | 25      | 30.4 | 1,870                |       |
| February.....           |      |      |      |      |      |      | 1,047            | 56      | 28      | 37.4 | 2,080                |       |
| March.....              |      |      |      |      |      |      | 1,769            | 79      | 44      | 57.1 | 3,510                |       |
| April.....              |      |      |      |      |      |      | 3,956            | 309     | 75      | 132  | 7,860                |       |
| May.....                |      |      |      |      |      |      | 6,687            | 340     | 82      | 216  | 13,260               |       |
| June.....               |      |      |      |      |      |      | 1,850            | 79      | 41      | 61.7 | 3,870                |       |
| July.....               |      |      |      |      |      |      | 1,071            | 44      | 31      | 34.5 | 2,120                |       |
| August.....             |      |      |      |      |      |      | 937              | 34      | 28      | 30.2 | 1,860                |       |
| September.....          |      |      |      |      |      |      | 850              | 31      | 27      | 29.3 | 1,750                |       |
| Water year 1940-41..... |      |      |      |      |      |      | 21,972           | 340     | 25      | 60.2 | 43,590               |       |

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

## Pine View Reservoir near Ogden, Utah

Location.- Staff gage, lat. 41°15'20", long. 111°50'25", in NW¼ sec. 16, T. 6 N., R. 1 E., at trash rack at Pine View Dam on Ogden River, 7 miles northeast of Ogden. Datum of gage is at mean sea level.

Drainage area.- 310 square miles.

Records available.- November 1936 to September 1941.

Extremes.- Maximum contents during year, 43,580 acre-feet May 21, 22, 27-31 (elevation, 4,872.00 feet); minimum, 1,550 acre-feet Feb. 9 (elevation, 4,829.42 feet).  
1936-41: Maximum contents, 45,370 acre-feet May 17, 1938 (elevation, 4,873.00 feet); minimum, 80 acre-feet Feb. 19, 1937 (elevation, 4,818.99 feet).

Remarks.- Reservoir is formed by earth-fill, rock-faced dam; storage began Nov. 16, 1936. Capacity, 43,580 acre-feet between elevations 4,818 feet (sill of trash rack structure) and 4,872 feet (top of spillway gates, above mean sea level; during September 1939 sills of radial spillway gates were raised 1 foot, thus changing the top of spillway gates from elevation 4,871 feet to 4,872 feet). Dead storage, 45 acre-feet (below elevation 4,818 feet), which must be deducted from the figures of total contents shown in the tables to obtain usable contents. Water is used for irrigation on the Ogden River project. Gage is read daily at 8 a.m., contents are as of that time.

Cooperation.- Capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1940 to September 1941

| Day | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.  | Apr.   | May    | June   | July   | Aug.   | Sept.  |
|-----|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| 1   | 7,220 | 5,750 | 4,500 | 2,830 | 1,590 | 2,820 | 6,860  | 30,580 | 43,580 | 39,900 | 32,980 | 25,980 |
| 2   | 7,200 | 5,700 | 4,500 | 2,830 | 1,580 | 2,960 | 7,180  | 32,040 | 43,580 | 39,700 | 32,760 | 25,820 |
| 3   | 7,130 | 5,740 | 4,450 | 2,790 | 1,600 | 3,320 | 7,610  | 33,160 | 43,580 | 39,490 | 32,490 | 25,660 |
| 4   | 7,050 | 5,780 | 4,410 | 2,750 | 1,600 | 3,560 | 7,990  | 34,660 | 43,470 | 39,210 | 32,350 | 25,470 |
| 5   | 7,040 | 5,740 | 4,360 | 2,660 | 1,600 | 3,660 | 8,560  | 35,940 | 43,400 | 39,980 | 32,120 | 25,260 |
| 6   | 6,990 | 5,690 | 4,310 | 2,620 | 1,590 | 3,780 | 9,760  | 36,990 | 43,350 | 39,700 | 31,800 | 25,050 |
| 7   | 6,970 | 5,650 | 4,260 | 2,530 | 1,550 | 3,920 | 10,540 | 37,470 | 43,400 | 39,430 | 31,570 | 24,890 |
| 8   | 6,910 | 5,620 | 4,220 | 2,370 | 1,570 | 4,030 | 11,160 | 38,030 | 43,490 | 39,110 | 31,280 | 24,740 |
| 9   | 6,860 | 5,570 | 4,220 | 2,240 | 1,550 | 4,150 | 11,740 | 38,570 | 43,530 | 37,900 | 30,980 | 24,570 |
| 10  | 6,800 | 5,520 | 4,170 | 2,100 | 1,570 | 4,260 | 12,330 | 39,570 | 43,580 | 37,580 | 30,740 | 24,440 |
| 11  | 6,740 | 5,520 | 4,120 | 1,990 | 1,560 | 4,330 | 13,310 | 40,320 | 43,580 | 37,320 | 30,600 | 24,260 |
| 12  | 6,660 | 5,520 | 4,030 | 1,860 | 1,620 | 4,410 | 14,220 | 40,990 | 43,580 | 36,970 | 30,370 | 24,080 |
| 13  | 6,500 | 5,430 | 4,030 | 1,860 | 1,690 | 4,450 | 14,650 | 41,500 | 43,580 | 36,690 | 30,200 | 23,910 |
| 14  | 6,540 | 5,260 | 3,860 | 1,930 | 1,740 | 4,450 | 15,310 | 41,920 | 43,580 | 36,440 | 29,960 | 23,710 |
| 15  | 6,490 | 5,220 | 3,710 | 1,900 | 1,730 | 4,450 | 15,800 | 42,100 | 43,580 | 36,170 | 29,820 | 23,540 |
| 16  | 6,450 | 5,190 | 3,700 | 1,890 | 1,820 | 4,450 | 16,790 | 42,270 | 43,580 | 35,910 | 29,710 | 23,390 |
| 17  | 6,400 | 5,060 | 3,570 | 1,860 | 1,900 | 4,450 | 17,260 | 42,620 | 43,580 | 35,630 | 29,520 | 23,250 |
| 18  | 6,400 | 5,050 | 3,500 | 1,840 | 1,940 | 4,510 | 17,790 | 42,790 | 43,400 | 35,270 | 29,360 | 23,100 |
| 19  | 6,360 | 5,000 | 3,380 | 1,820 | 2,010 | 4,610 | 18,390 | 43,230 | 43,190 | 35,090 | 29,200 | 22,950 |
| 20  | 6,310 | 4,950 | 3,260 | 1,820 | 2,070 | 4,780 | 18,850 | 43,400 | 43,020 | 34,900 | 29,040 | 22,850 |
| 21  | 6,260 | 4,890 | 3,140 | 1,790 | 2,180 | 4,940 | 19,380 | 43,550 | 42,740 | 34,710 | 28,790 | 22,710 |
| 22  | 6,240 | 4,890 | 3,030 | 1,770 | 2,370 | 5,140 | 19,700 | 43,580 | 42,500 | 34,550 | 28,600 | 22,610 |
| 23  | 6,180 | 4,850 | 3,010 | 1,770 | 2,550 | 5,310 | 20,420 | 43,400 | 42,220 | 34,340 | 28,390 | 22,540 |
| 24  | 6,110 | 4,800 | 2,920 | 1,770 | 2,740 | 5,590 | 21,230 | 43,320 | 41,940 | 34,160 | 28,170 | 22,250 |
| 25  | 6,060 | 4,800 | 2,870 | 1,760 | 2,750 | 5,710 | 21,940 | 43,230 | 41,740 | 33,960 | 27,910 | 22,190 |
| 26  | 5,940 | 4,740 | 2,830 | 1,760 | 2,800 | 5,820 | 22,980 | 43,400 | 41,350 | 33,820 | 27,670 | 22,060 |
| 27  | 5,910 | 4,690 | 2,800 | 1,770 | 2,830 | 5,930 | 24,050 | 43,550 | 41,150 | 33,740 | 27,290 | 22,030 |
| 28  | 5,930 | 4,630 | 2,780 | 1,750 | 2,840 | 6,030 | 25,220 | 43,580 | 40,820 | 33,650 | 27,040 | 21,980 |
| 29  | 5,900 | 4,590 | 2,790 | 1,620 | -     | 6,190 | 26,550 | 43,580 | 40,490 | 33,530 | 26,780 | 21,910 |
| 30  | 5,860 | 4,540 | 2,820 | 1,690 | -     | 6,400 | 29,010 | 43,580 | 40,150 | 33,350 | 26,480 | 21,880 |
| 31  | 5,800 | -     | 2,850 | 1,590 | -     | 6,620 | -      | 43,580 | -      | 33,200 | 26,220 | -      |

Monthly elevation and contents, water year October 1940 to September 1941

| Date                    | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Oct. 1.....             | 4,841.12         | 7,220                | -1,470                                      |
| Nov. 1.....             | 4,835.72         | 5,750                | -1,250                                      |
| Dec. 1.....             | 4,836.45         | 4,500                | -1,670                                      |
| Calendar year 1940..... | -                | -                    | -15,930                                     |
| Jan. 1.....             | 4,832.90         | 2,830                | -1,250                                      |
| Feb. 1.....             | 4,829.50         | 1,580                | +1,240                                      |
| Mar. 1.....             | 4,832.85         | 2,320                | +4,040                                      |
| Apr. 1.....             | 4,840.55         | 6,860                | +23,720                                     |
| May 1.....              | 4,863.77         | 30,580               | +13,000                                     |
| June 1.....             | 4,872.00         | 43,580               | -3,680                                      |
| July 1.....             | 4,869.35         | 39,900               | -6,920                                      |
| Aug. 1.....             | 4,865.43         | 32,980               | -7,000                                      |
| Sept. 1.....            | 4,860.42         | 25,980               | -4,160                                      |
| Oct. 1.....             | 4,867.15         | 21,820               | -   |
| Water year 1940-41..... | -                | -                    | +14,600                                     |

Ogden River below Pine View Dam, near Ogden, Utah

Location.- Water-stage recorder, lat. 41°15'17", long. 111°50'47", in NE¼SW¼ sec. 16, T. 6 N., R. 1 E., 1,500 feet downstream from Wheeler Creek, 2,000 feet downstream from Pine View Dam, and 6½ miles northeast of Ogden.

Drainage area.- 321 square miles.

Records available.- October 1937 to September 1941, not including flow of Pine View pipe line. 1895-96, January 1904 to October 1912 and October 1931 to September 1937 at same site, including flow of pipe line, published as Ogden River near Ogden, Utah.

Extremes (regulated).- Maximum discharge during year, 465 second-feet May 14 (gauge height, 3.60 feet); minimum, 1 second-foot or less for several days when reservoir gates were closed.

1937-41: Maximum discharge, 1,260 second-feet Apr. 25, 26, 1938 (gauge height, 5.30 feet); minimum, less than 1 second-foot at times when reservoir gates were closed.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Pine View Reservoir (see preceding page). Records do not include flow of Pine View pipe line, which diverts water above station for use in irrigation and power development. Diversions above Pine View Reservoir for irrigation and municipal supply.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

|      |    |     |     |     |       |
|------|----|-----|-----|-----|-------|
| 0.75 | 0  | 1.8 | 43  | 3.0 | 275   |
| 1.0  | 1  | 2.0 | 65  | 3.5 | 446   |
| 1.1  | 2  | 2.2 | 95  | 4.0 | 645   |
| 1.2  | 4  | 2.4 | 128 | 4.5 | 865   |
| 1.4  | 13 | 2.6 | 170 | 5.0 | 1,110 |
| 1.6  | 26 | 2.8 | 219 | 5.3 | 1,260 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 3    | 2    | 1    |      |      | 3    | 25   | 34  | 115  | 25   | 4    | 17    |
| 2   | 3    | 2    | 1    |      |      | 8    | 24   | 34  | 103  | 18   | 14   | 17    |
| 3   | 3    | 2    | 1    |      |      | 5    | 24   | 34  | 51   | 17   | 12   | 17    |
| 4   | 3    | 2    | 1    |      |      | 3    | 21   | 72  | 72   | 19   | 12   | 12    |
| 5   | 3    | 2    | 1    |      |      | 3    | 77   | 121 | 65   | 23   | 12   | 6     |
| 6   | 2    | a2   | 1    |      |      | 3    | 34   | 190 | 39   | 22   | 12   | 6     |
| 7   | 2    | a2   | 1    |      |      | 3    | 2F   | 309 | 43   | 19   | 22   | 6     |
| 8   | 2    | a2   | 1    |      |      | 3    | 22   | 309 | 46   | 19   | 25   | 6     |
| 9   | 2    | a2   | 1    |      | bl   | 3    | 23   | 316 | 46   | 23   | 28   | 6     |
| 10  | 2    | a1   | 1    |      |      | 3    | 36   | 322 | 48   | 22   | 28   | 4     |
| 11  | 2    | a1   | 1    |      |      | 2    | 28   | 397 | 49   | 22   | 28   | 4     |
| 12  | 2    | a1   | 1    |      |      | 2    | 25   | 435 | 50   | 22   | 22   | 9     |
| 13  | 2    | a1   | 1    |      |      | 2    | 25   | 477 | 51   | 25   | 12   | 9     |
| 14  | 2    | 1    | 1    |      |      | 1    | 20   | 481 | 51   | 25   | 8    | 9     |
| 15  | 2    | 1    |      |      |      | 2    | 21   | 431 | 45   | 23   | 8    | 9     |
| 16  | 2    | 1    |      | bl   |      | 3    | 26   | 272 | 38   | 22   | 8    | 9     |
| 17  | 2    | 1    |      |      | b2   | 6    | 20   | 180 | 33   | 20   | 7    | 9     |
| 18  | 2    | 1    |      |      | b2   | 7    | 17   | 91  | 31   | 20   | 7    | 9     |
| 19  | 2    | 1    |      |      | b2   | 10   | 15   | 45  | 29   | 19   | 7    | 9     |
| 20  | 2    | 1    |      |      | b2   | 14   | 16   | 39  | 28   | 18   | 6    | 9     |
| 21  | 2    | 1    |      | bl   | 2    | 14   | 18   | 36  | 26   | 15   | 13   | 9     |
| 22  | 2    | 1    |      |      | *2   | 14   | 22   | 76  | 25   | 18   | 13   | 6     |
| 23  | 2    | 1    |      |      | a2   | 12   | 26   | 96  | 25   | 16   | 13   | 5     |
| 24  | 2    | 1    |      |      | a3   | 7    | 25   | 81  | 21   | 22   | 12   | 5     |
| 25  | 2    | 1    |      |      | 4    | 5    | 32   | 77  | 18   | 18   | 13   | 5     |
| 26  | 2    | 1    |      |      | 2    | 6    | 35   | 78  | 22   | 15   | 14   | 4     |
| 27  | 2    | 1    |      | (*)  | 2    | 10   | 35   | 84  | 21   | 10   | 14   | 3     |
| 28  | 2    | 1    |      |      | 2    | 14   | 33   | 93  | 28   | 7    | 14   | 3     |
| 29  | 2    | 1    |      |      | -    | 19   | 32   | 105 | 31   | 4    | 16   | 3     |
| 30  | 2    | 1    |      |      | -    | 25   | 32   | 121 | 29   | 4    | 16   | 3     |
| 31  | 2    | -    |      |      | -    | 25   | -    | 124 | -    | 4    | 17   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 67               | 3       | 2       | 2.2  | 133                  |
| November.....           | 39               | 2       | 1       | 1.3  | 77                   |
| December.....           | 31               | -       | -       | 1.0  | 61                   |
| Calendar year 1940..... | 5,534            | 181     | -       | 15.1 | 10,970               |
| January.....            | 31               | -       | -       | 1.0  | 61                   |
| February.....           | 43               | 4       | -       | 1.0  | 85                   |
| March.....              | 237              | 25      | 1       | 7.6  | 470                  |
| April.....              | 817              | 77      | 15      | 27.2 | 1,620                |
| May.....                | 5,550            | 481     | 34      | 179  | 11,010               |
| June.....               | 1,312            | 115     | 18      | 43.7 | 2,600                |
| July.....               | 558              | 25      | 4       | 18.0 | 1,110                |
| August.....             | 435              | 28      | 4       | 14.0 | 863                  |
| September.....          | 228              | 17      | 3       | 7.6  | 452                  |
| Water year 1940-41..... | 9,348            | 481     | -       | 25.6 | 18,540               |

\* Winter discharge measurement made on this day.  
a No gage-height record; discharge interpolated.  
b Stage-discharge relation affected by ice.

## Jordan River at Narrows, near Lehi, Utah

Location.- Water-stage recorders, lat. 40°26'40", long. 111°55'20", in SE¼NW¼ sec. 26, T. 4 S., R. 1 W., at Narrows 5½ miles northwest of Lehi and 7½ miles downstream from Utah Lake.

Drainage area.- 2,970 square miles (revised), including 300 square miles in Cedar Valley.

Records available.- October 1934 to September 1941. May to December 1904 and July 1913 to September 1934 at outlet of Utah Lake, 7½ miles upstream.

Average discharge.- 28 years (1913-41), 372 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 754 second-feet July 3, 4; minimum daily, 1 second-foot Mar. 17-23, Apr. 18-20, 23-26, 1913-41: Maximum daily discharge, 1,370 second-feet June 8, 1922 (gage height, 7.78 feet, site and datum then in use); no flow at times when gates were closed.

Remarks.- Records excellent. They represent combined flow of Jordan River, Utah & Salt Lake Canal, and East Jordan Canal. Flow completely regulated by gates and pumps at outlet of Utah Lake, pumps at Pelican Point, and diversion dam at Narrows.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb.    | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|---------|----------------------|------|-----|------|------|------|-------|
| 1                       | 112              | 22   | 16      | 6       | 6       | 2                    | 11   | 50  | 487  | 721  | 547  | 650   |
| 2                       | 106              | 21   | 16      | 6       | 6       | 2                    | 12   | 137 | 533  | 753  | 569  | 635   |
| 3                       | 103              | 22   | 16      | 6       | 6       | 2                    | 10   | 215 | 548  | 754  | 636  | 371   |
| 4                       | 103              | 22   | 16      | 6       | 6       | 2                    | 15   | 217 | 532  | 754  | 680  | 607   |
| 5                       | 102              | 22   | 10      | 6       | 6       | 2                    | 13   | 217 | 425  | 747  | 675  | 620   |
| 6                       | 106              | 18   | 6       | 6       | 6       | 2                    | 23   | 250 | 470  | 745  | 676  | 601   |
| 7                       | 159              | 15   | 5       | 6       | 6       | 2                    | 22   | 283 | 213  | 736  | 696  | 234   |
| 8                       | 182              | 15   | 4       | 6       | 6       | 2                    | 19   | 292 | 62   | 725  | 703  | 315   |
| 9                       | 238              | 15   | 4       | 6       | 6       | 2                    | 19   | 353 | 62   | 723  | 675  | 649   |
| 10                      | 283              | 15   | 4       | 6       | 6       | 2                    | 23   | 425 | 51   | 718  | 690  | 680   |
| 11                      | 271              | 15   | 4       | 6       | 6       | 2                    | 26   | 552 | 48   | 712  | 682  | 689   |
| 12                      | 279              | 15   | 4       | 6       | 6       | 2                    | 28   | 633 | 46   | 711  | 677  | 490   |
| 13                      | 290              | 15   | 5       | 6       | 4       | 2                    | 29   | 661 | 53   | 710  | 668  | 515   |
| 14                      | 281              | 15   | 5       | 6       | 2       | 2                    | 25   | 642 | 64   | 707  | 680  | 628   |
| 15                      | 18               | 15   | 6       | 6       | 2       | 2                    | 22   | 643 | 62   | 718  | 683  | 600   |
| 16                      | 17               | 15   | 6       | 6       | 2       | 2                    | 10   | 638 | 152  | 721  | 675  | 580   |
| 17                      | 17               | 15   | 6       | 6       | 2       | 1                    | 2    | 692 | 379  | 718  | 656  | 671   |
| 18                      | 17               | 15   | 5       | 6       | 2       | 1                    | 1    | 614 | 543  | 722  | 660  | 695   |
| 19                      | 17               | 15   | 5       | 6       | 2       | 1                    | 1    | 358 | 565  | 702  | 656  | 607   |
| 20                      | 17               | 15   | 5       | 6       | 2       | 1                    | 1    | 540 | 594  | 629  | 647  | 461   |
| 21                      | 17               | 15   | 5       | 6       | 2       | 1                    | 2    | 591 | 612  | 653  | 652  | 421   |
| 22                      | 17               | 17   | 5       | 6       | 2       | 1                    | 2    | 603 | 647  | 679  | 652  | 419   |
| 23                      | 19               | 20   | 5       | 6       | 2       | 1                    | 1    | 636 | 691  | 672  | 647  | 524   |
| 24                      | 19               | 21   | 5       | 6       | 2       | 15                   | 1    | 639 | 706  | 640  | 649  | 506   |
| 25                      | 22               | 20   | 5       | 6       | 2       | 30                   | 1    | 634 | 685  | 571  | 636  | 488   |
| 26                      | 22               | 19   | 6       | 6       | 2       | 36                   | 1    | 616 | 677  | 422  | 629  | 497   |
| 27                      | 22               | 19   | 6       | 6       | 2       | 39                   | 2    | 550 | 675  | 395  | 667  | 448   |
| 28                      | 21               | 18   | 6       | 6       | 2       | 35                   | 2    | 488 | 665  | 355  | 665  | 423   |
| 29                      | 22               | 16   | 6       | 6       | -       | 13                   | 3    | 499 | 665  | 348  | 662  | 465   |
| 30                      | 22               | 16   | 6       | 6       | -       | 9                    | 4    | 495 | 665  | 360  | 565  | 444   |
| 31                      | 22               | -    | 6       | 6       | -       | 8                    | -    | 478 | -    | 483  | 531  | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean    | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 2,223            | 290  | 17      | 94.3    | 5,800   |                      |      |     |      |      |      |       |
| November.....           | 580              | 22   | 16      | 17.3    | 1,030   |                      |      |     |      |      |      |       |
| December.....           | 209              | 16   | 4       | 6.7     | 415     |                      |      |     |      |      |      |       |
| Calendar year 1940..... | 101,487          | 793  | 1       | 277     | 201,300 |                      |      |     |      |      |      |       |
| January.....            | 186              | 6    | 6       | 6.0     | 368     |                      |      |     |      |      |      |       |
| February.....           | 106              | 6    | 2       | 3.8     | 210     |                      |      |     |      |      |      |       |
| March.....              | 224              | 39   | 1       | 7.2     | 444     |                      |      |     |      |      |      |       |
| April.....              | 331              | 29   | 1       | 11.0    | 657     |                      |      |     |      |      |      |       |
| May.....                | 14,631           | 682  | 50      | 472     | 29,020  |                      |      |     |      |      |      |       |
| June.....               | 12,600           | 706  | 46      | 320     | 24,990  |                      |      |     |      |      |      |       |
| July.....               | 20,004           | 754  | 348     | 645     | 39,680  |                      |      |     |      |      |      |       |
| August.....             | 20,176           | 703  | 531     | 651     | 40,020  |                      |      |     |      |      |      |       |
| September.....          | 15,711           | 689  | 234     | 524     | 31,160  |                      |      |     |      |      |      |       |
| Water year 1940-41..... | 87,621           | 754  | 1       | 240     | 178,800 |                      |      |     |      |      |      |       |

Spanish Fork at Thistle, Utah

Location.- Water-stage recorder, lat. 40°00', long. 111°30', in Sw<sup>1</sup>/<sub>4</sub> sec. 28, T. 9 S., R. 4 E., at Thistle, 600 feet downstream from confluence of Soldier Fork and Thistle Creek, and 2<sup>1</sup>/<sub>2</sub> miles upstream from Diamond Fork.

Drainage area.- 490 square miles.

Records available.- January 1908 to September 1925 and October 1936 to September 1941 in reports of Geological Survey. January 1933 to September 1941 in reports of Spanish Fork water commissioner.

Average discharge.- 25 years (1908-25, 1933-41), 98.5 second-feet.

Extremes.- Maximum discharge during year, 464 second-feet May 13 (gage height, 3.84 feet); minimum discharge recorded, 27 second-feet Nov. 14 and Sept. 2, but may have been less during periods of ice effect.

1908-25, 1933-41: Maximum discharge observed, 1,250 second-feet May 26, 1922; minimum observed, 10 second-feet Sept. 17, 22, 25, Oct. 25, 1934.

Remarks.- Records good except those for periods of ice effect, which are fair. Small diversions above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb.   | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|--------|----------------------|------|-----|------|------|------|-------|
| 1                       | 42               | 37   | 43      | b33     | 41     | 65                   | 61   | 176 | 127  | 85   | 51   | 30    |
| 2                       | 41               | 38   | 43      | b32     | 40     | 71                   | 61   | 185 | 165  | 80   | 45   | 30    |
| 3                       | 43               | 39   | 43      | b28     | 41     | 72                   | 64   | 199 | 149  | 71   | 45   | 31    |
| 4                       | 41               | 41   | 43      | b28     | b41    | 66                   | 61   | 217 | 147  | 67   | 43   | 36    |
| 5                       | 41               | 39   | 42      | b33     | b42    | 62                   | 76   | 222 | 139  | 66   | 40   | 36    |
| 6                       | 40               | 40   | 45      | 38      | 44     | 61                   | 80   | 240 | 130  | 69   | 58   | 36    |
| 7                       | 38               | 42   | 42      | 40      | 51     | 58                   | 69   | 246 | 169  | 66   | 51   | 38    |
| 8                       | 40               | 40   | 41      | 40      | 47     | 53                   | 65   | 268 | 187  | 53   | 50   | 37    |
| 9                       | 44               | 41   | 43      | 40      | 46     | 68                   | 62   | 313 | 207  | 56   | 50   | 38    |
| 10                      | 40               | 41   | 39      | 40      | 50     | 48                   | 89   | 354 | 197  | 55   | 67   | 40    |
| 11                      | 38               | 39   | 36      | 41      | 55     | 61                   | 69   | 387 | 166  | 53   | 102  | 39    |
| 12                      | 38               | 38   | 38      | 42      | 61     | 47                   | 71   | 417 | 161  | 54   | 64   | 37    |
| 13                      | 39               | 30   | 38      | 43      | 53     | 53                   | 75   | 445 | 143  | 53   | 50   | 36    |
| 14                      | 38               | 30   | b30     | 43      | 61     | 58                   | 72   | 427 | 139  | 48   | 47   | 33    |
| 15                      | 39               | 32   | b28     | 42      | 56     | 52                   | 71   | 387 | 138  | 51   | 72   | 32    |
| 16                      | 39               | 37   | b31     | 40      | 60     | 50                   | 78   | 339 | 138  | 47   | 56   | 29    |
| 17                      | 39               | 42   | b56     | 41      | 61     | 51                   | 78   | 322 | 130  | 47   | 53   | 28    |
| 18                      | 39               | 47   | 37      | 43      | 61     | 56                   | 70   | 336 | 127  | 53   | 46   | 30    |
| 19                      | 38               | 48   | 38      | 42      | 61     | 60                   | 71   | 322 | 126  | 64   | 43   | 31    |
| 20                      | 38               | 42   | 38      | 43      | 61     | 61                   | 69   | 290 | 123  | 59   | 42   | 29    |
| 21                      | 38               | 39   | 38      | 45      | 65     | 60                   | 89   | 273 | 122  | 51   | 41   | 29    |
| 22                      | 38               | 37   | 39      | 44      | 70     | 59                   | 69   | 254 | 118  | 48   | 42   | 31    |
| 23                      | 36               | 34   | 40      | 43      | 70     | 59                   | 75   | 257 | 115  | 46   | 42   | 36    |
| 24                      | 36               | 33   | 38      | 46      | 76     | 56                   | 86   | 265 | 113  | 47   | 43   | 33    |
| 25                      | 37               | 36   | 40      | 45      | 74     | 56                   | 89   | 270 | 110  | 64   | 41   | 32    |
| 26                      | 42               | 39   | 37      | 41      | 62     | 53                   | 98   | 299 | 106  | 92   | 40   | 31    |
| 27                      | 42               | 38   | 39      | 41      | 59     | 52                   | 106  | 279 | 99   | 86   | 39   | 32    |
| 28                      | 40               | 40   | 39      | 42      | 60     | 53                   | 122  | 261 | 94   | 51   | 38   | 33    |
| 29                      | 39               | 42   | 40      | 46      | -      | 55                   | 143  | 227 | 89   | 53   | 36   | 36    |
| 30                      | 39               | 44   | 42      | 44      | -      | 58                   | 165  | 197 | 85   | 53   | 33   | 38    |
| 31                      | 38               | -    | 41      | 44      | -      | 58                   | -    | 181 | -    | 48   | 33   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean   | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 1,220            | 44   | 36      | 39.4    | 2,420  |                      |      |     |      |      |      |       |
| November.....           | 1,161            | 47   | 30      | 38.7    | 2,300  |                      |      |     |      |      |      |       |
| December.....           | 1,203            | 43   | 28      | 38.8    | 2,390  |                      |      |     |      |      |      |       |
| Calendar year 1940..... | 23,610           | 331  | 19      | 64.5    | 46,840 |                      |      |     |      |      |      |       |
| January.....            | 1,252            | 46   | 28      | 40.4    | 2,480  |                      |      |     |      |      |      |       |
| February.....           | 1,557            | 76   | 40      | 55.6    | 3,090  |                      |      |     |      |      |      |       |
| March.....              | 1,772            | 72   | 47      | 57.2    | 3,510  |                      |      |     |      |      |      |       |
| April.....              | 2,412            | 166  | 61      | 80.4    | 4,780  |                      |      |     |      |      |      |       |
| May.....                | 8,845            | 445  | 178     | 285     | 17,540 |                      |      |     |      |      |      |       |
| June.....               | 4,047            | 207  | 86      | 136     | 8,030  |                      |      |     |      |      |      |       |
| July.....               | 1,785            | 92   | 46      | 57.6    | 3,540  |                      |      |     |      |      |      |       |
| August.....             | 1,501            | 102  | 33      | 48.4    | 2,980  |                      |      |     |      |      |      |       |
| September.....          | 1,004            | 40   | 28      | 33.5    | 1,990  |                      |      |     |      |      |      |       |
| Water year 1940-41..... | 27,759           | 446  | 28      | 76.1    | 55,060 |                      |      |     |      |      |      |       |

b Stage-discharge relation affected by ice.

## Spanish Fork at Castilla, Utah

Location.- Water-stage recorder, lat. 40°02', long. 111°32', in SE¼ sec. 12, T. 9 S., R. 3 E., 600 feet upstream from outlet of Cold Springs, 1 mile northwest of Castilla railroad station, 1½ miles upstream from diversion dam of Bureau of Reclamation, and 2 miles downstream from Diamond Fork.

Drainage area.- 670 square miles.

Records available.- May 1919 to September 1925 and October 1936 to September 1941 in reports of Geological Survey. January 1933 to September 1941 in reports of Spanish Fork water commissioner.

Average discharge.- 14 years (1919-25, 1933-41), 218 second-feet.

Extremes.- Maximum discharge during year, 776 second-feet Aug. 10 (gage height, 4.88 feet); minimum, 31 second-feet Jan. 3, 1919-25, 1933-41; Maximum daily discharge, 1,520 second-feet May 22, 1920; minimum, 25 second-feet Feb. 18, 1938, and Jan. 19, 1939.

Remarks.- Records good. Several small diversions above station for irrigation. Flow is materially increased by water diverted by tunnel from Strawberry Reservoir (capacity, 250,000 acre-feet) in Colorado River Basin into Diamond Fork of Spanish Fork for irrigation of lands in Jordan River Basin.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 92               | 64   | 68      | 50      | 63   | 88                   | 99   | 283 | 278  | 464  | 140  | 291   |
| 2                       | 90               | 64   | 70      | 49      | 59   | 104                  | 98   | 294 | 266  | 422  | 161  | 260   |
| 3                       | 93               | 66   | 68      | 44      | 60   | 106                  | 106  | 316 | 345  | 351  | 171  | 300   |
| 4                       | 88               | 68   | 67      | 44      | 60   | 92                   | 99   | 337 | 399  | 294  | 197  | 289   |
| 5                       | 87               | 64   | 66      | 54      | 62   | 87                   | 138  | 340 | 402  | 360  | 228  | 273   |
| 6                       | 98               | 67   | 68      | 63      | 63   | 82                   | 138  | 357 | 405  | 379  | 245  | 242   |
| 7                       | 101              | 67   | 67      | 63      | 77   | 80                   | 117  | 351 | 396  | 413  | 268  | 226   |
| 8                       | 107              | 66   | 64      | 64      | 71   | 81                   | 109  | 382 | 289  | 473  | 268  | 224   |
| 9                       | 128              | 66   | 68      | 63      | 70   | 88                   | 106  | 425 | 321  | 497  | 263  | 194   |
| 10                      | 126              | 67   | 66      | 63      | 71   | 75                   | 117  | 437 | 270  | 458  | 291  | 173   |
| 11                      | 114              | 64   | 55      | 66      | 77   | 81                   | 114  | 488 | 242  | 428  | 302  | 177   |
| 12                      | 136              | 66   | 60      | 70      | 99   | 78                   | 116  | 516 | 230  | 396  | 161  | 194   |
| 13                      | 125              | 50   | 59      | 67      | 84   | 87                   | 119  | 550 | 219  | 337  | 123  | 192   |
| 14                      | 121              | 55   | 47      | 67      | 77   | 96                   | 112  | 541 | 214  | 316  | 128  | 190   |
| 15                      | 86               | 59   | 43      | 66      | 81   | 86                   | 112  | 494 | 214  | 360  | 165  | 194   |
| 16                      | 74               | 64   | 47      | 64      | 92   | 84                   | 128  | 446 | 208  | 376  | 136  | 205   |
| 17                      | 71               | 70   | 58      | 60      | 90   | 86                   | 126  | 451 | 201  | 374  | 117  | 221   |
| 18                      | 70               | 77   | 62      | 66      | 90   | 84                   | 110  | 497 | 190  | 376  | 110  | 226   |
| 19                      | 70               | 77   | 63      | 66      | 92   | 87                   | 112  | 443 | 248  | 368  | 116  | 214   |
| 20                      | 68               | 70   | 62      | 67      | 90   | 92                   | 106  | 440 | 305  | 281  | 163  | 199   |
| 21                      | 67               | 68   | 60      | 70      | 93   | 88                   | 106  | 464 | 335  | 212  | 230  | 169   |
| 22                      | 66               | 64   | 53      | 71      | 99   | 88                   | 107  | 449 | 398  | 171  | 268  | 163   |
| 23                      | 64               | 53   | 63      | 66      | 99   | 92                   | 114  | 437 | 428  | 169  | 263  | 167   |
| 24                      | 64               | 55   | 63      | 70      | 106  | 88                   | 130  | 425 | 476  | 140  | 273  | 132   |
| 25                      | 64               | 62   | 63      | 68      | 106  | 86                   | 134  | 422 | 504  | 147  | 261  | 130   |
| 26                      | 71               | 64   | 59      | 64      | 90   | 80                   | 147  | 452 | 535  | 177  | 294  | 136   |
| 27                      | 71               | 62   | 63      | 62      | 82   | 81                   | 167  | 376 | 563  | 141  | 313  | 169   |
| 28                      | 70               | 67   | 63      | 63      | 87   | 82                   | 186  | 340 | 566  | 107  | 332  | 167   |
| 29                      | 67               | 68   | 64      | 70      | -    | 86                   | 219  | 316 | 532  | 98   | 340  | 140   |
| 30                      | 66               | 68   | 67      | 67      | -    | 90                   | 255  | 305 | 485  | 104  | 351  | 128   |
| 31                      | 66               | -    | 66      | 67      | -    | 88                   | -    | 283 | -    | 125  | 360  | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 2,683            |      | 138     | 64      | 86.5 | 5,320                |      |     |      |      |      |       |
| November.....           | 1,942            |      | 77      | 50      | 64.7 | 3,860                |      |     |      |      |      |       |
| December.....           | 1,922            |      | 70      | 43      | 62.0 | 3,810                |      |     |      |      |      |       |
| Calendar year 1940..... | 61,325           |      | 525     | 42      | 168  | 121,630              |      |     |      |      |      |       |
| January.....            | 1,954            |      | 71      | 44      | 65.0 | 3,890                |      |     |      |      |      |       |
| February.....           | 2,290            |      | 106     | 59      | 81.8 | 4,540                |      |     |      |      |      |       |
| March.....              | 2,693            |      | 106     | 75      | 86.9 | 5,340                |      |     |      |      |      |       |
| April.....              | 3,847            |      | 255     | 98      | 128  | 7,630                |      |     |      |      |      |       |
| May.....                | 12,637           |      | 550     | 283     | 408  | 25,070               |      |     |      |      |      |       |
| June.....               | 10,475           |      | 566     | 190     | 349  | 20,780               |      |     |      |      |      |       |
| July.....               | 9,304            |      | 497     | 98      | 300  | 18,450               |      |     |      |      |      |       |
| August.....             | 7,028            |      | 360     | 110     | 227  | 13,940               |      |     |      |      |      |       |
| September.....          | 5,955            |      | 300     | 128     | 198  | 11,810               |      |     |      |      |      |       |
| Water year 1940-41..... | 62,750           |      | 566     | 43      | 172  | 124,400              |      |     |      |      |      |       |



JORDAN RIVER BASIN

Spanish Fork near Lake Shore, Utah

Location.- Water-stage recorder, lat. 40°10', long. 111°44', in SE<sup>1</sup>/<sub>4</sub> sec. 32, T. 7 S., R. 2 E., 400 feet downstream from bridge, 1 mile upstream from mouth, and 2.5 miles north of Lake Shore.

Drainage area.- 700 square miles.

Records available.- January 1938 to September 1941. December 1903 to July 1907 and March 1909 to September 1925 at site 3 miles upstream.

Average discharge.- 20 years (1904-6, 1909-19, 1920-25, 1938-41), 96.9 second-feet.

Extremes.- Maximum discharge during year, 220 second-feet Aug. 11 (gage height, 6.42 feet); practically no flow during latter part of irrigation season.  
1903-7, 1909-25, 1938-41: Maximum discharge observed, 1,100 second-feet May 7, 1922; practically no flow during latter part of irrigation season for most years.

Remarks.- Records good except those for periods of no or doubtful gage-height record, which are fair. Flow affected by many diversions for irrigation and hydroelectric power plant. During the latter part of the irrigation season only waste and return waters pass the gage. Station below all diversions.

Cooperation.- Board of Canal Presidents and Bureau of Reclamation furnished 3 and 14 discharge measurements, respectively.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet) (Shifting-control method used Mar. 5 to May 21)

|     |      |     |      |     |     |
|-----|------|-----|------|-----|-----|
| 1.1 | 0    | 2.2 | 29.5 | 4.0 | 87  |
| 1.2 | .5   | 2.4 | 34   | 4.5 | 110 |
| 1.4 | 5    | 2.7 | 41   | 5.0 | 135 |
| 1.6 | 13   | 3.0 | 49   | 5.5 | 163 |
| 1.8 | 20   | 3.3 | 59   | 6.0 | 193 |
| 2.0 | 25.5 | 3.7 | 75   | 6.5 | 225 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | a1   | a15  | 79   | d46  | 71   | 98   | 112  | 128 | 3    | 1    | .8   | 1     |
| 2   | a1   | a15  | 77   | 40   | 64   | 120  | 120  | 146 | 1    | 1    | a.8  | .8    |
| 3   | a1   | 28   | 76   | 48   | 70   | 123  | 125  | 123 | 1    | 1    | a.8  | .6    |
| 4   | a1   | 48   | 66   | 52   | 68   | 107  | 122  | 135 | 1    | 1    | .8   | .6    |
| 5   | a1   | 53   | 69   | 53   | 71   | 100  | 129  | 149 | 1    | 1    | .8   | .5    |
| 6   | a1   | 61   | 71   | 61   | 70   | 93   | 167  | 152 | 2    | 1    | .8   | .8    |
| 7   | a1   | 62   | 71   | 67   | 75   | 92   | 115  | 139 | 1    | 1    | a1   | 1     |
| 8   | a1   | 64   | 62   | 69   | 80   | 89   | 129  | 160 | 1    | .8   | a2   | 1     |
| 9   | a1   | 44   | 65   | 70   | 78   | 93   | 123  | 152 | 30   | .8   | a4   | .8    |
| 10  | a1   | 42   | 64   | 68   | 77   | 88   | 131  | 93  | 83   | .8   | a6   | 1     |
| 11  | a1   | 40   | 59   | 68   | 86   | 86   | 133  | 56  | 36   | 1    | 42   | 1     |
| 12  | a1   | 42   | 54   | 70   | 114  | 87   | 133  | 28  | 29   | 1    | 2    | 1     |
| 13  | a1   | 39   | 59   | 75   | 113  | 85   | 141  | 29  | 16   | 1    | 1    | 2     |
| 14  | a1   | 33   | 44   | 73   | 92   | 100  | 136  | 22  | 14   | .8   | .8   | 2     |
| 15  | a1   | 32   | a50  | 68   | 90   | 94   | 132  | 5   | 9    | .8   | .8   | 1     |
| 16  | a1   | 35   | a56  | 69   | 102  | 93   | 133  | 3   | 28   | a.8  | 8    | .8    |
| 17  | a1   | 41   | a62  | 66   | 103  | 97   | 126  | 2   | 21   | a.8  | 1    | 1     |
| 18  | a1   | 69   | 69   | 67   | 101  | 95   | 121  | 1   | 9    | a.9  | .8   | .8    |
| 19  | a1   | 69   | 74   | 69   | 104  | 97   | 123  | 9   | 5    | a.9  | .5   | 1     |
| 20  | a1   | 72   | 63   | 74   | 104  | 104  | 117  | 7   | 6    | a1   | .6   | .6    |
| 21  | a6   | 71   | 62   | 70   | 104  | 103  | 112  | 5   | 2    | 1    | .6   | .6    |
| 22  | a6   | 65   | 63   | 74   | 113  | 103  | 103  | 2   | 3    | 1    | 2    | .6    |
| 23  | a6   | 66   | 69   | 70   | 121  | 107  | 84   | 1   | 2    | .8   | 1    | .6    |
| 24  | a6   | 44   | 67   | 73   | 121  | 105  | 89   | .8  | 2    | 1    | .8   | .6    |
| 25  | a6   | 64   | 73   | 75   | 125  | 104  | 90   | .8  | 2    | 1    | .8   | .8    |
| 26  | a8   | 76   | 65   | 69   | 109  | 97   | 85   | 3   | 2    | 2    | .8   | .8    |
| 27  | a10  | 73   | 64   | 68   | 96   | 94   | 87   | 1   | 3    | 25   | .8   | 2     |
| 28  | a12  | 71   | 78   | 68   | 94   | 96   | 92   | 2   | 2    | 1    | 1    | .8    |
| 29  | a12  | 76   | d70  | 73   | -    | a99  | 100  | 1   | 2    | .6   | 1    | .6    |
| 30  | a12  | 77   | d62  | 72   | -    | a102 | 92   | 1   | 1    | .5   | 1    | .6    |
| 31  | a12  | -    | d54  | 69   | -    | 105  | -    | 2   | -    | .6   | 1    | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 116              | 12      | 1       | 3.7  | 230                  |
| November.....           | 1,568            | 77      | 15      | 52.3 | 3,110                |
| December.....           | 2,017            | 79      | 44      | 65.1 | 4,000                |
| Calendar year 1940..... | 15,273.6         | 196     | -       | 41.7 | 30,300               |
| January.....            | 2,054            | 75      | 40      | 66.3 | 4,070                |
| February.....           | 2,618            | 125     | 64      | 93.5 | 5,190                |
| March.....              | 3,046            | 123     | 85      | 98.3 | 6,040                |
| April.....              | 3,502            | 167     | 84      | 117  | 6,950                |
| May.....                | 1,558.6          | 160     | .8      | 50.3 | 3,090                |
| June.....               | 318              | 63      | 1       | 10.6 | 631                  |
| July.....               | 52.9             | 25      | .5      | 1.71 | 105                  |
| August.....             | 86.1             | 42      | .5      | 2.78 | 171                  |
| September.....          | 27.5             | 2       | .5      | .92  | 55                   |
| Water year 1940-41..... | 16,964.1         | 167     | .5      | 46.5 | 33,640               |

a No gage-height record; discharge interpolated except Oct. 1 to Nov. 2 when it was based on three discharge measurements and notes of water commissioner.  
d Doubtful gage-height record; discharge interpolated.

## Diamond Fork near Thistle, Utah

Location.- Water-stage recorder, lat. 40°02'15", long. 111°29'20", in NW¼NE¼ sec. 16, T. 9 S., R. 4 E., 1½ miles upstream from mouth, 3 miles north of Thistle, and 3½ miles downstream from Little Diamond Creek.

Drainage area.- 155 square miles.

Records available.- April 1940 to September 1941. December 1907 to September 1917 at site 1 1/3 miles downstream.

Extremes.- Maximum discharge during period, 579 second-feet June 27 (gage height, 3.07 feet); minimum daily, 2 second-feet Dec. 15, 16, Jan. 4, 5, 1907-17, 1940-41; Maximum discharge observed, 733 second-feet May 9, 1909; minimum daily discharge, that of Dec. 15, 16, 1940, Jan. 4, 5, 1941.

Remarks.- Records good except those for periods of ice effect and doubtful gage-height record, which are fair. Some small diversions above station for irrigation. Flow is materially increased by water diverted by tunnel from Strawberry Reservoir in Colorado River Basin (capacity, 250,000 acre-feet) for irrigation of lands in Jordan River Basin.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 34   | 13   | 10   | 6    | 9    | 13   | 29   | 96  | 66   | 368  | 75   | 202   |
| 2   | 36   | 12   | 11   | b5   | b6   | 18   | 29   | 100 | 112  | 341  | 85   | 196   |
| 3   | 37   | 13   | 10   | b3   | b6   | 17   | 34   | 112 | 191  | 258  | 91   | 228   |
| 4   | 33   | 14   | 11   | b2   | b6   | 14   | 28   | 114 | 243  | 199  | 140  | 219   |
| 5   | 33   | 11   | 11   | b2   | b7   | 14   | 49   | 114 | 252  | 286  | 174  | 199   |
| 6   | 44   | 12   | 10   | b7   | b10  | 13   | 41   | 118 | 252  | 308  | 171  | 189   |
| 7   | 47   | 12   | 10   | b9   | b13  | 11   | 31   | 109 | 216  | 351  | 182  | 156   |
| 8   | 54   | 11   | 10   | b10  | 11   | 12   | 29   | 109 | 85   | 436  | 191  | 151   |
| 9   | 70   | 10   | 10   | b10  | 10   | 14   | 29   | 118 | 71   | 462  | 182  | 130   |
| 10  | 71   | 11   | 8    | b11  | 10   | 13   | 34   | 123 | 66   | 411  | 156  | 112   |
| 11  | 60   | 10   | 6    | 12   | 13   | 14   | 31   | 150 | 55   | 379  | d100 | 116   |
| 12  | 90   | 11   | b6   | 12   | 19   | 11   | 31   | 139 | 52   | 334  | d70  | 133   |
| 13  | 70   | 7    | b5   | 10   | 14   | 15   | 31   | 143 | 50   | 287  | d50  | 133   |
| 14  | 70   | 7    | b3   | 10   | 13   | 16   | 30   | 136 | 50   | 252  | 55   | 130   |
| 15  | 24   | 11   | b2   | 10   | 14   | 12   | 33   | 121 | 50   | 302  | 58   | 156   |
| 16  | 16   | 12   | b2   | 9    | 15   | 14   | 38   | 100 | 50   | 324  | 55   | 156   |
| 17  | 14   | 12   | b6   | 6    | 14   | 15   | 37   | 94  | 50   | 318  | 44   | 171   |
| 18  | 14   | 13   | b10  | 9    | 14   | 16   | 31   | 136 | 49   | 314  | 40   | 169   |
| 19  | 13   | 13   | b11  | 9    | 14   | 18   | 35   | 118 | 138  | 295  | 52   | 158   |
| 20  | 13   | 9    | *11  | 9    | 14   | 21   | 31   | 133 | 196  | 199  | 105  | 151   |
| 21  | 12   | 10   | 10   | 8    | 14   | 21   | 33   | 180 | 249  | 140  | 174  | 123   |
| 22  | 12   | 6    | 11   | 9    | 14   | 22   | 34   | 180 | 308  | 105  | 194  | 114   |
| 23  | 11   | 8    | 11   | 9    | 14   | 23   | 37   | 169 | 372  | 100  | 196  | 112   |
| 24  | 11   | 4    | 12   | 11   | 15   | 22   | 43   | 153 | 470  | 98   | 202  | 102   |
| 25  | 11   | 9    | 11   | 10   | 15   | 20   | 44   | 140 | 512  | 96   | 208  | 90    |
| 26  | 13   | 9    | 12   | 8    | 11   | 17   | 49   | 136 | 520  | 83   | 228  | 83    |
| 27  | 14   | 7    | 10   | 7    | 11   | 18   | 57   | 94  | 555  | 38   | 243  | 109   |
| 28  | 15   | *14  | 10   | 8    | 15   | 20   | 66   | 76  | 535  | 38   | 264  | 112   |
| 29  | 14   | 12   | 10   | 10   | -    | 22   | 75   | 65  | 474  | 34   | 270  | 100   |
| 30  | 13   | 11   | 9    | 10   | -    | 24   | 85   | 64  | 397  | 45   | 286  | 92    |
| 31  | 13   | -    | 9    | 10   | -    | 24   | -    | 62  | -    | 66   | 292  | -     |

| Month                    | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|--------------------------|------------------|---------|---------|------|----------------------|
| October.....             | 982              | 90      | 11      | 31.7 | 1,950                |
| November.....            | 315              | 14      | 4       | 10.5 | 627                  |
| December.....            | 276              | 12      | 2       | 8.9  | 547                  |
| Calendar year .....      | -                | -       | -       | -    | -                    |
| January.....             | 261              | 12      | 2       | 8.4  | 518                  |
| February.....            | 341              | 19      | 6       | 12.2 | 676                  |
| March.....               | 504              | 24      | 11      | 16.9 | 1,049                |
| April.....               | 1,182            | 85      | 28      | 31.4 | 2,340                |
| May.....                 | 3,681            | 180     | 62      | 119  | 7,300                |
| June.....                | 6,686            | 555     | 49      | 223  | 13,260               |
| July.....                | 7,246            | 462     | 34      | 234  | 14,370               |
| August.....              | 4,553            | 292     | 40      | 149  | 9,190                |
| September.....           | 4,252            | 223     | 53      | 142  | 8,450                |
| Water year 1940-41 ..... | 30,380           | 555     | 2       | 63.2 | 60,250               |

\* 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 Spanish Fork at Castilla and Thistle.

Provo River at Vivian Park, Utah

Location.- Water-stage recorder, lat. 40°22', long. 111°34', in NW¼ sec. 25, T. 5 S., R. 3 E., half a mile downstream from North Fork, 3,500 feet northeast of Vivian Park, and three-quarters of a mile upstream from South Fork.

Drainage area.- 600 square miles.

Records available.- November 1911 to September 1941.

Average discharge.- 29 years, 349 second-feet (since 1932 flow includes that of Weber-Provo diversion canal).

Extremes.- Maximum daily discharge during year, 846 second-feet (regulated) June 13; minimum daily, 59 second-feet Jan. 3.  
1911-41: Maximum discharge observed, 3,130 second-feet July 11, 1921: minimum discharge, 49 second-feet July 17, 1934.

Remarks.- Records excellent. Station is below diversions for irrigation in Heber Valley and above those in vicinity of Provo. Flow slightly regulated at headwaters by small lakes that serve as reservoirs. Records include flow of Weber-Provo diversion canal.

Cooperation.- Records collected and prepared in cooperation with Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 125  | 146  | 228  | 202  | 202  | 258  | 265  | 341 | 449  | 332  | 276  | 216   |
| 2   | 128  | 150  | 270  | 62   | 202  | 230  | 258  | 292 | 395  | 315  | 276  | 211   |
| 3   | 130  | 148  | 198  | 59   | 202  | 238  | 450  | 217 | 353  | 292  | 271  | 218   |
| 4   | 133  | 152  | 202  | 213  | 202  | 315  | 450  | 411 | 338  | 290  | 263  | 225   |
| 5   | 132  | 154  | 200  | 213  | 204  | 292  | 260  | 468 | 421  | 290  | 268  | 220   |
| 6   | 130  | 153  | 200  | 213  | 202  | 284  | 253  | 456 | 425  | 290  | 263  | 211   |
| 7   | 130  | 152  | 200  | 211  | 200  | 279  | 255  | 455 | 442  | 290  | 265  | 206   |
| 8   | 135  | 156  | 209  | 211  | 200  | 273  | 255  | 419 | 446  | 301  | 268  | 206   |
| 9   | 139  | 159  | 202  | 211  | 197  | 273  | 255  | 440 | 470  | 303  | 265  | 206   |
| 10  | 141  | 154  | 202  | 209  | 197  | 276  | 259  | 327 | 616  | 506  | 265  | 209   |
| 11  | 139  | 151  | 200  | 200  | 204  | 276  | 258  | 373 | 702  | 303  | 263  | 202   |
| 12  | 137  | 110  | 200  | 206  | 211  | 273  | 260  | 706 | 738  | 301  | 260  | 206   |
| 13  | 135  | 136  | 197  | 204  | 206  | 273  | 263  | 810 | 840  | 208  | 247  | 211   |
| 14  | 133  | 152  | 181  | 204  | 209  | 269  | 250  | 832 | 814  | 292  | 223  | 213   |
| 15  | 133  | 155  | 187  | 204  | 213  | 266  | 255  | 842 | 749  | 287  | 209  | 213   |
| 16  | 139  | 168  | 197  | 200  | 218  | 265  | 247  | 832 | 719  | 282  | 216  | 213   |
| 17  | 133  | 176  | 191  | 200  | 220  | 263  | 242  | 928 | 612  | 279  | 225  | 211   |
| 18  | 133  | 193  | 189  | 200  | 223  | 263  | 216  | 828 | 523  | 273  | 223  | 213   |
| 19  | 132  | 200  | 191  | 200  | 225  | 263  | 216  | 632 | 531  | 287  | 220  | 211   |
| 20  | 132  | 204  | 191  | 200  | 228  | 271  | 182  | 775 | 550  | 295  | 220  | 211   |
| 21  | 133  | 209  | 193  | 197  | 237  | 271  | 93   | 491 | 565  | 292  | 216  | 213   |
| 22  | 133  | 211  | 193  | 200  | 240  | 268  | 93   | 392 | 527  | 292  | 204  | 211   |
| 23  | 130  | 211  | 197  | 202  | 242  | 271  | 95   | 516 | 434  | 287  | 202  | 200   |
| 24  | 128  | 209  | 200  | 204  | 250  | 271  | 121  | 766 | 491  | 287  | 200  | 200   |
| 25  | 128  | 213  | 202  | 209  | 252  | 268  | 168  | 616 | 484  | 287  | 204  | 200   |
| 26  | 137  | 213  | 200  | 209  | 255  | 265  | 172  | 669 | 411  | 287  | 211  | 200   |
| 27  | 141  | 220  | 202  | 206  | 255  | 265  | 178  | 801 | 363  | 287  | 213  | 200   |
| 28  | 139  | 223  | 202  | 204  | 258  | 263  | 256  | 228 | 326  | 282  | 209  | 202   |
| 29  | 139  | 225  | 209  | 204  | -    | 253  | 350  | 775 | 323  | 276  | 209  | 202   |
| 30  | 141  | 228  | 206  | 204  | -    | 263  | 347  | 592 | 332  | 273  | 216  | 184   |
| 31  | 146  | -    | 206  | 202  | -    | 263  | -    | 421 | -    | 271  | 218  | -     |

| Month              | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|--------------------|------------------|---------|---------|------|----------------------|
| October            | 4,162            | 146     | 125     | 134  | 8,260                |
| November           | 5,326            | 228     | 110     | 178  | 10,560               |
| December           | 6,193            | 230     | 187     | 200  | 12,200               |
| Calendar year 1940 | 76,240           | 801     | 102     | 208  | 151,200              |
| January            | 6,095            | 213     | 59      | 197  | 12,100               |
| February           | 6,154            | 228     | 197     | 220  | 12,210               |
| March              | 8,492            | 338     | 258     | 274  | 16,840               |
| April              | 5,835            | 350     | 93      | 228  | 13,560               |
| May                | 18,835           | 842     | 292     | 608  | 37,350               |
| June               | 15,534           | 846     | 323     | 513  | 30,310               |
| July               | 9,027            | 332     | 271     | 291  | 17,800               |
| August             | 7,298            | 276     | 200     | 235  | 14,480               |
| September          | 6,244            | 225     | 184     | 208  | 12,380               |
| Water year 1940-41 | 100,196          | 846     | 59      | 275  | 198,700              |

## Provo River at Provo, Utah

Location.- Water-stage recorder, lat. 40°14'15", long. 111°41'45", in NE¼SE¼ sec. 3, T. 7 S., R. 2 E., 800 feet downstream from bridge on State Highway 114, 2 miles west of Provo, and 2 miles upstream from mouth.

Records available.- June 1933 to September 1934, November 1933 to September 1941. January 1937 to November 1938, at site 450 feet upstream, above one small diversion. May 1903 to June 1905, at site three-quarters of a mile upstream, above three small diversions. Records equivalent when adjusted for diversions.

Extremes.- Maximum discharge during year, 561 second-feet June 13; practically no flow July 6 and 7. 1903-5, 1933-34, 1937-41: Maximum discharge observed, 1,620 second-feet May 27, 1904; practically no flow during several periods.

Remarks.- Records good except those below 5 second-feet, which are fair. Station is below all diversions. At times entire flow is diverted above station for irrigation. Factory race diverts water above station into Provo Bay, an arm of Utah Lake. Records for this diversion were not obtained during the current year.

Cooperation.- Records collected and prepared in cooperation with Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan.             | Feb.    | Mar.    | Apr. | May                  | June | July | Aug. | Sept. |
|-------------------------|------|------|------|------------------|---------|---------|------|----------------------|------|------|------|-------|
| 1                       | 1    | 22   | 162  | 212              | 207     | 249     | 255  | 183                  | 15   | 5    | 3    | 2     |
| 2                       | 1    | 24   | 162  | 173              | 209     | 232     | 251  | 148                  | 12   | 2    | 3    | 1     |
| 3                       | 1    | 26   | 152  | 61               | 207     | 363     | 240  | 115                  | 11   | 2    | 4    | 3     |
| 4                       | 2    | 39   | 143  | 176              | 205     | 350     | 238  | 134                  | 10   | 2    | 5    | 3     |
| 5                       | 3    | 54   | 146  | 216              | 205     | 317     | 260  | 144                  | 12   | 1    | 4    | 3     |
| 6                       | 4    | 61   | 158  | 212              | 209     | 297     | 262  | 155                  | 12   | 0    | 2    | 4     |
| 7                       | 4    | 68   | 163  | 212              | 209     | 292     | 255  | 106                  | 50   | 0    | 1    | 4     |
| 8                       | 4    | 68   | 170  | 211              | 207     | 295     | 251  | 77                   | 92   | 1    | 1    | 3     |
| 9                       | 6    | 72   | 178  | 209              | 211     | 300     | 249  | 51                   | 176  | 1    | 3    | 3     |
| 10                      | 7    | 81   | 176  | 209              | 211     | 292     | 246  | 56                   | 341  | 1    | 6    | 3     |
| 11                      | 6    | 79   | 178  | 211              | 180     | 276     | 230  | 76                   | 515  | 1    | 7    | 3     |
| 12                      | 9    | 60   | 180  | 213              | 212     | 272     | 234  | 119                  | 519  | 1    | 8    | 3     |
| 13                      | 10   | 71   | 178  | 214              | 211     | 272     | 228  | 244                  | 548  | 2    | 6    | 3     |
| 14                      | 9    | 77   | 180  | 198              | 201     | 269     | 224  | 272                  | 442  | 3    | 6    | 3     |
| 15                      | 9    | 86   | 194  | 198              | 201     | 266     | 222  | 269                  | 314  | 3    | 6    | 6     |
| 16                      | 9    | 92   | 189  | 198              | 209     | 262     | 220  | 262                  | 276  | 2    | 5    | 4     |
| 17                      | 8    | 87   | 194  | 196              | 205     | 260     | 226  | 244                  | 178  | 1    | 6    | 4     |
| 18                      | 8    | 110  | 194  | 196              | 211     | 262     | 192  | 246                  | 103  | 2    | 4    | 3     |
| 19                      | 8    | 116  | 201  | 198              | 220     | 267     | 185  | 264                  | 94   | 4    | 2    | 7     |
| 20                      | 7    | 119  | 205  | 192              | 224     | 260     | 170  | 242                  | 80   | 5    | 2    | 7     |
| 21                      | 8    | 122  | 207  | 190              | 232     | 264     | 81   | 111                  | 87   | 4    | 3    | 6     |
| 22                      | 9    | 119  | 212  | 198              | 242     | 262     | 45   | 18                   | 109  | 4    | 3    | 6     |
| 23                      | 11   | 119  | 214  | 196              | 249     | 257     | 38   | 20                   | 124  | 3    | 3    | 9     |
| 24                      | 12   | 130  | 220  | 203              | 257     | 253     | 31   | 138                  | 136  | 2    | 3    | 13    |
| 25                      | 14   | 140  | 222  | 205              | 269     | 251     | 23   | 124                  | 131  | 5    | 3    | 17    |
| 26                      | 18   | 149  | 220  | 205              | 253     | 246     | 17   | 136                  | 92   | 12   | 2    | 15    |
| 27                      | 18   | 152  | 218  | 207              | 253     | 244     | 38   | 232                  | 31   | 15   | 2    | 14    |
| 28                      | 20   | 157  | 216  | 209              | 249     | 238     | 129  | 320                  | 16   | 10   | 2    | 18    |
| 29                      | 20   | 163  | 222  | 207              | -       | 236     | 207  | 320                  | 9    | 8    | 1    | 20    |
| 30                      | 21   | 163  | 218  | 207              | -       | 249     | 190  | 183                  | 11   | 5    | 1    | 31    |
| 31                      | 20   | -    | 220  | 209              | -       | 253     | -    | 37                   | -    | 4    | 2    | -     |
| Month                   |      |      |      | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |      |      |      |       |
| October.....            |      |      |      | 287              | 21      | 1       | 9.3  | 569                  |      |      |      |       |
| November.....           |      |      |      | 2,635            | 163     | 22      | 94.5 | 5,620                |      |      |      |       |
| December.....           |      |      |      | 5,889            | 222     | 143     | 190  | 11,680               |      |      |      |       |
| Calendar year 1940..... |      |      |      | 33,846           | 377     | 0       | 92.5 | 67,120               |      |      |      |       |
| January.....            |      |      |      | 6,141            | 216     | 61      | 198  | 12,180               |      |      |      |       |
| February.....           |      |      |      | 6,158            | 269     | 180     | 220  | 12,210               |      |      |      |       |
| March.....              |      |      |      | 8,446            | 363     | 236     | 272  | 16,750               |      |      |      |       |
| April.....              |      |      |      | 5,437            | 292     | 17      | 151  | 10,780               |      |      |      |       |
| May.....                |      |      |      | 5,045            | 320     | 18      | 163  | 10,010               |      |      |      |       |
| June.....               |      |      |      | 4,552            | 548     | 9       | 152  | 9,030                |      |      |      |       |
| July.....               |      |      |      | 111              | 15      | 0       | 3.6  | 220                  |      |      |      |       |
| August.....             |      |      |      | 109              | 8       | 1       | 3.5  | 216                  |      |      |      |       |
| September.....          |      |      |      | 219              | 31      | 1       | 7.3  | 434                  |      |      |      |       |
| Water year 1940-41..... |      |      |      | 45,229           | 548     | 0       | 124  | 89,700               |      |      |      |       |

Weber-Provo diversion canal near Woodland, Utah

Location.- Water-stage recorder and Parshall rating flume, lat. 40°36'40", long. 111°18'15", in SW¼SE¼ sec. 30, T. 2 S., R. 6 E., 100 feet upstream from outlet to Provo River and 4½ miles northwest of Woodland.

Records available.- October 1931 to September 1941.

Extremes.- Maximum daily discharge during year, 117 second-feet June 17; no water diverted from Weber River for several months.

1931-41: Maximum daily discharge, 152 second-feet June 14, 15, 1933; no water diverted from Weber River for several months during each year.

Remarks.- Records good. Canal diverts water from Weber River in SW¼SW¼ sec. 21, T. 1 S., R. 6 E., to Provo River for irrigation along Provo and Jordan Rivers. Figures given herein represent quantity of water reaching Provo River during periods when water was diverted from Weber River. Not all of water diverted from Weber River reaches Provo River due to evaporation, transpiration, and seepage losses. No water was diverted from Weber River on days for which no figures are given.

Cooperation.- Records of daily discharge furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb.  | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|-------|----------------------|------|-----|------|------|------|-------|
| 1                       |                  |      | -       |         |       |                      | 1    | 0   | 2    | 104  |      |       |
| 2                       |                  |      | -       |         |       |                      | 1    | 16  | 2    | 98   |      |       |
| 3                       |                  |      | 2       |         |       |                      | 1    | 58  | 2    | 79   |      |       |
| 4                       |                  |      | 2       |         |       |                      | 1    | 85  | 5    | 73   |      |       |
| 5                       |                  |      | 5       |         |       |                      | 2    | 88  | 5    | 66   |      |       |
| 6                       |                  |      | 5       |         |       |                      | 2    | 89  | 4    | 59   |      |       |
| 7                       |                  |      | 5       |         |       |                      | 2    | 88  | 6    | 51   |      |       |
| 8                       |                  |      | 5       |         |       |                      | 2    | 82  | 8    | 39   |      |       |
| 9                       |                  |      | 4       |         |       |                      | 2    | 84  | 45   | 30   |      |       |
| 10                      |                  |      | 4       |         |       |                      | 2    | 87  | 52   | 43   |      |       |
| 11                      |                  |      | 3       |         |       |                      | 2    | 85  | 103  | 35   |      |       |
| 12                      |                  |      | 3       |         |       |                      | 2    | 87  | 104  | 24   |      |       |
| 13                      |                  |      | -       |         |       |                      | 2    | 86  | 107  | 16   |      |       |
| 14                      |                  |      | -       |         |       |                      | 2    | 95  | 113  | 10   |      |       |
| 15                      |                  |      | -       |         |       |                      | 2    | 92  | 115  | 6    |      |       |
| 16                      |                  |      | -       |         |       |                      | 2    | 90  | 115  | -    |      |       |
| 17                      |                  |      | -       |         |       |                      | 2    | 91  | 117  | -    |      |       |
| 18                      |                  |      | -       |         |       |                      | 2    | 53  | 114  | -    |      |       |
| 19                      |                  |      | -       |         |       |                      | 2    | 4   | 112  | -    |      |       |
| 20                      |                  |      | -       |         |       |                      | 2    | 2   | 112  | -    |      |       |
| 21                      |                  |      | -       |         |       |                      | 2    | 2   | 115  | -    |      |       |
| 22                      |                  |      | -       |         |       |                      | 2    | 2   | 111  | -    |      |       |
| 23                      |                  |      | -       |         |       |                      | 2    | 2   | 112  | -    |      |       |
| 24                      |                  |      | -       |         |       |                      | 2    | 1   | 113  | -    |      |       |
| 25                      |                  |      | -       |         |       |                      | 2    | 2   | 112  | -    |      |       |
| 26                      |                  |      | -       |         |       |                      | 2    | 2   | 108  | -    |      |       |
| 27                      |                  |      | -       |         |       |                      | 2    | 3   | 107  | -    |      |       |
| 28                      |                  |      | -       |         |       |                      | 2    | 3   | 108  | -    |      |       |
| 29                      |                  |      | -       |         |       |                      | 1    | 2   | 101  | -    |      |       |
| 30                      |                  |      | -       |         |       |                      | 1    | 2   | 108  | -    |      |       |
| 31                      |                  |      | -       |         |       |                      | -    | 2   | -    | -    |      |       |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean  | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | -                | -    | -       | -       | -     | -                    |      |     |      |      |      |       |
| November.....           | -                | -    | -       | -       | -     | -                    |      |     |      |      |      |       |
| December.....           | 35               | 5    | -       | -       | 1.2   | 75                   |      |     |      |      |      |       |
| Calendar year 1940..... | 2,001            | 95   | 0       | 5.5     | 3,960 |                      |      |     |      |      |      |       |
| January.....            | -                | -    | -       | -       | -     | -                    |      |     |      |      |      |       |
| February.....           | -                | -    | -       | -       | -     | -                    |      |     |      |      |      |       |
| March.....              | -                | -    | -       | -       | -     | -                    |      |     |      |      |      |       |
| April.....              | 54               | 2    | 1       | 1.8     | 407   |                      |      |     |      |      |      |       |
| May.....                | 1,385            | 95   | 0       | 44.7    | 2,750 |                      |      |     |      |      |      |       |
| June.....               | 2,356            | 117  | 2       | 77.9    | 4,630 |                      |      |     |      |      |      |       |
| July.....               | 731              | 104  | -       | 23.6    | 1,450 |                      |      |     |      |      |      |       |
| August.....             | -                | -    | -       | -       | -     | -                    |      |     |      |      |      |       |
| September.....          | -                | -    | -       | -       | -     | -                    |      |     |      |      |      |       |
| Water year 1940-41..... | 4,544            | 117  | 0       | 12.5    | 9,010 |                      |      |     |      |      |      |       |

## South Fork of Provo River at Vivian Park, Utah

Location.- Water-stage recorder and Parshall flume, lat. 40°21', long. 111°34', in SE $\frac{1}{4}$  sec. 26, T. 5 S., R. 3 E., a quarter of a mile southeast of Vivian Park and half a mile upstream from mouth.

Drainage area.- 30 square miles.

Records available.- November 1911 to September 1941.

Average discharge.- 29 years (1912-41), 30.0 second-feet.

Extremes.- Maximum discharge during year, 46 second-feet May 14 (gage height, 1.20 feet); minimum daily, 23 second-feet Jan. 23.  
1911-41: Maximum discharge observed, 123 second-feet May 27, 1922; minimum discharge, 13 second-feet several times in 1934, 1935, and on Apr. 2, 1937.

Remarks.- Records excellent. Station below all diversions.

Cooperation.- Records collected and prepared in cooperation with Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 26               | 27   | 26      | 25      | 25   | 27                   | 25   | 28  | 33   | 25   | 31   | 30    |
| 2                       | 26               | 27   | 26      | 25      | 25   | 26                   | 25   | 29  | 32   | 26   | 30   | 30    |
| 3                       | 27               | 28   | 26      | 24      | 25   | 23                   | 25   | 30  | 32   | 26   | 30   | 31    |
| 4                       | 26               | 27   | 26      | 24      | 25   | 27                   | 25   | 31  | 31   | 26   | 30   | 31    |
| 5                       | 26               | 26   | 26      | 24      | 25   | 27                   | 27   | 30  | 32   | 26   | 29   | 32    |
| 6                       | 26               | 26   | 26      | 24      | 25   | 26                   | 26   | 31  | 32   | 25   | 28   | 32    |
| 7                       | 26               | 26   | 26      | 24      | 25   | 26                   | 26   | 32  | 33   | 25   | 30   | 32    |
| 8                       | 26               | 26   | 26      | 24      | 25   | 26                   | 26   | 32  | 32   | 26   | 29   | 32    |
| 9                       | 26               | 26   | 26      | 24      | 26   | 25                   | 26   | 32  | 31   | 26   | 29   | 32    |
| 10                      | 26               | 26   | 25      | 24      | 26   | 26                   | 26   | 32  | 30   | 26   | 29   | 32    |
| 11                      | 26               | 26   | 25      | 24      | 26   | 25                   | 25   | 37  | 19   | 26   | 28   | 32    |
| 12                      | 26               | 26   | 25      | 24      | 26   | 25                   | 25   | 40  | 28   | 26   | 29   | 30    |
| 13                      | 27               | 26   | 25      | 24      | 26   | 24                   | 25   | 44  | 28   | 26   | 30   | 28    |
| 14                      | 25               | 26   | 25      | 24      | 25   | 24                   | 24   | 44  | 29   | 26   | 30   | 29    |
| 15                      | 26               | 26   | 25      | 24      | 26   | 24                   | 24   | 42  | 29   | 26   | 30   | 30    |
| 16                      | 26               | 26   | 25      | 24      | 26   | 24                   | 26   | 37  | 30   | 26   | 30   | 29    |
| 17                      | 27               | 26   | 25      | 24      | 26   | 24                   | 26   | 35  | 31   | 26   | 30   | 30    |
| 18                      | 27               | 26   | 25      | 24      | 26   | 24                   | 26   | 36  | 31   | 26   | 31   | 30    |
| 19                      | 26               | 26   | 24      | 24      | 26   | 24                   | 26   | 34  | 30   | 26   | 30   | 30    |
| 20                      | 26               | 26   | 24      | 25      | 26   | 25                   | 25   | 31  | 29   | 26   | 30   | 32    |
| 21                      | 26               | 26   | 23      | 25      | 27   | 25                   | 25   | 28  | 29   | 26   | 30   | 32    |
| 22                      | 26               | 26   | 25      | 24      | 27   | 25                   | 25   | 28  | 29   | 26   | 30   | 32    |
| 23                      | 26               | 25   | 25      | 23      | 28   | 26                   | 24   | 29  | 29   | 26   | 30   | 32    |
| 24                      | 26               | 26   | 25      | 24      | 28   | 25                   | 24   | 27  | 28   | 26   | 30   | 32    |
| 25                      | 26               | 26   | 24      | 24      | 28   | 25                   | 24   | 26  | 28   | 27   | 31   | 32    |
| 26                      | 26               | 26   | 24      | 24      | 28   | 25                   | 24   | 27  | 28   | 26   | 30   | 32    |
| 27                      | 26               | 26   | 24      | 24      | 28   | 25                   | 25   | 32  | 28   | 29   | 30   | 37    |
| 28                      | 26               | 26   | 25      | 24      | 27   | 25                   | 25   | 35  | 28   | 30   | 28   | 36    |
| 29                      | 26               | 26   | 25      | 25      | 27   | 25                   | 25   | 41  | 26   | 31   | 28   | 36    |
| 30                      | 26               | 26   | 25      | 25      | -    | 25                   | 25   | 38  | 26   | 31   | 28   | 37    |
| 31                      | 26               | 26   | 25      | 25      | -    | 25                   | 25   | 36  | 25   | 32   | 28   | 36    |
|                         |                  |      | 25      | 25      | -    | 25                   | -    | 33  | -    | 32   | 29   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 815              |      | 28      | 26      | 26.3 | 1,620                |      |     |      |      |      |       |
| November.....           | 795              |      | 28      | 26      | 27.2 | 1,580                |      |     |      |      |      |       |
| December.....           | 761              |      | 26      | 24      | 26.2 | 1,550                |      |     |      |      |      |       |
| Calendar year 1940..... | 8,544            |      | 28      | 18      | 27.3 | 16,950               |      |     |      |      |      |       |
| January.....            | 751              |      | 25      | 23      | 24.2 | 1,400                |      |     |      |      |      |       |
| February.....           | 734              |      | 28      | 25      | 24.2 | 1,460                |      |     |      |      |      |       |
| March.....              | 787              |      | 28      | 24      | 24.3 | 1,560                |      |     |      |      |      |       |
| April.....              | 758              |      | 27      | 24      | 24.2 | 1,500                |      |     |      |      |      |       |
| May.....                | 1,040            |      | 44      | 24      | 24.5 | 2,050                |      |     |      |      |      |       |
| June.....               | 888              |      | 33      | 25      | 24.6 | 1,780                |      |     |      |      |      |       |
| July.....               | 873              |      | 32      | 25      | 24.9 | 1,650                |      |     |      |      |      |       |
| August.....             | 914              |      | 31      | 26      | 24.5 | 1,810                |      |     |      |      |      |       |
| September.....          | 979              |      | 30      | 26      | 24.6 | 1,940                |      |     |      |      |      |       |
| Water year 1940-41..... | 10,058           |      | 44      | 23      | 24.6 | 19,960               |      |     |      |      |      |       |

## Sevier River near Kingston, Utah

Location.- Water-stage recorder and concrete control, lat. 38°12', long. 112°12', in NE¼ sec. 16, T. 30 S., R. 3 W., 1,000 feet upstream from bridge on State Highway 22, 1 mile west of Kingston, and 2 miles upstream from East Fork.

Drainage area.- 1,110 square miles.

Records available.- June 1914 to September 1941.

Average discharge.- 27 years, 149 second-feet.

Extremes.- Maximum discharge during year, 1,250 second-feet May 14 (gage height, 3.43 feet); minimum daily, 20 second-feet Sept. 2-4.

1914-41: Maximum discharge, about 3,000 second-feet (including estimated flow of 360 second-feet in overflow channel bypassing station) Mar. 4, 1938 (gage height, 5.20 feet), from rating curve extended above 600 second-feet; minimum daily, 5 second-feet June 16-20, 1931, July 30 to Aug. 15, 1940.

Remarks.- Records excellent except those for periods of low effect or no gage-height record, which are fair. Many diversions above station; none between station and mouth of East Fork.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec. | Jan.    | Feb.    | Mar. | Apr.                 | May   | June | July | Aug. | Sept. |
|-------------------------|------------------|------|------|---------|---------|------|----------------------|-------|------|------|------|-------|
| 1                       | 141              | 118  | 138  | b128    | 132     | 135  | 157                  | 339   | 588  | a130 | 66   | 23    |
| 2                       | 138              | 118  | 135  | b120    | 126     | 131  | 157                  | 385   | 598  | a120 | 59   | 20    |
| 3                       | 129              | 118  | 132  | b118    | 126     | 148  | 154                  | 453   | 598  | 112  | 52   | 20    |
| 4                       | 121              | 115  | 132  | b115    | 123     | 148  | 144                  | 549   | 637  | 101  | 53   | 20    |
| 5                       | 135              | 109  | 135  | b113    | 123     | 141  | 148                  | 582   | 654  | 91   | 57   | 22    |
| 6                       | 129              | 104  | 135  | b115    | 126     | 132  | 154                  | 682   | 637  | 70   | 53   | 40    |
| 7                       | 121              | 121  | 132  | b115    | 135     | 126  | 144                  | 790   | 712  | 70   | 95   | 31    |
| 8                       | 121              | 126  | 129  | b120    | 138     | 123  | 135                  | 844   | 856  | 66   | 280  | 30    |
| 9                       | 118              | 123  | 132  | b127    | 138     | 118  | 129                  | 802   | 772  | 68   | 205  | 22    |
| 10                      | 121              | 123  | 129  | b125    | 144     | 115  | 138                  | 957   | 654  | 72   | 231  | 25    |
| 11                      | 118              | 123  | 129  | b125    | 157     | 115  | 170                  | 1,030 | 588  | 96   | 220  | 25    |
| 12                      | 121              | 126  | 126  | b125    | 201     | 115  | 201                  | 1,110 | 566  | 84   | 184  | 35    |
| 13                      | 123              | 121  | 123  | b125    | 180     | 123  | 184                  | 1,190 | 566  | 61   | 167  | 55    |
| 14                      | 123              | 126  | b115 | b130    | 160     | 135  | 177                  | 1,200 | 560  | 57   | 132  | 91    |
| 15                      | 121              | a130 | b100 | 132     | 157     | 129  | 174                  | 1,120 | 560  | 57   | 138  | 112   |
| 16                      | 123              | a132 | b105 | 129     | 174     | 123  | 180                  | 1,010 | 538  | 57   | 129  | 118   |
| 17                      | 123              | a130 | b110 | 121     | 167     | 123  | 180                  | 928   | 488  | 52   | 129  | 104   |
| 18                      | 126              | a125 | 121  | 118     | 163     | 129  | 157                  | 882   | 438  | 50   | 126  | 121   |
| 19                      | 126              | a125 | b130 | 115     | 160     | 126  | 144                  | 870   | 424  | 93   | 107  | 121   |
| 20                      | 123              | a125 | b125 | 123     | 154     | 141  | 138                  | 784   | 399  | 180  | 98   | 104   |
| 21                      | 118              | a123 | 118  | 123     | 157     | 132  | 135                  | 700   | 385  | 121  | 74   | 98    |
| 22                      | 116              | a122 | b117 | 126     | 187     | 121  | 138                  | 682   | 337  | 94   | 61   | 123   |
| 23                      | 112              | a122 | b118 | 121     | 151     | 129  | 135                  | 682   | a330 | 72   | 52   | 138   |
| 24                      | 107              | a122 | b125 | 123     | 148     | 129  | 123                  | 642   | a300 | 371  | 50   | 129   |
| 25                      | 107              | a123 | b127 | 121     | 144     | 129  | 135                  | 682   | a270 | 371  | 41   | 121   |
| 26                      | 146              | a123 | b127 | 123     | 138     | 121  | 151                  | 700   | a230 | 243  | 34   | 129   |
| 27                      | 216              | 123  | b120 | 126     | 135     | 104  | 163                  | 706   | a210 | 198  | 25   | 129   |
| 28                      | 144              | 123  | b125 | 123     | 132     | 109  | 209                  | 718   | a190 | 154  | 30   | 129   |
| 29                      | 126              | 135  | b130 | 129     | -       | 118  | 231                  | 670   | a170 | 121  | 25   | 126   |
| 30                      | 126              | 135  | b130 | 132     | -       | 129  | 254                  | 620   | a150 | 94   | 23   | 126   |
| 31                      | 121              | -    | b133 | 135     | -       | 138  | -                    | 582   | -    | 75   | 27   | -     |
| Month                   | Second-foot-days |      |      | Maximum | Minimum | Mean | Run-off in acre-feet |       |      |      |      |       |
| October.....            | 3,941            |      |      | 216     | 107     | 127  | 7,820                |       |      |      |      |       |
| November.....           | 3,692            |      |      | 132     | 104     | 123  | 7,820                |       |      |      |      |       |
| December.....           | 3,883            |      |      | 159     | 100     | 125  | 7,700                |       |      |      |      |       |
| Calendar year 1940..... | 32,715           |      |      | 670     | 5       | 89.4 | 64,880               |       |      |      |      |       |
| January.....            | 3,821            |      |      | 135     | 112     | 123  | 7,580                |       |      |      |      |       |
| February.....           | 4,146            |      |      | 201     | 123     | 148  | 8,220                |       |      |      |      |       |
| March.....              | 3,943            |      |      | 151     | 104     | 127  | 7,800                |       |      |      |      |       |
| April.....              | 4,830            |      |      | 254     | 123     | 161  | 9,600                |       |      |      |      |       |
| May.....                | 24,017           |      |      | 1,200   | 339     | 775  | 47,640               |       |      |      |      |       |
| June.....               | 14,420           |      |      | 855     | 180     | 451  | 28,610               |       |      |      |      |       |
| July.....               | 3,542            |      |      | 371     | 50      | 116  | 7,120                |       |      |      |      |       |
| August.....             | 3,023            |      |      | 290     | 23      | 97.5 | 5,000                |       |      |      |      |       |
| September.....          | 2,397            |      |      | 129     | 50      | 79.6 | 4,730                |       |      |      |      |       |
| Water year 1940-41..... | 76,710           |      |      | 1,200   | 20      | 207  | 150,200              |       |      |      |      |       |

a No gage-height record; discharge computed on basis of records for station at Hatch.  
b Stage-discharge relation affected by ice.

## SEVIER LAKE BASIN

## Plute Reservoir near Marysville, Utah

Location.- Staff gage, lat. 38°20', long. 112°12', in W½ sec. 3, T. 29 S., R. 3 W., at Plute Dam, 9 miles south of Marysville. Datum of gage is 5,900.8 feet above mean sea level.

Drainage area.- 2,440 square miles.

Records available.- March 1914 to September 1941.

Extremes.- Maximum contents during year, 74,010 acre-feet June 7 (gage height, 76.0 feet); minimum, 11,370 acre-feet Oct. 25-26 (gage height, 38.9 feet).  
1914-41: Maximum contents, 28,300 acre-feet May 28, 1922 (gage height, 76.4 feet, original capacity table); no storage at times during several years.

Remarks.- Reservoir is formed by earth-fill dam; storage began in summer of 1910. Capacity, 84,750 acre-feet between gage heights 16 feet (approximate bottom of reservoir) and 80 feet (top of flashboards in spillway). Spillway crest is at gage height 70.2 feet. No dead storage. Water is used for irrigation. Gage read about 4 p.m. daily; contents are as of that time.

Contents, in acre-feet, water year October 1940 to September 1941

| Day | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 11,990 | 11,990 | 17,920 | 26,570 | 34,640 | 43,580 | 50,200 | 56,730 | 72,500 | 69,540 | 51,940 | 39,560 |
| 2   | 12,090 | 12,300 | 15,160 | 26,720 | 34,800 | 44,060 | 50,580 | 56,930 | 72,760 | 68,510 | 51,350 | 38,330 |
| 3   | 12,200 | 12,400 | 18,410 | 26,860 | 34,950 | 44,240 | 50,970 | 57,140 | 73,010 | 68,090 | 50,780 | 37,300 |
| 4   | 12,300 | 12,510 | 18,660 | 27,000 | 35,290 | 44,420 | 51,160 | 57,550 | 73,260 | 67,130 | 50,200 | 36,290 |
| 5   | 12,410 | 12,620 | 18,910 | 27,150 | 35,620 | 44,610 | 51,350 | 57,960 | 73,510 | 66,190 | 49,610 | 35,450 |
| 6   | 12,410 | 12,830 | 19,280 | 27,300 | 35,950 | 44,790 | 51,740 | 58,600 | 73,760 | 65,030 | 49,430 | 34,640 |
| 7   | 12,410 | 13,040 | 19,540 | 27,580 | 36,290 | 44,980 | 51,940 | 59,450 | 74,010 | 63,890 | 49,620 | 33,830 |
| 8   | 12,300 | 13,260 | 19,800 | 27,880 | 36,630 | 45,160 | 52,330 | 60,320 | 73,760 | 62,760 | 49,810 | 33,040 |
| 9   | 12,300 | 13,570 | 20,060 | 28,170 | 36,980 | 45,340 | 52,530 | 61,420 | 73,510 | 61,660 | 50,200 | 32,250 |
| 10  | 12,300 | 13,890 | 20,320 | 28,460 | 37,470 | 45,530 | 52,720 | 63,210 | 73,260 | 60,890 | 50,580 | 31,480 |
| 11  | 12,200 | 13,910 | 20,580 | 28,760 | 37,820 | 45,710 | 53,120 | 65,960 | 73,010 | 60,100 | 51,160 | 32,100 |
| 12  | 12,200 | 14,120 | 20,840 | 28,910 | 38,160 | 45,900 | 53,510 | 68,570 | 73,140 | 59,240 | 53,320 | 30,260 |
| 13  | 12,090 | 14,340 | 20,960 | 29,200 | 38,510 | 46,080 | 53,910 | 71,260 | 73,260 | 58,600 | 52,330 | 29,650 |
| 14  | 12,090 | 14,560 | 21,120 | 29,500 | 38,850 | 46,260 | 54,310 | 72,760 | 73,380 | 58,170 | 52,920 | 29,200 |
| 15  | 12,090 | 14,780 | 21,380 | 29,800 | 39,200 | 46,450 | 54,710 | 72,350 | 73,510 | 57,550 | 53,120 | 28,780 |
| 16  | 11,990 | 15,120 | 21,660 | 30,110 | 39,560 | 46,640 | 55,110 | 72,630 | 73,380 | 56,730 | 53,320 | 28,320 |
| 17  | 11,990 | 15,120 | 21,920 | 30,410 | 39,740 | 46,820 | 55,310 | 72,500 | 73,510 | 56,910 | 53,510 | 27,880 |
| 18  | 11,890 | 15,230 | 22,200 | 30,710 | 39,910 | 47,000 | 55,510 | 72,250 | 73,260 | 56,110 | 53,710 | 27,440 |
| 19  | 11,780 | 15,340 | 22,470 | 31,020 | 40,270 | 47,190 | 55,710 | 72,500 | 73,140 | 54,510 | 53,510 | 27,000 |
| 20  | 11,780 | 15,450 | 22,750 | 31,330 | 40,620 | 47,380 | 55,710 | 73,010 | 73,510 | 54,610 | 53,120 | 26,720 |
| 21  | 11,680 | 15,450 | 23,030 | 31,630 | 40,980 | 47,930 | 55,910 | 72,380 | 73,510 | 53,910 | 52,920 | 26,720 |
| 22  | 11,570 | 15,570 | 23,440 | 31,940 | 41,340 | 48,310 | 56,910 | 72,500 | 73,510 | 53,710 | 51,740 | 26,570 |
| 23  | 11,570 | 15,680 | 23,720 | 32,250 | 41,680 | 48,490 | 56,910 | 72,760 | 73,380 | 53,510 | 50,970 | 26,570 |
| 24  | 11,470 | 15,790 | 24,000 | 32,570 | 42,240 | 48,680 | 56,120 | 73,260 | 73,260 | 53,710 | 49,810 | 26,720 |
| 25  | 11,370 | 16,020 | 24,290 | 32,880 | 42,600 | 48,870 | 56,120 | 73,260 | 73,260 | 53,710 | 48,680 | 26,860 |
| 26  | 11,370 | 16,250 | 24,570 | 33,200 | 43,150 | 49,060 | 56,120 | 73,010 | 73,260 | 53,910 | 47,560 | 27,000 |
| 27  | 11,470 | 16,490 | 24,850 | 33,510 | 43,510 | 49,250 | 56,320 | 72,760 | 72,760 | 53,710 | 46,450 | 27,150 |
| 28  | 11,470 | 16,830 | 25,280 | 33,830 | 43,690 | 49,430 | 56,320 | 72,760 | 72,000 | 53,510 | 45,160 | 27,300 |
| 29  | 11,570 | 17,190 | 25,710 | 34,150 | -      | 49,620 | 56,530 | 72,760 | 71,260 | 53,120 | 43,890 | 27,440 |
| 30  | 11,570 | 17,560 | 25,990 | 34,320 | -      | 49,810 | 56,730 | 72,760 | 70,520 | 52,720 | 42,420 | 27,580 |
| 31  | 11,780 | -      | 26,280 | 34,480 | -      | 50,000 | -      | 72,500 | -      | 52,330 | 40,980 | -      |

Monthly gage height and contents, water year October 1940 to September 1941

| Date                    | Gage height (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|--------------------|----------------------|---|
| Sept. 30.....           | 39.3               | 11,780               | -   |
| Oct. 31.....            | 39.3               | 11,780               | 0   |
| Nov. 30.....            | 44.5               | 17,560               | +5,780                                      |
| Dec. 31.....            | 51.0               | 26,280               | +8,720                                      |
| Calendar year 1940..... | -                  | -                    | -720  |
| Jan. 31.....            | 56.4               | 34,480               | +8,200                                      |
| Feb. 29.....            | 61.7               | 43,690               | +9,210                                      |
| Mar. 31.....            | 65.1               | 50,000               | +6,310                                      |
| Apr. 30.....            | 68.4               | 56,730               | +6,730                                      |
| May 31.....             | 75.4               | 72,500               | +15,770                                     |
| June 30.....            | 74.6               | 70,520               | -1,980                                      |
| July 31.....            | 66.3               | 52,330               | -18,190                                     |
| Aug. 31.....            | 60.2               | 40,980               | -11,350                                     |
| Sept. 30.....           | 51.9               | 27,580               | -13,400                                     |
| Water year 1940-41..... | -                  | -                    | +15,800                                     |



Sevier River below Piute Dam, near Marysvale, Utah

Location.- Water-stage recorder, lat. 38°20', long. 112°11', in NE¼ sec. 34, T. 28 S., R. 3 W., three-quarters of a mile downstream from Piute Dam and 8 miles south of Marysvale.

Drainage area.- 2,440 square miles.

Records available.- May 1911 to September 1941.

Average discharge.- 29 years (1912-41), 251 second-feet.

Extremes (regulated).- Maximum discharge observed during year, 2,380 second-feet May 14 (gauge height, 6.38 feet); minimum daily discharge, 4 second-feet Feb. 9-25.

1911-41: Maximum discharge, 2,600 second-feet May 23, 24, 1922; practically no flow at times when reservoir gates are closed.

Remarks.- Records good. One small diversion between gage and Piute Reservoir. Flow regulated by reservoir (see preceding page).

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov.  | Dec.    | Jan.    | Feb.    | Mar.                 | Apr. | May   | June | July | Aug. | Sept. |
|-------------------------|------------------|-------|---------|---------|---------|----------------------|------|-------|------|------|------|-------|
| 1                       | 108              | 104   | 8       | 7       | 5       | 5                    | 5    | 288   | 650  | 564  | 460  | g747  |
| 2                       | 114              | 104   | 8       | 7       | 5       | 5                    | 5    | 239   | 598  | 557  | 472  | g679  |
| 3                       | 120              | 104   | 8       | 8       | 5       | 5                    | 5    | 234   | 577  | 504  | 479  | 594   |
| 4                       | 112              | 104   | 8       | 9       | 5       | 5                    | 5    | 270   | 551  | 645  | 465  | 537   |
| 5                       | 130              | 100   | 8       | 10      | 5       | 5                    | 6    | 292   | 640  | 658  | 399  | 531   |
| 6                       | 139              | 84    | 8       | 10      | 5       | 5                    | 6    | 373   | 622  | 661  | 332  | 521   |
| 7                       | 158              | 84    | 8       | 10      | 5       | 5                    | 6    | 407   | 664  | 665  | 270  | 472   |
| 8                       | 169              | 83    | 7       | 10      | 5       | 5                    | 7    | 659   | 950  | 717  | 199  | 537   |
| 9                       | 183              | 83    | 7       | 10      | 4       | 5                    | 7    | 792   | 928  | 661  | 104  | 468   |
| 10                      | 185              | 81    | 7       | 10      | 4       | 5                    | 7    | 878   | 806  | 581  | h99  | 460   |
| 11                      | 202              | 79    | 8       | 8       | 4       | 5                    | 7    | 962   | 717  | 664  | h61  | 454   |
| 12                      | 200              | 76    | 9       | 7       | 4       | 5                    | 7    | 985   | 521  | 637  | h61  | 390   |
| 13                      | 192              | 74    | 8       | 7       | 4       | 5                    | 7    | 1,240 | 482  | 444  | h61  | 399   |
| 14                      | 178              | 72    | 8       | 7       | 4       | 5                    | 7    | 1,950 | 485  | 429  | 110  | 432   |
| 15                      | 181              | 72    | 8       | 7       | 4       | 5                    | 7    | 2,120 | 577  | 444  | 211  | 429   |
| 16                      | 181              | 72    | 7       | 7       | 4       | 5                    | 7    | 1,710 | 608  | 495  | 151  | 429   |
| 17                      | 195              | 74    | 7       | 6       | 4       | 5                    | 7    | 1,640 | 598  | 564  | 147  | 432   |
| 18                      | 202              | 74    | 7       | 7       | 4       | 5                    | 9    | 1,470 | 518  | 560  | 185  | 435   |
| 19                      | 202              | 49    | 7       | 7       | 4       | 5                    | 42   | 1,220 | 244  | 550  | g289 | 372   |
| 20                      | 202              | 37    | 7       | 6       | 4       | 5                    | 61   | 1,530 | 283  | 426  | g569 | 299   |
| 21                      | 202              | 40    | 7       | 6       | 4       | 5                    | 104  | 1,300 | 457  | 426  | g390 | 259   |
| 22                      | 195              | 40    | 7       | 6       | 4       | 5                    | 108  | 880   | 420  | 375  | g527 | 259   |
| 23                      | 165              | 40    | 7       | 6       | 4       | 5                    | 104  | 861   | 372  | 355  | g584 | 246   |
| 24                      | 163              | 37    | 7       | 6       | 4       | 5                    | 83   | 1,120 | 308  | 324  | g679 | 218   |
| 25                      | 163              | 20    | 7       | 6       | 4       | 5                    | 84   | 1,160 | 241  | 327  | g720 | 211   |
| 26                      | 139              | 19    | 7       | 6       | 5       | 5                    | 114  | 1,160 | 286  | 369  | g720 | 149   |
| 27                      | 110              | 15    | 7       | 6       | 5       | 5                    | 178  | 1,060 | 479  | 378  | g720 | 118   |
| 28                      | 104              | 9     | 7       | 6       | 5       | 5                    | 202  | 1,050 | 498  | 444  | g724 | 99    |
| 29                      | 106              | 9     | 7       | 6       | -       | 5                    | 216  | 1,040 | 567  | 463  | g778 | 80    |
| 30                      | 106              | 8     | 7       | 6       | -       | 5                    | 222  | 1,040 | 567  | 460  | g766 | 83    |
| 31                      | 106              | -     | 7       | 6       | -       | 5                    | -    | 932   | -    | 460  | g759 | -     |
| Month                   | Second-foot-days |       | Maximum | Minimum | Mean    | Run-off in acre-feet |      |       |      |      |      |       |
| October.....            | 4,912            | 202   | 106     | 158     | 9,740   |                      |      |       |      |      |      |       |
| November.....           | 1,847            | 104   | 8       | 61.6    | 3,660   |                      |      |       |      |      |      |       |
| December.....           | 230              | 8     | 7       | 7.4     | 456     |                      |      |       |      |      |      |       |
| Calendar year 1940..... | 57,642           | 684   | 2       | 157     | 114,300 |                      |      |       |      |      |      |       |
| January.....            | 226              | 10    | 6       | 7.3     | 448     |                      |      |       |      |      |      |       |
| February.....           | 123              | 5     | 4       | 4.4     | 244     |                      |      |       |      |      |      |       |
| March.....              | 155              | 5     | 5       | 5.0     | 307     |                      |      |       |      |      |      |       |
| April.....              | 1,636            | 222   | 5       | 54.5    | 3,240   |                      |      |       |      |      |      |       |
| May.....                | 30,635           | 2,120 | 234     | 988     | 60,780  |                      |      |       |      |      |      |       |
| June.....               | 16,444           | 950   | 241     | 548     | 32,620  |                      |      |       |      |      |      |       |
| July.....               | 16,651           | 717   | 324     | 505     | 31,040  |                      |      |       |      |      |      |       |
| August.....             | 12,259           | 778   | 61      | 395     | 24,320  |                      |      |       |      |      |      |       |
| September.....          | 11,358           | 747   | 80      | 379     | 22,530  |                      |      |       |      |      |      |       |
| Water year 1940-41..... | 95,477           | 2,120 | 4       | 262     | 189,400 |                      |      |       |      |      |      |       |

g Computed from graph based on gage readings and recorded time of gate changes.  
 h Computed from daily gage reading.

Sevier River above Clear Creek, near Sevier, Utah

Location.- Water-stage recorder, lat. 38°34'20", long. 112°15'25" (revised), in ~~Wine~~ sec. 5, T. 26 S., R. 4 W., 0.6 mile upstream from bridge on U. S. highway 89, 0.7 mile upstream from Clear Creek, and 1 mile south of Sevier.

Drainage area.- 2,700 square miles.

Records available.- April 1939 to September 1941. May 1911 to September 1929 at site 0.8 mile downstream, published as Sevier River at Sevier; those for Nov. 16, 1916, to September 1929 include flow of Clear Creek and are not equivalent.

Extremes (regulated).- Maximum discharge during year, 2,270 second-feet May 16 (gage height, 4.83 feet); minimum daily, 18 second-feet Dec. 15.  
1911-29, 1939-41: Maximum discharge, 2,900 second-feet during last week in May 1922 (computed on basis of records for station near Marysville); minimum, 10 second-feet Nov. 27, 1919 (including flow of Clear Creek).

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 affected by storage in Piate and Otter Creek Reservoirs.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet) (Shifting-control method used May 14-15)

| Oct. 1 to May 15 |    |     |     |     | May 16 to Sept. 30 |     |     |     |     |     |       |
|------------------|----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-------|
| 0.6              | 7  | 1.6 | 124 | 3.0 | 670                | 1.0 | 46  | 2.0 | 261 | 3.6 | 1,110 |
| .8               | 20 | 1.8 | 172 | 3.3 | 855                | 1.2 | 69  | 2.3 | 378 | 4.0 | 1,440 |
| 1.0              | 37 | 2.0 | 230 | 3.6 | 1,060              | 1.4 | 99  | 2.6 | 513 | 4.4 | 1,620 |
| 1.2              | 58 | 2.3 | 336 | 4.0 | 1,390              | 1.6 | 140 | 3.0 | 724 | 4.9 | 2,350 |
| 1.4              | 86 | 2.6 | 464 | 4.4 | 1,770              | 1.8 | 195 | 3.3 | 905 |     |       |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May   | June  | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|-------|------|------|-------|
| 1   | 120  | 129  | 31   | b04  | 26   | 24   | 25   | a250  | 964   | 652  | 471  | 759   |
| 2   | 120  | 129  | 31   | b23  | b25  | 26   | 24   | a250  | 798   | 646  | 480  | 747   |
| 3   | 122  | 129  | 30   | b22  | b24  | 26   | 22   | a250  | 765   | 604  | 490  | 657   |
| 4   | 124  | 129  | 29   | b22  | b24  | 25   | 22   | a250  | 747   | 630  | 490  | 588   |
| 5   | 124  | 126  | 29   | b23  | b25  | 25   | 22   | a280  | 730   | 707  | 448  | 557   |
| 6   | 142  | 118  | 29   | b25  | 26   | 24   | 22   | 344   | 782   | 718  | 395  | 552   |
| 7   | 150  | 110  | 28   | b27  | 26   | 24   | 22   | 406   | 818   | 713  | 325  | 504   |
| 8   | 170  | 108  | 27   | b27  | 26   | 24   | 22   | 498   | 1,080 | 736  | 291  | 523   |
| 9   | 183  | 108  | 26   | b27  | 26   | 23   | 21   | 682   | 1,130 | 765  | 214  | 538   |
| 10  | 194  | 104  | 26   | b27  | 26   | 22   | 22   | 796   | 1,050 | 685  | 175  | 485   |
| 11  | 203  | 102  | b25  | 26   | 26   | 23   | 25   | 881   | 918   | 646  | 178  | 475   |
| 12  | 209  | 100  | 19   | 26   | 29   | 23   | 30   | 969   | 806   | 614  | 131  | 430   |
| 13  | 212  | 96   | b20  | 26   | 27   | 26   | 27   | 1,070 | 657   | 547  | 107  | 404   |
| 14  | 200  | 93   | b20  | 26   | 26   | 28   | 25   | 1,200 | 652   | 494  | 103  | 430   |
| 15  | 194  | 93   | b18  | 26   | 26   | 26   | 24   | 1,720 | 702   | 475  | 131  | 444   |
| 18  | 194  | 91   | b20  | 26   | 26   | 26   | 25   | 2,150 | 806   | 499  | 221  | 444   |
| 17  | 194  | 95   | b22  | 26   | 26   | 25   | 24   | 1,810 | 821   | 578  | 192  | 444   |
| 18  | 212  | 99   | b20  | b24  | 25   | 25   | 23   | 1,660 | 861   | 598  | 183  | 448   |
| 19  | 215  | 95   | b20  | b25  | 24   | 25   | 24   | 1,580 | 668   | 614  | 264  | 426   |
| 20  | 215  | 76   | b20  | 26   | 24   | 25   | 47   | 1,320 | 485   | 572  | 313  | 325   |
| 21  | 215  | 65   | b21  | 26   | 25   | 26   | 74   | 1,470 | 646   | 475  | 387  | 280   |
| 22  | 215  | 61   | b23  | b25  | 25   | 24   | 104  | 1,310 | 611   | 434  | 452  | 227   |
| 23  | 194  | 55   | b23  | b24  | 24   | 24   | 116  | 984   | 630   | 408  | 547  | 283   |
| 24  | 183  | 57   | b23  | b25  | 25   | 26   | 110  | 1,030 | 578   | 370  | 625  | 251   |
| 25  | 180  | 66   | b24  | b25  | 25   | 24   | 93   | 1,220 | 499   | 366  | 685  | 244   |
| 28  | 192  | 45   | b22  | 26   | 25   | a23  | 104  | 1,290 | 400   | 387  | 713  | 211   |
| 27  | 162  | 41   | b25  | 26   | 24   | a23  | 133  | 1,290 | 523   | 400  | 702  | 172   |
| 28  | 133  | 39   | b25  | 26   | 24   | a23  | 199  | 1,210 | 578   | 426  | 696  | 156   |
| 29  | 131  | 33   | b25  | 26   | -    | a24  | 212  | 1,170 | 636   | 466  | 724  | 138   |
| 30  | 131  | 32   | b25  | 26   | -    | a24  | 227  | 1,160 | 657   | 480  | 759  | 131   |
| 31  | 129  | -    | b25  | 26   | -    | a25  | -    | 1,130 | -     | 475  | 759  | -     |

| Month              | Second-foot-days | Maximum | Minimum | Mean  | Run-off in acre-feet |
|--------------------|------------------|---------|---------|-------|----------------------|
| October            | 5,352            | 215     | 120     | 173   | 10,620               |
| November           | 2,624            | 129     | 32      | 87.5  | 5,200                |
| December           | 761              | 31      | 18      | 24.2  | 1,490                |
| Calendar year 1940 | 69,391           | 720     | 18      | 190   | 137,600              |
| January            | 785              | 27      | 22      | 25.3  | 1,560                |
| February           | 712              | 29      | 24      | 25.4  | 1,410                |
| March              | 761              | 28      | 22      | 24.5  | 1,610                |
| April              | 1,860            | 227     | 21      | 62.0  | 3,690                |
| May                | 31,630           | 2,120   | 250     | 1,020 | 62,740               |
| June               | 22,018           | 1,180   | 400     | 734   | 43,670               |
| July               | 17,180           | 765     | 366     | 554   | 34,080               |
| August             | 12,646           | 759     | 103     | 408   | 26,080               |
| September          | 12,333           | 769     | 131     | 411   | 24,460               |
| Water year 1940-41 | 108,652          | 2,120   | 18      | 298   | 215,500              |

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

b Stage-discharge relation affected by ice.

## Sevier River near Sigurd, Utah

Location.- Water-stage recorder, lat. 38°52', long. 111°57', in SW $\frac{1}{4}$  sec. 19, T. 22 S., R. 1 W., 200 feet downstream from bridge, half a mile downstream from Rockyford Dam, 2 miles northeast of Sigurd, and 5 miles upstream from Lost Creek.

Drainage area.- 3,340 square miles.

Records available.- July to September 1912, July 1914 to September 1941.

Average discharge.- 27 years (1914-41), 114 second-feet.

Extremes (regulated).- Maximum discharge during year, 1,020 second-feet May 30 (gage height, 4.15 feet); minimum daily, 1 second-foot Mar. 24-26, 29-30, May 8, when reservoir gates were closed.

1914-41: Maximum discharge, 2,400 second-feet May 30, 1922 (gage height, 8.1 feet, datum then in use) from rating curve extended above 600 second-feet on basis of maximum discharge for other Sevier River stations; practically no flow (seepage only) when Rockyford Reservoir gates are closed.

Remarks.- Records good except those for periods of no gage-height record and those below 5 second-feet, which are fair. Entire flow usually diverted during low-water season; flow past station at such times represents seepage and return flow from canals. Flow also regulated by dams and reservoirs above station.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

| (Shifting-control method used Oct. 1-7 and June 13 to Sept. 30) |   |     |    |     |    |                   |
|---|---|-----|----|-----|----|-------------------|
| 0.6   | 0 | 1.0 | 10 | 1.4 | 40 | 2.0 138 600       |
| .7  | 1 | 1.1 | 15 | 1.5 | 51 | 2.3 214 3.8 S10   |
| .8  | 3 | 1.2 | 23 | 1.6 | 64 | 2.6 303 4.2 1,050 |
| .9  | 5 | 1.3 | 31 | 1.8 | 95 | 3.0 435           |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May   | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|------|------|------|-------|
| 1   | 2    | 73   | 91   | a80  | a90  | 70   | 52   | 4     | 782  | 2    | 27   | 32    |
| 2   | 5    | 72   | 91   | a80  | a90  | 73   | 78   | 2     | 550  | 2    | 17   | 33    |
| 3   | 8    | 72   | 91   | a80  | a85  | 76   | 87   | 2     | 497  | 2    | 16   | 36    |
| 4   | 8    | 72   | a91  | a80  | a80  | 73   | 61   | 2     | 338  | 16   | 19   | 43    |
| 5   | 8    | 73   | a91  | a85  | a80  | 73   | 38   | 2     | 269  | 25   | 18   | 48    |
| 6   | 8    | 72   | a91  | a85  | a85  | 72   | 13   | 2     | 254  | 27   | 24   | 48    |
| 7   | 8    | 72   | a91  | a85  | a95  | 70   | 11   | 2     | 269  | 25   | 44   | 49    |
| 8   | a8   | 72   | a91  | a95  | a90  | 72   | 21   | 1     | 338  | 27   | 72   | 45    |
| 9   | a8   | 70   | 91   | a85  | 85   | 72   | 25   | 3     | 424  | 27   | 78   | 32    |
| 10  | a30  | 70   | 91   | a85  | 88   | 72   | 21   | 7     | 578  | 30   | 85   | 22    |
| 11  | 47   | 70   | 91   | a85  | 89   | 72   | 20   | 70    | 888  | 33   | 112  | 23    |
| 12  | 47   | 68   | 88   | a85  | 88   | 72   | 22   | 131   | 972  | 36   | 120  | 29    |
| 13  | 47   | 67   | 79   | 84   | a90  | 78   | a25  | 225   | 876  | 38   | 167  | 29    |
| 14  | 47   | 67   | 67   | 86   | a95  | 89   | a25  | 368   | 716  | 39   | 162  | 27    |
| 15  | 62   | 66   | a65  | 86   | a100 | 93   | a25  | 390   | 555  | 40   | 148  | 26    |
| 16  | 110  | 67   | a65  | 86   | 104  | 88   | a30  | 409   | 468  | 39   | 140  | 27    |
| 17  | 106  | 68   | a65  | a100 | 100  | 84   | a20  | 433   | 456  | 40   | 134  | 29    |
| 18  | 102  | 73   | a65  | a125 | 98   | 82   | a15  | 591   | 445  | 40   | 125  | 28    |
| 19  | 100  | 84   | a65  | a90  | 98   | 70   | a10  | 690   | 445  | 17   | 125  | 28    |
| 20  | 98   | 86   | a70  | a90  | 93   | 64   | a10  | 766   | 399  | 20   | 76   | 29    |
| 21  | 100  | 86   | a70  | a95  | a90  | 76   | a10  | 822   | 195  | 26   | 34   | 34    |
| 22  | 100  | 82   | a70  | a95  | 86   | 74   | a10  | 788   | 56   | 36   | 8    | 36    |
| 23  | 102  | 79   | a70  | a100 | 78   | 33   | a10  | 755   | 21   | 37   | 2    | 37    |
| 24  | 102  | 76   | a80  | a120 | 76   | 1    | a10  | 760   | 17   | 37   | 2    | 38    |
| 25  | 102  | 73   | a85  | a110 | 73   | 1    | 11   | 655   | 18   | 37   | 3    | 42    |
| 26  | 100  | 74   | a90  | a100 | 74   | 1    | 15   | 630   | 7    | 15   | 2    | 59    |
| 27  | 100  | 76   | a95  | a95  | 72   | 2    | 11   | 685   | 2    | 9    | 2    | 109   |
| 28  | 100  | 91   | a105 | a90  | 73   | 2    | 8    | 789   | 3    | 8    | 2    | 118   |
| 29  | a100 | 91   | a105 | a95  | -    | 1    | 4    | 984   | 2    | 18   | 13   | 125   |
| 30  | 93   | -    | a105 | a95  | -    | 1    | 4    | 1,010 | 2    | 14   | 4    | 129   |
| 31  | 82   | -    | a95  | a95  | -    | 3    | -    | 840   | -    | 20   | 30   | -     |

| Month              | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|--------------------|------------------|---------|---------|------|----------------------|
| October            | 1,940            | 110     | 2       | 62.6 | 3,650                |
| November           | 2,253            | 91      | 66      | 75.1 | 4,470                |
| December           | 2,600            | 105     | 65      | 83.9 | 5,160                |
| Calendar year 1940 | 16,514           | 216     | 1       | 45.1 | 32,770               |
| January            | 2,837            | 125     | 80      | 91.5 | 5,630                |
| February           | 2,446            | 104     | 72      | 87.4 | 4,860                |
| March              | 1,710            | 93      | 1       | 56.2 | 3,390                |
| April              | 852              | 78      | 4       | 22.7 | 1,350                |
| May                | 12,903           | 1,010   | 1       | 41.6 | 25,590               |
| June               | 10,932           | 972     | 2       | 364  | 21,680               |
| July               | 782              | 40      | 2       | 26.2 | 1,550                |
| August             | 1,854            | 167     | 2       | 59.8 | 3,680                |
| September          | 1,393            | 129     | 22      | 46.4 | 2,760                |
| Water year 1940-41 | 42,322           | 1,010   | 1       | 116  | 83,960               |

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

## Sevier River below San Pitch River, near Gunnison, Utah

Location.- Water-stage recorder, lat. 39°09', long. 111°52', in NE¼ sec. 14, T. 19 S., R. 1 W., 1,000 feet downstream from San Pitch River and 3 miles west of Gunnison.

Drainage area.- 4,880 square miles.

Records available.- October 1917 to September 1941.

Average discharge.- 24 years, 220 second-feet.

Extremes (regulated).- Maximum discharge during year, 1,480 second-feet May 24 (gage height, 4.81 feet); minimum, 83 second-feet Aug. 1.

1917-41: Maximum discharge, 2,620 second-feet June 1, 1922 (gage height, 5.68 feet, present datum); minimum daily, 8 second-feet July 13-17, Sept. 6, 1934.

Remarks.- Records good. Flow regulated by reservoirs above station; many diversions above station for irrigation, most of flow being diverted during irrigation season.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec. | Jan.    | Feb.    | Mar. | Apr.                 | May   | June  | July | Aug. | Sept. |
|-------------------------|------------------|------|------|---------|---------|------|----------------------|-------|-------|------|------|-------|
| 1                       | 106              | 169  | 201  | 212     | 217     | 182  | 89                   | 134   | 1,140 | 134  | 83   | 104   |
| 2                       | 113              | 159  | 201  | 196     | 212     | 195  | 125                  | 129   | 1,110 | 134  | 89   | 104   |
| 3                       | 106              | 154  | 201  | 195     | 212     | 195  | 156                  | 127   | 994   | 122  | 93   | 104   |
| 4                       | 113              | 154  | 204  | 193     | 206     | 193  | 149                  | 149   | 914   | 113  | 93   | 115   |
| 5                       | 120              | 149  | 204  | 193     | 201     | 187  | 132                  | 142   | 754   | 97   | 97   | 127   |
| 6                       | 120              | 149  | 201  | 201     | 201     | 187  | 117                  | 108   | 622   | 95   | 100  | 132   |
| 7                       | 113              | 146  | 201  | 204     | 206     | 177  | 97                   | 125   | 646   | 113  | 115  | 127   |
| 8                       | 113              | 152  | 201  | 204     | 214     | 174  | 91                   | 159   | 763   | 115  | 144  | 127   |
| 9                       | 120              | 152  | 204  | 204     | 212     | 167  | 93                   | 167   | 800   | 91   | 172  | 129   |
| 10                      | 122              | 155  | 204  | 204     | 209     | 167  | 97                   | 193   | 914   | 93   | 162  | 134   |
| 11                      | 137              | 162  | 201  | 204     | 212     | 162  | 93                   | 212   | 963   | 91   | 196  | 122   |
| 12                      | 154              | 167  | 195  | 204     | 222     | 156  | 95                   | 310   | 1,060 | 100  | 220  | 117   |
| 13                      | 156              | 156  | 187  | 206     | 220     | 159  | 111                  | 395   | 1,200 | 100  | 220  | 125   |
| 14                      | 162              | 152  | 174  | 206     | 212     | 180  | 125                  | 414   | 1,220 | 95   | 247  | 127   |
| 15                      | 164              | 149  | 169  | 206     | 217     | 190  | 125                  | 478   | 1,120 | 108  | 249  | 129   |
| 16                      | 180              | 152  | 169  | 206     | 222     | 174  | 127                  | 518   | 978   | 106  | 241  | 132   |
| 17                      | 214              | 156  | 169  | 201     | 222     | 169  | 134                  | 527   | 815   | 109  | 241  | 134   |
| 18                      | 209              | 169  | 177  | 222     | 222     | 159  | 129                  | 535   | 768   | 108  | 230  | 134   |
| 19                      | 201              | 193  | 180  | 244     | 222     | 156  | 117                  | 607   | 725   | 100  | 217  | 132   |
| 20                      | 195              | 198  | 177  | 209     | 217     | 146  | 111                  | 729   | 677   | 117  | 204  | 137   |
| 21                      | 193              | 195  | 172  | 212     | 212     | 149  | 117                  | 800   | 643   | 93   | 164  | 142   |
| 22                      | 193              | 190  | 174  | 214     | 212     | 156  | 113                  | 963   | 478   | 91   | 129  | 154   |
| 23                      | 193              | 177  | 185  | 217     | 209     | 154  | 95                   | 1,190 | 315   | 87   | 108  | 162   |
| 24                      | 190              | 172  | 190  | 220     | 198     | 142  | 104                  | 1,430 | 239   | 91   | 95   | 169   |
| 25                      | 182              | 174  | 198  | 239     | 201     | 108  | 104                  | 1,300 | 198   | 100  | 85   | 169   |
| 26                      | 185              | 198  | 201  | 228     | 198     | 106  | 102                  | 1,250 | 172   | 104  | 83   | 169   |
| 27                      | 190              | 198  | 201  | 222     | 190     | 104  | 111                  | 1,150 | 159   | 115  | 85   | 160   |
| 28                      | 187              | 187  | 212  | 214     | 182     | 100  | 137                  | 1,040 | 115   | 120  | 81   | 230   |
| 29                      | 177              | 198  | 222  | 212     | -       | 97   | 144                  | 1,050 | 111   | 106  | 83   | 254   |
| 30                      | 177              | 201  | 222  | 217     | -       | 97   | 120                  | 1,050 | 117   | 91   | 87   | 270   |
| 31                      | 172              | -    | 220  | 217     | -       | 91   | -                    | 1,110 | -     | 89   | 102  | -     |
| Month                   | Second-foot-days |      |      | Maximum | Minimum | Mean | Run-off in acre-feet |       |       |      |      |       |
| October.....            | 4,957            |      |      | 214     | 106     | 160  | 9,830                |       |       |      |      |       |
| November.....           | 5,084            |      |      | 201     | 146     | 169  | 10,080               |       |       |      |      |       |
| December.....           | 6,017            |      |      | 220     | 169     | 194  | 11,930               |       |       |      |      |       |
| Calendar year 1940..... | 53,063           |      |      | 375     | 36      | 145  | 105,200              |       |       |      |      |       |
| January.....            | 6,528            |      |      | 239     | 193     | 211  | 12,950               |       |       |      |      |       |
| February.....           | 5,980            |      |      | 222     | 182     | 210  | 11,660               |       |       |      |      |       |
| March.....              | 4,779            |      |      | 195     | 91      | 154  | 9,480                |       |       |      |      |       |
| April.....              | 3,460            |      |      | 156     | 89      | 115  | 6,860                |       |       |      |      |       |
| May.....                | 18,469           |      |      | 1,430   | 108     | 598  | 36,630               |       |       |      |      |       |
| June.....               | 20,710           |      |      | 1,220   | 111     | 690  | 41,080               |       |       |      |      |       |
| July.....               | 3,224            |      |      | 134     | 87      | 104  | 6,390                |       |       |      |      |       |
| August.....             | 4,555            |      |      | 249     | 81      | 146  | 9,000                |       |       |      |      |       |
| September.....          | 4,391            |      |      | 270     | 104     | 146  | 8,710                |       |       |      |      |       |
| Water year 1940-41..... | 88,034           |      |      | 1,430   | 81      | 241  | 174,600              |       |       |      |      |       |

## Sevier Bridge Reservoir near Juab, Utah

Location.- Staff gage, lat. 39°22', long. 112°02', in NW¼ sec. 1, T. 17 S., R. 2 W., at Sevier Bridge Dam, 13 miles southwest of Juab.

Drainage area.- 5,120 square miles.

Records available.- January 1914 to September 1941.

Extremes.- Maximum contents during year, 109,600 acre-feet June 21 (gage height, 63.35 feet); minimum, 25,980 acre-feet Oct. 1 (gage height, 33.30 feet).  
1914-41: Maximum contents, 251,000 acre-feet Apr. 19, 20, 1922 (gage height, 80.0 feet), from former capacity table; no storage at times during 1927-28, 1930-36.

Remarks.- Reservoir was formed by a 30-foot earth-fill dam and storage began about 1904; dam ultimately raised to 90 feet by June 1916. Capacity, 236,000 acre-feet between gage heights 6 feet (approximate bottom of outlet tunnel) and 80.0 feet (top of flash-board on spillway). No dead storage. Figures given herein represent total contents. Water is used for irrigation. Gage read to half-tenths about 9 a.m. daily; contents are as of that time.

Contents, in acre-feet, water year October 1940 to September 1941

| Day | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June    | July   | Aug.   | Sept.  |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|
| 1   | 25,980 | 33,530 | 42,490 | 56,500 | 68,250 | 80,790 | 90,430 | 97,540 | 85,360  | 99,860 | 76,800 | 63,340 |
| 2   | 26,160 | 33,330 | 42,960 | 57,030 | 69,540 | 81,280 | 90,760 | 97,540 | 87,290  | 98,490 | 76,950 | 62,800 |
| 3   | 26,340 | 33,120 | 43,420 | 57,560 | 68,830 | 81,580 | 90,930 | 97,730 | 89,090  | 97,350 | 77,100 | 61,980 |
| 4   | 26,530 | 33,120 | 43,690 | 58,080 | 69,400 | 82,040 | 91,600 | 97,920 | 90,930  | 96,590 | 76,800 | 61,300 |
| 5   | 26,890 | 32,920 | 44,360 | 58,610 | 69,980 | 82,350 | 91,600 | 97,920 | 92,450  | 96,020 | 76,040 | 60,900 |
| 6   | 27,080 | 32,710 | 45,070 | 58,080 | 70,560 | 82,660 | 91,770 | 97,350 | 93,690  | 95,460 | 75,140 | 59,820 |
| 7   | 27,260 | 32,710 | 45,300 | 58,080 | 70,850 | 82,980 | 91,940 | 96,400 | 94,390  | 93,870 | 74,390 | 59,000 |
| 8   | 27,450 | 33,120 | 45,790 | 58,210 | 71,440 | 83,480 | 92,100 | 93,690 | 94,570  | 93,670 | 73,650 | 58,480 |
| 9   | 27,640 | 33,530 | 46,250 | 58,450 | 72,020 | 83,930 | 92,270 | 92,100 | 95,460  | 93,330 | 72,900 | 57,960 |
| 10  | 27,830 | 33,740 | 46,730 | 59,010 | 72,610 | 84,090 | 92,450 | 90,930 | 96,970  | 92,630 | 72,320 | 58,350 |
| 11  | 28,020 | 34,160 | 47,220 | 59,410 | 73,050 | 84,250 | 92,630 | 89,760 | 98,300  | 91,770 | 71,730 | 58,610 |
| 12  | 28,020 | 34,570 | 47,700 | 60,080 | 73,660 | 84,570 | 93,160 | 88,260 | 99,450  | 90,430 | 71,730 | 58,080 |
| 13  | 28,020 | 34,780 | 48,190 | 60,490 | 73,940 | 84,730 | 93,330 | 86,320 | 101,900 | 89,090 | 71,440 | 57,820 |
| 14  | 28,020 | 35,200 | 48,430 | 60,630 | 74,540 | 85,040 | 93,510 | 84,730 | 103,380 | 87,290 | 71,440 | 57,420 |
| 15  | 28,400 | 35,630 | 48,670 | 61,300 | 74,990 | 85,520 | 93,510 | 83,300 | 106,550 | 86,000 | 71,140 | 57,030 |
| 16  | 28,770 | 36,050 | 48,790 | 61,440 | 75,440 | 86,160 | 93,510 | 82,350 | 107,500 | 84,410 | 71,140 | 57,030 |
| 17  | 29,150 | 36,480 | 49,160 | 61,710 | 75,890 | 86,490 | 93,690 | 81,420 | 109,400 | 82,980 | 70,700 | 57,160 |
| 18  | 29,540 | 36,910 | 49,660 | 62,250 | 76,490 | 86,810 | 94,220 | 80,330 | 109,400 | 81,730 | 71,140 | 57,560 |
| 19  | 29,930 | 37,340 | 50,150 | 62,660 | 76,950 | 87,300 | 94,570 | 79,090 | 109,400 | 80,020 | 70,850 | 57,820 |
| 20  | 30,520 | 37,780 | 50,650 | 63,210 | 77,260 | 87,620 | 95,460 | 78,320 | 109,400 | 79,090 | 71,000 | 57,960 |
| 21  | 30,910 | 38,220 | 51,140 | 63,620 | 77,710 | 87,940 | 95,820 | 78,020 | 109,600 | 78,020 | 70,850 | 58,350 |
| 22  | 31,300 | 38,880 | 51,640 | 64,170 | 78,020 | 88,260 | 96,210 | 77,710 | 109,400 | 77,100 | 70,700 | 58,350 |
| 23  | 31,710 | 39,100 | 51,890 | 64,450 | 78,430 | 88,590 | 96,400 | 77,710 | 109,200 | 76,490 | 70,560 | 58,080 |
| 24  | 32,110 | 39,320 | 52,400 | 64,860 | 78,780 | 88,920 | 96,400 | 78,020 | 108,600 | 76,040 | 69,960 | 58,080 |
| 25  | 32,510 | 39,990 | 52,910 | 65,430 | 79,400 | 89,260 | 96,590 | 78,630 | 108,200 | 76,040 | 69,120 | 58,220 |
| 26  | 32,920 | 40,440 | 53,280 | 65,850 | 79,710 | 89,420 | 96,970 | 79,710 | 107,100 | 75,740 | 68,250 | 58,480 |
| 27  | 33,330 | 40,890 | 53,640 | 66,410 | 80,170 | 89,590 | 96,750 | 80,020 | 106,000 | 75,740 | 67,540 | 58,740 |
| 28  | 33,530 | 41,350 | 53,920 | 66,690 | 80,430 | 89,760 | 96,750 | 81,420 | 104,400 | 76,040 | 66,410 | 59,000 |
| 29  | 33,530 | 41,800 | 54,430 | 67,250 | -      | 89,760 | 97,160 | 82,350 | 102,700 | 75,890 | 65,850 | 59,140 |
| 30  | 33,330 | 42,260 | 55,210 | 67,530 | -      | 89,930 | 97,350 | 82,980 | 100,900 | 76,490 | 65,290 | 59,410 |
| 31  | 33,530 | -      | 55,980 | 67,970 | -      | 90,260 | -      | 84,090 | -       | 76,650 | 63,900 | -      |

Monthly gage height and contents, water year October 1940 to September 1941

| Date                    | Gage height (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|--------------------|----------------------|---|
| Oct. 1.....             | 33.30              | 25,980               | +7,550                                      |
| Nov. 1.....             | 37.20              | 33,530               | +8,960                                      |
| Dec. 1.....             | 41.30              | 42,490               | +14,010                                     |
| Calendar year 1940..... | -                  | -                    | -25,080                                     |
| Jan. 1.....             | 47.00              | 56,500               | +11,750                                     |
| Feb. 1.....             | 51.30              | 68,250               | +12,540                                     |
| Mar. 1.....             | 55.50              | 80,790               | +9,640                                      |
| Apr. 1.....             | 58.50              | 90,430               | +7,110                                      |
| May 1.....              | 60.50              | 97,540               | -12,180                                     |
| June 1.....             | 56.95              | 85,360               | +14,500                                     |
| July 1.....             | 61.10              | 99,860               | -23,060                                     |
| Aug. 1.....             | 54.20              | 76,800               | -13,460                                     |
| Sept. 1.....            | 49.55              | 63,340               | -4,190                                      |
| Oct. 1.....             | 48.15              | 59,540               | -   |
| Water year 1940-41..... | -                  | -                    | +33,170                                     |

## Sevier River near Juab, Utah

Location.- Water-stage recorder, lat. 39°22', long. 112°02', in NW¼ sec. 1, T. 17 S., R. 2 W., 300 feet downstream from Sevier Bridge Dam and 11 miles southwest of Juab.

Drainage area.- 5,120 square miles.

Records available.- September 1911 to September 1941.

Average discharge.- 30 years, 253 second-feet.

Extremes (regulated).- Maximum discharge during year, 1,050 second-feet May 12-15 (gage height, 3.71 feet; minimum, 2 second-feet or less for several days when reservoir gates were closed.

1911-41: Maximum discharge, 2,140 second-feet June 2, 1922 (gage height, 8.50 feet, site and datum then in use); practically no flow at times when reservoir gates are closed.

Remarks.- Records good except those for period of doubtful or no gage-height record, which are fair. No diversions between this station and station near Gunnison. Flow regulated by Sevier Bridge Reservoir (see preceding page).

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May              | June    | July    | Aug. | Sept.                |
|-------------------------|------|------|------|------|------|------|------|------------------|---------|---------|------|----------------------|
| 1                       | 3    | 207  |      |      |      | (†)  |      | 2                | 152     | 772     | 8    | 449                  |
| 2                       | 2    | 238  |      |      |      |      |      | 2                | 144     | 700     | 8    | 449                  |
| 3                       | 2    | 242  |      |      |      |      |      | 115              | 144     | 522     | 97   | 449                  |
| 4                       | 2    | 242  |      |      |      |      |      | 221              | 147     | 411     | 305  | 449                  |
| 5                       | 12   | 242  |      |      |      |      |      | 238              | 194     | 393     | 434  | 449                  |
| 6                       | 42   | 166  |      |      |      |      |      | 239              | 320     | 371     | 434  | 453                  |
| 7                       | 38   | 72   |      |      |      |      |      | 878              | 367     | 367     | 439  | 453                  |
| 8                       | 38   | 2    |      |      |      |      |      | 980              | 382     | 362     | 459  | 453                  |
| 9                       | 38   | 2    |      |      |      |      |      | 920              | 200     | 358     | 434  | 375                  |
| 10                      | 57   | 2    |      |      |      |      |      | 950              | 169     | 398     | 411  | 307                  |
| 11                      | 114  | 2    |      |      |      | (†)  |      | 1,010            | 188     | 684     | 358  | 291                  |
| 12                      | 188  | 2    |      |      |      |      |      | 1,050            | 103     | 805     | 349  | 291                  |
| 13                      | 188  | 2    |      |      |      |      |      | 1,050            | 103     | 800     | 349  | 291                  |
| 14                      | 75   | 2    |      |      |      |      |      | 1,050            | 170     | 805     | 284  | 291                  |
| 15                      | 3    | 2    |      |      |      |      |      | 1,050            | 221     | 805     | 253  | 180                  |
| 16                      | 3    | 2    | 2    | 2    | 2    | 2    | 2    | 1,030            | 217     | 822     | 253  | 78                   |
| 17                      | 3    | 2    | 2    |      |      |      |      | 998              | 355     | 854     | 253  | 39                   |
| 18                      | 3    | 2    | 2    | (†)  |      |      |      | 980              | 512     | 902     | 260  | 5                    |
| 19                      | 3    | 2    | 2    |      |      |      |      | 998              | 547     | 717     | 245  | 5                    |
| 20                      | 3    | 2    | 2    |      |      |      |      | 974              | 568     | 502     | 245  | 5                    |
| 21                      | 3    | 2    | 2    |      |      |      |      | 898              | 576     | 487     | 260  | 5                    |
| 22                      | 2    | 2    | 2    |      |      |      |      | 850              | 573     | 421     | 245  | 5                    |
| 23                      | 2    | 2    | 2    |      |      |      |      | 860              | 568     | 253     | 341  | 5                    |
| 24                      | 2    | 2    | 2    |      |      |      |      | 860              | 614     | 200     | 407  | 5                    |
| 25                      | 2    | 2    | 2    |      |      |      |      | 878              | 646     | 200     | 425  | 5                    |
| 26                      | 2    | 2    | 2    |      |      |      |      | 832              | 646     | 142     | 439  | 5                    |
| 27                      | 86   | 2    | 2    |      |      |      |      | 695              | 641     | 52      | 444  | 5                    |
| 28                      | 197  | 2    | 2    |      |      |      |      | 695              | 706     | 7       | 449  | 91                   |
| 29                      | 200  | 2    | 2    |      |      |      |      | 542              | 810     | 7       | 449  | 158                  |
| 30                      | 182  | 2    | 2    |      |      |      |      | 444              | 605     | 6       | 449  | 158                  |
| 31                      | 161  | -    | -    |      |      | (†)  | -    | 253              | -       | 8       | 449  | -                    |
| Month                   |      |      |      |      |      |      |      | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
| October.....            |      |      |      |      |      |      |      | 1,604            | 200     | 2       | 51.7 | 3,180                |
| November.....           |      |      |      |      |      |      |      | 1,455            | 242     | 2       | 46.5 | 2,890                |
| December.....           |      |      |      |      |      |      |      | 62               | -       | -       | -    | 128                  |
| Calendar year 1940..... |      |      |      |      |      |      |      | 63,623           | 1,090   | 2       | 174  | 126,200              |
| January.....            |      |      |      |      |      |      |      | 62               | -       | -       | 2    | 125                  |
| February.....           |      |      |      |      |      |      |      | 58               | -       | -       | 2    | 111                  |
| March.....              |      |      |      |      |      |      |      | 62               | -       | -       | 2    | 125                  |
| April.....              |      |      |      |      |      |      |      | 60               | -       | -       | 2    | 119                  |
| May.....                |      |      |      |      |      |      |      | 22,343           | 1,050   | 2       | 721  | 44,320               |
| June.....               |      |      |      |      |      |      |      | 11,710           | 810     | 103     | 390  | 23,230               |
| July.....               |      |      |      |      |      |      |      | 14,135           | 905     | 7       | 456  | 28,040               |
| August.....             |      |      |      |      |      |      |      | 10,198           | 449     | 8       | 329  | 20,230               |
| September.....          |      |      |      |      |      |      |      | 5,144            | 449     | 5       | 205  | 12,190               |
| Water year 1940-41..... |      |      |      |      |      |      |      | 67,891           | 1,050   | 2       | 196  | 134,700              |

† Discharge measurement made on this day.

Notes.- No or doubtful gage-height record (reservoir gates closed) Nov. 20 to May 2; discharge computed on basis of four discharge measurements.

East Fork of Sevier River near Kingston, Utah

Location.- Water-stage recorder, lat. 36°12', long. 112°09', in SW¼ sec. 13, T. 30 S., R. 3 W., 1,000 feet downstream from bridge on State Highway 22, 1.7 miles east of Kingston, and 4.1 miles above mouth.

Drainage area.- 1,260 square miles.

Records available.- March 1913 to September 1941. May to September 1912 at site 2½ miles downstream, below all diversions.

Average discharge.- 28 years, 89.7 second-feet.

Extremes (regulated).- Maximum discharge during year, 2,030 second-feet May 12 (gage height, 5.05 feet); minimum daily, 8 second-feet Feb. 3-6, 1913-41; Maximum discharge, that of May 12, 1941; minimum, 6 second-feet Oct. 30, 1930.

Remarks.- Records good except those for periods of ice effect, which are fair. Diversions above and below station for irrigation. Station is above diversions in vicinity of Kingston. Flow regulated at Otter Creek Reservoir (capacity, 52,600 acre-feet), 8 miles upstream.

Rating tables, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used May 17-21)

| Oct. 1 to May 21 |    |     |     |     | May 22 to Sept. 30 |     |    |     |     |     |     |
|------------------|----|-----|-----|-----|--------------------|-----|----|-----|-----|-----|-----|
| 0.4              | 2  | 1.6 | 120 | 3.5 | 805                | 0.0 | 8  | 0.5 | 61  | 2.0 | 800 |
| .6               | 5  | 1.8 | 159 | 4.0 | 1,150              | .1  | 12 | 1.0 | 84  | 2.3 | 379 |
| .8               | 15 | 2.0 | 203 | 4.5 | 1,520              | .2  | 17 | 1.2 | 112 | 2.6 | 505 |
| 1.0              | 31 | 2.3 | 264 | 5.1 | 2,080              | .4  | 29 | 1.4 | 145 |     |     |
| 1.2              | 55 | 2.6 | 358 |     |                    | .6  | 43 | 1.7 | 204 |     |     |
| 1.4              | 85 | 3.0 | 550 |     |                    |     |    |     |     |     |     |

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May   | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-------|------|------|------|-------|
| 1                       | 18               | 18   |         |         | 11   | 15                   | 16   | 26    | 242  | 50   | 130  | 61    |
| 2                       | 19               | 19   |         |         | b9   | 18                   | 16   | 28    | 213  | 49   | 126  | 61    |
| 3                       | 18               | 19   |         |         | b8   | 19                   | 18   | 38    | 202  | 46   | 125  | 60    |
| 4                       | 18               | 19   |         |         | b8   | 20                   | 20   | 52    | 196  | 47   | 125  | 59    |
| 5                       | 21               | 19   |         |         | b8   | 17                   | 21   | 63    | 148  | 45   | 128  | 57    |
| 6                       | 20               | 19   |         |         | b8   | 16                   | 21   | 135   | 120  | 44   | 135  | 51    |
| 7                       | 19               | 19   |         |         | b9   | 14                   | 21   | 300   | 108  | 45   | 131  | 38    |
| 8                       | 19               | 20   |         |         | 10   | 14                   | 21   | 532   | 112  | 46   | 133  | 37    |
| 9                       | 19               | 19   |         |         | 10   | 14                   | 21   | 823   | 85   | 46   | 136  | 36    |
| 10                      | 18               | 19   |         |         | 11   | 13                   | 22   | 1,050 | 71   | 45   | 163  | 36    |
| 11                      | 18               | 19   |         |         | 23   | 13                   | 23   | 1,620 | 65   | 47   | 152  | 36    |
| 12                      | 18               | 20   |         |         | 28   | 13                   | 26   | 1,740 | 60   | 55   | 133  | 36    |
| 13                      | 18               | 21   |         |         | 24   | 14                   | 24   | 1,730 | 52   | 48   | 128  | 36    |
| 14                      | 18               | 21   |         |         | 18   | 14                   | 22   | 1,440 | 53   | 45   | 125  | 40    |
| 15                      | 18               | 23   |         |         | 18   | 14                   | 22   | 1,090 | 55   | 42   | 126  | 39    |
| 16                      | 18               | 22   | b15     | b12     | 21   | 14                   | 22   | 919   | 51   | 42   | 126  | 40    |
| 17                      | 18               | 16   |         |         | 21   | 14                   | 22   | 800   | 49   | 42   | 123  | 40    |
| 18                      | 18               | 18   |         |         | 21   | 14                   | 21   | 788   | 49   | 41   | 110  | 40    |
| 19                      | 18               | 19   |         |         | 20   | 14                   | 21   | 695   | 50   | 39   | 82   | 38    |
| 20                      | 18               | 19   |         |         | 20   | 14                   | 21   | 559   | 48   | 122  | 62   | 38    |
| 21                      | 18               | 17   |         |         | 20   | 14                   | 21   | 493   | 42   | 125  | 62   | 38    |
| 22                      | 18               | b15  |         |         | 18   | 14                   | 21   | 469   | 41   | 125  | 60   | 43    |
| 23                      | 18               | b15  |         |         | 18   | 14                   | 21   | 474   | 41   | 135  | 61   | 43    |
| 24                      | 18               | b16  |         |         | 18   | 14                   | 21   | 487   | 39   | 163  | 62   | 42    |
| 25                      | 18               | b17  |         |         | 16   | 15                   | 22   | 487   | 37   | 140  | 62   | 38    |
| 26                      | 24               | b18  |         |         | -16  | 15                   | 23   | 482   | 37   | 138  | 61   | 35    |
| 27                      | 24               | *b17 |         |         | 15   | 14                   | 23   | 482   | 46   | 135  | 60   | 30    |
| 28                      | 21               | b17  |         |         | 15   | 14                   | 23   | 464   | 49   | 131  | 58   | 30    |
| 29                      | 19               | b18  |         |         | -    | 14                   | 26   | 410   | 50   | 136  | 59   | 30    |
| 30                      | 19               | 18   |         |         | -    | 14                   | 25   | 350   | 51   | 133  | 61   | 29    |
| 31                      | 18               | -    |         |         | -    | 14                   | -    | 289   | -    | 131  | 61   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |       |      |      |      |       |
| October.....            | 584              |      | 24      | 18      | 18.8 | 1,180                |      |       |      |      |      |       |
| November.....           | 558              |      | 23      | 18      | 18.8 | 1,110                |      |       |      |      |      |       |
| December.....           | 465              |      | -       | -       | 16.0 | 922                  |      |       |      |      |      |       |
| Calendar year 1940..... | 25,008           |      | 216     | -       | 65.1 | 45,810               |      |       |      |      |      |       |
| January.....            | 372              |      | -       | -       | 12.0 | 788                  |      |       |      |      |      |       |
| February.....           | 452              |      | 38      | 8       | 16.1 | 897                  |      |       |      |      |      |       |
| March.....              | 454              |      | 20      | 13      | 14.8 | 900                  |      |       |      |      |      |       |
| April.....              | 649              |      | 26      | 16      | 21.8 | 1,690                |      |       |      |      |      |       |
| May.....                | 19,315           |      | 1,740   | 26      | 623  | 38,310               |      |       |      |      |      |       |
| June.....               | 2,469            |      | 242     | 37      | 82.0 | 4,980                |      |       |      |      |      |       |
| July.....               | 2,479            |      | 183     | 39      | 80.0 | 4,980                |      |       |      |      |      |       |
| August.....             | 3,148            |      | 103     | 68      | 101  | 6,840                |      |       |      |      |      |       |
| September.....          | 1,290            |      | 61      | 29      | 41.3 | 2,460                |      |       |      |      |      |       |
| Water year 1940-41..... | 52,172           |      | 1,740   | -       | 68.1 | 68,650               |      |       |      |      |      |       |

\* Winter discharge measurement made on this day.  
b Stage-discharge relation affected by ice.

## SEVIER LAKE BASIN

## Clear Creek at Sevier, Utah

Location.- Water-stage recorder, lat. 38°34'55", long. 112°15'25", in SE¼ sec. 32, T. 25 S., R. 4 W., at bridge on U. S. Highway 89, 600 feet upstream from mouth and 0.3 mile south of Sevier. Former gage at site 300 feet downstream at different datum.

Drainage area.- 169 square miles (revised).

Records available.- February 1912 to September 1919 and October 1940 to September 1941 in reports of Geological Survey. April 1934 to September 1941 (irrigation seasons only in some years) in reports of Sevier River water commissioner.

Extremes.- Maximum discharge during year, 487 second-feet Aug. 7 (gage height, 4.05 feet); minimum daily, 2 second-feet Oct. 1-25.  
1912-19, 1940-41: Maximum discharge observed, that of Aug. 7, 1941; no flow Aug. 26, 1913.

Remarks.- Records good except those for periods of no and doubtful gage-height record, which are fair. Station is below all diversions for irrigation. Practically entire flow is diverted each year during latter part of irrigation season.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.   | Apr. | May  | June | July | Aug. | Sept.  |
|-------------------------|------|------|------|------|------|--------|------|------|------|------|------|--------|
| 1                       | a2   | 4    | 13   | 10   | 10   | 13     | 25   | 71   | 180  | 71   | 7    | 4      |
| 2                       | a2   | 4    | 12   | 6    | 10   | 14     | 22   | 65   | 172  | 73   | 5    | 4      |
| 3                       | a2   | 4    | 12   | 8    | 9    | 13     | 20   | 80   | 165  | 71   | 4    | 5      |
| 4                       | a2   | 5    | 13   | 8    | 9    | 13     | 18   | 97   | 153  | 71   | 4    | 5      |
| 5                       | a2   | 5    | 12   | 11   | 10   | 13     | 23   | 83   | 154  | 64   | 3    | 4      |
| 6                       | a2   | 5    | 12   | 12   | 11   | 13     | 20   | 114  | 147  | 66   | 3    | 4      |
| 7                       | a2   | 6    | 11   | 12   | 14   | 11     | 18   | 131  | 176  | 64   | 70   | 4      |
| 8                       | a2   | 6    | 12   | 12   | 12   | 11     | 20   | a150 | 200  | 66   | 56   | 4      |
| 9                       | a2   | 5    | 12   | 11   | 12   | 14     | 23   | a170 | 183  | 61   | 44   | 4      |
| 10                      | a2   | 5    | 10   | 12   | 12   | 11     | 24   | 190  | 161  | 56   | 28   | 4      |
| 11                      | a2   | 5    | 7    | 12   | 15   | 14     | 26   | 202  | 143  | 56   | d24  | 4      |
| 12                      | a2   | 5    | 10   | 12   | 16   | 13     | 29   | 235  | 132  | 55   | d21  | 4      |
| 13                      | 2    | 4    | 8    | 12   | 12   | 17     | 26   | 255  | 129  | 45   | d19  | 4      |
| 14                      | 2    | 4    | 8    | 12   | 13   | 18     | 26   | 251  | 141  | 34   | 17   | 5      |
| 15                      | 2    | 5    | 9    | 12   | 13   | 14     | 25   | 220  | 147  | d28  | 17   | 4      |
| 16                      | 2    | 5    | 9    | 12   | 13   | 14     | 32   | 231  | 149  | d23  | 17   | 4      |
| 17                      | 2    | 6    | 11   | 8    | 13   | 16     | 29   | 227  | 149  | d18  | 16   | 5      |
| 18                      | 2    | 7    | 12   | 10   | 13   | 16     | 24   | 243  | 145  | d15  | 16   | 5      |
| 19                      | 2    | 6    | 13   | 12   | 13   | 18     | 27   | 251  | 156  | d20  | 14   | 5      |
| 20                      | 2    | 6    | 12   | 12   | 13   | 22     | 26   | 235  | 129  | d25  | 12   | 5      |
| 21                      | 2    | 6    | 12   | 12   | 13   | 30     | 23   | 212  | 123  | d22  | 10   | 5      |
| 22                      | 2    | 4    | 12   | 12   | 13   | 18     | 24   | 227  | 120  | d20  | 10   | 7      |
| 23                      | 2    | 5    | 12   | 11   | 13   | 20     | 28   | 216  | 116  | d17  | 9    | 7      |
| 24                      | 2    | 6    | 12   | 12   | 13   | 18     | 32   | 195  | 113  | d35  | 8    | 8      |
| 25                      | 2    | 12   | 12   | 11   | 13   | 18     | 32   | 204  | 113  | d35  | 8    | 8      |
| 26                      | 7    | 13   | 12   | 12   | 12   | 16     | 31   | 210  | 97   | d20  | 8    | 8      |
| 27                      | 6    | 10   | 12   | 12   | 11   | 17     | 31   | 237  | 86   | 12   | 7    | 7      |
| 28                      | 5    | 12   | 12   | 11   | 13   | 18     | 42   | 237  | 71   | 11   | 6    | 7      |
| 29                      | 5    | 14   | 12   | 11   | -    | 20     | 45   | 218  | 60   | 11   | 5    | 7      |
| 30                      | 6    | 14   | 12   | 11   | -    | 20     | 56   | 200  | 61   | 10   | 6    | 8      |
| 31                      | 5    | -    | 12   | 11   | -    | 24     | -    | 187  | -    | 9    | 5    | -      |
| Month                   |      |      |      |      |      |        |      |      |      |      |      |        |
| October.....            |      |      |      |      |      | 84     | 7    | 2    |      | 2.7  |      | 167    |
| November.....           |      |      |      |      |      | 198    | 14   | 4    |      | 6.6  |      | 393    |
| December.....           |      |      |      |      |      | 350    | 13   | 7    |      | 11.3 |      | 694    |
| Calendar year .....     |      |      |      |      |      | -      | -    | -    |      | -    |      | -      |
| January.....            |      |      |      |      |      | 342    | 12   | 6    |      | 11.0 |      | 678    |
| February.....           |      |      |      |      |      | 344    | 16   | 9    |      | 12.3 |      | 682    |
| March.....              |      |      |      |      |      | 497    | 24   | 11   |      | 16.0 |      | 986    |
| April.....              |      |      |      |      |      | 827    | 56   | 18   |      | 27.6 |      | 1,640  |
| May.....                |      |      |      |      |      | 5,842  | 255  | 63   |      | 188  |      | 11,590 |
| June.....               |      |      |      |      |      | 4,061  | 200  | 60   |      | 135  |      | 8,050  |
| July.....               |      |      |      |      |      | 1,184  | 75   | 9    |      | 36.2 |      | 2,350  |
| August.....             |      |      |      |      |      | 478    | 70   | 3    |      | 15.4 |      | 948    |
| September.....          |      |      |      |      |      | 159    | 8    | 4    |      | 5.3  |      | 315    |
| Water year 1940-41..... |      |      |      |      |      | 14,366 | 255  | 2    |      | 39.4 |      | 28,490 |

a No gage-height record; discharge interpolated.

d Doubtful gage-height record; discharge computed on basis of records for Sevier River at Hatch and near Kingston.



Beaver River near Beaver, Utah

Location.- Water-stage recorder, lat. 38°17', long. 112°34', in SW¼ sec. 17, T. 29 S., R. 6 W., at Fishlake National Forest boundary, three-quarters of a mile downstream from Bakers Canyon and 4¼ miles east of Beaver.

Drainage area.- 82 square miles.

Records available.- June to September 1906, March 1914 to September 1941.

Average discharge.- 27 years (1914-41), 56.2 second-feet.

Extremes.- Maximum discharge during year, 676 second-feet June 7 (gage height, 4.08 feet); minimum, 8 second-feet Dec. 1.

1914-41: Maximum discharge, 1,080 second-feet July 22, 1936 (gage height, 7.27 feet, site and datum then in use), from rating curve extended above 500 second-feet; minimum, 5 second-feet Aug. 29, 1931 and Nov. 30, 1939.

Remarks.- Records good except those for periods of ice effect, which are fair. No diversions above station for irrigation. Water diverted by Telluride Power Co. but returned to stream several miles above station. Flow slightly regulated by power plants and several small reservoirs.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr.   | May | June | July | Aug. | Sept.  |
|-------------------------|------|------|------|------|------|------|--------|-----|------|------|------|--------|
| 1                       | 23   | 24   | 18   | b20  | 21   | 20   | 27     | 72  | 442  | 147  | 65   | 39     |
| 2                       | 23   | 24   | 19   | b18  | 20   | 19   | 24     | 76  | 434  | 140  | 65   | 37     |
| 3                       | 23   | 23   | 19   | b17  | 22   | 20   | 24     | 96  | 420  | 134  | 64   | 37     |
| 4                       | 24   | 23   | 19   | b17  | 23   | 21   | 23     | 95  | 394  | 132  | 61   | 38     |
| 5                       | 25   | 18   | 19   | b18  | 21   | 21   | 24     | 96  | 398  | 125  | 61   | 37     |
| 6                       | 24   | 20   | 19   | b19  | 20   | 20   | 23     | 134 | 452  | 117  | 52   | 36     |
| 7                       | 24   | 22   | 19   | 19   | 20   | 20   | 23     | 167 | 580  | 115  | 58   | 35     |
| 8                       | 24   | 22   | 19   | 20   | 20   | 20   | 23     | 200 | 447  | 113  | 58   | 35     |
| 9                       | 26   | 21   | 20   | 20   | 20   | 20   | 26     | 270 | 377  | 111  | 57   | 35     |
| 10                      | 26   | 18   | 20   | 20   | 20   | 20   | 24     | 328 | 328  | 102  | 61   | 35     |
| 11                      | 24   | 20   | 19   | 19   | 20   | 19   | 24     | 352 | 298  | 100  | 65   | 34     |
| 12                      | 23   | 20   | b18  | 19   | 19   | 19   | 24     | 394 | 309  | 98   | 54   | 33     |
| 13                      | 23   | 20   | b17  | 20   | 21   | 20   | 23     | 475 | 356  | 91   | 51   | 32     |
| 14                      | 23   | 20   | b16  | 19   | 21   | 20   | 23     | 495 | 398  | 85   | 49   | 33     |
| 15                      | 23   | 20   | b16  | 20   | 21   | 19   | 23     | 460 | 407  | 85   | 51   | 33     |
| 16                      | 22   | 22   | b17  | 20   | 21   | 19   | 24     | 438 | 424  | 91   | 49   | 32     |
| 17                      | 23   | 21   | b18  | b20  | 21   | 20   | 24     | 460 | 434  | 102  | 49   | 31     |
| 18                      | 22   | 21   | b19  | b20  | 20   | 21   | 23     | 447 | 424  | 100  | 48   | 29     |
| 19                      | 22   | 20   | b21  | 20   | 20   | 22   | 22     | 352 | 390  | 111  | 47   | 30     |
| 20                      | 22   | 21   | 20   | 20   | 20   | 24   | 22     | 280 | 373  | 72   | 46   | 28     |
| 21                      | 23   | 20   | 20   | 20   | 20   | 22   | 22     | 263 | 340  | 78   | 45   | 30     |
| 22                      | 24   | b19  | 20   | 20   | 20   | 22   | 22     | 325 | 336  | 80   | 44   | 33     |
| 23                      | 23   | b18  | 19   | 21   | 20   | 22   | 23     | 452 | 328  | 79   | 40   | 36     |
| 24                      | 23   | b19  | 20   | 20   | 20   | 21   | 24     | 424 | 325  | 80   | 39   | 35     |
| 25                      | 22   | b19  | 20   | 20   | 19   | 21   | 23     | 460 | 288  | 105  | 39   | 35     |
| 26                      | 33   | b18  | 20   | 20   | 18   | 21   | 28     | 530 | 243  | 91   | 39   | 34     |
| 27                      | 26   | b18  | 20   | 20   | 18   | 22   | 26     | 525 | 218  | 84   | 42   | 35     |
| 28                      | 27   | b18  | 20   | 21   | 19   | 23   | 33     | 490 | 192  | 72   | 42   | 31     |
| 29                      | 23   | 19   | 20   | 20   | -    | 24   | 46     | 452 | 170  | 72   | 39   | 33     |
| 30                      | 26   | 19   | 20   | 20   | -    | 24   | 65     | 434 | 154  | 68   | 39   | 32     |
| 31                      | 22   | -    | 20   | 20   | -    | 26   | -      | 416 | -    | 65   | 39   | -      |
| Month                   |      |      |      |      |      |      |        |     |      |      |      |        |
| October.....            |      |      |      |      |      |      | 741    | 27  | 22   | 23.9 |      | 1,470  |
| November.....           |      |      |      |      |      |      | 607    | 24  | 18   | 20.2 |      | 1,200  |
| December.....           |      |      |      |      |      |      | 591    | 21  | 16   | 19.1 |      | 1,170  |
| Calendar year 1940..... |      |      |      |      |      |      | 18,986 | 365 | 14   | 51.9 |      | 37,650 |
| January.....            |      |      |      |      |      |      | 607    | 21  | 17   | 19.6 |      | 1,200  |
| February.....           |      |      |      |      |      |      | 565    | 21  | 18   | 20.2 |      | 1,120  |
| March.....              |      |      |      |      |      |      | 652    | 26  | 19   | 21.0 |      | 1,290  |
| April.....              |      |      |      |      |      |      | 784    | 65  | 22   | 26.1 |      | 1,560  |
| May.....                |      |      |      |      |      |      | 10,458 | 530 | 72   | 337  |      | 20,740 |
| June.....               |      |      |      |      |      |      | 10,679 | 590 | 154  | 356  |      | 21,230 |
| July.....               |      |      |      |      |      |      | 3,045  | 147 | 65   | 98.2 |      | 6,040  |
| August.....             |      |      |      |      |      |      | 1,558  | 65  | 39   | 50.3 |      | 3,090  |
| September.....          |      |      |      |      |      |      | 1,012  | 39  | 28   | 35.7 |      | 2,010  |
| Water year 1940-41..... |      |      |      |      |      |      | 31,299 | 560 | 16   | 85.8 |      | 62,110 |

b Stage-discharge relation affected by ice.

## Beaver River at Adamsville, Utah

Location.- Water-stage recorder, lat. 38°16', long. 112°48', in S½ sec. 30, T. 29 S., R. 8 W., 600 feet downstream from bridge on State Highway 21, a quarter of a mile upstream from Indian Creek, and three-quarters of a mile south of Adamsville.

Drainage area.- 272 square miles.

Records available.- December 1913 to September 1936, October 1937 to September 1941.

Average discharge.- 25 years (1914-36, 1938-41), 37.7 second-feet.

Extremes.- Maximum discharge during year, 1,090 second-feet July 23 (gage height, 4.68 feet), from rating curve extended above 500 second-feet; minimum, 9 second-feet Oct. 21.

1913-36, 1937-41: Maximum discharge, that of July 23, 1941; no flow during periods in 1924, 1931, 1934, 1935, 1939.

Remarks.- Records good except those for periods of ice effect, which are fair. No diversions between station and Rockyford Reservoir. Several ditches above station divert practically entire flow during irrigation season to supply Adamsville and Beaver districts.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 15   | 24   | 39   | 39   | 42   | 55   | 36   | 40  | 516  | 78   | 35   | 20    |
| 2   | 14   | 39   | 39   | 36   | 40   | 40   | 29   | 37  | 294  | 64   | 30   | 20    |
| 3   | 12   | 39   | 39   | b37  | 40   | 45   | 26   | 51  | 286  | 53   | 29   | 20    |
| 4   | 11   | 38   | 38   | b26  | 38   | 48   | 24   | 66  | 280  | 45   | 27   | 23    |
| 5   | 12   | 37   | 38   | 38   | 39   | 40   | 28   | 58  | 278  | 30   | 22   | 23    |
| 6   | 14   | 37   | 38   | 39   | 38   | 39   | 35   | 90  | 314  | 31   | 26   | 24    |
| 7   | 16   | 38   | 37   | 40   | 44   | 36   | 32   | 136 | 496  | 25   | 31   | 22    |
| 8   | 17   | 38   | 37   | 40   | 42   | 55   | 28   | 161 | 592  | 18   | 37   | 24    |
| 9   | 17   | 38   | 36   | 39   | 38   | 34   | 28   | 237 | 473  | 19   | 42   | 24    |
| 10  | 16   | 37   | 37   | 37   | 39   | 34   | 29   | 314 | 363  | 21   | 47   | 26    |
| 11  | 13   | 37   | 37   | 38   | 39   | 54   | 32   | 267 | 311  | 24   | 91   | 26    |
| 12  | 14   | 37   | b54  | 37   | 43   | 33   | 58   | 418 | 280  | 32   | 61   | 21    |
| 13  | 13   | 37   | b52  | 36   | 42   | 44   | 47   | 526 | 270  | 31   | 51   | 21    |
| 14  | 10   | 36   | b50  | 38   | 39   | 53   | 35   | 473 | 283  | 27   | 47   | 20    |
| 15  | 11   | 37   | b26  | 38   | 38   | 42   | 31   | 375 | 297  | 24   | 57   | 20    |
| 16  | 11   | 38   | b38  | 38   | 37   | 38   | 40   | 294 | 294  | 20   | 65   | 22    |
| 17  | 12   | 39   | 55   | 37   | 37   | 35   | 38   | 283 | 297  | 19   | 55   | 26    |
| 18  | 12   | 51   | 60   | 38   | 36   | 37   | 33   | 305 | 302  | 24   | 51   | 22    |
| 19  | 11   | 48   | 50   | 38   | 38   | 36   | 31   | 264 | 283  | 51   | 49   | 19    |
| 20  | 12   | 43   | 46   | 37   | 37   | 37   | 30   | 232 | 257  | 40   | 42   | 19    |
| 21  | 10   | 40   | 43   | 38   | 43   | 38   | 30   | 196 | 220  | 33   | 37   | 20    |
| 22  | 10   | 39   | 43   | 38   | 40   | 37   | 30   | 207 | 203  | 28   | 37   | 27    |
| 23  | 10   | 36   | 45   | 38   | 36   | 36   | 28   | 300 | 199  | 144  | 38   | 49    |
| 24  | 10   | 33   | 44   | 39   | 37   | 38   | 25   | 316 | 183  | 353  | 35   | 42    |
| 25  | 12   | 37   | 48   | 42   | 48   | 58   | 25   | 372 | 169  | 190  | 31   | 37    |
| 26  | 28   | 38   | 43   | 39   | 40   | 33   | 26   | 428 | 142  | 157  | 23   | 35    |
| 27  | 28   | 42   | 47   | 39   | 36   | 27   | 26   | 496 | 126  | 136  | 23   | 32    |
| 28  | 24   | 43   | 50   | 42   | 35   | 30   | 30   | 473 | 118  | 66   | 21   | 31    |
| 29  | 21   | 42   | 48   | 42   | -    | 36   | 26   | 393 | 101  | 77   | 22   | 35    |
| 30  | 21   | 40   | 47   | 42   | -    | 36   | 30   | 366 | 91   | 66   | 20   | 35    |
| 31  | 20   | -    | 44   | 42   | -    | 37   | -    | 356 | -    | 51   | 20   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 456              | 28      | 10      | 14.7 | 904                  |
| November.....           | 1,158            | 51      | 24      | 36.6 | 2,300                |
| December.....           | 1,271            | 53      | 26      | 41.0 | 2,520                |
| Calendar year 1940..... | 10,344           | 232     | 1       | 28.3 | 20,810               |
| January.....            | 1,199            | 42      | 36      | 38.7 | 2,580                |
| February.....           | 1,103            | 45      | 35      | 39.4 | 2,190                |
| March.....              | 1,161            | 53      | 27      | 37.5 | 2,300                |
| April.....              | 846              | 58      | 24      | 31.5 | 1,880                |
| May.....                | 8,510            | 526     | 37      | 27.5 | 16,880               |
| June.....               | 8,112            | 502     | 91      | 27.1 | 16,100               |
| July.....               | 2,004            | 353     | 18      | 64.6 | 3,970                |
| August.....             | 1,232            | 91      | 20      | 39.7 | 2,440                |
| September.....          | 785              | 49      | 19      | 28.2 | 1,560                |
| Water year 1940-41..... | 27,941           | 592     | 10      | 76.6 | 56,420               |

b Stage-discharge relation affected by ice.

Rockyford Reservoir near Minersville, Utah

Location.- Staff gage, lat. 38°14', long. 112°50', in NE¼ sec. 11, T. 30 S., R. 9 W., at Rockyford Dam on Beaver River, 5 miles east of Minersville.

Drainage area.- 510 square miles.

Records available.- October 1937 to September 1941.

Extremes.- Maximum contents observed during year, 23,590 acre-feet June 18 (gage height, 51.3 feet); minimum observed, 1,840 acre-feet Oct. 9 (gage height, 16.3 feet). 1937-41: Maximum contents observed, that of June 18, 1941; no storage Oct. 16, 31, 1939.

Remarks.- Reservoir is formed by earth-fill dam completed in 1914. Capacity, 23,260 acre-feet between gage heights 0 foot (bottom of outlet tunnel) and 51.0 feet (spillway crest). Prior to the fall of 1937 the spillway crest was at elevation 52.5 feet. Dead storage negligible. Water is used for irrigation on lands of Delta Land & Water Co.

Contents, in acre-feet, water year October 1940 to September 1941

| Day | Oct.  | Nov.  | Dec.  | Jan.  | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  |
|-----|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | -     | -     | -     | -     | -      | -      | -      | -      | 22,600 | 23,040 | -      | -      |
| 2   | -     | -     | -     | -     | -      | -      | -      | 13,040 | 22,490 | -      | 21,390 | -      |
| 3   | -     | -     | -     | 7,430 | 9,390  | -      | 12,540 | -      | 22,350 | -      | -      | -      |
| 4   | -     | -     | -     | -     | -      | 11,280 | -      | -      | 22,390 | -      | -      | -      |
| 5   | -     | -     | 5,420 | -     | -      | -      | -      | -      | 22,270 | -      | -      | -      |
| 6   | -     | -     | -     | -     | 9,590  | -      | 12,700 | 13,920 | 22,270 | -      | -      | -      |
| 7   | -     | 3,280 | -     | -     | -      | 11,420 | -      | -      | 22,380 | -      | -      | -      |
| 8   | -     | -     | -     | -     | -      | -      | -      | -      | 22,930 | 22,160 | 20,790 | -      |
| 9   | 1,840 | -     | -     | -     | -      | -      | -      | -      | 22,550 | -      | -      | 18,140 |
| 10  | -     | -     | -     | -     | 9,860  | -      | -      | -      | 22,370 | -      | -      | -      |
| 11  | -     | 3,510 | -     | -     | -      | 11,620 | -      | 14,270 | 22,490 | -      | -      | -      |
| 12  | -     | -     | -     | 9,030 | -      | -      | 12,950 | -      | 22,360 | -      | -      | -      |
| 13  | -     | -     | -     | -     | -      | -      | -      | 16,100 | 22,380 | -      | -      | -      |
| 14  | -     | -     | -     | -     | -      | -      | -      | -      | 22,710 | -      | -      | 17,380 |
| 15  | 2,050 | 3,790 | 5,920 | 8,200 | -      | 11,620 | 13,110 | 17,470 | 23,040 | -      | -      | -      |
| 16  | -     | -     | -     | -     | 10,200 | -      | -      | -      | 23,400 | -      | -      | -      |
| 17  | -     | -     | -     | -     | -      | -      | 13,190 | -      | 23,480 | -      | -      | -      |
| 18  | -     | -     | -     | 8,360 | -      | -      | -      | -      | 23,590 | -      | -      | -      |
| 19  | -     | -     | 6,170 | -     | -      | 11,960 | 13,350 | 16,700 | 23,460 | -      | -      | -      |
| 20  | -     | -     | -     | -     | -      | -      | -      | -      | 23,260 | -      | -      | -      |
| 21  | -     | -     | -     | -     | -      | 12,100 | -      | 19,080 | 23,370 | 21,060 | 20,780 | -      |
| 22  | -     | -     | -     | -     | 10,610 | -      | 13,510 | -      | 23,370 | -      | -      | 16,430 |
| 23  | -     | -     | -     | -     | -      | -      | -      | 19,560 | 23,370 | -      | -      | -      |
| 24  | -     | -     | -     | -     | -      | 12,230 | -      | 19,840 | 23,370 | 21,260 | -      | -      |
| 25  | -     | 4,580 | -     | 8,750 | -      | -      | -      | -      | 23,460 | 21,500 | -      | -      |
| 26  | 2,440 | -     | 6,770 | -     | 10,880 | -      | 13,670 | 20,590 | 23,260 | -      | 20,120 | 16,810 |
| 27  | -     | 4,750 | -     | -     | -      | -      | 13,750 | 21,180 | -      | -      | -      | -      |
| 28  | -     | -     | -     | 8,910 | 11,010 | -      | -      | 21,930 | 23,260 | 21,720 | -      | -      |
| 29  | -     | -     | -     | -     | -      | 12,300 | -      | 22,360 | -      | -      | -      | -      |
| 30  | -     | 5,000 | -     | -     | -      | -      | 13,800 | 22,710 | 23,160 | -      | 19,650 | 17,000 |
| 31  | 2,740 | -     | 7,270 | 9,110 | -      | 12,380 | -      | 22,710 | -      | 21,520 | 19,600 | -      |

a No gage height record; contents interpolated.

Monthly gage height and contents, water year October 1940 to September 1941

| Date                    | Gage height (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|--------------------|----------------------|---|
| Sept. 30.....           | 14.9               | 1,500                | -   |
| Oct. 31.....            | 19.8               | 2,740                | +1,240                                      |
| Nov. 30.....            | 26.2               | 5,000                | +2,260                                      |
| Dec. 31.....            | 31.0               | 7,270                | +2,270                                      |
| Calendar year 1940..... | -                  | -                    | +2,590                                      |
| Jan. 31.....            | 34.3               | 9,110                | +1,840                                      |
| Feb. 29.....            | 37.1               | 11,010               | +1,900                                      |
| Mar. 31.....            | 39.1               | 12,380               | +1,370                                      |
| Apr. 30.....            | -                  | 13,800               | +1,420                                      |
| May 31.....             | 50.5               | 22,710               | +8,910                                      |
| June 30.....            | 50.9               | 23,160               | +440  |
| July 31.....            | -                  | 21,520               | -1,640                                      |
| Aug. 31.....            | -                  | 19,600               | -2,020                                      |
| Sept. 30.....           | 44.7               | 17,000               | -2,600                                      |
| Water year 1940-41..... | -                  | -                    | +15,500                                     |

a No gage-height record; contents interpolated.

## Beaver River at Rockyford Dam, near Minersville, Utah

Location.- Water-stage recorder and concrete control, lat. 38°14', long. 112°50', in NW¼ sec. 11, T. 30 S., R. 9 W., half a mile downstream from Rockyford Dam and 4¼ miles east of Minersville.

Drainage area.- 512 square miles.

Records available.- December 1913 to September 1941.

Average discharge.- 26 years (1914-36, 1937-41) 38.9 second-feet.

Extremes (regulated).- Maximum discharge during year, 507 second-feet June 8-9 (gage height, 3.02 feet); minimum daily, 3 second-feet Oct. 7-12.  
1913-41: Maximum discharge, 727 second-feet June 10, 1921 (gage height, 3.53 feet); minimum, 0.3 second-foot Mar. 19, 20, 1914.

Remarks.- Records good except those for periods when recorder was not operating, which are fair. One small diversion between dam and station. Flow regulated by operation of gates at Rockyford Dam and affected also by several diversions above reservoir for irrigation and municipal supply.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 5                | 5    | 6       | 6       | 5    | 8                    | 9    | 16  | 379  | 93   | 88   | 94    |
| 2                       | 5                | 5    | 6       | 6       | 5    | 8                    | 9    | 25  | 351  | 89   | 82   | 93    |
| 3                       | 5                | 5    | 6       | 6       | 5    | 8                    | 9    | 28  | 334  | 105  | 79   | 93    |
| 4                       | 5                | 5    | 6       | 6       | 5    | 8                    | 9    | 26  | 321  | 107  | 76   | 93    |
| 5                       | 4                | 5    | 6       | 6       | 6    | 8                    | 9    | 49  | 315  | 105  | 78   | 93    |
| 6                       | 4                | 5    | 6       | 6       | 6    | 8                    | 9    | 63  | 318  | 101  | 78   | 91    |
| 7                       | 3                | 5    | 6       | 6       | 6    | 8                    | 9    | 63  | 358  | 101  | 68   | 91    |
| 8                       | 3                | 5    | 6       | 6       | 6    | 8                    | 9    | 64  | 456  | 101  | 64   | 89    |
| 9                       | 3                | 5    | 6       | 6       | 6    | 8                    | 9    | 72  | 507  | 100  | 64   | 89    |
| 10                      | 3                | 5    | 6       | 6       | 6    | 8                    | 10   | 52  | 497  | 100  | 64   | 89    |
| 11                      | 3                | 5    | 6       | 6       | 6    | 8                    | 10   | 84  | 441  | 96   | 64   | 89    |
| 12                      | 3                | 6    | 6       | 6       | 6    | 8                    | 10   | 59  | 240  | 96   | 64   | 88    |
| 13                      | 4                | 6    | 6       | 6       | 6    | 8                    | 10   | 96  | 130  | 67   | 64   | 88    |
| 14                      | 4                | 6    | 6       | 6       | 6    | 8                    | 10   | 107 | 120  | 46   | 66   | 86    |
| 15                      | 4                | 6    | 6       | 6       | 6    | 9                    | 10   | 109 | 114  | 42   | 70   | 84    |
| 16                      | 4                | 6    | 6       | 6       | 6    | 9                    | 10   | 109 | 162  | 40   | 67   | 81    |
| 17                      | 4                | 6    | 6       | 6       | 6    | 9                    | 10   | 109 | 216  | 42   | 66   | 87    |
| 18                      | 4                | 6    | 6       | 6       | 6    | 9                    | 10   | 110 | 290  | 44   | 66   | 86    |
| 19                      | 4                | 6    | 6       | 6       | 6    | 9                    | 10   | 114 | 325  | 42   | 66   | 86    |
| 20                      | 4                | 6    | 6       | 6       | 6    | 9                    | 10   | 114 | 266  | 40   | 68   | 85    |
| 21                      | 4                | 6    | 6       | 6       | 6    | 9                    | 10   | 118 | 211  | 76   | 70   | 81    |
| 22                      | 4                | 6    | 6       | 6       | 6    | 9                    | 10   | 140 | 173  | 94   | 72   | 25    |
| 23                      | 5                | 6    | 6       | 6       | 6    | 9                    | 10   | 149 | 173  | 112  | 84   | 21    |
| 24                      | 5                | 6    | 6       | 6       | 6    | 9                    | 10   | 151 | 173  | 105  | 67   | 20    |
| 25                      | 6                | 6    | 6       | 6       | 6    | 8                    | 9    | 11  | 153  | 93   | 73   | 12    |
| 26                      | 6                | 6    | 6       | 6       | 6    | 8                    | 9    | 11  | 155  | 109  | 105  | 89    |
| 27                      | 6                | 6    | 6       | 6       | 6    | 8                    | 9    | 12  | 157  | 105  | 109  | 94    |
| 28                      | 6                | 6    | 6       | 6       | 6    | 8                    | 9    | 14  | 157  | 107  | 109  | 94    |
| 29                      | 5                | 6    | 6       | 6       | 6    | 8                    | 9    | 15  | 159  | 107  | 109  | 94    |
| 30                      | 5                | 6    | 6       | 6       | 6    | 8                    | 9    | 16  | 281  | 109  | 107  | 93    |
| 31                      | 5                | --   | 6       | 6       | 6    | 8                    | --   | --  | 393  | --   | 98   | 93    |
|                         |                  |      |         |         |      |                      |      |     |      |      |      |       |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 135              |      | 6       | 3       | 4.4  | 268                  |      |     |      |      |      |       |
| November.....           | 169              |      | 6       | 5       | 5.6  | 335                  |      |     |      |      |      |       |
| December.....           | 186              |      | 6       | 6       | 6.0  | 369                  |      |     |      |      |      |       |
| Calendar year 1940..... | 9,388            |      | 89      | 3       | 25.7 | 18,620               |      |     |      |      |      |       |
| January.....            | 165              |      | 6       | 5       | 5.3  | 327                  |      |     |      |      |      |       |
| February.....           | 177              |      | 8       | 5       | 6.3  | 351                  |      |     |      |      |      |       |
| March.....              | 265              |      | 9       | 8       | 8.5  | 526                  |      |     |      |      |      |       |
| April.....              | 311              |      | 15      | 9       | 10.3 | 617                  |      |     |      |      |      |       |
| May.....                | 3,550            |      | 393     | 16      | 115  | 7,040                |      |     |      |      |      |       |
| June.....               | 7,537            |      | 507     | 105     | 251  | 14,950               |      |     |      |      |      |       |
| July.....               | 2,674            |      | 112     | 40      | 86.3 | 5,300                |      |     |      |      |      |       |
| August.....             | 2,325            |      | 94      | 64      | 75.0 | 4,610                |      |     |      |      |      |       |
| September.....          | 1,750            |      | 94      | 9       | 58.3 | 3,470                |      |     |      |      |      |       |
| Water year 1940-41..... | 19,244           |      | 507     | 3       | 52.7 | 38,170               |      |     |      |      |      |       |

Note.- Water-stage recorder not operating Oct. 1 to Apr. 23; discharge computed on basis of staff-gage readings made weekly or oftener.

ESCALANTE DESERT BASIN

Coal Creek near Cedar City, Utah

Location.- Water-stage recorder, lat. 37°40'25", long. 113°02'10", in NE¼ sec. 13, T. 36 S., R. 11 W., at flood-control dam 1½ miles southeast of Cedar City and 3½ miles downstream from South Creek.

Drainage area.- 92 square miles.

Records available.- May 1935 to September 1941. May 1915 to November 1919 at approximately same site, but records do not include flow of power canal operated during this period (abandoned since 1919). Records equivalent if flow of power canal is added to those obtained at former site.

Extremes.- Maximum discharge during year, 800 second-feet May 11 (gage height, 2.70 feet), from rating curve extended by broad-crested weir formula; minimum daily, 4 second-feet Dec. 15, 16

1935-41: Maximum discharge observed, 2,910 second-feet July 9, 1936 (gage height, 6.4 feet), from rating curve extended by broad-crested weir formula; minimum observed, 4 second-feet Dec. 15, 1935 (may have been less during periods of ice effect).

Remarks.- Records good except those for periods of ice effect, no gage-height record, daily gage readings, and reconstructed gage-height graph, which are fair. No diversion above station for irrigation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.             | Apr.    | May     | June | July                 | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1                       | 10   | 21   | 9    | b7   | 9    | 13               | 30      | 101     | 271  | 47                   | 21   | 16    |
| 2                       | 9    | 21   | 9    | b6   | b8   | 13               | 21      | 124     | 258  | 45                   | 21   | 15    |
| 3                       | 7    | 21   | 9    | b6   | b7   | 10               | 19      | 119     | 248  | 42                   | 20   | 15    |
| 4                       | 6    | 20   | 9    | b5   | b6   | 13               | 19      | 143     | 232  | 42                   | 20   | 15    |
| 5                       | 7    | 19   | 7    | b5   | b5   | 12               | 20      | 201     | 217  | 40                   | g20  | 14    |
| 6                       | 6    | 17   | 9    | b6   | b6   | 12               | 17      | 248     | 214  | 40                   | g21  | 14    |
| 7                       | 6    | 17   | 9    | b6   | b7   | 12               | 17      | 315     | 346  | 40                   | g30  | 14    |
| 8                       | 6    | 15   | 8    | 7    | 9    | 14               | 21      | 419     | 245  | 38                   | g20  | 14    |
| 9                       | 7    | 14   | 7    | 7    | 9    | 16               | 31      | 356     | 201  | 37                   | 40   | 14    |
| 10                      | 7    | 12   | b7   | 7    | 10   | 15               | 30      | 524     | 183  | 35                   | 22   | 14    |
| 11                      | 8    | 14   | b7   | 7    | 11   | 17               | 26      | 564     | 174  | 35                   | 21   | 13    |
| 12                      | 8    | 12   | 7    | 7    | 10   | 15               | 23      | 610     | 180  | 35                   | 20   | 14    |
| 13                      | 8    | 12   | b6   | a7   | 10   | 21               | 21      | 491     | 189  | 35                   | 18   | g8    |
| 14                      | 8    | 12   | b5   | a7   | 10   | 17               | 21      | 415     | 192  | 34                   | 17   | 17    |
| 15                      | 8    | 12   | b4   | a6   | 11   | 14               | 25      | 398     | 186  | 34                   | 21   | 14    |
| 16                      | 8    | 10   | b4   | a5   | 11   | 17               | 37      | 367     | 177  | 34                   | 21   | 10    |
| 17                      | 8    | 10   | b5   | b5   | 12   | 27               | 24      | 395     | 171  | 33                   | 20   | 12    |
| 18                      | 8    | 10   | b6   | 7    | 12   | 31               | 21      | 353     | 169  | 34                   | 20   | 17    |
| 19                      | 8    | 10   | b6   | 6    | 12   | 32               | 21      | 266     | 151  | 33                   | 15   | 15    |
| 20                      | 8    | 10   | b7   | 6    | 13   | 28               | 22      | 258     | 132  | 32                   | 17   | 15    |
| 21                      | 9    | 10   | b7   | 7    | 14   | 19               | 24      | 291     | 101  | 32                   | 17   | 15    |
| 22                      | 9    | 9    | 7    | 6    | 14   | 19               | 26      | 350     | 94   | 34                   | 18   | 17    |
| 23                      | 9    | 9    | 8    | b7   | 14   | 23               | 27      | 381     | 87   | 53                   | 19   | 17    |
| 24                      | 10   | b8   | 10   | e    | 14   | 19               | 37      | 388     | 79   | 40                   | 19   | 18    |
| 25                      | 10   | b9   | 9    | b7   | 12   | 16               | 45      | 407     | 70   | 30                   | 18   | 17    |
| 26                      | 98   | 10   | 7    | b8   | 11   | 15               | 55      | 403     | 55   | 25                   | 19   | 16    |
| 27                      | 24   | 12   | 8    | 8    | 12   | 22               | 87      | 392     | 50   | 23                   | 18   | 16    |
| 28                      | 27   | 12   | 8    | 8    | 12   | 24               | 106     | 350     | 48   | 23                   | 18   | 16    |
| 29                      | 25   | 10   | 7    | 9    | -    | 23               | 129     | 322     | 47   | 22                   | 17   | 17    |
| 30                      | 24   | 10   | 7    | 9    | -    | 22               | 124     | 298     | 47   | 21                   | 17   | 17    |
| 31                      | 21   | -    | 7    | 9    | -    | 33               | -       | 284     | -    | 21                   | 16   | -     |
| Month                   |      |      |      |      |      | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |      |       |
| October.....            |      |      |      |      |      | 415              | 27      | 6       | 13.4 | 823                  |      |       |
| November.....           |      |      |      |      |      | 387              | 21      | 8       | 12.9 | 768                  |      |       |
| December.....           |      |      |      |      |      | 225              | 10      | 4       | 7.3  | 446                  |      |       |
| Calendar year 1940..... |      |      |      |      |      | 8,698            | 204     | 4       | 23.8 | 17,260               |      |       |
| January.....            |      |      |      |      |      | 211              | 9       | 5       | 6.8  | 419                  |      |       |
| February.....           |      |      |      |      |      | 291              | 14      | 5       | 10.4 | 577                  |      |       |
| March.....              |      |      |      |      |      | 587              | 33      | 10      | 15.9 | 1,160                |      |       |
| April.....              |      |      |      |      |      | 1,126            | 129     | 17      | 37.5 | 2,230                |      |       |
| May.....                |      |      |      |      |      | 10,502           | 610     | 101     | 339  | 20,830               |      |       |
| June.....               |      |      |      |      |      | 4,804            | 271     | 47      | 160  | 9,530                |      |       |
| July.....               |      |      |      |      |      | 1,069            | 47      | 21      | 34.5 | 2,120                |      |       |
| August.....             |      |      |      |      |      | 624              | 40      | 16      | 20.1 | 1,240                |      |       |
| September.....          |      |      |      |      |      | 461              | 23      | 10      | 15.4 | 914                  |      |       |
| Water year 1940-41..... |      |      |      |      |      | 20,702           | 610     | 4       | 56.7 | 41,060               |      |       |

a No gage-height record; discharge interpolated.

b Stage-discharge relation affected by ice.

g Computed from reconstructed gage-height graph based on twice daily gage readings and range in stage of freshet.

Note.- Discharge, Nov. 21 to Jan. 12, Jan. 17 to Feb. 12, computed from staff gage readings.

## SALTON SEA BASIN

Salton Sea, Calif.

Location.- Bench mark set by Imperial Irrigation District, lat. 33°26'55", long. 116°02'20", in NW¼ sec. 27, T. 8 S., R. 9 E., 1 mile northeast of Flgtree John Spring and about 9 miles south of Mecca. Elevation is 242.44 feet below mean sea level.

Drainage area.- 8,360 square miles.

Records available.- November 1904 to September 1941. Records prior to September 1932 in Water-Supply Paper 735.

Extremes.- Maximum stage, 195.0 feet below mean sea level in February and March 1907; minimum since 1906, 250.7 feet below mean sea level in November 1924; bottom of sea (from 1904-5 determinations) is 273.5 feet below mean sea level.

Remarks.- Area of water surface of sea at elevation 250 feet below mean sea level, 266 square miles; area at 240 feet below mean sea level, 328 square miles. See Water-Supply Paper 735 for condensed history of Salton Sea. Elevations in the following table, furnished by Imperial Irrigation District, were determined by leveling from above-mentioned bench mark.

Elevation, in feet, below mean sea level, water year October 1940  
to September 1941

|        |       |         |       |         |       |
|--------|-------|---------|-------|---------|-------|
| Oct. 1 | 243.2 | Feb. 28 | 241.6 | Aug. 1  | 241.6 |
| Nov. 1 | 243.3 | Apr. 1  | 241.0 | Sept. 2 | 241.7 |
| Dec. 2 | 243.1 | May 1   | 241.2 | Oct. 1  | 241.7 |
| Jan. 2 | 242.5 | June 1  | 241.3 |         |       |
| Feb. 1 | 242.0 | July 1  | 241.6 |         |       |

## Palm Canyon Creek near Palm Springs, Calif.

Location.- Water-stage recorder, lat. 33°44'55", long. 116°32'15", in S½ sec. 11, T. 5 S., R. 4 E., three-quarters of a mile upstream from Murray Canyon Creek and 6 miles south of Palm Springs. Altitude of gage, about 700 feet.

Drainage area.- 94.0 square miles.

Records available.- January 1930 to September 1941.

Average discharge.- 11 years, 7.75 second-feet.

Extremes.- Maximum discharge during year, 2,900 second-feet Dec. 24 (gage height, 4.85 feet), from rating curve extended above 150 second-feet on basis of velocity-area studies; no flow Oct. 1 to Dec. 12.

1930-41: Maximum discharge, 3,850 second-feet Feb. 6, 1937 (gage height, 5.60 feet), from rating curve extended above 120 second-feet on basis of velocity-area studies; no flow for several months during most years.

Remarks.- Records fair except those for Dec. 24 and those for periods of no gage-height record, which are poor.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb.   | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|--------|----------------------|------|-----|------|------|------|-------|
| 1                       |                  |      | 0       | f0.8    | 13     | 323                  | 78   | 30  | 7.5  | 1.4  | 0.5  | 0.5   |
| 2                       |                  |      | 0       | .8      | 13     | 188                  | 113  | 25  | 7    | 1.2  | .5   | .5    |
| 3                       |                  |      | 0       | .8      | 12     | 116                  | 63   | 24  | 7    | 1.1  | .6   | .5    |
| 4                       |                  |      | 0       | .8      | 12     | 247                  | 52   | 22  | 6.5  | f.8  | .8   | f.4   |
| 5                       |                  |      | 0       | .9      | f11    | 249                  | 67   | 20  | 6.5  | f.8  | .e   | .4    |
| 6                       |                  |      | 0       | 1.0     | 15     | 140                  | 52   | 20  | 6    | f.7  | f1.2 | .3    |
| 7                       |                  |      | 0       | .8      | 15     | 104                  | 45   | 20  | 6    | .7   | 1.2  | .3    |
| 8                       |                  |      | 0       | .8      | 11     | f84                  | 42   | 19  | 6.5  | .6   | 3.6  | .3    |
| 9                       |                  |      | 0       | .9      | 10     | 73                   | 39   | 19  | 5.5  | f.6  | 2.3  | .3    |
| 10                      |                  |      | 0       | f.9     | 10     | 65                   | 49   | 18  | 4.9  | f.6  | 1.5  | .3    |
| 11                      |                  |      | 0       | f.8     | 67     | f54                  | 76   | 17  | 4.5  | f.6  | 10   | .3    |
| 12                      |                  |      | .2      | .8      | 95     | 56                   | 61   | 17  | 4.0  | f.5  | 3.0  | .3    |
| 13                      |                  |      | .5      | .8      | 25     | 94                   | 61   | 15  | 4.0  | f.5  | 1.5  | .3    |
| 14                      |                  |      | .5      | .8      | 33     | 207                  | 56   | 16  | 4.0  | f.5  | 1.0  | .4    |
| 15                      |                  |      | .6      | .9      | 58     | 159                  | 52   | 16  | 4.0  | f.5  | .9   | .3    |
| 16                      |                  |      | 1.1     | .9      | 27     | 113                  | 54   | 15  | 3.6  | f.4  | .8   | .3    |
| 17                      |                  |      | 14      | .9      | 22     | 91                   | 50   | 14  | 3.6  | .6   | .8   | .3    |
| 18                      |                  |      | f1.6    | .8      | 20     | 76                   | 49   | 14  | 3.3  | 1.8  | .7   | .2    |
| 19                      |                  |      | f1.4    | .8      | 20     | 65                   | 45   | 14  | 3.3  | 1.8  | .7   | .2    |
| 20                      |                  |      | 1.1     | .8      | 60     | 57                   | 44   | 13  | 3.0  | .7   | .7   | .2    |
| 21                      |                  |      | .9      | 2.0     | 64     | 52                   | 39   | 12  | 2.6  | .3   | .6   | .2    |
| 22                      |                  |      | .9      | 2.5     | 136    | 49                   | 39   | 12  | 2.3  | .4   | .6   | .3    |
| 23                      |                  |      | 1.6     | 2.5     | 71     | 45                   | 36   | 12  | 2.0  | f.5  | .6   | .3    |
| 24                      |                  |      | 860     | f4.8    | 54     | 40                   | 33   | 13  | 2.0  | .4   | .6   | .3    |
| 25                      |                  |      | f180    | f2.0    | 47     | 39                   | 33   | 10  | 1.8  | .4   | .6   | .3    |
| 26                      |                  |      | f26     | 2.5     | 40     | 36                   | 33   | 7.5 | 1.8  | .4   | .5   | .3    |
| 27                      |                  |      | f9      | 5.5     | 34     | 31                   | 28   | 7.5 | 2.0  | .4   | .5   | .3    |
| 28                      |                  |      | 6       | 184     | 30     | 30                   | 26   | 7   | 2.0  | .4   | .5   | .3    |
| 29                      |                  |      | 5.5     | 94      | -      | 36                   | 25   | 9   | 2.0  | .4   | .5   | .5    |
| 30                      |                  |      | 3.3     | 34      | -      | 31                   | 26   | 9   | 1.6  | .4   | .5   | .4    |
| 31                      |                  |      | 2.0     | 14      | -      | 37                   | -    | 8.5 | -    | .4   | .5   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean   | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 0                | 0    | 0       | 0       | 0      | 0                    |      |     |      |      |      |       |
| November.....           | 0                | 0    | 0       | 0       | 0      | 0                    |      |     |      |      |      |       |
| December.....           | 1,116.2          | 860  | 0       | 36.0    | 2,210  |                      |      |     |      |      |      |       |
| Calendar year 1940..... | 2,184.6          | 860  | 0       | 5.97    | 4,330  |                      |      |     |      |      |      |       |
| January.....            | 364.6            | 184  | .8      | 11.8    | 723    |                      |      |     |      |      |      |       |
| February.....           | 1,028            | 156  | 10      | 36.7    | 2,040  |                      |      |     |      |      |      |       |
| March.....              | 2,396.6          | 323  | 30      | 96.3    | 5,820  |                      |      |     |      |      |      |       |
| April.....              | 1,466            | 113  | 25      | 48.9    | 2,810  |                      |      |     |      |      |      |       |
| May.....                | 476.5            | 30   | 7       | 15.4    | 945    |                      |      |     |      |      |      |       |
| June.....               | 120.8            | 7.5  | 1.6     | 4.05    | 240    |                      |      |     |      |      |      |       |
| July.....               | 20.8             | 1.8  | .3      | .57     | 41     |                      |      |     |      |      |      |       |
| August.....             | 39.1             | 10   | .5      | 1.26    | 78     |                      |      |     |      |      |      |       |
| September.....          | 9.8              | .5   | .2      | .33     | 19     |                      |      |     |      |      |      |       |
| Water year 1940-41..... | 7,627.8          | 860  | 0       | 20.3    | 15,130 |                      |      |     |      |      |      |       |

Peak discharge.- Dec. 24 (11 a.m.) 2,900 sec.-ft.; Jan. 23 (2 p.m.) 402 sec.-ft.; Feb. 22 (8:30 a.m.) 380 sec.-ft.; Mar. 1 (2:30 a.m.) 623 sec.-ft.; Mar. 1 (6 p.m.) 465 sec.-ft.; Mar. 4 (3:30 p.m.) 454 sec.-ft.

f Computed on basis of partly estimated gage-height record.

Notes.- No gage-height record Jan. 2-9, 12-23, 25, Feb. 1-4, Mar. 9-10, July 24 to Aug. 5, Aug. 9 to Sept. 3; discharge computed on basis of recorded range in stage, hourly rainfall records, and records for San Jacinto River near San Jacinto, and Santa Ana River near Mentone.

## Deep Creek near Hesperia, Calif.

Location.- Water-stage recorder and broad-crested weir control, lat. 34°20'30", long. 117°13'40", in SE $\frac{1}{4}$  sec. 18, T. 3 N., R. 3 W., half a mile upstream from confluence with West Fork of Mojave River and 8 miles southeast of Hesperia. Altitude of gage, about 3,050 feet.

Drainage area.- 137 square miles.

Records available.- December 1929 to September 1941.

Average discharge.- 11 years (1930-41), 72.1 second-feet.

Extremes.- Maximum discharge during year, 5,500 second-feet Dec. 24 (gage height, 5.85 feet); minimum, 1.5 second-feet Oct. 1, 1929-41; Maximum discharge, 46,600 second-feet Mar. 2, 1938, by slope-area method; minimum, 0.1 second-foot at times during 1932-34, 1936.

Remarks.- Records good. Storage in Lake Arrowhead above station. Hesperia Water Co.'s canal diverts about 2 miles above station.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec.             | Jan.    | Feb.    | Mar.  | Apr.                 | May | June | July | Aug. | Sept. |
|-------------------------|------|------|------------------|---------|---------|-------|----------------------|-----|------|------|------|-------|
| 1                       | 1.8  | 6    | 7                | 53      | 43      | 1,030 | 552                  | 297 | 79   | 27   | 7.5  | 5.5   |
| 2                       | 1.9  | 6    | 7                | 44      | 40      | 728   | 592                  | 261 | 79   | 25   | 7    | 5     |
| 3                       | 2.0  | 6    | 7                | 39      | 39      | 568   | 422                  | 268 | 73   | 24   | 6.5  | 5.5   |
| 4                       | 2.0  | 6    | 7                | 36      | 40      | 949   | 356                  | 274 | 73   | 22   | 6.5  | 5.5   |
| 5                       | 1.8  | 6    | 7                | 34      | 43      | 762   | 1,280                | 274 | 78   | 21   | 7.5  | 5     |
| 6                       | 1.8  | 6.5  | 7                | 30      | 59      | 592   | 651                  | 274 | 67   | 20   | 15   | 5     |
| 7                       | 1.8  | 6.5  | 7                | 28      | 54      | 498   | 609                  | 265 | 66   | 20   | 12   | 4.9   |
| 8                       | 2.0  | 6.5  | 7                | 26      | 44      | 505   | 490                  | 254 | 66   | 18   | 11   | 4.9   |
| 9                       | 2.4  | 6.5  | 7                | 26      | 40      | 415   | 356                  | 248 | 64   | 17   | 9    | 4.9   |
| 10                      | 2.4  | 6.5  | 7                | 26      | 39      | 300   | 468                  | 242 | 58   | 17   | 13   | 4.9   |
| 11                      | 2.4  | 6.5  | 7                | 29      | 189     | 290   | 717                  | 235 | 53   | 17   | 20   | 4.9   |
| 12                      | 2.4  | 6.5  | 9                | 28      | 251     | 342   | 528                  | 230 | 50   | 16   | 15   | 4.9   |
| 13                      | 2.5  | 6.5  | 10               | 24      | 140     | 744   | 353                  | 208 | 47   | 15   | 13   | 4.9   |
| 14                      | 2.6  | 6.5  | 9                | 24      | 125     | 1,250 | 356                  | 196 | 44   | 15   | 12   | 5     |
| 15                      | 2.6  | 6.5  | 7                | 24      | 473     | 820   | 370                  | 176 | 42   | 14   | 11   | 6     |
| 16                      | 2.6  | 6.5  | 20               | 22      | 385     | 600   | 392                  | 162 | 37   | 14   | 11   | 6     |
| 17                      | 2.6  | 7    | 467              | 22      | 342     | 536   | 536                  | 158 | 35   | 11   | 9.5  | 6     |
| 18                      | 2.6  | 29   | 139              | 22      | 300     | 460   | 528                  | 148 | 32   | 9.5  | 9    | 6     |
| 19                      | 2.6  | 34   | 60               | 21      | 196     | 335   | 496                  | 136 | 35   | 9.5  | 8    | 6     |
| 20                      | 2.6  | 19   | 34               | 20      | 1,620   | 300   | 452                  | 128 | 32   | 9    | 7.5  | 5.5   |
| 21                      | 2.8  | 15   | 25               | 21      | 1,850   | 268   | 370                  | 118 | 30   | 9    | 7    | 6     |
| 22                      | 2.8  | 12   | 23               | 24      | 1,290   | 248   | 261                  | 104 | 30   | 9    | 7    | 6     |
| 23                      | 2.9  | 8.5  | 112              | 24      | 708     | 268   | 261                  | 100 | 30   | 9    | 7    | 6.5   |
| 24                      | 2.9  | 8    | 1,810            | 115     | 482     | 392   | 261                  | 100 | 29   | 10   | 6.5  | 6.5   |
| 25                      | 4.1  | 8    | 501              | 155     | 435     | 224   | 261                  | 100 | 29   | 12   | 6.5  | 6     |
| 26                      | 21   | 8    | 155              | 92      | 378     | 213   | 274                  | 92  | 29   | 14   | 6.5  | 6     |
| 27                      | 24   | 8    | 92               | 79      | 280     | 213   | 280                  | 90  | 29   | 14   | 6.5  | 6.5   |
| 28                      | 13   | 7.5  | 66               | 73      | 233     | 208   | 287                  | 88  | 29   | 13   | 6.5  | 7     |
| 29                      | 8    | 7.5  | 73               | 64      | -       | 438   | 294                  | 88  | 28   | 12   | 6.5  | 7.5   |
| 30                      | 7    | 7    | 73               | 54      | -       | 335   | 307                  | 85  | 27   | 8.5  | 6.5  | 7     |
| 31                      | 6.5  | -    | 64               | 47      | -       | 335   | -                    | 82  | -    | 8    | 6.5  | -     |
| Month                   |      |      | Second-foot-days | Maximum | Minimum | Mean  | Run-off in acre-feet |     |      |      |      |       |
| October.....            |      |      | 140.4            | 24      | 1.8     | 4.53  | 278                  |     |      |      |      |       |
| November.....           |      |      | 280.0            | 34      | 6       | 9.33  | 555                  |     |      |      |      |       |
| December.....           |      |      | 3,825            | 1,810   | 7       | 125   | 7,580                |     |      |      |      |       |
| Calendar year 1940..... |      |      | 15,445.3         | 1,810   | .5      | 42.2  | 30,680               |     |      |      |      |       |
| January.....            |      |      | 1,323            | 155     | 20      | 42.7  | 2,620                |     |      |      |      |       |
| February.....           |      |      | 10,121           | 1,850   | 39      | 561   | 20,070               |     |      |      |      |       |
| March.....              |      |      | 15,154           | 1,250   | 208     | 489   | 30,060               |     |      |      |      |       |
| April.....              |      |      | 13,352           | 1,260   | 261     | 445   | 26,480               |     |      |      |      |       |
| May.....                |      |      | 5,473            | 287     | 82      | 177   | 10,860               |     |      |      |      |       |
| June.....               |      |      | 1,398            | 78      | 27      | 46.6  | 2,770                |     |      |      |      |       |
| July.....               |      |      | 459.5            | 27      | 8       | 14.8  | 911                  |     |      |      |      |       |
| August.....             |      |      | 284.0            | 20      | 6.5     | 9.16  | 553                  |     |      |      |      |       |
| September.....          |      |      | 171.3            | 7.5     | 4.9     | 5.71  | 340                  |     |      |      |      |       |
| Water year 1940-41..... |      |      | 51,979.2         | 1,850   | 1.8     | 142   | 103,100              |     |      |      |      |       |

Peak discharge.- Dec. 24 (1 p.m.) 5,500 sec.-ft.; Feb. 20 (10 p.m.) 4,600 sec.-ft.; Mar. 1 (3 a.m.) 1,750 sec.-ft.; Mar. 4 (11 a.m.) 1,220 sec.-ft.; Mar. 14 (8 a.m.) 1,540 sec.-ft.; Apr. 5 (3 a.m.) 2,280 sec.-ft.



Mojave River at lower narrows, near Victorville, Calif.

Location.- Water-stage recorder, lat. 34°34'25", long. 117°19'10", in SW¼ sec. 29, T. 6 N., R. 4 W., 500 feet upstream from bridge on U. S. Highway 66 and 3 miles northwest of Victorville.

Drainage area.- 530 square miles.

Records available.- October 1936 to September 1941. February 1899 to July 1906, November 1930 to September 1936 at site 3 miles upstream.

Extremes.- Maximum discharge during year, 4,480 second-feet Feb. 21 (gage height, 5.10 feet); minimum daily, 15 second-feet on July 3, 4.  
1930-41: Maximum discharge, 70,600 second-feet Mar. 2, 1938 (gage height, 16.70 feet), by slope-area method; minimum, 11 second-feet Aug. 12, 1937.

Remarks.- Records good except Feb. 16 to Apr. 16, which are fair. Storage at Lake Arrowhead and Lake Gregory. Diversions for irrigation from Deep Creek by Hesperia Water Co. and from Mojave River at Victorville.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb.  | Mar.   | Apr.  | May | June | July    | Aug. | Sept. |
|-------------------------|------|------|------|------|-------|--------|-------|-----|------|---------|------|-------|
| 1                       | 27   | 41   | 45   | 55   | 53    | 1,420  | 671   | 420 | 48   | 18      | 22   | 29    |
| 2                       | 29   | 41   | 45   | 55   | 51    | 1,540  | 848   | 332 | 44   | 20      | 24   | 25    |
| 3                       | 29   | 41   | 45   | 51   | 51    | 1,550  | 715   | 308 | 40   | 15      | 22   | 25    |
| 4                       | 32   | 41   | 45   | 51   | 51    | 2,020  | 548   | 317 | 37   | 15      | 22   | 31    |
| 5                       | 31   | 41   | 45   | 53   | 49    | 2,030  | 1,490 | 308 | 33   | 17      | 20   | 31    |
| 6                       | 31   | 41   | 45   | 53   | 51    | 1,150  | 1,040 | 303 | 29   | 17      | 22   | 31    |
| 7                       | 29   | 40   | 47   | 51   | 51    | 990    | 839   | 294 | 24   | 17      | 18   | 27    |
| 8                       | 29   | 40   | 47   | 49   | 51    | 848    | 796   | 271 | 25   | 18      | 20   | 29    |
| 9                       | 29   | 40   | 45   | 49   | 53    | 745    | 621   | 252 | 25   | 18      | 18   | 29    |
| 10                      | 27   | 41   | 47   | 53   | 53    | 529    | 836   | 245 | 22   | 17      | 35   | 29    |
| 11                      | 27   | 36   | 47   | 53   | 55    | 399    | 1,270 | 232 | 20   | 18      | 37   | 29    |
| 12                      | 29   | 38   | 49   | 53   | 72    | 404    | 1,090 | 228 | 24   | 20      | 29   | 29    |
| 13                      | 31   | 40   | 47   | 53   | 55    | 1,320  | 737   | 201 | 27   | 20      | 31   | 29    |
| 14                      | 32   | 40   | 45   | 51   | 47    | 1,770  | 670   | 189 | 29   | 18      | 27   | 31    |
| 15                      | 31   | 36   | 45   | 51   | 157   | 1,450  | 642   | 168 | 31   | 22      | 27   | 27    |
| 16                      | 31   | 38   | 49   | 53   | 297   | 1,020  | 607   | 151 | 31   | 22      | 27   | 29    |
| 17                      | 32   | 43   | 57   | 51   | 282   | 920    | 663   | 141 | 29   | 18      | 27   | 33    |
| 18                      | 34   | 47   | 51   | 51   | 354   | 839    | 692   | 132 | 29   | 25      | 24   | 31    |
| 19                      | 34   | 47   | 47   | 51   | 215   | 600    | 642   | 122 | 29   | 25      | 24   | 31    |
| 20                      | 34   | 45   | 45   | 51   | 1,060 | 487    | 600   | 104 | 27   | 22      | 25   | 33    |
| 21                      | 32   | 43   | 43   | 51   | 3,060 | 394    | 568   | 89  | 27   | 22      | 22   | 35    |
| 22                      | 31   | 43   | 43   | 53   | 1,740 | 362    | 404   | 82  | 22   | 22      | 20   | 31    |
| 23                      | 31   | 40   | 49   | 53   | 1,100 | 332    | 362   | 79  | 25   | 22      | 20   | 29    |
| 24                      | 31   | 43   | 266  | 53   | 832   | 436    | 347   | 71  | 25   | 24      | 22   | 31    |
| 25                      | 34   | 43   | 368  | 55   | 740   | 357    | 337   | 71  | 27   | 22      | 20   | 31    |
| 26                      | 41   | 43   | 85   | 57   | e590  | 280    | 332   | 66  | 29   | 25      | 24   | 31    |
| 27                      | 38   | 43   | 86   | 53   | e480  | 287    | 342   | 58  | 31   | 27      | 24   | 29    |
| 28                      | 40   | 45   | 59   | 55   | e350  | 254    | 347   | 48  | 24   | 29      | 24   | 29    |
| 29                      | 41   | 45   | 57   | 55   | -     | 530    | 347   | 46  | 20   | 27      | 24   | 29    |
| 30                      | 41   | 45   | 55   | 49   | -     | 535    | 357   | 51  | 18   | 29      | 24   | 29    |
| 31                      | 41   | -    | 53   | 53   | -     | 404    | -     | 44  | -    | 25      | 24   | -     |
| Month                   |      |      |      |      |       |        |       |     |      |         |      |       |
| October.....            |      |      |      |      |       | 1,009  | 41    | 27  | 32.5 | 2,000   |      |       |
| November.....           |      |      |      |      |       | 1,248  | 47    | 36  | 41.6 | 2,480   |      |       |
| December.....           |      |      |      |      |       | 2,082  | 368   | 43  | 67.2 | 4,130   |      |       |
| Calendar year 1940..... |      |      |      |      |       | 14,124 | 368   | 17  | 38.6 | 28,030  |      |       |
| January.....            |      |      |      |      |       | 1,623  | 57    | 49  | 52.4 | 3,220   |      |       |
| February.....           |      |      |      |      |       | 11,978 | 3,060 | 49  | 428  | 25,760  |      |       |
| March.....              |      |      |      |      |       | 26,982 | 2,030 | 254 | 838  | 51,530  |      |       |
| April.....              |      |      |      |      |       | 19,760 | 1,490 | 332 | 659  | 39,190  |      |       |
| May.....                |      |      |      |      |       | 5,433  | 420   | 44  | 175  | 10,780  |      |       |
| June.....               |      |      |      |      |       | 851    | 48    | 18  | 28.4 | 1,690   |      |       |
| July.....               |      |      |      |      |       | 656    | 29    | 15  | 21.2 | 1,300   |      |       |
| August.....             |      |      |      |      |       | 749    | 37    | 18  | 24.2 | 1,490   |      |       |
| September.....          |      |      |      |      |       | 892    | 35    | 25  | 29.7 | 1,770   |      |       |
| Water year 1940-41..... |      |      |      |      |       | 72,263 | 3,060 | 15  | 198  | 143,300 |      |       |

Peak discharge.- Dec. 24 (10 p.m.) 1,500 sec.-ft.; Feb. 21 (3 a.m.) 4,480 sec.-ft.; Mar. 1 (8 a.m.) 2,480 sec.-ft.; Mar. 4 (4:30 p.m.) 3,130 sec.-ft.; Mar. 14 (2 p.m.) 2,440 sec.-ft.; Apr. 5 (9 a.m.) 2,890 sec.-ft.

e Indefinite stage-discharge relation; discharge computed on basis of records for Deep Creek and West Fork Mojave River near Hesperia.

## Mojave River at Barstow, Calif.

Location.- Water-stage recorder, lat. 34°54'25". long. 117°01'20", in SW $\frac{1}{4}$  sec. 31, T. 10 N., R. 1 W., on U. S. Highway 91 at Barstow. Altitude of gage, about 2,090 feet.

Records available.- October 1930 to September 1941.

Average discharge.- 11 years, 47.7 second-feet.

Extremes.- Maximum discharge during year, 3,520 second-feet Mar. 5 (gage height, 4.22 feet); no flow for several months.

1930-41: Maximum discharge, 64,300 second-feet Mar. 3, 1938 (gage height, 8.60 feet), by slope-area method; no flow for several months each year.

Remarks.- Records fair except those for periods of indefinite stage-discharge relation or no gage-height record, which are poor. Storage and many diversions above station.

## Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb.  | Mar.             | Apr.    | May     | June | July                 | Aug. | Sept. |
|-------------------------|------|------|------|------|-------|------------------|---------|---------|------|----------------------|------|-------|
| 1                       |      |      |      |      | 0     | 749              | 370     | 275     |      |                      |      |       |
| 2                       |      |      |      |      | 0     | 1,440            | 574     | 313     |      |                      |      |       |
| 3                       |      |      |      |      | 0     | 1,120            | 591     | 250     |      |                      |      |       |
| 4                       |      |      |      |      | 0     | 1,320            | 522     | 204     |      |                      |      |       |
| 5                       |      |      |      |      | 0     | 2,460            | 763     | 184     |      |                      |      |       |
| 6                       |      |      |      |      | 0     | el,200           | 1,140   | 184     |      |                      |      |       |
| 7                       |      |      |      |      | 0     | e900             | 860     | 172     |      |                      |      |       |
| 8                       |      |      |      |      | 0     | e750             | 700     | 172     |      |                      |      |       |
| 9                       |      |      |      |      | 0     | a600             | 556     | e150    |      |                      |      |       |
| 10                      |      |      |      |      | 0     | a400             | 428     | a130    |      |                      |      |       |
| 11                      |      |      |      |      | 0     | 370              | 794     | a127    |      |                      |      |       |
| 12                      |      |      |      |      | 0     | 384              | 1,280   | a120    |      |                      |      |       |
| 13                      |      |      |      |      | 0     | 567              | 960     | a110    |      |                      |      |       |
| 14                      |      |      |      |      | 0     | 1,310            | e600    | a95     |      |                      |      |       |
| 15                      |      |      |      |      | 0     | 2,000            | e570    | a80     |      |                      |      |       |
| 16                      |      |      |      |      | 0     | 1,140            | 539     | a70     |      |                      |      |       |
| 17                      |      |      |      |      | 0     | 920              | 539     | a80     |      |                      |      |       |
| 18                      |      |      |      |      | 0     | 720              | 545     | a51     |      |                      |      |       |
| 19                      |      |      |      |      | 0     | 627              | 560     | a42     |      |                      |      |       |
| 20                      |      |      |      |      | 0     | 522              | e500    | a34     |      |                      |      |       |
| 21                      |      |      |      |      | 1,060 | 399              | e450    | a27     |      |                      |      |       |
| 22                      |      |      |      |      | 1,590 | 355              | 370     | a20     |      |                      |      |       |
| 23                      |      |      |      |      | 1,020 | 340              | 313     | a15     |      |                      |      |       |
| 24                      |      |      |      |      | 661   | 262              | 275     | a10     |      |                      |      |       |
| 25                      |      |      |      |      | 642   | 355              | 288     | a3      |      |                      |      |       |
| 26                      |      |      |      |      | 574   | 239              | 239     | a.5     |      |                      |      |       |
| 27                      |      |      |      |      | 370   | 227              | 239     | a.1     |      |                      |      |       |
| 28                      |      |      |      |      | 300   | 193              | 288     | 0       |      |                      |      |       |
| 29                      |      |      |      |      | -     | 172              | 275     | 0       |      |                      |      |       |
| 30                      |      |      |      |      | -     | 369              | 288     | 0       |      |                      |      |       |
| 31                      |      |      |      |      | -     | 370              | -       | 0       |      |                      |      |       |
| Month                   |      |      |      |      |       | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |      |       |
| October.....            |      |      |      |      |       | 0                | 0       | 0       | 0    | 0                    |      |       |
| November.....           |      |      |      |      |       | 0                | 0       | 0       | 0    | 0                    |      |       |
| December.....           |      |      |      |      |       | 0                | 0       | 0       | 0    | 0                    |      |       |
| Calendar year 1940..... |      |      |      |      |       | 0                | 0       | 0       | 0    | 0                    |      |       |
| January.....            |      |      |      |      |       | 0                | 0       | 0       | 0    | 0                    |      |       |
| February.....           |      |      |      |      |       | 6,217            | 1,590   | 0       | 222  | 12,330               |      |       |
| March.....              |      |      |      |      |       | 22,880           | 2,460   | 172     | 738  | 45,380               |      |       |
| April.....              |      |      |      |      |       | 16,406           | 1,280   | 239     | 547  | 32,540               |      |       |
| May.....                |      |      |      |      |       | 2,898.6          | 313     | 0       | 95.6 | 5,780                |      |       |
| June.....               |      |      |      |      |       | 0                | 0       | 0       | 0    | 0                    |      |       |
| July.....               |      |      |      |      |       | 0                | 0       | 0       | 0    | 0                    |      |       |
| August.....             |      |      |      |      |       | 0                | 0       | 0       | 0    | 0                    |      |       |
| September.....          |      |      |      |      |       | 0                | 0       | 0       | 0    | 0                    |      |       |
| Water year 1940-41..... |      |      |      |      |       | 48,401.6         | 2,460   | 0       | 133  | 96,000               |      |       |

Peak discharges.- Feb. 21 (9:50 p.m.) 2,390 sec.-ft.; Feb. 22 (3 a.m.) 2,360 sec.-ft.; Mar. 1 Mar. 1 (8 p.m.) 1,920 sec.-ft.; Mar. 5 (9 a.m.) 3,520 sec.-ft.; Mar. 14 (10 p.m.) 2,430 sec.-ft.; Apr. 5 (6 p.m.) 2,490 sec.-ft.

a No gage-height record; discharge computed on basis of four discharge measurements, one field estimate, and records for station near Victorville.

e Indefinite stage-discharge relation; discharge computed on basis of one discharge measurement and records for station near Victorville.

West Fork of Mojave River near Hesperia, Calif.

Location.- Water-stage recorder, lat. 34°20'20", long. 117°14'35", in SE¼ sec. 13, T. 3 N., R. 4 W., at highway bridge, half a mile upstream from confluence with Deep Creek and 7 miles southeast of Hesperia. Altitude of gage, about 3,050 feet.

Drainage area.- 74.8 square miles.

Records available.- January 1930 to September 1941.

Average discharge.- 11 years, 35.1 second-feet.

Extremes.- Maximum discharge during year, 2,280 second-feet Mar. 4 (gage height, 6.05 feet); no flow for several months.

1930-41: Maximum discharge, 26,100 second-feet Mar. 2, 1938, by slope-area method; no flow for several months of each year.

Remarks.- Records good. Storage at Lake Gregory above station.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb.  | Mar.  | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|-------|-------|------|-----|------|------|------|-------|
| 1   |      |      | 0    | 20   | 16    | 731   | 404  | 164 | 26   | 0.6  |      |       |
| 2   |      |      | 0    | 16   | 15    | 697   | 346  | 128 | 25   | .4   |      |       |
| 3   |      |      | 0    | 5.5  | 14    | 487   | 254  | 122 | 25   | .4   |      |       |
| 4   |      |      | 0    | 4.0  | 13    | 1,530 | 269  | 112 | 24   | .4   |      |       |
| 5   |      |      | 0    | 3.2  | 11    | 907   | 564  | 98  | 22   | .3   |      |       |
| 6   |      |      | 0    | 2.5  | 31    | 540   | 317  | 85  | 21   | .3   |      |       |
| 7   |      |      | 0    | 1.7  | 30    | 435   | 269  | 82  | 24   | .3   |      |       |
| 8   |      |      | 0    | 1.3  | 22    | 358   | 226  | 72  | 24   | .3   |      |       |
| 9   |      |      | 0    | 1.0  | 18    | 296   | 210  | 66  | 22   | .2   |      |       |
| 10  |      |      | 0    | 1.5  | 16    | 248   | 406  | 60  | 20   | .2   |      |       |
| 11  |      |      | 0    | 1.7  | 117   | 205   | 614  | 56  | 19   | .2   |      |       |
| 12  |      |      | 0    | 1.7  | 139   | 316   | 432  | 56  | 17   | .2   |      |       |
| 13  |      |      | 0    | 1.5  | 68    | 499   | 366  | 56  | 14   | .1   |      |       |
| 14  |      |      | 0    | 1.5  | 83    | 866   | 368  | 56  | 11   | .1   |      |       |
| 15  |      |      | 0    | 1.3  | 233   | 494   | 308  | 55  | 11   | .1   |      |       |
| 16  |      |      | .4   | 1.3  | 212   | 355   | 272  | 53  | 10   | .1   |      |       |
| 17  |      |      | 65   | 1.5  | 217   | 293   | 243  | 47  | 8    | .1   |      |       |
| 18  |      |      | 17   | 1.5  | 136   | 263   | 240  | 42  | 8    | .1   |      |       |
| 19  |      |      | 11   | 1.7  | 107   | 228   | 218  | 41  | 6    | .1   |      |       |
| 20  |      |      | 7    | 1.4  | 1,090 | 203   | 208  | 40  | 6.5  | .1   |      |       |
| 21  |      |      | 3.7  | 1.4  | 972   | 186   | 198  | 37  | 6    |      |      |       |
| 22  |      |      | .6   | 7.5  | 768   | 171   | 181  | 34  | 7.5  |      |      |       |
| 23  |      |      |      | 9.5  | 439   | 153   | 167  | 33  | 7.5  |      |      |       |
| 24  |      |      | 256  | 91   | 371   | 142   | 153  | 31  | 7.5  |      |      |       |
| 25  |      |      | 76   | 76   | 287   | 134   | 134  | 30  | 2.8  |      |      |       |
| 26  |      |      | f38  | 49   | 232   | 106   | 124  | 29  | 1.6  | .02  |      |       |
| 27  |      |      | f35  | 39   | 200   | 118   | 116  | 28  | 1.9  |      |      |       |
| 28  |      |      | f31  | 31   | 292   | 114   | 108  | 27  | 2.3  |      |      |       |
| 29  |      |      | 49   | 27   | -     | 351   | 100  | 27  | 1.6  |      |      |       |
| 30  |      |      | 47   | 22   | -     | 178   | 166  | 26  | 1.0  |      |      |       |
| 31  |      |      | 29   | 18   | -     | 207   | -    | 26  | -    |      |      |       |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 0                | 0       | 0       | 0    | 0                    |
| November.....           | 0                | 0       | 0       | 0    | 0                    |
| December.....           | 712.7            | 256     | 0       | 23.0 | 1,410                |
| Calendar year 1940..... | 4,266.84         | 344     | 0       | 11.7 | 8,460                |
| January.....            | 442.2            | 91      | 1.0     | 14.3 | 877                  |
| February.....           | 6,147            | 1,090   | 11      | 220  | 12,190               |
| March.....              | 11,763           | 1,530   | 114     | 379  | 23,330               |
| April.....              | 7,991            | 614     | 100     | 266  | 15,830               |
| May.....                | 1,618            | 164     | 28      | 58.6 | 3,810                |
| June.....               | 386.2            | 26      | 1.0     | 12.8 | 764                  |
| July.....               | 4.82             | .6      | -       | .165 | 9.6                  |
| August.....             | 0                | 0       | 0       | 0    | 0                    |
| September.....          | 0                | 0       | 0       | 0    | 0                    |
| Water year 1940-41..... | 29,253.92        | 1,530   | 0       | 60.1 | 58,020               |

Peak discharge.- Feb. 20 (1 p.m.) 1,860 sec.-ft.; Mar. 1 (12:30 a.m.) 1,615 sec.-ft.; Mar. 4 (3 p.m.) 2,280 sec.-ft.; Mar. 14 (7 a.m.) 1,420 sec.-ft.; Apr. 5 (1 a.m.) 1,130 sec.-ft.; Apr. 11 (4 a.m.) 1,270 sec.-ft.  
 f Computed on basis of partly estimated gage-height record.

## ANTELOPE VALLEY BASIN

Rock Creek near Valyermo, Calif.

Location.- Water-stage recorder, lat. 34°25'10", long. 117°50'25", in NE¼ sec. 20, T. 4 N., R. 9 W., 1¼ miles southeast of Valyermo. Altitude of gage, about 4,050 feet.

Drainage area.- 23.0 square miles.

Records available.- January 1923 to September 1937, May 1938 to September 1941.

Average discharge.- 17 years (1923-37, 1938-41), 14.8 second-feet.

Extremes.- Maximum discharge during year, 512 second-feet Feb. 21 (gage height, 4.10 feet), from rating curve extended above 290 second-feet by logarithmic plotting; minimum, 4.2 second-feet Oct. 23, 24.

1923-41: Maximum discharge, 8,300 second-feet Mar. 2, 1938, by slope-area method; minimum, 1.2 second-feet Aug. 22, 1925.

Remarks.- Records good except those for days of high water Dec. 24, Feb. 20-22, which are fair. No diversions above station.

Cooperation.- Results of 15 discharge measurements furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 5                | 4.5  | 5       | 18      | 19   | 168                  | 82   | 96  | 104  | 50   | 28   | 18    |
| 2                       | 5                | 4.5  | 5       | 16      | 17   | 136                  | 73   | 96  | 104  | 50   | 29   | 18    |
| 3                       | 5                | 4.5  | 5       | 15      | 16   | 111                  | 74   | 104 | 100  | 49   | 28   | 17    |
| 4                       | 4.8              | 4.5  | 4.8     | 14      | 15   | 147                  | 90   | 109 | 96   | 48   | 27   | 17    |
| 5                       | 4.8              | 4.5  | 4.8     | 14      | 15   | 120                  | 159  | 113 | 107  | 48   | 27   | 17    |
| 6                       | 4.8              | 4.5  | 4.8     | 12      | 21   | 96                   | 124  | 126 | 104  | 46   | 27   | 17    |
| 7                       | 4.8              | 4.5  | 4.8     | 12      | 17   | 86                   | 115  | 130 | 100  | 45   | 27   | 17    |
| 8                       | 4.8              | 4.5  | 4.8     | 12      | 16   | 90                   | 102  | 132 | 96   | 44   | 27   | 17    |
| 9                       | 4.8              | 4.5  | 4.8     | 12      | 16   | 78                   | 100  | 132 | 92   | 43   | 26   | 17    |
| 10                      | 4.8              | 4.8  | 4.8     | 12      | 16   | 73                   | 97   | 136 | 90   | 41   | 27   | 16    |
| 11                      | 4.8              | 4.8  | 4.8     | 12      | 34   | 72                   | 109  | 145 | 87   | 40   | 27   | 15    |
| 12                      | 4.8              | 4.8  | 5.5     | 12      | 33   | 116                  | 102  | 132 | 90   | 39   | 26   | 15    |
| 13                      | 4.8              | 4.8  | 5.5     | 12      | 29   | 204                  | 90   | 134 | 87   | 37   | 26   | 15    |
| 14                      | 4.8              | 4.5  | 6       | 12      | 41   | 171                  | 100  | 134 | 84   | 37   | 25   | 15    |
| 15                      | 4.5              | 4.5  | 6       | 12      | 76   | 149                  | 102  | 120 | 83   | 36   | 26   | 15    |
| 16                      | 4.8              | 4.5  | 7.5     | 12      | 78   | 132                  | 102  | 126 | 83   | 35   | 25   | 15    |
| 17                      | 4.8              | 4.8  | 46      | 12      | 132  | 122                  | 99   | 128 | 82   | 34   | 24   | 15    |
| 18                      | 4.8              | 4.8  | 16      | 12      | 63   | 116                  | 92   | 130 | 82   | 34   | 24   | 16    |
| 19                      | 4.8              | 4.8  | 9.5     | 11      | 50   | 107                  | 86   | 120 | 80   | 33   | 24   | 16    |
| 20                      | 4.8              | 4.8  | 7.5     | 11      | 299  | 100                  | 82   | 113 | 76   | 32   | 24   | 15    |
| 21                      | 4.8              | 4.8  | 6.5     | 11      | 410  | 94                   | 76   | 113 | 73   | 32   | 23   | 16    |
| 22                      | 4.8              | 4.8  | 6       | 11      | 292  | 87                   | 74   | 119 | 72   | 30   | 23   | 16    |
| 23                      | 4.5              | 4.8  | 37      | 11      | 185  | 84                   | 74   | 122 | 70   | 30   | 23   | 15    |
| 24                      | 4.5              | 4.8  | 106     | 21      | 130  | 82                   | 74   | 128 | 66   | 31   | 21   | 15    |
| 25                      | 5                | 4.8  | 48      | 23      | 111  | 74                   | 78   | 122 | 63   | 31   | 21   | 15    |
| 26                      | 5                | 4.8  | 29      | 24      | 97   | 72                   | 83   | 122 | 60   | 33   | 20   | 15    |
| 27                      | 4.8              | 4.8  | 21      | 24      | 86   | 70                   | 87   | 122 | 56   | 31   | 20   | 15    |
| 28                      | 4.8              | 4.8  | 19      | 23      | 121  | 76                   | 92   | 113 | 55   | 30   | 19   | 14    |
| 29                      | 4.8              | 4.8  | 22      | 23      | -    | 101                  | 94   | 104 | 51   | 29   | 19   | 14    |
| 30                      | 4.5              | 5    | 22      | 22      | -    | 87                   | 107  | 104 | 51   | 28   | 18   | 13    |
| 31                      | 4.5              | -    | 20      | 21      | -    | 87                   | -    | 104 | -    | 28   | 18   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 148.6            |      | 5       | 4.5     | 4.79 | 295                  |      |     |      |      |      |       |
| November.....           | 140.6            |      | 5       | 4.5     | 4.69 | 279                  |      |     |      |      |      |       |
| December.....           | 499.4            |      | 106     | 4.8     | 16.1 | 991                  |      |     |      |      |      |       |
| Calendar year 1940..... | 4,343.6          |      | 106     | 4.5     | 11.9 | 8,620                |      |     |      |      |      |       |
| January.....            | 469              |      | 24      | 11      | 15.1 | 930                  |      |     |      |      |      |       |
| February.....           | 2,435            |      | 410     | 15      | 87.0 | 4,830                |      |     |      |      |      |       |
| March.....              | 3,296            |      | 204     | 70      | 106  | 6,540                |      |     |      |      |      |       |
| April.....              | 2,324            |      | 159     | 74      | 94.1 | 5,600                |      |     |      |      |      |       |
| May.....                | 3,729            |      | 145     | 96      | 120  | 7,400                |      |     |      |      |      |       |
| June.....               | 2,444            |      | 107     | 51      | 61.5 | 4,850                |      |     |      |      |      |       |
| July.....               | 1,154            |      | 50      | 28      | 37.2 | 2,290                |      |     |      |      |      |       |
| August.....             | 748              |      | 28      | 18      | 24.1 | 1,480                |      |     |      |      |      |       |
| September.....          | 471              |      | 18      | 13      | 15.7 | 934                  |      |     |      |      |      |       |
| Water year 1940-41..... | 18,358.6         |      | 410     | 4.5     | 50.3 | 36,420               |      |     |      |      |      |       |

Peak discharge.- Dec. 24 (12 m.) 214 sec.-ft.; Feb. 21 (3 p.m.) 512 sec.-ft.; Feb. 28 (11 p.m.) 308 sec.-ft.; Mar. 13 (2:30 a.m.) 314 sec.-ft.; Apr. 4 (11:30 p.m.) 200 sec.-ft.

Little Rock Creek near Little Rock, Calif.

Location.- Water-stage recorder, lat. 34°27'50" (revised), long. 118°01'05" (revised), about a quarter of a mile upstream from Santiago Creek and 5 miles south of Little Rock, Los Angeles County. Altitude of gage, about 3,290 feet.

Drainage area.- 49.0 square miles.

Records available.- October 1930 to September 1941 (1937-38, 1938-39 incomplete).

Extremes.- Maximum discharge during year, 2,240 second-feet Feb. 20 (gage height, 5.27 feet); no flow Oct. 1 to Nov. 7. 1930-41: Maximum discharge, 17,000 second-feet (estimated) Mar. 2, 1938; no flow part of each year.

Cooperation.- Records furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       |                  | 0    | 1.4     | 20      | 24   | 550                  | 156  | 169 | 43   | 10   | 3.5  | 2.1   |
| 2                       |                  | 0    | 1.5     | 17      | 21   | 316                  | 160  | 156 | 42   | 9.5  | 3.4  | 2.1   |
| 3                       |                  | 0    | 1.5     | 16      | 20   | 198                  | 147  | 162 | 41   | 9    | 3.3  | 2.1   |
| 4                       |                  | 0    | 1.5     | 13      | 18   | 353                  | 202  | 163 | 38   | 9    | 3.3  | 2.1   |
| 5                       |                  | 0    | 1.7     | 13      | 17   | 270                  | 452  | 166 | 36   | 8.5  | 3.2  | 2.0   |
| 6                       |                  | 0    | 1.7     | 12      | 23   | 225                  | 212  | 177 | 33   | 8    | 3.1  | 2.0   |
| 7                       |                  | 0    | 1.7     | 13      | 20   | 223                  | 188  | 171 | 32   | 8    | 3.0  | 2.0   |
| 8                       | .3               | 1.7  | 1.6     | 20      | 253  | 177                  | 162  | 31  | 7.5  | 3.0  | 2.0  | 2.0   |
| 9                       | .5               | 1.8  | 1.3     | 20      | 263  | 169                  | 147  | 28  | 7    | 2.9  | 2.0  | 2.0   |
| 10                      | .8               | 1.8  | 1.5     | 22      | 268  | 164                  | 145  | 26  | 7    | 2.8  | 2.0  | 2.0   |
| 11                      | .8               | 1.8  | 1.6     | 76      | 271  | 181                  | 139  | 26  | 6.5  | 2.8  | 2.0  | 2.0   |
| 12                      | .9               | 1.8  | 16      | 102     | 400  | 169                  | 125  | 23  | 7    | 2.7  | 2.0  | 2.0   |
| 13                      | .9               | 1.9  | 14      | 76      | 750  | 160                  | 116  | 20  | 6    | 2.7  | 2.0  | 2.0   |
| 14                      | .8               | 2.1  | 13      | 106     | 400  | 173                  | 105  | 19  | 6    | 2.6  | 2.0  | 2.0   |
| 15                      | .8               | 2.1  | 13      | 251     | 300  | 180                  | 98   | 18  | 5.5  | 2.6  | 2.0  | 2.0   |
| 16                      | .8               | 14   | 12      | 240     | 275  | 175                  | 94   | 18  | 5.5  | 2.5  | 2.0  | 2.0   |
| 17                      | .9               | 124  | 12      | 478     | 250  | 165                  | 91   | 17  | 5    | 2.5  | 1.9  | 1.9   |
| 18                      | 2.2              | 44   | 11      | 196     | 230  | 162                  | 83   | 16  | 5    | 2.5  | 1.9  | 1.9   |
| 19                      | 4.0              | 30   | 11      | 160     | 215  | 158                  | 74   | 16  | 5    | 2.4  | 1.9  | 1.9   |
| 20                      | 2.5              | 23   | 10      | 1,330   | 200  | 166                  | 65   | 16  | 4.6  | 2.4  | 1.9  | 1.9   |
| 21                      | 2.1              | 20   | 10      | 1,730   | 180  | 152                  | 64   | 13  | 4.4  | 2.4  | 1.9  | 1.9   |
| 22                      | 1.7              | 18   | 11      | 1,070   | 170  | 148                  | 66   | 12  | 4.2  | 2.3  | 1.9  | 1.9   |
| 23                      | 1.5              | 81   | 10      | 417     | 160  | 145                  | 67   | 12  | 3.9  | 2.3  | 1.9  | 1.9   |
| 24                      | 1.4              | 224  | 20      | 285     | 180  | 143                  | 76   | 12  | 3.9  | 2.3  | 1.9  | 1.9   |
| 25                      | 1.5              | 70   | 25      | 191     | 140  | 139                  | 65   | 12  | 4.6  | 2.2  | 1.9  | 1.9   |
| 26                      | 1.4              | 30   | 25      | 154     | 130  | 136                  | 60   | 12  | 4.4  | 2.2  | 1.9  | 1.9   |
| 27                      | 1.2              | 20   | 26      | 120     | 120  | 132                  | 57   | 12  | 4.2  | 2.2  | 1.9  | 1.9   |
| 28                      | 1.2              | 16   | 26      | 266     | 130  | 129                  | 52   | 12  | 4.0  | 2.2  | 1.9  | 1.9   |
| 29                      | 1.4              | 21   | 28      | -       | 162  | 127                  | 49   | 11  | 3.9  | 2.2  | 1.9  | 1.9   |
| 30                      | 1.5              | 26   | 28      | -       | 145  | 157                  | 47   | 11  | 3.8  | 2.1  | 1.9  | 1.9   |
| 31                      | -                | 22   | 28      | -       | 147  | -                    | 46   | -   | 3.6  | 2.1  | -    | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 0                |      | 0       | 0       | 0    | 0                    |      |     |      |      |      |       |
| November.....           | 31.1             |      | 4.0     | 0       | 1.04 | 62                   |      |     |      |      |      |       |
| December.....           | 808.0            |      | 224     | 1.4     | 26.1 | 1,600                |      |     |      |      |      |       |
| Calendar year 1940..... | 4,036.0          |      | 224     | 0       | 11.0 | 8,100                |      |     |      |      |      |       |
| January.....            | 511              |      | 28      | 10      | 16.5 | 1,010                |      |     |      |      |      |       |
| February.....           | 7,482            |      | 1,730   | 17      | 267  | 14,840               |      |     |      |      |      |       |
| March.....              | 7,844            |      | 750     | 120     | 253  | 15,560               |      |     |      |      |      |       |
| April.....              | 5,114            |      | 452     | 127     | 170  | 10,140               |      |     |      |      |      |       |
| May.....                | 3,256            |      | 177     | 46      | 105  | 6,460                |      |     |      |      |      |       |
| June.....               | 686              |      | 43      | 11      | 21.9 | 1,300                |      |     |      |      |      |       |
| July.....               | 184.5            |      | 10      | 3.6     | 5.95 | 366                  |      |     |      |      |      |       |
| August.....             | 81.7             |      | 3.5     | 2.1     | 2.64 | 162                  |      |     |      |      |      |       |
| September.....          | 89.0             |      | 2.1     | 1.9     | 1.97 | 117                  |      |     |      |      |      |       |
| Water year 1940-41..... | 26,027.3         |      | 1,730   | 0       | 71.3 | 51,620               |      |     |      |      |      |       |

## MONO LAKE BASIN

Mono Lake near Mono Lake, Calif.

Location.- Staff gage, lat. 38°00', long. 119°08', in NE¼ sec. 31, T. 2 N., R. 26 E., about a mile south of Mono Lake post office. Datum of gage is 6,390.66 feet above mean sea level, datum of 1929.

Records available.- June 1912 to September 1941; those prior to September 1934 are contained in Water-Supply Paper 765.

Extremes.- 1912-41: Maximum gage height, 37.4 feet July 18, 1919; minimum, 23.8 feet Nov. 18, 1935.

Gage height, in feet, water year October 1940 to September 1941

| Date   | U. S. Forest Service | City of Los Angeles | Date    | U. S. Forest Service | City of Los Angeles |
|--------|----------------------|---------------------|---------|----------------------|---------------------|
| Oct. 5 | -                    | 26.3                | Apr. 1  | -                    | 26.6                |
| 7      | -                    | 26.1                | 14      | 26.7                 | -                   |
| 15     | -                    | 26.1                | 18      | -                    | 26.6                |
| 17     | 26.1                 | 26.1                | 21      | -                    | 26.6                |
| 21     | -                    | 26.1                | 28      | -                    | 26.6                |
| 28     | -                    | 26.0                |         |                      |                     |
| Nov. 4 | -                    | 26.0                | May 1   | -                    | 26.6                |
| 12     | -                    | 26.0                | 8       | -                    | 26.7                |
| 22     | -                    | 26.9                | 13      | 26.6                 | -                   |
| 23     | 25.9                 | 26.9                | 15      | -                    | 26.7                |
| 28     | -                    | 25.9                | 21      | -                    | 26.6                |
|        |                      |                     | 28      | -                    | 26.7                |
| Dec. 5 | -                    | 26.0                | June 3  | -                    | 26.7                |
| 9      | -                    | 25.9                | 11      | -                    | 26.7                |
| 19     | -                    | 26.0                | 15      | 26.7                 | -                   |
| 27     | -                    | 26.2                | 16      | -                    | 26.8                |
|        |                      |                     | 27      | -                    | 26.8                |
| Jan. 1 | -                    | 26.3                | 30      | -                    | 26.8                |
| 16     | -                    | 26.3                |         |                      |                     |
| 20     | -                    | 26.3                | July 10 | -                    | 26.9                |
| 26     | 26.4                 | -                   | 16      | 27.0                 | -                   |
| 28     | -                    | 26.4                | 18      | -                    | 27.0                |
|        |                      |                     | 20      | *27.0                | -                   |
| Feb. 4 | -                    | 26.4                | 23      | -                    | 27.0                |
| 12     | -                    | 26.4                | 28      | -                    | 27.0                |
| 18     | -                    | 26.5                |         |                      |                     |
| 24     | 26.5                 | -                   | Aug. 5  | -                    | 27.0                |
| 25     | -                    | 26.5                | 11      | -                    | 27.0                |
|        |                      |                     | 18      | 27.0                 | 26.9                |
| Mar. 5 | -                    | 26.6                | Sept. 3 | -                    | 26.6                |
| 10     | -                    | 26.6                | 8       | -                    | 26.6                |
| 11     | 26.6                 | -                   | 15      | -                    | 26.5                |
| 17     | -                    | 26.6                | 23      | -                    | 26.4                |
| 24     | -                    | 26.6                |         |                      |                     |

\* U. S. Geological Survey reading.

## WALKER LAKE BASIN

Walker Lake near Hawthorne, Nev.

Location.- Bench mark at United States naval ammunition depot, lat. 38°35', long. 118°42', in NE¼ sec. 2, T. 8 N., R. 29 E., 6 miles northwest of Hawthorne. Bench mark is 4,055.41 feet above mean sea level, adjustment of 1912.

Records available.- August 1928 to September 1941. Occasional readings prior to August 1928.

Extremes.- 1928-41: Maximum elevation observed, 4,051.8 feet Mar. 13, 1928 (Indian Service); minimum observed, 4,018.6 feet Sept. 5, 1941.  
Lake elevation, Sept. 27, 1908, 4,078.0 feet, observed by U. S. Coast and Geodetic Survey, adjustment of 1912.

Remarks.- Elevations determined by spirit leveling.

Cooperation.- Records furnished by U. S. Navy Department.

Elevation, in feet, above mean sea level, water year October 1940 to September 1941

|         |         |         |         |
|---------|---------|---------|---------|
| Oct. 10 | 4,019.9 | Mar. 4  | 4,019.5 |
| Nov. 8  | 4,018.5 | Apr. 3  | 4,019.5 |
| Dec. 6  | 4,019.3 | May 6   | 4,019.5 |
| Jan. 3  | 4,019.1 | July 10 | 4,018.8 |
| Feb. 21 | 4,019.0 | Sept. 5 | 4,018.6 |

Bridgeport Reservoir near Bridgeport, Calif.

Location.- Float gage or reference point, lat. 36°19'30", long. 119°12'50", at Bridgeport Dam on East Walker River, in SE¼ sec. 34, T. 6 N., R. 25 E., 4½ miles north of Bridgeport. Datum of gage is at mean sea level.

Drainage area.- 362 square miles.

Records available.- October 1931 to September 1941 in reports of Geological Survey. March 1926 to September 1931 in files of Walker River Irrigation District.

Extremes.- Maximum contents during year, 43,070 acre-feet July 6 (elevation, 6,460.2 feet); minimum, 18,260 acre-feet Oct. 3-9 (elevation, 6,449.7 feet).  
1926-41: Maximum contents, 44,560 acre-feet June 12, 1938 (elevation, 6,460.7 feet); no storage during fall of 1929, 1930.

Remarks.- Reservoir is formed by earth-fill, rock-faced dam; storage began Dec. 8, 1923; dam completed in November 1924. Capacity, 42,460 acre-feet between elevations 6,412 feet (sill of outlet gate) and 6,460 feet (crest of spillway). No dead storage. Water is used for irrigation in Walker River irrigation district. Gage read about 8 a.m. daily; contents are as of that time.

Cooperation.- Elevations and capacity table furnished by Walker River Irrigation District.

Contents, in acre-feet, water year October 1940 to September 1941

| Day | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 18,440 | 20,160 | 22,680 | 26,090 | 31,820 | 37,180 | 35,700 | 35,700 | 35,040 | 41,440 | 40,860 | 34,770 |
| 2   | 18,350 | 20,250 | 22,790 | 26,420 | 31,950 | 37,460 | 36,230 | 35,700 | 34,900 | 41,580 | 40,710 | 34,510 |
| 3   | 18,260 | 20,340 | 22,900 | 26,750 | 32,080 | 37,320 | 36,100 | 35,300 | 34,900 | 41,730 | 40,560 | 34,240 |
| 4   | 18,260 | 20,440 | 23,000 | 27,090 | 32,200 | 37,320 | 35,830 | 35,170 | 34,110 | 42,170 | 40,120 | 33,860 |
| 5   | 18,260 | 20,530 | 23,100 | 27,320 | 32,330 | 37,180 | 35,830 | 35,040 | 34,110 | 42,460 | 39,540 | 33,480 |
| 6   | 18,260 | 20,620 | 23,200 | 27,550 | 32,460 | 37,040 | 35,830 | 35,040 | 34,240 | 43,070 | 39,120 | 33,090 |
| 7   | 18,260 | 20,720 | 23,300 | 27,780 | 32,590 | 36,900 | 35,960 | 35,170 | 34,110 | 42,460 | 38,710 | 32,960 |
| 8   | 18,260 | 20,820 | 23,410 | 28,010 | 32,720 | 36,630 | 35,960 | 35,170 | 34,240 | 42,460 | 38,290 | 32,590 |
| 9   | 18,260 | 20,920 | 23,520 | 28,240 | 32,840 | 36,630 | 35,960 | 34,900 | 34,510 | 42,460 | 38,150 | 32,200 |
| 10  | 18,350 | 21,010 | 23,620 | 28,470 | 32,960 | 36,760 | 35,960 | 35,170 | 34,900 | 42,460 | 37,870 | 31,950 |
| 11  | 18,350 | 21,110 | 23,720 | 28,700 | 33,090 | 36,760 | 35,960 | 35,440 | 35,040 | 42,460 | 37,870 | 31,700 |
| 12  | 18,440 | 21,210 | 23,830 | 28,930 | 33,220 | 36,760 | 35,960 | 35,300 | 35,170 | 42,460 | 37,870 | 31,450 |
| 13  | 18,520 | 21,300 | 23,940 | 29,160 | 33,350 | 36,760 | 35,960 | 35,440 | 35,300 | 42,460 | 37,730 | 31,210 |
| 14  | 18,610 | 21,400 | 24,040 | 29,400 | 33,480 | 37,040 | 35,960 | 35,570 | 35,830 | 42,020 | 37,590 | 31,090 |
| 15  | 18,700 | 21,500 | 24,040 | 29,440 | 33,600 | 37,870 | 36,100 | 35,440 | 37,320 | 41,880 | 37,460 | 30,850 |
| 16  | 18,780 | 21,600 | 24,040 | 29,880 | 34,000 | 38,150 | 36,230 | 35,700 | 37,730 | 41,880 | 37,590 | 30,840 |
| 17  | 18,870 | 21,700 | 24,140 | 30,000 | 35,040 | 38,430 | 36,230 | 35,960 | 38,430 | 42,020 | 37,730 | 30,200 |
| 18  | 18,960 | 21,800 | 24,140 | 30,120 | 35,170 | 38,840 | 36,360 | 36,100 | 38,710 | 42,020 | 37,590 | 29,880 |
| 19  | 19,060 | 21,900 | 24,240 | 30,240 | 35,300 | 38,710 | 36,500 | 35,960 | 39,400 | 42,020 | 37,590 | 29,760 |
| 20  | 19,060 | 21,990 | 24,340 | 30,360 | 35,440 | 38,290 | 36,500 | 36,230 | 39,630 | 42,170 | 37,730 | 29,640 |
| 21  | 19,150 | 22,090 | 24,340 | 30,480 | 35,700 | 37,870 | 36,500 | 36,100 | 40,420 | 42,170 | 37,590 | 29,520 |
| 22  | 19,240 | 22,190 | 24,450 | 30,610 | 35,830 | 37,730 | 36,500 | 36,100 | 40,560 | 42,320 | 37,590 | 29,280 |
| 23  | 19,330 | 22,280 | 24,560 | 30,730 | 36,230 | 37,460 | 36,500 | 35,960 | 40,420 | 42,320 | 37,460 | 29,200 |
| 24  | 19,420 | 22,380 | 24,660 | 30,850 | 36,360 | 37,040 | 36,500 | 35,300 | 40,560 | 42,460 | 37,590 | 29,160 |
| 25  | 19,570 | 22,360 | 24,770 | 30,970 | 36,500 | 36,760 | 36,360 | 35,440 | 40,420 | 42,320 | 37,320 | 28,930 |
| 26  | 19,610 | 22,480 | 24,880 | 31,090 | 36,500 | 36,630 | 36,100 | 35,440 | 40,860 | 42,020 | 37,040 | 28,930 |
| 27  | 19,700 | 22,480 | 24,990 | 31,210 | 36,500 | 36,360 | 36,100 | 35,870 | 41,290 | 41,880 | 36,630 | 28,930 |
| 28  | 19,790 | 22,580 | 25,210 | 31,330 | 36,760 | 36,100 | 36,100 | 35,870 | 41,440 | 41,730 | 36,230 | 28,160 |
| 29  | 19,880 | 22,590 | 25,430 | 31,450 | -      | 35,830 | 35,960 | 35,960 | 41,440 | 41,580 | 35,700 | 28,160 |
| 30  | 19,980 | 22,580 | 25,650 | 31,570 | -      | 35,700 | 35,830 | 35,700 | 41,440 | 41,440 | 35,300 | 28,160 |
| 31  | 20,070 | -      | 25,870 | 31,700 | -      | 35,830 | -      | 35,040 | -      | 41,140 | 35,300 | -      |

Monthly elevation and contents, water year October 1940 to September 1941

| Date                    | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Oct. 1.....             | 6,449.8          | 18,440               | +1,720                                      |
| Nov. 1.....             | 6,450.75         | 20,160               | +2,520                                      |
| Dec. 1.....             | 6,452.05         | 22,680               | +3,410                                      |
| Calendar year 1940..... | -                | -                    | +12,370                                     |
| Jan. 1.....             | 6,453.65         | 26,090               | +5,730                                      |
| Feb. 1.....             | 6,456.1          | 31,820               | +5,360                                      |
| Mar. 1.....             | 6,458.15         | 37,180               | +1,480                                      |
| Apr. 1.....             | 6,457.6          | 35,700               | 0   |
| May 1.....              | 6,457.6          | 35,700               | -660  |
| June 1.....             | 6,457.35         | 35,040               | +6,400                                      |
| July 1.....             | 6,459.65         | 41,440               | -580  |
| Aug. 1.....             | 6,459.45         | 40,860               | -6,090                                      |
| Sept. 1.....            | 6,457.25         | 34,770               | -5,610                                      |
| Oct. 1.....             | 6,455.00         | 29,160               | -   |
| Water year 1940-41..... | -                | -                    | +10,720                                     |

## East Walker River near Bridgeport, Calif.

Location.- Water-stage recorder, lat. 38°19'40", long. 119°12'50", in SW¼ sec. 34, T. 8 N., R. 25 E., 1,500 feet downstream from Bridgeport Reservoir, 5 miles north of Bridgeport, and 10 miles upstream from Sweetwater Creek.

Drainage area.- 362 square miles.

Records available.- October 1921 to September 1941. July 1911 to September 1914 at site 1½ miles upstream (gage heights only).

Average discharge.- 18 years (1922-24, 1925-41), 120 second-feet.

Extremes (regulated).- Maximum daily discharge during year, 596 second-feet July 7 (gage height, 2.68 feet); minimum daily, 9 second-feet Oct. 21 to Feb. 24, Mar. 14-17, 1921-41; Maximum discharge observed, 1,220 second-feet June 12, 1938 (gage height, 6.74 feet, datum then in use); minimum observed, 2 second-feet many days when reservoir gates were closed.

Remarks.- Records good. Flow affected by irrigation of meadow and pasture lands near Bridgeport and regulated by Bridgeport Reservoir (see preceding page).

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

|     |    |     |     |     |     |     |     |
|-----|----|-----|-----|-----|-----|-----|-----|
| 0.0 | 2  | 0.4 | 29  | 1.3 | 183 | 2.5 | 534 |
| .1  | 5  | .6  | 55  | 1.6 | 258 | 2.8 | 638 |
| .2  | 11 | .8  | 86  | 1.9 | 342 |     |     |
| .3  | 19 | 1.0 | 121 | 2.2 | 435 |     |     |

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 89               | 9    | 9       | 9       | 9    | 116                  | 232  | 227 | 477  | 366  | 293  | 288   |
| 2                       | 73               | 9    | 9       | 9       | 9    | 125                  | 47   | 227 | 477  | 351  | 293  | 288   |
| 3                       | 58               | 9    | 9       | 9       | 9    | 150                  | 207  | 227 | 474  | 336  | 285  | 288   |
| 4                       | 55               | 9    | 9       | 9       | 9    | 161                  | 189  | 227 | 474  | 333  | 291  | 285   |
| 5                       | 44               | 9    | 9       | 9       | 9    | 168                  | 188  | 235 | 474  | 375  | 291  | 285   |
| 6                       | 39               | 9    | 9       | 9       | 9    | 170                  | 142  | 250 | 474  | 497  | 291  | 285   |
| 7                       | 39               | 9    | 9       | 9       | 9    | 170                  | 127  | 250 | 474  | 596  | 291  | 285   |
| 8                       | 39               | 9    | 9       | 9       | 9    | 170                  | 105  | 282 | 474  | 575  | 291  | 285   |
| 9                       | 29               | 9    | 9       | 9       | 9    | 167                  | 83   | 296 | 448  | 578  | 291  | 274   |
| 10                      | 27               | 9    | 9       | 9       | 9    | 148                  | 76   | 296 | 432  | 575  | 291  | 263   |
| 11                      | 27               | 9    | 9       | 9       | 9    | 148                  | 76   | 296 | 432  | 575  | 291  | 248   |
| 12                      | 27               | 9    | 9       | 9       | 9    | 148                  | 76   | 296 | 403  | 578  | 263  | 245   |
| 13                      | 25               | 9    | 9       | 9       | 9    | 148                  | 76   | 296 | 366  | 561  | 245  | 232   |
| 14                      | 24               | 9    | 9       | 9       | 9    | 9                    | 76   | 296 | 328  | 507  | 227  | 210   |
| 15                      | 24               | 9    | 9       | 9       | 9    | 9                    | 78   | 296 | 316  | 422  | 227  | 200   |
| 16                      | 24               | 9    | 9       | 9       | 9    | 9                    | 78   | 296 | 316  | 360  | 205  | 200   |
| 17                      | 24               | 9    | 9       | 9       | 9    | 9                    | 78   | 296 | 316  | 316  | 190  | 200   |
| 18                      | 24               | 9    | 9       | 9       | 9    | 107                  | 58   | 319 | 288  | 138  | 200  |       |
| 19                      | 14               | 9    | 9       | 9       | 9    | 217                  | 72   | 336 | 319  | 285  | 188  | 185   |
| 20                      | 10               | 9    | 9       | 9       | 9    | 263                  | 81   | 375 | 319  | 227  | 188  | 176   |
| 21                      | 9                | 9    | 9       | 9       | 9    | 263                  | 81   | 391 | 319  | 217  | 188  | 165   |
| 22                      | 9                | 9    | 9       | 9       | 9    | 263                  | 107  | 391 | 419  | 220  | 188  | 157   |
| 23                      | 9                | 9    | 9       | 9       | 9    | 313                  | 128  | 391 | 450  | 255  | 202  | 155   |
| 24                      | 9                | 9    | 9       | 9       | 9    | 313                  | 142  | 391 | 445  | 296  | 232  | 136   |
| 25                      | 9                | 9    | 9       | 9       | 10   | 313                  | 165  | 391 | 391  | 307  | 232  | 127   |
| 26                      | 9                | 9    | 9       | 9       | 10   | 313                  | 193  | 406 | 378  | 302  | 248  | 112   |
| 27                      | 9                | 9    | 9       | 9       | 12   | 313                  | 193  | 419 | 378  | 299  | 266  | 100   |
| 28                      | 9                | 9    | 9       | 9       | 13   | 313                  | 193  | 419 | 378  | 277  | 280  | 83    |
| 29                      | 9                | 9    | 9       | 9       | -    | 313                  | 214  | 445 | 378  | 285  | 288  | 83    |
| 30                      | 9                | 9    | 9       | 9       | -    | 248                  | 227  | 477 | 378  | 296  | 285  | 85    |
| 31                      | 9                | -    | 9       | 9       | -    | 237                  | -    | 477 | -    | 296  | 285  | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 814              |      | 89      | 9       | 26.3 | 1,610                |      |     |      |      |      |       |
| November.....           | 270              |      | 9       | 9       | 9.0  | 536                  |      |     |      |      |      |       |
| December.....           | 279              |      | 9       | 9       | 9.0  | 553                  |      |     |      |      |      |       |
| Calendar year 1940..... | 37,990           |      | 289     | 5       | 104  | 75,360               |      |     |      |      |      |       |
| January.....            | 279              |      | 9       | 9       | 9.0  | 553                  |      |     |      |      |      |       |
| February.....           | 261              |      | 13      | 9       | 9.3  | 518                  |      |     |      |      |      |       |
| March.....              | 5,804            |      | 313     | 9       | 187  | 11,510               |      |     |      |      |      |       |
| April.....              | 3,792            |      | 232     | 47      | 126  | 7,520                |      |     |      |      |      |       |
| May.....                | 10,217           |      | 477     | 227     | 330  | 20,270               |      |     |      |      |      |       |
| June.....               | 12,056           |      | 480     | 316     | 402  | 23,910               |      |     |      |      |      |       |
| July.....               | 11,720           |      | 596     | 217     | 378  | 23,250               |      |     |      |      |      |       |
| August.....             | 7,825            |      | 293     | 188     | 252  | 15,520               |      |     |      |      |      |       |
| September.....          | 6,113            |      | 288     | 83      | 204  | 12,120               |      |     |      |      |      |       |
| Water year 1940-41..... | 59,430           |      | 596     | 9       | 163  | 117,900              |      |     |      |      |      |       |

Note.- Recorder not operating Oct. 1 to Apr. 5; discharge computed from daily gage readings.



West Walker River below East Fork, near Coleville, Calif.

**Location.**- Water-stage recorder, lat. 38°22'45", long. 119°27'00", in SE¼ sec. 9, T. 6 N., R. 23 E., 200 feet upstream from bridge on U. S. Highway 395, 75 feet downstream from East Fork, and 13 miles southeast of Coleville.

**Drainage area.**- 182 square miles.

**Records available.**- April 1938 to September 1941. October 1902 to July 1908 at site 9½ miles downstream; March 1909 to August 1910, and June 1915 to March 1938 at site 10 miles downstream, published as West Walker River near Coleville, Calif.

**Extremes.**- Maximum discharge during year, 2,040 second-feet June 20 (gage height, 5.01 feet); minimum, 6 second-feet Dec. 10.

1938-41: Maximum discharge, 2,490 second-feet June 9, 1938 (gage height, 4.90 feet, site and datum then in use), from rating curve extended above 1,600 second-feet; minimum that of Dec. 10, 1940.

Maximum discharge known, 5,800 second-feet Dec. 11, 1937, by slope-area method.

**Remarks.**- Records good except those for period of ice effect, which are fair. Station is above all diversions except a few small ranch ditches. Flow very slightly regulated by Poor Lake Reservoir (capacity unknown), 7 miles upstream.

**Cooperation.**- Five discharge measurements furnished by Walker River Irrigation District.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

|     |    |     |     |     |     |     |       |
|-----|----|-----|-----|-----|-----|-----|-------|
| 0.7 | 6  | 1.2 | 40  | 2.0 | 173 | 3.5 | 761   |
| .8  | 10 | 1.4 | 65  | 2.3 | 249 | 4.0 | 1,090 |
| .9  | 15 | 1.6 | 96  | 2.6 | 345 | 4.5 | 1,520 |
| 1.0 | 22 | 1.8 | 132 | 3.0 | 502 | 5.0 | 2,030 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May   | June  | July  | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|-------|-------|------|-------|
| 1   | 40   | 40   | 30   | 70   |      | 61   | 134  | 480   | 834   | 891   | 229  | 86    |
| 2   | 41   | 53   | 29   | 66   |      | 61   | 128  | 530   | 1,010 | 1,020 | 216  | 83    |
| 3   | 42   | 46   | 28   | 78   | b45  | 56   | 121  | 530   | 1,180 | 1,100 | 196  | 85    |
| 4   | 42   | 39   | 27   | 64   |      | 61   | 122  | 563   | 1,360 | 1,120 | 191  | 85    |
| 5   | 41   | 46   | 26   | 55   |      | 58   | 124  | 721   | 1,570 | 1,120 | 169  | 85    |
| 6   | 40   | 48   | 24   | 58   | 41   | 58   | 119  | 924   | 1,520 | 1,130 | 196  | 85    |
| 7   | 39   | 46   | 27   | 55   | 46   | 57   | 119  | 950   | 1,200 | 1,110 | 229  | 80    |
| 8   | 40   | 42   | 24   | 50   | 46   | 60   | 117  | 1,090 | 937   | 1,080 | 252  | 77    |
| 9   | 42   | 36   | 24   | 48   | 56   | 61   | 122  | 1,170 | 878   | 1,060 | 238  | 76    |
| 10  | 39   | 34   | 22   | 46   | 68   | 66   | 117  | 1,140 | 1,060 | 1,130 | 232  | 74    |
| 11  | 38   | 39   | b21  | 45   | 74   | 70   | 117  | 1,270 | 1,350 | 978   | 229  | 71    |
| 12  | 37   | 37   | b20  | 52   | 65   | 76   | 111  | 1,280 | 1,520 | 937   | 216  | 70    |
| 13  | 36   | 38   | b20  | 45   | 66   | 80   | 119  | 1,030 | 1,590 | 878   | 194  | 68    |
| 14  | 36   | 36   | b20  | 45   | 60   | 80   | 152  | 840   | 1,580 | 775   | 191  | 66    |
| 15  | 36   | 35   | b20  | 57   | 78   | 78   | 180  | 634   | 1,500 | 710   | 206  | 65    |
| 16  | 36   | 35   | b22  |      | 56   | 82   | 182  | 965   | 1,450 | 644   | 214  | 64    |
| 17  | 36   | 37   | b25  |      | 55   | 91   | 167  | 1,240 | 1,360 | 592   | 206  | 62    |
| 18  | 36   | 36   | 29   |      | 53   | 108  | 156  | 1,170 | 1,270 | 545   | 187  | 61    |
| 19  | 35   | 27   | 32   |      | 52   | 106  | 152  | 852   | 1,570 | 520   | 187  | 57    |
| 20  | 35   | 31   | 33   |      | 52   | 99   | 154  | 791   | 1,660 | 493   | 156  | 65    |
| 21  | 34   | 28   | 34   |      | 52   | 98   | 162  | 992   | 1,340 | 498   | 148  | 90    |
| 22  | 33   | 28   | 38   | b45  | 52   | 101  | 184  | 1,230 | 1,300 | 516   | 146  | 86    |
| 23  | 33   | b26  | 41   |      | 52   | 111  | 229  | 1,290 | 1,200 | 530   | 140  | 85    |
| 24  | 35   | b30  | 29   |      | 52   | 115  | 289  | 1,360 | 1,010 | 493   | 126  | 78    |
| 25  | 46   | b30  | 29   |      | 51   | 117  | 367  | 1,520 | 791   | 423   | 124  | 77    |
| 26  | 46   | b27  | 32   |      | 51   | 126  | 409  | 1,400 | 779   | 385   | 117  | 76    |
| 27  | 39   | b30  | 103  |      | 50   | 136  | 439  | 1,140 | 715   | 352   | 108  | 72    |
| 28  | 38   | 31   | 132  |      | 61   | 139  | 489  | 1,080 | 597   | 311   | 106  | 70    |
| 29  | 39   | 31   | 98   |      | -    | 124  | 525  | 1,020 | 688   | 285   | 104  | 66    |
| 30  | 36   | 30   | 77   |      | -    | 130  | 476  | 865   | 865   | 249   | 98   | 62    |
| 31  | 37   | -    | 76   |      | -    | 136  | -    | 791   | -     | 246   | 91   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean  | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October.....            | 1,183            | 46      | 33      | 38.2  | 2,350                |
| November.....           | 1,072            | 53      | 26      | 35.7  | 2,130                |
| December.....           | 1,191            | 132     | 20      | 38.4  | 2,360                |
| Calendar year 1940..... | 96,363           | 1,520   | 20      | 263   | 191,200              |
| January.....            | 1,544            | 79      | -       | 49.8  | 3,050                |
| February.....           | 1,493            | 74      | -       | 53.3  | 2,960                |
| March.....              | 2,805            | 138     | 57      | 90.5  | 5,560                |
| April.....              | 6,281            | 525     | 111     | 209   | 12,460               |
| May.....                | 31,088           | 1,520   | 480     | 1,003 | 61,660               |
| June.....               | 35,724           | 1,680   | 597     | 1,191 | 70,860               |
| July.....               | 22,117           | 1,130   | 246     | 713   | 43,870               |
| August.....             | 5,424            | 262     | 91      | 175   | 10,760               |
| September.....          | 2,221            | 90      | 57      | 74.0  | 4,410                |
| Water year 1940-41..... | 112,143          | 1,680   | 20      | 307   | 222,400              |

b Stage-discharge relation affected by ice.

## Topaz Reservoir near Topaz, Calif.

Location.- Float and staff gages at outlet works of Topaz Reservoir, lat. 38°41', long. 119°31', in sec. 28, T. 10 N., R. 22 E., 6 miles north of Topaz. Datum of gage is at mean sea level (levels by Walker River Irrigation District).

Records available.- October 1931 to September 1941.

Extremes.- Maximum contents observed during year, 60,240 acre-feet June 30 (elevation, 5,005.35 feet); minimum observed, 13,350 acre-feet Oct. 25 to Nov. 1 (elevation, 4,980.75 feet).

1931-41: Maximum contents observed, that of June 30, 1941; minimum observed, 505 acre-feet, from revised capacity rating, Oct. 22-25, 1931 (elevation, 4,972.83 feet).

Remarks.- Topaz Reservoir, formerly known as Alkali Lake, was formed by the diversion of water from West Walker River through a feeder canal and the construction of an outlet tunnel through a low saddle in rim of lake. Storage began Jan. 30, 1922. Usable capacity, 59,440 acre-feet between elevations 4,972.3 feet (lowest practical elevation for diversion through tunnel, bottom of outlet tunnel at elevation 4,970 feet) and 5,005 feet (3 feet below top of levee) above mean sea level. Capacity of reservoir increased from about 45,000 acre-feet to 59,440 acre-feet in October 1937 by an earth-fill, rock-faced levee at south end. Water is used for irrigation in Walker River irrigation district.

Cooperation.- Elevations and base data for capacity table furnished by Walker River Irrigation District.

Contents, in acre-feet, water year October 1940 to September 1941

| Day | Oct.   | Nov.   | Dec.   | Jan.   | Feb.   | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  |
|-----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 14,000 | 13,350 | -      | -      | 26,570 | -      | -      | 34,690 | -      | 60,200 | 56,080 | 41,780 |
| 2   | -      | -      | -      | -      | -      | -      | -      | -      | 54,840 | 60,180 | 55,670 | -      |
| 3   | 13,760 | -      | -      | -      | -      | -      | -      | -      | 55,580 | 60,200 | -      | 40,870 |
| 4   | 13,760 | -      | -      | 21,660 | -      | -      | 36,370 | -      | 56,190 | 60,200 | 54,200 | 40,460 |
| 5   | 13,680 | -      | -      | -      | -      | -      | -      | -      | 56,750 | 60,220 | 53,440 | 39,370 |
| 6   | 13,600 | -      | 17,220 | -      | -      | -      | -      | -      | 57,480 | 60,200 | 52,730 | 39,570 |
| 7   | 13,600 | -      | -      | -      | -      | 27,230 | 32,690 | -      | 57,950 | 60,150 | 51,850 | -      |
| 8   | -      | 14,080 | -      | -      | -      | -      | -      | 34,600 | 58,300 | 60,150 | 51,200 | 37,130 |
| 9   | 13,600 | -      | -      | -      | -      | -      | -      | -      | 58,180 | 60,180 | 50,500 | 36,750 |
| 10  | -      | -      | -      | 22,930 | -      | -      | -      | 35,430 | 58,140 | 60,150 | -      | -      |
| 11  | 13,560 | -      | -      | -      | -      | -      | -      | -      | -      | -      | 49,380 | -      |
| 12  | 13,560 | -      | -      | -      | -      | -      | 36,370 | -      | 57,610 | 60,200 | 49,160 | 36,560 |
| 13  | -      | -      | 17,890 | -      | -      | -      | -      | 38,170 | 57,610 | 60,200 | 48,880 | 36,370 |
| 14  | 13,530 | -      | -      | -      | 28,620 | 33,870 | -      | 41,470 | 58,110 | 60,200 | 48,600 | -      |
| 15  | 13,480 | 14,820 | -      | -      | -      | -      | -      | 42,390 | -      | 60,180 | 48,390 | 36,080 |
| 16  | 13,460 | -      | -      | -      | -      | -      | -      | 42,800 | -      | 60,150 | 48,130 | 35,060 |
| 17  | 13,450 | -      | -      | 24,210 | -      | -      | -      | -      | 59,850 | 60,150 | 47,490 | 34,600 |
| 18  | 13,430 | -      | -      | -      | -      | -      | 35,990 | -      | -      | 60,130 | 47,920 | 34,140 |
| 19  | -      | -      | -      | -      | -      | -      | -      | -      | -      | 60,130 | 47,610 | -      |
| 20  | -      | -      | 18,470 | -      | -      | -      | -      | 44,760 | 60,130 | -      | 47,600 | 33,050 |
| 21  | -      | -      | -      | -      | 30,020 | 35,150 | 35,900 | 44,970 | 60,180 | 60,060 | 47,280 | -      |
| 22  | -      | -      | -      | -      | -      | 45,410 | -      | -      | 60,010 | 60,010 | 46,960 | 31,620 |
| 23  | 13,450 | 18,640 | -      | -      | -      | -      | 35,710 | 45,910 | 60,130 | -      | -      | -      |
| 24  | -      | -      | -      | 25,330 | -      | -      | -      | -      | -      | 59,550 | -      | 31,440 |
| 25  | 13,350 | -      | -      | -      | -      | -      | 35,520 | -      | 60,080 | 59,160 | 46,590 | 31,080 |
| 26  | -      | -      | -      | -      | -      | -      | -      | -      | 60,130 | 57,950 | 45,280 | 30,910 |
| 27  | -      | -      | 19,890 | -      | -      | -      | -      | 49,850 | -      | 57,950 | 44,860 | 30,730 |
| 28  | -      | -      | -      | 31,080 | 35,990 | 34,970 | 51,150 | -      | -      | 57,960 | 44,260 | -      |
| 29  | 13,350 | 16,390 | -      | -      | -      | -      | -      | -      | -      | 57,390 | -      | 28,570 |
| 30  | -      | 16,490 | -      | -      | -      | -      | 34,780 | 53,130 | 60,240 | 56,980 | 42,690 | 28,290 |
| 31  | 13,350 | -      | 21,240 | 26,450 | -      | 36,180 | -      | 54,020 | -      | 56,530 | 42,180 | -      |

Monthly elevation and contents, water year October 1940 to September 1941

| Date                    | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Sept. 30.....           | 4,981.30         | 14,250               | -   |
| Oct. 31.....            | 4,980.75         | 13,350               | -900  |
| Nov. 30.....            | 4,982.66         | 16,490               | +3,140                                      |
| Dec. 31.....            | 4,985.50         | 21,240               | +4,750                                      |
| Calendar year 1940..... | -                | -                    | +5,100                                      |
| Jan. 31.....            | 4,988.55         | 26,450               | +5,210                                      |
| Feb. 28.....            | 4,991.20         | 31,080               | +4,630                                      |
| Mar. 31.....            | 4,994.00         | 36,180               | +5,100                                      |
| Apr. 30.....            | 4,995.25         | 34,780               | -1,400                                      |
| May 31.....             | 5,002.60         | 54,020               | +19,240                                     |
| June 30.....            | 5,005.35         | 60,240               | -8,220                                      |
| July 31.....            | 5,003.72         | 53,530               | -3,710                                      |
| Aug. 31.....            | 4,997.05         | 42,180               | -14,350                                     |
| Sept. 30.....           | 4,989.61         | 28,290               | -13,890                                     |
| Water year 1940-41..... | -                | -                    | +14,040                                     |

CARSON RIVER BASIN

East Fork of Carson River near Gardnerville, Nev.

Location.- Water-stage recorder, lat. 38°51'30", long. 119°41'50", in NE¼ sec. 2, T. 11 N., R. 20 E., 2 miles east of Mud Lake Reservoir, 3 miles downstream from Leviathan Creek, and 7 miles southeast of Gardnerville.

Drainage area.- 360 square miles.

Records available.- May 1939 to September 1941. April 1890 to December 1893, October 1900 to December 1906, June to October 1917, December 1924 to September 1929, and October 1935 to December 1937 at site 2 miles downstream. March 1908 to December 1910 at site 2 miles upstream.

Extremes.- Maximum discharge during year, 2,480 second-feet May 12 (gage height, 4.51 feet); minimum, 30 second-feet Dec. 11, 14, 1890-93, 1900-6, 1908-10, 1917, 1924-29, 1935-37, 1939-41: Maximum discharge, 12,000 second-feet Dec. 11, 1937 (gage destroyed by flood), computed on basis of slope-area determinations of flow of tributaries, 14 miles upstream; minimum discharge observed, 8 second-feet Dec. 4-10, 19-23, 1904.

Remarks.- Records good except those for periods of ice effect, which are fair. Station is above all diversions in Carson Valley. Flow affected by diversions for irrigation and by storage in several small reservoirs (total capacity, about 5,000 acre-feet) above station.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

|     |    |     |     |     |     |     |       |     |       |
|-----|----|-----|-----|-----|-----|-----|-------|-----|-------|
| 0.6 | 25 | 1.0 | 82  | 1.8 | 301 | 2.9 | 880   | 4.5 | 2,470 |
| .7  | 36 | 1.2 | 124 | 2.0 | 380 | 3.2 | 1,110 | 5.0 | 3,170 |
| .8  | 49 | 1.4 | 174 | 2.3 | 520 | 3.6 | 1,460 |     |       |
| .9  | 64 | 1.6 | 235 | 2.6 | 385 | 4.0 | 1,870 |     |       |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May   | June  | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|-------|------|------|-------|
| 1   | 61   | 68   | 61   | 111  | 100  | 230  | 230  | 697   | 1,100 | 570  | 158  | 84    |
| 2   | 60   | 66   | 62   | 109  | 92   | 194  | 224  | 804   | 1,220 | 608  | 153  | 95    |
| 3   | 60   | 96   | 62   | 102  | 92   | 171  | 211  | 897   | 1,360 | 649  | 153  | 109   |
| 4   | 64   | 75   | 61   | 115  | 96   | 169  | 224  | 943   | 1,470 | 637  | 146  | 102   |
| 5   | 61   | 64   | 60   | 100  | 100  | 169  | 235  | 1,210 | 1,580 | 631  | 138  | 92    |
| 6   | 61   | 77   | 60   | 92   | 106  | 180  | 224  | 1,640 | 1,530 | 614  | 141  | 73    |
| 7   | 62   | 80   | 58   | 111  | 90   | 177  | 227  | 1,470 | 1,280 | 586  | 156  | 71    |
| 8   | 62   | 84   | 61   | 100  | 106  | 180  | 211  | 1,640 | 1,010 | 560  | 199  | 71    |
| 9   | 68   | 78   | 61   | 92   | 156  | 191  | 227  | 1,780 | 990   | 525  | 164  | 71    |
| 10  | 68   | 71   | 55   | 90   | 208  | 205  | 224  | 1,680 | 1,090 | 520  | 163  | 71    |
| 11  | 64   | 69   | 50   | 92   | 230  | 211  | 214  | 1,860 | 1,260 | 481  | 158  | 82    |
| 12  | 64   | 75   | 48   | 90   | 160  | 218  | 199  | 2,060 | 1,360 | 466  | 164  | 90    |
| 13  | 62   | 73   | b46  | 92   | 158  | 224  | 191  | 1,730 | 1,360 | 429  | 126  | 86    |
| 14  | 60   | 73   | b45  | 104  | 153  | 224  | 230  | 1,370 | 1,360 | 411  | 120  | 92    |
| 15  | 60   | 71   | b45  | 106  | 151  | 205  | 284  | 1,300 | 1,260 | 389  | 117  | 88    |
| 16  | 60   | 71   | b90  | 94   | 136  | 205  | 309  | 1,500 | 1,230 | 347  | 129  | 77    |
| 17  | 60   | 73   | 156  | 96   | 141  | 230  | 284  | 1,860 | 1,130 | 320  | 122  | 80    |
| 18  | 58   | 71   | 146  | 96   | 141  | 270  | 263  | 1,670 | 1,090 | 287  | 115  | 84    |
| 19  | 60   | 62   | 141  | 96   | 138  | 250  | 253  | 1,160 | 1,150 | 273  | 104  | 82    |
| 20  | 61   | 52   | 126  | 92   | 141  | 227  | 236  | 1,070 | 1,170 | 256  | 100  | 88    |
| 21  | 61   | 66   | 115  | 96   | 146  | 208  | 240  | 1,310 | 982   | 246  | 96   | 94    |
| 22  | 61   | 61   | 109  | 92   | 143  | 208  | 273  | 1,800 | 922   | 240  | 92   | 77    |
| 23  | 60   | 56   | 161  | 96   | 148  | 224  | 343  | 1,700 | 852   | 233  | 88   |       |
| 24  | 61   | b60  | 96   | 106  | 143  | 224  | 411  | 1,610 | 784   | 224  | 84   | 75    |
| 25  | 84   | b55  | 69   | 98   | 143  | 224  | 505  | 1,770 | 649   | 211  | 80   | 73    |
| 26  | 86   | b55  | 68   | 104  | 141  | 240  | 592  | 1,780 | 637   | 199  | 75   | 66    |
| 27  | 77   | 58   | 565  | 100  | 141  | 266  | 649  | 1,510 | 598   | 194  | 92   | 66    |
| 28  | 69   | 66   | 360  | 92   | 171  | 270  | 697  | 1,370 | 530   | 188  | 102  | 68    |
| 29  | 69   | 68   | 240  | 90   | -    | 253  | 764  | 1,310 | 535   | 174  | 104  | 68    |
| 30  | 69   | 66   | 130  | 90   | -    | 230  | 721  | 1,150 | 570   | 160  | 104  | 68    |
| 31  | 68   | -    | 129  | 92   | -    | 238  | -    | 1,070 | -     | 156  | 98   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean  | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October.....            | 2,001            | 86      | 60      | 64.5  | 3,970                |
| November.....           | 2,100            | 96      | 56      | 70.0  | 4,170                |
| December.....           | 3,568            | 565     | 45      | 115   | 7,070                |
| Calendar year 1940..... | 138,833          | 2,020   | 45      | 379   | 275,400              |
| January.....            | 3,016            | 115     | 86      | 97.3  | 5,980                |
| February.....           | 3,891            | 230     | 90      | 139   | 7,720                |
| March.....              | 6,713            | 270     | 169     | 217   | 13,320               |
| April.....              | 9,893            | 764     | 191     | 330   | 19,620               |
| May.....                | 44,491           | 2,060   | 697     | 1,435 | 88,260               |
| June.....               | 32,059           | 1,890   | 530     | 1,069 | 65,690               |
| July.....               | 11,793           | 649     | 156     | 330   | 23,390               |
| August.....             | 3,851            | 199     | 75      | 124   | 7,600                |
| September.....          | 2,411            | 109     | 68      | 80.4  | 4,780                |
| Water year 1940-41..... | 125,765          | 2,060   | 45      | 345   | 249,500              |

b Stage-discharge relation affected by ice.

## Carson River near Carson City, Nev.

Location.- Water-stage recorder, lat. 39°06'30", long. 119°42'30", in NW $\frac{1}{4}$  sec. 2, T. 14 N., R. 20 E., 2 miles downstream from Clear Creek, 2 $\frac{1}{2}$  miles upstream from bridge on road to Mexican Dam, and 5 miles southeast of Carson City.

Records available.- May 1939 to September 1941.

Extremes.- Maximum discharge during year, 2,430 second-feet May 13 (gage height, 4.47 feet); minimum, 23 second-feet Sept. 14.

1939-41: Maximum discharge, that of May 13, 1941; minimum daily, 4 second-feet (estimated) Aug. 17, 1939.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Flow slightly regulated by several small reservoirs on tributaries above.

Rating table, water year 1940-41, except period of ice effect  
(gage height, in feet, and discharge, in second-feet)

|      |    |     |     |     |     |     |       |
|------|----|-----|-----|-----|-----|-----|-------|
| -0.5 | 2  | 0.4 | 34  | 1.6 | 241 | 3.5 | 1,390 |
| .3   | 5  | .6  | 47  | 1.9 | 355 | 4.0 | 1,890 |
| .2   | 8  | .8  | 64  | 2.2 | 490 | 4.5 | 2,470 |
| 0    | 15 | 1.0 | 89  | 2.6 | 717 |     |       |
| .2   | 23 | 1.3 | 151 | 3.0 | 980 |     |       |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May   | June  | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|-------|------|------|-------|
| 1   | 55   | 65   | 103  | 281  | 190  | 331  | 266  | 917   | 1,170 | 505  | 37   | 39    |
| 2   | 33   | 65   | 99   | 241  | 190  | 359  | 255  | 931   | 1,160 | 480  | 35   | 38    |
| 3   | 35   | 67   | 94   | 224  | 187  | 315  | 238  | 1,050 | 1,180 | 466  | 34   | 32    |
| 4   | 36   | 70   | 94   | 231  | 184  | 319  | 231  | 1,190 | 1,280 | 456  | 39   | 29    |
| 5   | 36   | 75   | 98   | 254  | 187  | 351  | 259  | 1,310 | 1,470 | 438  | 39   | 36    |
| 6   | 36   | 80   | 94   | 221  | 193  | 376  | 252  | 1,590 | 1,580 | 402  | 40   | 36    |
| 7   | 36   | 85   | 89   | 229  | 187  | 351  | 238  | 1,940 | 1,560 | 376  | 36   | 32    |
| 8   | 39   | 90   | 89   | 252  | 184  | 315  | 245  | 1,920 | 1,340 | 335  | 33   | 24    |
| 9   | 43   | 93   | 94   | 218  | 215  | 307  | 231  | 2,000 | 1,080 | 292  | 29   | 24    |
| 10  | 46   | 93   | 101  | 205  | 307  | 311  | 241  | 2,170 | 917   | 270  | 30   | 24    |
| 11  | 47   | 88   | 92   | 199  | 339  | 323  | 241  | 2,060 | 878   | 266  | 33   | 26    |
| 12  | 46   | 88   | 83   | 196  | 315  | 315  | 211  | 2,180 | 966   | 234  | 31   | 27    |
| 13  | 46   | 88   | 870  | 193  | 259  | 315  | 199  | 2,390 | 1,050 | 205  | 39   | 26    |
| 14  | 57   | 88   | b65  | 215  | 238  | 315  | 187  | 2,120 | 1,150 | 193  | 39   | 24    |
| 15  | 53   | 88   | b75  | 241  | 241  | 281  | 159  | 1,660 | 1,200 | 196  | 36   | 24    |
| 16  | 53   | 87   | b115 | 221  | 285  | 263  | 151  | 1,440 | 1,170 | 193  | 35   | 26    |
| 17  | 58   | 87   | b120 | 224  | 281  | 263  | 175  | 1,560 | 1,110 | 175  | 40   | 30    |
| 18  | 56   | 85   | 127  | 224  | 304  | 285  | 263  | 1,920 | 973   | 170  | 46   | 31    |
| 19  | 53   | 85   | 193  | 215  | 273  | 323  | 259  | 1,860 | 958   | 159  | 47   | 26    |
| 20  | 53   | 85   | 178  | 205  | 255  | 323  | 277  | 1,260 | 966   | 123  | 41   | 26    |
| 21  | 53   | 83   | 156  | 205  | 263  | 300  | 288  | 1,110 | 858   | 91   | 36   | 28    |
| 22  | 55   | 85   | 164  | 221  | 266  | 288  | 285  | 1,300 | 768   | 73   | 36   | 30    |
| 23  | 57   | 85   | 221  | 228  | 252  | 288  | 273  | 1,580 | 762   | 61   | 33   | 33    |
| 24  | 58   | 85   | 347  | 234  | 248  | 300  | 319  | 1,810 | 711   | 51   | 33   | 35    |
| 25  | 58   | 92   | 277  | 221  | 258  | 292  | 428  | 1,870 | 631   | 47   | 32   | 33    |
| 26  | 55   | 95   | 221  | 215  | 234  | 285  | 526  | 2,020 | 558   | 42   | 32   | 40    |
| 27  | 58   | 95   | 343  | 211  | 234  | 304  | 508  | 2,030 | 574   | 40   | 35   | 43    |
| 28  | 60   | 104  | 910  | 205  | 241  | 327  | 717  | 1,740 | 620   | 39   | 33   | 39    |
| 29  | 63   | 106  | 596  | 199  | -    | 323  | 607  | 1,560 | 608   | 38   | 30   | 39    |
| 30  | 65   | 106  | 428  | 193  | -    | 300  | 852  | 1,450 | 558   | 38   | 33   | 44    |
| 31  | 65   | -    | 363  | 190  | -    | 281  | -    | 1,320 | -     | 39   | 35   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean  | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October.....            | 1,547            | 65      | 33      | 49.9  | 3,070                |
| November.....           | 2,588            | 106     | 65      | 86.3  | 5,130                |
| December.....           | 6,089            | 910     | 65      | 197   | 12,100               |
| Calendar year 1940..... | 147,016          | 2,170   | 6       | 402   | 291,600              |
| January.....            | 6,790            | 281     | 190     | 219   | 13,470               |
| February.....           | 6,790            | 339     | 184     | 242   | 13,470               |
| March.....              | 9,529            | 376     | 205     | 311   | 19,100               |
| April.....              | 9,681            | 852     | 151     | 323   | 19,200               |
| May.....                | 51,258           | 2,390   | 917     | 1,653 | 101,700              |
| June.....               | 29,786           | 1,580   | 558     | 993   | 59,080               |
| July.....               | 6,493            | 505     | 38      | 209   | 12,880               |
| August.....             | 1,107            | 47      | 29      | 35.7  | 2,200                |
| September.....          | 944              | 44      | 24      | 31.5  | 1,870                |
| Water year 1940-41..... | 132,712          | 2,390   | 24      | 364   | 263,300              |

b Stage-discharge relation affected by ice.

Note.- No gage-height record Oct. 25 to Nov. 28; discharge computed on basis of records for station near Fort Churchill.

## Carson River near Fort Churchill, Nev.

Location.- Water-stage recorder, lat. 39°17', long. 119°18', in SE¼ sec. 32, T. 17 N., R. 24 E., 2 miles west of Fort Churchill and 6 miles east of Clifton.

Drainage area.- 1,450 square miles.

Records available.- January 1934 to September 1941. April 1911 to December 1933 at site 8 miles upstream.

Average discharge.- 30 years (1911-41), 358 second-feet.

Extremes.- Maximum daily discharge during year, 2,150 second-feet May 14; no flow Oct. 1-13, Aug. 1 to Sept. 30.

1911-41: Maximum discharge observed, 6,150 second-feet Jan. 26, 1914 (gage height, 11.5 feet, site and datum then in use); no flow during some periods in nearly every year since 1923.

Remarks.- Records good. Several diversions above station for irrigation, including diversions for irrigation of 720 acres between present site and the one used prior to Jan. 1, 1934. Practically entire flow is diverted during late irrigation season.

Cooperation.- Records of daily discharge furnished by Truckee-Carson Irrigation District.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb.  | Mar.                 | Apr. | May   | June  | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|-------|----------------------|------|-------|-------|------|------|-------|
| 1                       | 0                | 90   | 128     | 406     | 204   | 244                  | 266  | 693   | 1,120 | 521  |      |       |
| 2                       | 0                | 91   | 131     | 328     | 201   | 320                  | 250  | 728   | 1,080 | 490  |      |       |
| 3                       | 0                | 90   | 131     | 266     | 201   | 359                  | 241  | 776   | 1,100 | 466  |      |       |
| 4                       | 0                | 91   | 128     | 244     | 201   | 333                  | 233  | 598   | 1,170 | 446  |      |       |
| 5                       | 0                | 98   | 125     | 233     | 204   | 320                  | 224  | 1,020 | 1,300 | 456  |      |       |
| 6                       | 0                | 102  | 125     | 233     | 207   | 349                  | 236  | 1,140 | 1,480 | 402  |      |       |
| 7                       | 0                | 105  | 122     | 233     | 209   | 359                  | 233  | 1,420 | 1,480 | 373  |      |       |
| 8                       | 0                | 111  | 120     | 230     | 209   | 344                  | 215  | 1,780 | 1,270 | 343  |      |       |
| 9                       | 0                | 114  | 117     | 230     | 209   | 318                  | 218  | 1,750 | 1,060 | 299  |      |       |
| 10                      | 0                | 117  | 117     | 227     | 224   | 312                  | 212  | 1,810 | 888   | 249  |      |       |
| 11                      | 0                | 117  | 125     | 221     | 292   | 312                  | 212  | 2,000 | 811   | 230  |      |       |
| 12                      | 0                | 117  | 131     | 215     | 328   | 312                  | 212  | 1,920 | 862   | 227  |      |       |
| 13                      | 0                | 114  | 140     | 212     | 333   | 312                  | 209  | 2,040 | 973   | 218  |      |       |
| 14                      | 30               | 114  | 103     | 212     | 292   | 318                  | 186  | 2,150 | 1,060 | 193  |      |       |
| 15                      | 30               | 114  | 93      | 212     | 266   | 312                  | 172  | 1,910 | 1,130 | 190  |      |       |
| 16                      | 34               | 117  | 114     | 218     | 255   | 292                  | 149  | 1,460 | 1,060 | 187  |      |       |
| 17                      | 37               | 114  | 134     | 227     | 281   | 260                  | 128  | 1,370 | 1,060 | 178  |      |       |
| 18                      | 37               | 114  | 134     | 224     | 292   | 260                  | 178  | 1,500 | 973   | 153  |      |       |
| 19                      | 40               | 114  | 140     | 221     | 302   | 281                  | 192  | 1,840 | 879   | 147  |      |       |
| 20                      | 42               | 114  | 178     | 218     | 292   | 307                  | 198  | 1,610 | 871   | 128  |      |       |
| 21                      | 42               | 111  | 204     | 215     | 271   | 320                  | 201  | 1,120 | 871   | 100  |      |       |
| 22                      | 44               | 111  | 204     | 215     | 266   | 297                  | 212  | 1,060 | 742   | 81   |      |       |
| 23                      | 47               | 111  | 201     | 215     | 271   | 292                  | 215  | 1,230 | 693   | 70   |      |       |
| 24                      | 51               | 108  | 224     | 218     | 260   | 297                  | 201  | 1,500 | 686   | 57   |      |       |
| 25                      | 54               | 108  | 333     | 218     | 250   | 292                  | 224  | 1,660 | 666   | 46   |      |       |
| 26                      | 59               | 108  | 344     | 221     | 244   | 297                  | 320  | 1,700 | 555   | 33   |      |       |
| 27                      | 68               | 108  | 320     | 221     | 241   | 276                  | 406  | 1,750 | 555   | 31   |      |       |
| 28                      | 76               | 120  | 354     | 221     | 238   | 292                  | 510  | 1,790 | 562   | 31   |      |       |
| 29                      | 81               | 122  | 860     | 218     | -     | 312                  | 559  | 1,670 | 610   | 18   |      |       |
| 30                      | 88               | 122  | 650     | 212     | -     | 302                  | 692  | 1,480 | 569   | 16   |      |       |
| 31                      | 91               | -    | 406     | 209     | -     | 292                  | -    | 1,330 | -     | 14   |      |       |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean  | Run-off in acre-feet |      |       |       |      |      |       |
| October.....            | 951              |      | 91      | 0       | 30.7  | 1,890                |      |       |       |      |      |       |
| November.....           | 3,287            |      | 122     | 90      | 110   | 6,520                |      |       |       |      |      |       |
| December.....           | 6,656            |      | 860     | 93      | 214   | 13,160               |      |       |       |      |      |       |
| Calendar year 1940..... | 143,629          |      | 2,000   | 0       | 592   | 284,700              |      |       |       |      |      |       |
| January.....            | 7,193            |      | 406     | 209     | 232   | 14,270               |      |       |       |      |      |       |
| February.....           | 7,043            |      | 333     | 201     | 252   | 13,970               |      |       |       |      |      |       |
| March.....              | 9,493            |      | 359     | 244     | 306   | 18,830               |      |       |       |      |      |       |
| April.....              | 7,704            |      | 692     | 128     | 257   | 15,280               |      |       |       |      |      |       |
| May.....                | 46,095           |      | 2,150   | 693     | 1,497 | 91,430               |      |       |       |      |      |       |
| June.....               | 28,176           |      | 1,480   | 555     | 959   | 55,890               |      |       |       |      |      |       |
| July.....               | 6,373            |      | 521     | 14      | 206   | 12,640               |      |       |       |      |      |       |
| August.....             | 0                |      | 0       | 0       | 0     | 0                    |      |       |       |      |      |       |
| September.....          | 0                |      | 0       | 0       | 0     | 0                    |      |       |       |      |      |       |
| Water year 1940-41..... | 122,951          |      | 2,150   | 0       | 337   | 243,900              |      |       |       |      |      |       |

## West Fork of Carson River at Woodfords, Calif.

Location.- Water-stage recorder, lat. 36°46'00", long. 119°50'00", in SE $\frac{1}{4}$ SW $\frac{1}{4}$  sec. 34, T. 11 N., R. 19 E., 0.3 mile downstream from bridge on State Highway 8, 0.8 mile west of Woodfords, and  $\frac{3}{4}$  mile downstream from Willow Creek.

Drainage area.- 68 square miles.

Records available.- October 1900 to May 1907, 1910-11 (fragmentary), October 1938 to September 1941. April 1890 to March 1892 and June 1907 to September 1920 at site 0.7 mile downstream and below three diversions for irrigation.

Average discharge.- 18 years (1901-3, 1905-15, 1916-20, 1939-41), 138 second-feet.

Extremes.- Maximum discharge during year, 1,330 second-feet May 5 (gage height, 6.00 feet); minimum, 9 second-feet Dec. 11.

1900-1920, 1938-41: Maximum discharge, 1,570 second-feet May 9 and 10, 1906 (gage height, 6.8 feet, datum then in use); minimum, (1900-1907, 1938-41) that of Dec. 11, 1940.

Maximum discharge known, 3,500 second-feet Dec. 11, 1937, by slope-area method (gage height, 9.00 feet, present datum, from floodmarks).

Remarks.- Records good except those for periods of ice effect or daily staff-gage readings, which are fair, and those for periods of no gage-height record, which are poor. Flow slightly affected by one small diversion above station for irrigation, also slightly regulated by several small reservoirs of unknown capacities.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)

|     |    |     |     |     |     |     |       |
|-----|----|-----|-----|-----|-----|-----|-------|
| 0.4 | 6  | 1.4 | 44  | 2.5 | 157 | 4.5 | 621   |
| .6  | 10 | 1.6 | 59  | 2.8 | 201 | 5.0 | 810   |
| .8  | 15 | 1.8 | 77  | 3.2 | 271 | 5.5 | 1,050 |
| 1.0 | 22 | 2.0 | 97  | 3.6 | 359 | 6.0 | 1,330 |
| 1.2 | 31 | 2.2 | 119 | 4.0 | 468 |     |       |

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.             | Apr.    | May     | June | July                 | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1                       | 20   | 24   | 21   |      |      | 31               | 67      | 325     | 308  | 141                  |      | 72    |
| 2                       | 20   | 33   | 21   |      |      | 32               | 66      | 354     | 328  | 147                  |      | 77    |
| 3                       | 20   | 28   | 20   |      |      | 31               | 63      | 434     | 347  | 148                  |      | 72    |
| 4                       | 22   | 25   | 20   |      |      | 32               | 60      | 497     | 354  | 140                  |      | 55    |
| 5                       | 23   | 25   | 20   |      | a25  | 32               | 59      | 794     | 394  | 138                  |      | 59    |
| 6                       | 24   | 27   | 20   |      |      | 32               | 61      | 814     | 374  | 135                  |      | 65    |
| 7                       | 23   | 30   | 20   |      |      | 33               | 65      | 693     | 308  | 130                  |      | 69    |
| 8                       | 22   | 30   | 20   |      |      | 35               | 63      | 778     | 280  | 125                  |      | 69    |
| 9                       | 22   | 26   | 20   |      |      | 37               | 66      | 743     | 239  | 117                  |      | 69    |
| 10                      | 21   | 22   | 17   |      | a30  | 39               | 64      | 693     | 243  | 114                  |      | 73    |
| 11                      | 20   | 26   | a15  |      | a30  | 41               | 62      | 790     | 269  | 110                  |      | 72    |
| 12                      | 20   | 24   | a15  |      | h29  | 44               | 59      | 864     | 291  | 108                  |      | 69    |
| 13                      | 20   | 24   | a15  |      |      | 47               | 60      | 701     | 308  | 100                  |      | 87    |
| 14                      | 20   | 24   | a15  |      |      | 50               | 79      | 840     | 295  | 98                   |      | 91    |
| 15                      | 20   | 24   | a16  |      |      | 48               | 97      | 512     | 269  | 94                   |      | 88    |
| 16                      | 20   | 24   | a16  | a25  | a30  |                  |         |         |      |                      |      |       |
| 17                      | 20   | 24   | a18  |      |      | 50               | 102     | 552     | 263  | 90                   |      | 83    |
| 18                      | 20   | 24   | a20  |      |      | 56               | 89      | 671     | 239  | 81                   |      |       |
| 19                      | 20   | 21   | a25  |      |      | 63               | 81      | 568     | 229  | 73                   |      |       |
| 20                      | 20   | 22   | a25  |      | 30   | 63               | 78      | 410     | 254  | 72                   |      |       |
| 21                      | 20   | 22   | a25  |      | 32   | 57               | 80      | 392     | 247  | 68                   |      |       |
| 22                      | 20   | 22   | a20  |      |      | 55               | 92      | 455     | 211  | 67                   |      |       |
| 23                      | 20   | 20   | 26   |      |      | 53               | 54      | 120     | 533  | 196                  |      | 64    |
| 24                      | 25   | 17   | 28   |      |      | 59               | 59      | 154     | 569  | 184                  |      | 64    |
| 25                      | 22   | 22   | a25  |      |      | 60               | 160     | 549     | 165  | 62                   |      | a45   |
| 26                      | 22   | 21   | a20  |      |      | 63               | 229     | 549     | 139  | 61                   |      |       |
| 28                      | 27   | 17   | a20  |      |      | 67               | 67      | 271     | 540  | 139                  |      | 57    |
| 27                      | 25   | 22   | 45   |      |      | 31               | 76      | 302     | 452  | 149                  |      | 55    |
| 28                      | 24   | 22   | 45   |      |      | 32               | 77      | 328     | 410  | 139                  |      | 54    |
| 29                      | 24   | 22   | 39   |      |      | 69               | 330     | 372     | 126  | 63                   |      | a25   |
| 30                      | 24   | 22   | 36   |      |      | 65               | 302     | 335     | 136  | 64                   |      | a25   |
| 31                      | 23   | -    | 32   |      |      | 70               | -       | 306     | -    | 62                   |      | -     |
| Month                   |      |      |      |      |      | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |      |       |
| October.....            |      |      |      |      |      | 693              | 32      | 20      | 22.4 | 1,370                |      |       |
| November.....           |      |      |      |      |      | 713              | 33      | 17      | 23.8 | 1,410                |      |       |
| December.....           |      |      |      |      |      | 723              | 45      | -       | 25.3 | 1,430                |      |       |
| Calendar year 1940..... |      |      |      |      |      | 38,516           | 658     | -       | 105  | 76,380               |      |       |
| January.....            |      |      |      |      |      | 775              | -       | -       | 25   | 1,540                |      |       |
| February.....           |      |      |      |      |      | 811              | -       | -       | 29.0 | 1,610                |      |       |
| March.....              |      |      |      |      |      | 1,667            | 77      | 31      | 50.5 | 3,110                |      |       |
| April.....              |      |      |      |      |      | 3,751            | 330     | 59      | 124  | 7,400                |      |       |
| May.....                |      |      |      |      |      | 17,235           | 864     | 308     | 556  | 34,180               |      |       |
| June.....               |      |      |      |      |      | 7,403            | 324     | 126     | 247  | 14,690               |      |       |
| July.....               |      |      |      |      |      | 2,900            | 148     | 54      | 23.5 | 5,780                |      |       |
| August.....             |      |      |      |      |      | 1,841            | 91      | -       | 59.4 | 3,680                |      |       |
| September.....          |      |      |      |      |      | 748              | -       | -       | 24.9 | 1,480                |      |       |
| Water year 1940-41..... |      |      |      |      |      | 39,138           | 864     | -       | 107  | 77,610               |      |       |

a Doubtful or no gage-height record; discharge computed on basis of records for West Fork of Carson River near Gardnerville. Temperature and precipitation records.

h Computed from staff-gage reading.

Humboldt River at Palisade, Nev.

Location.- Water-stage recorder, lat. 40°37', long. 116°12', in sec. 36, T. 32 N., R. 51 E., at Palisade, a quarter of a mile downstream from Southern Pacific Railroad bridge and three-quarters of a mile upstream from Pine Creek.

Drainage area.- 5,010 square miles.

Records available.- November 1902 to October 1906; July 1911 to September 1941.

Average discharge.- 33 years (1903-6, 1911-41), 323 second-feet.

Extremes.- Maximum discharge during year, 2,110 second-feet June 12 (gage height, 6.13 feet); minimum, 16 second-feet Oct. 1.

1902-6, 1911-41: Maximum discharge observed, 4,300 second-feet Mar. 5, 1921 (gage height, 8.6 feet, site and datum then in use); minimum observed, 2 second-feet Aug. 25-28, 1931.

Remarks.- Records good except those for periods of ice effect or estimated gage heights, WHICH are fair. Water is diverted for irrigation of about 150,000 acres of hay and pasture lands above station.

Rating table, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

|     |    |     |     |     |       |     |       |
|-----|----|-----|-----|-----|-------|-----|-------|
| 1.6 | 0  | 2.2 | 42  | 3.3 | 309   | 5.5 | 1,570 |
| 1.7 | 2  | 2.4 | 75  | 3.6 | 428   | 6.0 | 1,940 |
| 1.8 | 6  | 2.6 | 111 | 4.0 | 625   | 6.5 | 2,340 |
| 1.9 | 12 | 2.8 | 157 | 4.5 | 910   |     |       |
| 2.0 | 20 | 3.0 | 211 | 5.0 | 1,220 |     |       |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May   | June   | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-------|--------|------|------|-------|
| 1   | 17   | 32   | 31   | b45  | 63   | 442  | 339  | 658   | 1,870  | 868  | 107  | 68    |
| 2   | 18   | 32   | 32   | b55  | 59   | f378 | 390  | 696   | 1,950  | 856  | 99   | 63    |
| 3   | 18   | 34   | 34   | b50  | 58   | f346 | 407  | 740   | 1,790  | 832  | 95   | 63    |
| 4   | 19   | 32   | 34   | b50  | 58   | f355 | 399  | 802   | 1,620  | 796  | 91   | 61    |
| 5   | 22   | 30   | 35   | b55  | 55   | f328 | 394  | 892   | 1,510  | 768  | 84   | 59    |
| 6   | 22   | 24   | 36   | b40  | 75   | 324  | 420  | 904   | 1,500  | 735  | 77   | 55    |
| 7   | 22   | 24   | 36   | 52   | 91   | 313  | 424  | 922   | 1,580  | 674  | 70   | 53    |
| 8   | 21   | 25   | 39   | 46   | 77   | 298  | 428  | 940   | 1,680  | 603  | 68   | 52    |
| 9   | 21   | 26   | 37   | 46   | 93   | 302  | 437  | 952   | 1,800  | 545  | 105  | 48    |
| 10  | 20   | 26   | 32   | 49   | 133  | 298  | 473  | 952   | 1,900  | 492  | 120  | 45    |
| 11  | 20   | 20   | b50  | 49   | 241  | 281  | 540  | 940   | 22,000 | 446  | 113  | 45    |
| 12  | 19   | 19   | b28  | 50   | 473  | 278  | 606  | 952   | 22,040 | 407  | 194  | 43    |
| 13  | 20   | 21   | b26  | 50   | 342  | 271  | 658  | 1,050 | 19,960 | 382  | 251  | 43    |
| 14  | 20   | 29   | b23  | 53   | 246  | 267  | 779  | 1,110 | 1,810  | 354  | 170  | 43    |
| 15  | 20   | 31   | b23  | 55   | 278  | 248  | 774  | 1,130 | 1,650  | 324  | 138  | 43    |
| 16  | 21   | 30   | b27  | 55   | 350  | 235  | 814  | 1,110 | 1,540  | 298  | 124  | 43    |
| 17  | 22   | 29   | b29  | 52   | 324  | 248  | 890  | 1,070 | 1,430  | 274  | 115  | 42    |
| 18  | 23   | 31   | 30   | 53   | 315  | 231  | 922  | 1,080 | 1,360  | 261  | 153  | 41    |
| 19  | 23   | 32   | 28   | 52   | 278  | 261  | 946  | 1,150 | 1,300  | 241  | 143  | 41    |
| 20  | 23   | 32   | 27   | 56   | 256  | 271  | 916  | 1,180 | 1,280  | 229  | 131  | 48    |
| 21  | 24   | 31   | 28   | 59   | 258  | 271  | 856  | 1,140 | 1,260  | 205  | 122  | 48    |
| 22  | 25   | 31   | 32   | 61   | 278  | 278  | 784  | 1,070 | 1,220  | 191  | 113  | 49    |
| 23  | 26   | 29   | 37   | 61   | 292  | 284  | 718  | 1,040 | 1,160  | 173  | 111  | 55    |
| 24  | 27   | 28   | 40   | 61   | 309  | 278  | 669  | 1,050 | 1,090  | 152  | 107  | 56    |
| 25  | 27   | 34   | 38   | 64   | 295  | 278  | 614  | 1,120 | 1,020  | 133  | 99   | 56    |
| 26  | 28   | 27   | 36   | 70   | 281  | 288  | 586  | 1,280 | 952    | 131  | 95   | 55    |
| 27  | 29   | 28   | 48   | 68   | 278  | 295  | 586  | 1,460 | 880    | 126  | 87   | 55    |
| 28  | 29   | 31   | 49   | 64   | 331  | 298  | 603  | 1,600 | 868    | 128  | 82   | 50    |
| 29  | 29   | 30   | 49   | 58   | -    | 302  | 603  | 1,770 | 904    | 124  | 77   | 49    |
| 30  | 30   | 30   | 55   | 52   | -    | 309  | 614  | 1,630 | 898    | 115  | 73   | 48    |
| 31  | 32   | -    | 59   | 59   | -    | 316  | -    | 1,630 | -      | 113  | 71   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean  | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|-------|----------------------|
| October.....            | 723              | 37      | 17      | 25.3  | 1,450                |
| November.....           | 858              | 34      | 19      | 28.6  | 1,700                |
| December.....           | 1,087            | 59      | 23      | 35.1  | 2,150                |
| Calendar year 1940..... | 77,120           | 1,200   | 11      | 211   | 153,000              |
| January.....            | 1,610            | 70      | 50      | 51.9  | 5,190                |
| February.....           | 6,192            | 473     | 55      | 221   | 12,220               |
| March.....              | 9,192            | 442     | 235     | 297   | 18,230               |
| April.....              | 18,581           | 946     | 339     | 619   | 36,850               |
| May.....                | 33,980           | 1,770   | 658     | 1,096 | 67,400               |
| June.....               | 43,822           | 2,040   | 868     | 1,461 | 86,920               |
| July.....               | 11,974           | 868     | 113     | 386   | 23,750               |
| August.....             | 3,470            | 251     | 68      | 112   | 6,880                |
| September.....          | 1,518            | 68      | 41      | 50.6  | 3,010                |
| Water year 1940-41..... | 133,007          | 2,040   | 17      | 364   | 263,800              |

b Stage-discharge relation affected by ice.  
 f Computed on basis of partly or wholly estimated gage-height record.

## HUMBOLDT RIVER BASIN

Humboldt River near Inlay, Nev.

Location.- Water-stage recorder, lat. 40°41'20", long. 118°12'55", in SW $\frac{1}{4}$  sec. 25, T. 33 N., R. 33 E., just upstream from flow line of Rye Patch Reservoir, 600 feet upstream from old Calahan Dam, 4 miles northwest of Inlay, and 9 miles downstream from Humboldt Lovelock Irrigation, Light & Power Co.'s feeder canal.

Drainage area.- 13,500 square miles.

Records available.- June 1935 to September 1941.

Extremes.- Maximum daily discharge during year, 588 second-feet July 8; no flow for many days.  
1935-41: Maximum daily discharge, that of July 8, 1941; no flow during some periods in 1935, 1937-41.

Remarks.- Records good except those for period of no gage-height record, which are fair. Humboldt Lovelock Irrigation, Light & Power Co.'s feeder canal diverts water from river above station to the Humboldt Reservoirs. This water is ordinarily released during the irrigation season through Rye Patch Reservoir to the Humboldt River for irrigation in the Lovelock district. Flow also affected by many diversions above station for irrigation.

Cooperation.- Record of daily discharge furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb.    | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|---------|----------------------|------|-----|------|------|------|-------|
| 1                       |                  |      |         |         |         | 0                    | 206  | 386 | 493  | 527  | 60   | 21    |
| 2                       |                  |      |         |         |         | 0                    | 208  | 356 | 489  | 525  | 49   | 21    |
| 3                       |                  |      |         |         |         | 0                    | 210  | 237 | 446  | 537  | 44   | 21    |
| 4                       |                  |      |         |         |         | 0                    | 211  | 232 | 450  | 546  | 42   | 20    |
| 5                       |                  |      |         |         |         | 0                    | 211  | 208 | 394  | 550  | 40   | 20    |
| 6                       |                  |      |         |         |         | 20                   | 213  | 232 | 301  | 577  | 39   | 19    |
| 7                       |                  |      |         |         |         | 20                   | 215  | 230 | 363  | 563  | 38   | 19    |
| 8                       |                  |      |         |         |         | 20                   | 215  | 178 | 412  | 569  | 37   | 19    |
| 9                       |                  |      |         |         |         | 21                   | 223  | 197 | 424  | 565  | 36   | 18    |
| 10                      |                  |      |         |         |         | 28                   | 232  | 251 | 432  | 561  | 34   | 18    |
| 11                      |                  |      |         |         |         | 39                   | 240  | 271 | 483  | 573  | 38   | 18    |
| 12                      |                  |      |         |         |         | 44                   | 251  | 325 | 464  | 562  | 37   | 18    |
| 13                      |                  |      |         |         |         | 57                   | 255  | 297 | 458  | 552  | 34   | 18    |
| 14                      |                  |      |         |         |         | 54                   | 260  | 312 | 497  | 527  | 32   | 16    |
| 15                      |                  |      |         |         |         | 70                   | 265  | 350 | 515  | 506  | 31   | 16    |
| 16                      |                  |      |         |         |         | 222                  | 267  | 404 | 470  | 480  | 30   | a10   |
| 17                      |                  |      |         |         |         | 237                  | 265  | 442 | 464  | 466  | 28   | a10   |
| 18                      |                  |      |         |         |         | 235                  | 264  | 446 | 470  | 440  | 26   | a10   |
| 19                      |                  |      |         |         |         | 225                  | 271  | 440 | 485  | 412  | 25   | a10   |
| 20                      |                  |      |         |         |         | 220                  | 286  | 442 | 489  | 375  | 25   | a10   |
| 21                      |                  |      |         |         |         | 217                  | 297  | 456 | 491  | 339  | 24   | a10   |
| 22                      |                  |      |         |         |         | 210                  | 306  | 470 | 495  | 301  | 24   | a10   |
| 23                      |                  |      |         |         |         | 203                  | 322  | 480 | 485  | 256  | 24   | a10   |
| 24                      |                  |      |         |         |         | 197                  | 335  | 483 | 468  | 211  | 24   | a10   |
| 25                      |                  |      |         |         |         | 192                  | 344  | 476 | 470  | 182  | 24   | a10   |
| 26                      |                  |      |         |         |         | 195                  | 346  | 478 | 478  | 159  | 24   | a10   |
| 27                      |                  |      |         |         |         | 198                  | 354  | 497 | 491  | 129  | 23   | a10   |
| 28                      |                  |      |         |         |         | 202                  | 356  | 501 | 514  | 112  | 21   | a10   |
| 29                      |                  |      |         |         |         | 203                  | 354  | 501 | 512  | 106  | 21   | a10   |
| 30                      |                  |      |         |         |         | 203                  | 367  | 493 | 515  | 88   | 21   | a10   |
| 31                      |                  |      |         |         |         | 203                  | -    | 495 | -    | 75   | 21   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean    | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 0                | 0    | 0       | 0       | 0       | 0                    | 0    |     |      |      |      |       |
| November.....           | 0                | 0    | 0       | 0       | 0       | 0                    | 0    |     |      |      |      |       |
| December.....           | 0                | 0    | 0       | 0       | 0       | 0                    | 0    |     |      |      |      |       |
| Calendar year 1940..... | 25,115           | 363  | 0       | 68.6    | 49,810  |                      |      |     |      |      |      |       |
| January.....            | 0                | 0    | 0       | 0       | 0       | 0                    | 0    |     |      |      |      |       |
| February.....           | 0                | 0    | 0       | 0       | 0       | 0                    | 0    |     |      |      |      |       |
| March.....              | 3,758            | 237  | 0       | 120     | 7,410   |                      |      |     |      |      |      |       |
| April.....              | 5,149            | 367  | 206     | 272     | 16,160  |                      |      |     |      |      |      |       |
| May.....                | 11,575           | 501  | 173     | 373     | 22,960  |                      |      |     |      |      |      |       |
| June.....               | 13,903           | 518  | 301     | 463     | 27,580  |                      |      |     |      |      |      |       |
| July.....               | 12,450           | 588  | 75      | 402     | 24,690  |                      |      |     |      |      |      |       |
| August.....             | 975              | 60   | 21      | 31.5    | 1,930   |                      |      |     |      |      |      |       |
| September.....          | 431              | 21   | 10      | 14.4    | 855     |                      |      |     |      |      |      |       |
| Water year 1940-41..... | 51,218           | 588  | 0       | 140     | 101,600 |                      |      |     |      |      |      |       |

a No gage-height record; discharge estimated.



Rye Patch Reservoir near Rye Patch, Nev.

Location.- Mercury indicating gage, lat. 40°28'15", long. 118°18'20", in NE¼ sec. 18, T. 30 N., R. 33 E., at control works at left end of Rye Patch Dam, 2 miles northwest of Rye Patch. Datum of gage is at mean sea level (Southern Pacific Railway datum).

Drainage area.- 13,700 square miles.

Records available.- February 1936 to September 1941.

Extremes.- Maximum contents during year, 39,000 acre-feet July 20 (elevation, 4,114.77 feet); minimum, 5,920 acre-feet Nov. 14 (elevation, 4,098.65 feet).  
1936-41: Maximum contents, that of July 20, 1940; minimum since operation began, 1,760 acre-feet Oct. 15, 1937.

Remarks.- Reservoir is formed by earth-fill, rock-faced dam; storage began Feb. 20, 1936. Capacity, 178,100 acre-feet between elevations 4,072.5 (sill of trash-rack structure) and 4,133.0 feet (top of spillway gates) above mean sea level. Dead storage negligible. Elevation of spillway (gate sill) is 4,116 feet. Water is used for irrigation on Humboldt project.

Cooperation.- Records furnished by Pershing County Water Conservation District of Nevada.

Contents, in acre-feet, water year October 1940 to September 1941

| Day | Oct.  | Nov.  | Dec.  | Jan.  | Feb.  | Mar.   | Apr.   | May    | June   | July   | Aug.   | Sept.  |
|-----|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| 1   | 6,890 | 6,170 | 6,070 | 6,350 | 7,130 | 7,610  | 11,750 | 16,940 | 17,510 | 32,530 | 34,160 | 28,460 |
| 2   | 6,890 | 6,200 | 6,080 | 6,580 | 7,140 | 7,620  | 11,920 | 17,070 | 17,690 | 33,210 | 33,640 | 28,450 |
| 3   | 6,890 | 6,220 | 6,080 | 6,660 | 7,140 | 7,670  | 12,040 | 17,160 | 18,160 | 33,870 | 33,080 | 28,410 |
| 4   | 6,890 | 6,250 | 6,090 | 6,680 | 7,160 | 7,710  | 12,210 | 17,050 | 18,340 | 34,490 | 32,720 | 28,380 |
| 5   | 6,890 | 6,250 | 6,100 | 6,700 | 7,180 | 7,720  | 12,410 | 16,800 | 18,690 | 35,170 | 32,380 | 28,350 |
| 6   | 6,890 | 6,250 | 6,100 | 6,720 | 7,180 | 7,730  | 12,710 | 16,720 | 19,010 | 35,660 | 32,160 | 28,320 |
| 7   | 6,890 | 6,250 | 6,110 | 6,740 | 7,190 | 7,760  | 12,970 | 16,450 | 19,360 | 35,050 | 31,770 | 28,520 |
| 8   | 6,870 | 6,210 | 6,120 | 6,760 | 7,200 | 7,790  | 13,250 | 16,230 | 19,700 | 35,480 | 31,500 | 28,290 |
| 9   | 6,870 | 6,130 | 6,210 | 6,770 | 7,220 | 7,880  | 13,520 | 16,050 | 20,810 | 35,830 | 31,320 | 27,750 |
| 10  | 6,800 | 6,080 | 6,170 | 6,780 | 7,230 | 7,880  | 13,680 | 15,850 | 20,750 | 37,180 | 30,940 | 27,890 |
| 11  | 6,780 | 6,040 | 6,170 | 6,790 | 7,270 | 7,900  | 14,070 | 15,640 | 21,030 | 37,450 | 30,850 | 27,580 |
| 12  | 6,740 | 5,990 | 6,170 | 6,870 | 7,300 | 7,950  | 14,210 | 15,450 | 21,470 | 37,530 | 30,760 | 27,310 |
| 13  | 6,700 | 5,940 | 6,170 | 6,820 | 7,310 | 8,010  | 14,250 | 15,350 | 21,960 | 38,320 | 30,690 | 27,470 |
| 14  | 6,660 | 5,920 | 6,170 | 6,840 | 7,320 | 8,180  | 14,390 | 15,270 | 22,460 | 38,660 | 30,610 | 27,210 |
| 15  | 6,600 | 5,930 | 6,170 | 6,860 | 7,350 | 8,180  | 14,640 | 15,140 | 23,000 | 38,660 | 30,330 | 27,130 |
| 16  | 6,590 | 5,940 | 6,170 | 6,870 | 7,360 | 8,160  | 14,880 | 15,040 | 23,560 | 38,760 | 30,150 | 27,080 |
| 17  | 6,440 | 5,950 | 6,170 | 6,890 | 7,430 | 8,260  | 15,040 | 14,940 | 23,980 | 38,930 | 30,090 | 27,050 |
| 18  | 6,350 | 5,980 | 6,170 | 6,910 | 7,450 | 8,580  | 15,250 | 15,200 | 24,380 | 38,930 | 30,030 | 26,780 |
| 19  | 6,270 | 5,990 | 6,170 | 6,920 | 7,450 | 8,900  | 15,430 | 15,280 | 24,940 | 38,930 | 29,990 | 26,870 |
| 20  | 6,180 | 5,990 | 6,170 | 6,940 | 7,440 | 9,210  | 15,610 | 15,400 | 25,460 | 39,000 | 29,920 | 26,840 |
| 21  | 6,100 | 6,000 | 6,220 | 6,960 | 7,460 | 9,470  | 15,740 | 15,560 | 25,910 | 39,930 | 29,920 | 26,840 |
| 22  | 6,030 | 6,000 | 6,240 | 6,970 | 7,490 | 9,770  | 15,860 | 15,640 | 26,440 | 39,700 | 29,830 | 26,840 |
| 23  | 6,010 | 6,010 | 6,240 | 6,990 | 7,500 | 10,120 | 16,070 | 15,720 | 27,020 | 38,280 | 29,600 | 26,840 |
| 24  | 6,010 | 6,020 | 6,240 | 7,010 | 7,510 | 10,320 | 16,160 | 15,770 | 27,550 | 37,850 | 29,490 | 26,780 |
| 25  | 6,010 | 6,030 | 6,240 | 7,010 | 7,540 | 10,520 | 16,250 | 15,830 | 27,980 | 37,440 | 29,430 | 26,840 |
| 26  | 6,030 | 6,030 | 6,280 | 7,030 | 7,560 | 10,810 | 16,320 | 15,890 | 28,460 | 37,050 | 29,340 | 27,050 |
| 27  | 6,130 | 6,040 | 6,320 | 7,070 | 7,580 | 10,990 | 16,560 | 16,120 | 28,950 | 36,340 | 29,260 | 27,130 |
| 28  | 6,150 | 6,050 | 6,360 | 7,090 | 7,590 | 11,200 | 16,650 | 16,190 | 29,440 | 35,690 | 29,150 | 27,130 |
| 29  | 6,170 | 6,050 | 6,440 | 7,090 | -     | 11,250 | 16,760 | 16,560 | 30,920 | 35,020 | 28,750 | 27,130 |
| 30  | 6,170 | 6,060 | 6,590 | 7,090 | -     | 11,470 | 16,870 | 16,830 | 32,010 | 35,530 | 28,630 | 27,180 |
| 31  | 6,170 | -     | 6,610 | 7,110 | -     | 11,610 | -      | 17,140 | -      | 34,510 | 28,520 | -      |

Monthly elevation and contents, water year October 1940 to September 1941

| Date                    | Elevation (feet) | Contents (acre-feet) | Change in contents during month (acre-feet) |
|-------------------------|------------------|----------------------|---|
| Oct. 1.....             | 4,097.95         | 6,890                | -720  |
| Nov. 1.....             | 4,097.00         | 6,170                | -100  |
| Dec. 1.....             | 4,096.86         | 6,070                | +280  |
| Calendar year 1940..... | -                | -                    | -2,070                                      |
| Jan. 1.....             | 4,097.60         | 6,350                | +780  |
| Feb. 1.....             | 4,098.24         | 7,130                | +480  |
| Mar. 1.....             | 4,098.83         | 7,610                | +4,140                                      |
| Apr. 1.....             | 4,103.04         | 11,750               | +5,190                                      |
| May 1.....              | 4,106.51         | 16,940               | +570  |
| June 1.....             | 4,106.82         | 17,510               | 15,020                                      |
| July 1.....             | 4,112.82         | 32,530               | +1,630                                      |
| Aug. 1.....             | 4,113.33         | 34,160               | -5,700                                      |
| Sept. 1.....            | 4,111.45         | 28,460               | -1,280                                      |
| Oct. 1.....             | 4,111.00         | 27,180               | -   |
| Water year 1940-41..... | -                | -                    | +20,290                                     |

## HUMBOLDT RIVER BASIN

Humboldt River near Rye Patch, Nev.

Location.- Water-stage recorder, lat. 40°27'25", long. 118°18'20", in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 19, T. 30 N., R. 33 E., 5,000 feet downstream from Rye Patch Dam and 1 mile northwest of Rye Patch.

Drainage area.- 13,700 square miles.

Records available.- October 1935 to September 1941. January 1896 to December 1909, September 1910 to September 1922, and September 1924 to September 1932 (fragmentary), at site near Oreana, 7 miles downstream, published as Humboldt River near Oreana, Nev.

Average discharge.- 29 years (1899-1909, 1910-16, 1917-22, 1930-32, 1935-41), 196 second-feet (unadjusted).

Extremes.- Maximum daily discharge during year 460 second-feet (regulated), May 21-26; practically no flow for many days when reservoir gates were closed.  
1896-1922, 1924-32, 1935-41: Maximum discharge, 3,050 second-feet May 12, 1897 (gauge height, 12.6 Feet, site and datum then in use); practically no flow during some periods in 1905, 1915, 1918-20, 1931-32, 1935-41.

Remarks.- Records good. Because of unstable conditions caused by backwater from aquatic vegetation at gaging-station, flow was computed from records of gate openings at dam, 5,000 feet above station, using theoretical rating and applying a coefficient determined from current-meter measurements. Flow completely regulated by Rye Patch Reservoir (see preceding page), slightly regulated by Humboldt (Taylor-Pitt) Reservoirs, and affected by many diversions for irrigation.

Cooperation.- Records of daily discharge furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 0                | 0    |         |         |      | 0                    | 120  | 321 | 328  | 89   | 231  | 40    |
| 2                       | 0                | 0    |         |         |      | 0                    | 118  | 338 | 298  | 112  | 220  | 34    |
| 3                       | 0                | 0    |         |         |      | 0                    | 118  | 309 | 278  | 124  | 208  | 34    |
| 4                       | 0                | 0    |         |         |      | 0                    | 118  | 308 | 254  | 125  | 196  | 34    |
| 5                       | 0                | 0    |         |         |      | 0                    | 97   | 308 | 229  | 150  | 195  | 21    |
| 6                       | 0                | 0    |         |         |      | 0                    | 76   | 307 | 210  | 188  | 176  | 14    |
| 7                       | 0                | 17   |         |         |      | 0                    | 80   | 313 | 162  | 214  | 148  | 33    |
| 8                       | 0                | 45   |         |         |      | 0                    | 80   | 322 | 150  | 250  | 136  | 45    |
| 9                       | 24               | 29   |         |         |      | 0                    | 126  | 322 | 150  | 290  | 135  | 45    |
| 10                      | 24               | 28   |         |         |      | 0                    | 145  | 325 | 151  | 290  | 89   | 56    |
| 11                      | 19               | 28   |         |         |      | 0                    | 174  | 334 | 152  | 280  | 86   | 70    |
| 12                      | 19               | 28   |         |         |      | 0                    | 187  | 361 | 152  | 266  | 86   | 70    |
| 13                      | 19               | 12   |         |         |      | 0                    | 187  | 390 | 173  | 250  | 86   | 70    |
| 14                      | 26               | 0    |         |         |      | 0                    | 188  | 398 | 182  | 274  | 76   | 70    |
| 15                      | 34               | 0    |         |         |      | 26                   | 195  | 423 | 182  | 299  | 40   | 50    |
| 16                      | 34               | 0    |         |         |      | 51                   | 200  | 434 | 184  | 309  | 35   | 30    |
| 17                      | 34               | 0    |         |         |      | 51                   | 200  | 450 | 184  | 314  | 35   | 30    |
| 18                      | 34               | 0    |         |         |      | 51                   | 201  | 458 | 158  | 314  | 35   | 30    |
| 19                      | 34               | 0    |         |         |      | 52                   | 202  | 458 | 144  | 314  | 35   | 22    |
| 20                      | 34               | 0    |         |         |      | 52                   | 230  | 458 | 144  | 366  | 34   | 16    |
| 21                      | 34               | 0    |         |         |      | 52                   | 242  | 460 | 145  | 389  | 34   | 16    |
| 22                      | 34               | 0    |         |         |      | 53                   | 242  | 450 | 145  | 389  | 34   | 6     |
| 23                      | 20               | 0    |         |         |      | 53                   | 277  | 460 | 146  | 388  | 34   | 0     |
| 24                      | 0                | 0    |         |         |      | 53                   | 292  | 460 | 146  | 387  | 34   | 0     |
| 25                      | 0                | 0    |         |         |      | 53                   | 292  | 460 | 146  | 357  | 34   | 0     |
| 26                      | 0                | 0    |         |         |      | 54                   | 292  | 460 | 146  | 386  | 34   | 0     |
| 27                      | 0                | 0    |         |         |      | 56                   | 293  | 436 | 46   | 357  | 47   | 0     |
| 28                      | 0                | 0    |         |         |      | 106                  | 312  | 355 | 0    | 340  | 66   | 0     |
| 29                      | 0                | 0    |         |         |      | 106                  | 326  | 326 | 0    | 304  | 60   | 0     |
| 30                      | 0                | 0    |         |         |      | 106                  | 321  | 326 | 46   | 274  | 48   | 0     |
| 31                      | 0                | -    |         |         |      | 110                  | -    | 326 | -    | 232  | 48   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 423              |      | 34      | 0       | 13.6 | 839                  |      |     |      |      |      |       |
| November.....           | 187              |      | 45      | 0       | 6.2  | 371                  |      |     |      |      |      |       |
| December.....           | 0                |      | 0       | 0       | 0    | 0                    |      |     |      |      |      |       |
| Calendar year 1940..... | 30,586           |      | 414     | 0       | 83.6 | 60,670               |      |     |      |      |      |       |
| January.....            | 0                |      | 0       | 0       | 0    | 0                    |      |     |      |      |      |       |
| February.....           | 0                |      | 0       | 0       | 0    | 0                    |      |     |      |      |      |       |
| March.....              | 1,085            |      | 110     | 0       | 35.0 | 2,150                |      |     |      |      |      |       |
| April.....              | 5,937            |      | 332     | 76      | 188  | 11,730               |      |     |      |      |      |       |
| May.....                | 11,866           |      | 460     | 307     | 383  | 23,540               |      |     |      |      |      |       |
| June.....               | 4,831            |      | 328     | 0       | 161  | 9,580                |      |     |      |      |      |       |
| July.....               | 8,631            |      | 359     | 89      | 278  | 17,120               |      |     |      |      |      |       |
| August.....             | 2,765            |      | 231     | 34      | 89.2 | 5,480                |      |     |      |      |      |       |
| September.....          | 836              |      | 70      | 0       | 27.9 | 1,660                |      |     |      |      |      |       |
| Water year 1940-41..... | 36,561           |      | 460     | 0       | 100  | 72,520               |      |     |      |      |      |       |

South Fork of Humboldt River near Elko, Nev.

Location.- Water-stage recorder, lat. 40°43'15", long. 115°49'50", in NW¼ sec. 30, T. 33 N., R. 55 E., a quarter of a mile upstream from head of canyon, 1.5 miles downstream from highway bridge, 9 miles upstream from mouth, and 10 miles southwest of Elko.

Drainage area.- 1,150 square miles.

Records available.- August 1896 to September 1922, October 1923 to September 1932, October 1936 to September 1941.

Average discharge.- 33 years (1896-1903, 1904-9, 1910-18, 1923-26, 1927-32, 1936-41), 126 second-feet.

Extremes.- Maximum discharge during year, 1,560 second-foot Aug. 8 (gage height, 5.25 feet); minimum daily, 1 second-foot Oct. 1, 2, 3, 1896-1922, 1923-32, 1936-41; Maximum discharge, 2,400 second-feet Jan. 26, 1914, from rating curve extended above 1,200 second-foot; practically no flow during some periods in nearly every year since 1915.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are fair. Flow affected by many diversions above station for irrigation. Station is below all diversions except those to Hunter & Banks Ranch, 3 miles downstream.

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June  | July  | Aug. | Sept. |     |    |    |
|-----|------|------|------|------|------|------|------|-----|-------|-------|------|-------|-----|----|----|
| 1   | a1   | 10   | b10  | a25  |      | 73   | 96   | 401 | 286   | 408   | 30   | 22    |     |    |    |
| 2   | a1   | 10   |      |      |      |      | 96   | 134 | 420   | 296   | 363  | 28    | 20  |    |    |
| 3   | a1   | 10   |      |      |      |      | 82   | 143 | 498   | 334   | 320  | 26    | 19  |    |    |
| 4   | a2   | 9    |      |      |      |      | 72   | 134 | 547   | 529   | 300  | 21    | 21  |    |    |
| 5   | a2   | 9    |      |      |      |      | 66   | 136 | 520   | 542   | 296  | 18    | 19  |    |    |
| 6   | a2   | 9    |      |      |      |      | 58   | 145 | 492   | 601   | 281  | 17    | 16  |    |    |
| 7   | a2   | 9    |      |      |      |      | 52   | 150 | 456   | 890   | 246  | 16    | 14  |    |    |
| 8   | a2   | 9    |      |      |      |      | 50   | 141 | 452   | 1,090 | 234  | 103   | 14  |    |    |
| 9   | 3    | 10   |      |      |      |      | 50   | 136 | 484   | 960   | 205  | 24    | 14  |    |    |
| 10  | 3    | 10   |      |      |      |      | 47   | 180 | 484   | 725   | 191  | 27    | 14  |    |    |
| 11  | 4    | 10   | a20  | a20  |      | 47   | 191  | 534 | 596   | 175   | 219  | 12    |     |    |    |
| 12  | 4    | 9    |      |      |      |      | 46   | 211 | 673   | 574   | 170  | 198   | 12  |    |    |
| 13  | 4    | 9    |      |      |      |      | 46   | 262 | 770   | 616   | 158  | 104   | 13  |    |    |
| 14  | 3    | 10   |      |      |      |      | 45   | 290 | 800   | 560   | 143  | 77    | 13  |    |    |
| 15  | 4    | 10   |      |      |      |      | 40   | 283 | 715   | 619   | 129  | 64    | 14  |    |    |
| 16  | 4    | 11   |      |      | a15  | a25  |      | 40  | 363   | 610   | 646  | 116   | 60  | 14 |    |
| 17  | 3    | 11   |      |      |      |      |      |     | 43    | 390   | 516  | 568   | 108 | 62 | 14 |
| 18  | 4    | 11   |      |      |      |      |      |     | 48    | 401   | 538  | 537   | 93  | 85 | 14 |
| 19  | 4    | 12   |      |      |      |      |      |     | 48    | 378   | 556  | 806   | 96  | 66 | 12 |
| 20  | 3    | 10   |      |      |      |      |      |     | 61    | 338   | 520  | 583   | 84  | 61 | 17 |
| 21  | 3    | 11   |      |      |      |      | 70   | 307 | 464   | 552   | 73   | 55    | 20  |    |    |
| 22  | 3    | b11  |      |      |      |      | 67   | 274 | 440   | 504   | 66   | 47    | 22  |    |    |
| 23  | 4    | b10  |      |      |      |      | 66   | 264 | 456   | 468   | 45   | 43    | 28  |    |    |
| 24  | 4    | b10  |      |      |      |      | 67   | 271 | 556   | 440   | 39   | 39    | 29  |    |    |
| 25  | 4    | b10  |      |      |      |      | 67   | 280 | 705   | 397   | 39   | 36    | 28  |    |    |
| 26  | 7    | b10  | a20  |      | 72   | 66   | 296  | 965 | 352   | 41    | 31   | 27    |     |    |    |
| 27  | 12   | b10  |      |      |      | 66   | 67   | 307 | 1,190 | 327   | 50   | 26    | 25  |    |    |
| 28  | 12   | b10  |      |      |      | 66   | 70   | 313 | 1,100 | 396   | 43   | 25    | 21  |    |    |
| 29  | 12   | b10  |      |      |      | -    | 73   | 331 | 835   | 390   | 40   | 24    | 23  |    |    |
| 30  | 12   | b10  |      |      |      | -    | 82   | 371 | 691   | 378   | 36   | 25    | 23  |    |    |
| 31  | 11   | -    |      |      |      | -    | 82   | -   | 705   | -     | 32   | 25    | -   |    |    |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 140              | 12      | 1       | 4.5  | 278                  |
| November.....           | 300              | 12      | 0       | 10.0 | 823                  |
| December.....           | 415              | -       | -       | 13.4 | 823                  |
| Calendar year 1940..... | 37,066           | 730     | 1       | 101  | 73,520               |
| January.....            | 620              | -       | -       | 20   | 1,230                |
| February.....           | 1,469            | -       | -       | 52.5 | 2,910                |
| March.....              | 1,865            | 96      | 40      | 60.8 | 3,740                |
| April.....              | 7,519            | 401     | 99      | 250  | 14,900               |
| May.....                | 18,971           | 1,190   | 401     | 612  | 37,630               |
| June.....               | 17,302           | 1,090   | 327     | 577  | 34,320               |
| July.....               | 4,601            | 409     | 32      | 148  | 9,130                |
| August.....             | 1,762            | 219     | 15      | 56.8 | 3,490                |
| September.....          | 554              | 29      | 12      | 18.5 | 1,100                |
| Water year 1940-41..... | 55,529           | 1,190   | 1       | 162  | 110,100              |

a No gage-height record; discharge computed on basis of one discharge measurement, records for Humboldt River at Palisade, temperature and precipitation records.

b Stage-discharge relation affected by ice.

Martin Creek near Paradise Valley, Nev.

Location.- Water-stage recorder, lat. 41°32'00", long. 117°25'40", in NW¼SW¼ sec. 12, T. 42 N., R. 40 E., 0.6 mile upstream from Humboldt County Fish Hatchery and 7 miles northeast of Paradise Valley.

Records available.- October 1921 to September 1941.

Average discharge.- 19 years (1921-26, 1927-41), 25.1 second-feet.

Extremes.- Maximum discharge during year, 361 second-feet Mar. 1 (gage height, 3.73 feet), from rating curve extended above 130 second-feet; minimum, 4 second-feet Dec. 11 and Jan. 1.

1921-41: Maximum discharge, 1,000 second-feet Feb. 21-22, 1927, from rating curve extended above 200 second-feet; minimum, 2 second-feet Sept. 1-9, 1928.

Remarks.- Records good. No diversion above gage.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

|     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|
| 1.0 | 5   | 1.5 | 31  | 2.6 | 159 |
| 1.1 | 8.5 | 1.7 | 49  | 3.0 | 223 |
| 1.2 | 13  | 2.0 | 81  | 3.4 | 295 |
| 1.3 | 18  | 2.3 | 118 | 3.8 | 376 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 5    | 8    | 10   | 6    | 8    | 269  | 67   | 118 | 72   | 22   | 6    | 5     |
| 2   | 5    | 10   | 10   | 6    | 9    | 122  | 61   | 132 | 68   | 20   | 5    | 5     |
| 3   | 5    | 11   | 10   | 7    | 9    | 56   | 53   | 130 | 66   | 20   | 5    | 6     |
| 4   | 5    | 10   | 9    | 10   | 9    | 43   | 51   | 131 | 67   | 18   | 5    | 5     |
| 5   | 5    | 9    | 9    | 10   | 9    | 42   | 61   | 116 | 63   | 16   | 5    | 5     |
| 6   | 5    | 10   | 10   | 8    | 23   | 44   | 53   | 117 | 61   | 14   | 5    | 5     |
| 7   | 5    | 10   | 9    | 10   | 33   | 68   | 57   | 118 | 77   | 14   | 5    | 5     |
| 8   | 5    | 11   | 8    | 10   | 17   | 73   | 56   | 142 | 64   | 12   | 5    | 5     |
| 9   | 5    | 11   | 9    | 9    | 26   | 76   | 61   | 153 | 68   | 12   | 5    | 5     |
| 10  | 5    | 11   | 6    | 9    | 64   | 69   | 59   | 152 | 51   | 11   | 5    | 5     |
| 11  | 5    | 10   | 5    | 9    | 169  | 74   | 52   | 156 | 48   | 10   | 7    | 5     |
| 12  | 5    | 10   | 6    | 9    | 100  | 71   | 50   | 176 | 47   | 9    | 6    | 6     |
| 13  | 5    | 9    | 6    | 10   | 34   | 69   | 55   | 170 | 45   | 9    | 5    | 6     |
| 14  | 5    | 9    | 5    | 12   | 25   | 53   | 53   | 153 | 43   | 8    | 5    | 6     |
| 15  | 6    | 8    | 5    | 10   | 26   | 47   | 62   | 130 | 40   | 8    | 5    | 6     |
| 16  | 6    | 9    | 6    | 10   | 35   | 71   | 58   | 115 | 38   | 8    | 5    | 5     |
| 17  | 6    | 10   | 8    | 10   | 41   | 114  | 51   | 112 | 36   | 8    | 5    | 5     |
| 18  | 6    | 10   | 8    | 10   | 64   | 119  | 49   | 114 | 34   | 8    | 5    | 5     |
| 19  | 6    | 8    | 9    | 11   | 51   | 82   | 42   | 103 | 32   | 7    | 5    | 6     |
| 20  | 6    | 8    | 9    | 11   | 38   | 63   | 40   | 89  | 30   | 6    | 5    | 6     |
| 21  | 6    | 9    | 9    | 11   | 85   | 52   | 40   | 83  | 28   | 6    | 5    | 6     |
| 22  | 6    | 8    | 10   | 10   | 86   | 53   | 46   | 87  | 25   | 5    | 5    | 6     |
| 23  | 6    | 6    | 12   | 11   | 105  | 58   | 55   | 92  | 24   | 5    | 5    | 6     |
| 24  | 6    | 7    | 12   | 11   | 105  | 43   | 68   | 98  | 23   | 5    | 5    | 6     |
| 25  | 7    | 10   | 10   | 11   | 61   | 49   | 73   | 103 | 25   | 5    | 5    | 6     |
| 26  | 10   | 8    | 10   | 13   | 37   | 61   | 79   | 123 | 22   | 5    | 5    | 6     |
| 27  | 9    | 7    | 24   | 9    | 33   | 71   | 85   | 126 | 39   | 6    | 5    | 6     |
| 28  | 8    | 10   | 16   | 7    | 91   | 73   | 89   | 100 | 39   | 6    | 5    | 6     |
| 29  | 8    | 10   | 14   | 7    | -    | 73   | 95   | 89  | 27   | 6    | 5    | 6     |
| 30  | 8    | 10   | 13   | 8    | -    | 66   | 105  | 87  | 26   | 6    | 5    | 6     |
| 31  | 7    | -    | 8    | 8    | -    | 70   | -    | 80  | -    | 6    | 5    | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 187              | 10      | 5       | 6.0  | 371                  |
| November.....           | 277              | 11      | 6       | 9.2  | 549                  |
| December.....           | 295              | 24      | 5       | 9.5  | 585                  |
| Calendar year 1940..... | 10,790           | 374     | 4       | 29.5 | 21,400               |
| January.....            | 293              | 13      | 6       | 9.5  | 581                  |
| February.....           | 1,382            | 159     | 8       | 49.4 | 2,740                |
| March.....              | 2,283            | 269     | 42      | 73.6 | 4,530                |
| April.....              | 1,823            | 105     | 40      | 60.8 | 3,620                |
| May.....                | 3,694            | 176     | 80      | 119  | 7,330                |
| June.....               | 1,320            | 77      | 22      | 44.0 | 2,620                |
| July.....               | 301              | 22      | 5       | 9.7  | 597                  |
| August.....             | 159              | 7       | 5       | 5.1  | 315                  |
| September.....          | 167              | 6       | 5       | 5.6  | 331                  |
| Water year 1940-41..... | 12,181           | 269     | 5       | 33.4 | 24,170               |

Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal near Humboldt, Nev.

Location.- Water-stage recorder and Cippoletti weir, lat. 40°36'25", long. 118°18'20", in SE¼ sec. 30, T. 32 N., R. 33 E., at outlet of lower Humboldt (Taylor-Pitt) Reservoir, 2½ miles west of Humboldt.

Records available.- February 1914 to September 1920, October 1921 to September 1941.

Average discharge.- 26 years, 14.0 second-feet.

Extremes.- Maximum daily discharge during year, 122 second-feet May 18; no flow for many days.

1914-20, 1921-41: Maximum daily discharge, 477 second-feet July 17, 1917; practically no flow at times during each year.

Remarks.- Records good. Flow regulated by reservoir outlet gates a few hundred feet upstream. Canal conducts stored water released from Humboldt (Taylor-Pitt) Reservoirs to Rye Patch Reservoir, from which it is later released and carried in natural river channel to Lovelock district for use in irrigation.

Cooperation.- Records of daily discharge furnished by Bureau of Reclamation.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.             | Apr.    | May     | June | July                 | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1                       |      |      |      |      |      | 0                | 24      | 44      | 12   |                      | 0    | 15    |
| 2                       |      |      |      |      |      | 0                | 24      | 21      | 4    |                      | 0    | 15    |
| 3                       |      |      |      |      |      | 0                | 24      | 12      | 0    |                      | 0    | 15    |
| 4                       |      |      |      |      |      | 0                | 24      | 7       | 0    |                      | 0    | 15    |
| 5                       |      |      |      |      |      | 0                | 24      | 0       | 0    |                      | 0    | 5     |
| 6                       |      |      |      |      |      | 0                | 32      | 0       | 0    |                      | 0    | 0     |
| 7                       |      |      |      |      |      | 0                | 36      | 4       | 0    |                      | 0    | 10    |
| 8                       |      |      |      |      |      | 0                | 36      | 15      | 0    |                      | 0    | 15    |
| 9                       |      |      |      |      |      | 0                | 50      | 15      | 0    |                      | 0    | 15    |
| 10                      |      |      |      |      |      | 0                | 60      | 19      | 0    |                      | 0    | 15    |
| 11                      |      |      |      |      |      | 0                | 60      | 27      | 0    |                      | 0    | 15    |
| 12                      |      |      |      |      |      | 0                | 60      | 41      | 0    |                      | 0    | 15    |
| 13                      |      |      |      |      |      | 0                | 60      | 64      | 0    |                      | 0    | 15    |
| 14                      |      |      |      |      |      | 0                | 60      | 72      | 0    |                      | 0    | 15    |
| 15                      |      |      |      |      |      | 0                | 70      | 94      | 0    |                      | 0    | 15    |
| 16                      |      |      |      |      |      | 0                | 74      | 112     | 0    |                      | 0    | 15    |
| 17                      |      |      |      |      |      | 0                | 73      | 118     | 0    |                      | 0    | 15    |
| 18                      |      |      |      |      |      | 0                | 70      | 122     | 0    |                      | 0    | 15    |
| 19                      |      |      |      |      |      | 0                | 61      | 121     | 0    |                      | 0    | 15    |
| 20                      |      |      |      |      |      | 0                | 61      | 112     | 0    |                      | 0    | 15    |
| 21                      |      |      |      |      |      | 0                | 61      | 92      | 0    |                      | 0    | 15    |
| 22                      |      |      |      |      |      | 0                | 61      | 84      | 0    |                      | 0    | 15    |
| 23                      |      |      |      |      |      | 0                | 60      | 76      | 0    |                      | 0    | 100   |
| 24                      |      |      |      |      |      | 0                | 50      | 68      | 0    |                      | 0    | 92    |
| 25                      |      |      |      |      |      | 0                | 54      | 61      | 0    |                      | 0    | 0     |
| 26                      |      |      |      |      |      | 0                | 61      | 61      | 0    |                      | 0    | 0     |
| 27                      |      |      |      |      |      | 0                | 55      | 39      | 0    |                      | 0    | 0     |
| 28                      |      |      |      |      |      | 0                | 50      | 12      | 0    |                      | 11   | 0     |
| 29                      |      |      |      |      |      | 4                | 50      | 12      | 0    |                      | 15   | 0     |
| 30                      |      |      |      |      |      | 12               | 50      | 12      | 0    |                      | 15   | 0     |
| 31                      |      |      |      |      |      | 18               | -       | 12      | -    |                      | 15   | -     |
| Month                   |      |      |      |      |      | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |      |       |
| October.....            |      |      |      |      |      | 0                | 0       | 0       | 0    | 0                    |      |       |
| November.....           |      |      |      |      |      | 0                | 0       | 0       | 0    | 0                    |      |       |
| December.....           |      |      |      |      |      | 0                | 0       | 0       | 0    | 0                    |      |       |
| Calendar year 1940..... |      |      |      |      |      | 7,996            | 143     | 0       | 21.8 | 15,865               |      |       |
| January.....            |      |      |      |      |      | 0                | 0       | 0       | 0    | 0                    |      |       |
| February.....           |      |      |      |      |      | 0                | 0       | 0       | 0    | 0                    |      |       |
| March.....              |      |      |      |      |      | 34               | 16      | 0       | 1.1  | 67                   |      |       |
| April.....              |      |      |      |      |      | 1,555            | 74      | 24      | 51.2 | 3,040                |      |       |
| May.....                |      |      |      |      |      | 1,549            | 122     | 0       | 50.0 | 3,070                |      |       |
| June.....               |      |      |      |      |      | 16               | 12      | 0       | .5   | 32                   |      |       |
| July.....               |      |      |      |      |      | 0                | 0       | 0       | 0    | 0                    |      |       |
| August.....             |      |      |      |      |      | 56               | 15      | 0       | 1.8  | 111                  |      |       |
| September.....          |      |      |      |      |      | 492              | 100     | 0       | 16.4 | 976                  |      |       |
| Water year 1940-41..... |      |      |      |      |      | 3,682            | 122     | 0       | 10.0 | 7,300                |      |       |

## Pyramid Lake near Nixon, Nev.

Location.- Bench mark N 21 of U. S. Coast and Geodetic Survey, lat. 39°50'30", long. 119°28'00", in 35454 sec. 24, T. 23 N., R. 22 E., at southwest corner of concrete bridge No. 296 B, 150 feet southwest of milepost 297, 11.5 miles south, along Southern Pacific Railroad, from station at Sutcliffe, and 6 miles west of Nixon. Elevation of bench mark is 3,340.04 feet above mean sea level, datum of 1929.

Records available.- 1887 to 1925 (occasional elevations in some years). June 1926 to September 1941. Elevations prior to January 1934 referred to adjustment of 1912, datum of which is 0.57 foot above that of datum of 1929.

Extremes.- 1926-41: Maximum elevation observed, 3,847.35 feet June 1926, datum of 1929; minimum, 3,815.93 feet Sept. 16, 1941.

Remarks.- Elevations determined by spirit leveling.

Cooperation.- Records furnished by Indian Service.

| Elevation, in feet, above mean sea level, 1940-41 |          |          |          |
|---|----------|----------|----------|
| Aug. 16, 1940 <sup>2</sup>                        | 3,817.92 | Apr. 21  | 3,816.92 |
| Oct. 11   | 3,816.79 | May 19   | 3,816.83 |
| Nov. 12   | 3,816.66 | June 21  | 3,817.00 |
| Dec. 11   | 3,816.55 | July 18  | 3,816.92 |
| Jan. 17, 1941                                     | 3,816.75 | Aug. 19  | 3,816.29 |
| Feb. 16   | 3,817.04 | Sept. 16 | 3,815.93 |
| Mar. 26   | 3,816.99 |          |          |

<sup>2</sup>/ Not previously published.

## Lake Tahoe at Tahoe, Calif.

Location.- Staff gage, lat. 39°09'55", long. 120°08'25", in NW¼ sec. 7, T. 15 N., R. 17 E., at Tahoe, near outlet of lake. Datum of gage is 6,219.01 feet above mean sea level, datum of 1929, or 6,220.0 feet above mean sea level (datum of Bureau of Reclamation). Elevations given herein are referred to datum of 1929.

Drainage area.- 519 square miles (including water surface of lake, which is 193 square miles).

Records available.- 1900 to September 1941.

Extremes.- Maximum gage height during year, 8.59 feet July 15; minimum, 5.91 feet Dec. 16, 1900-41; Maximum gage height, 11.26 feet July 14, 15, 17, 18, 1907; minimum, 1.74 feet Dec. 26, 1934.

Remarks.- Lake levels maintained by concrete regulator dam with 17 gates; storage began about 1874. Capacity, 1,028,000 acre-feet between elevations 6,222.01 feet (natural rim of lake at outlet) and 6,230.27 feet (highest stage recorded, July 14, 15, 17, 18, 1907) above mean sea level. Increase in capacity in the range indicated, about 125,000 acre-feet per foot of rise. Sill of outlet gates is 6,218.01 feet above mean sea level. Water is used for irrigation in State of Nevada and for power development. Gage read once daily.

Cooperation.- Records furnished by H. C. Dukes, Federal Court Water Master.

Gage height, in feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May  | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1   | 6.76 | 6.35 | 6.10 | 6.48 | 6.65 | 6.90 | 7.04 | 7.30 | 8.13 | 8.53 | 8.39 | 7.87  |
| 2   | 6.73 | 6.40 | 6.09 | 6.48 | 6.65 | 6.92 | 7.05 | 7.33 | 8.14 | 8.54 | 8.38 | 7.84  |
| 3   | 6.72 | 6.39 | 6.09 | 6.47 | 6.65 | 6.94 | 7.05 | 7.37 | 8.16 | 8.54 | 8.36 | 7.82  |
| 4   | 6.70 | 6.37 | 6.08 | 6.45 | 6.65 | 6.96 | 7.07 | 7.40 | 8.17 | 8.55 | 8.34 | 7.80  |
| 5   | 6.68 | 6.34 | 6.08 | 6.47 | 6.65 | 6.97 | 7.11 | 7.43 | 8.19 | 8.55 | 8.32 | 7.79  |
| 6   | 6.67 | 6.34 | 6.07 | 6.48 | 6.65 | 6.98 | 7.11 | 7.45 | 8.22 | 8.56 | 8.30 | 7.79  |
| 7   | 6.66 | 6.35 | 6.06 | 6.48 | 6.65 | 6.99 | 7.11 | 7.47 | 8.24 | 8.56 | 8.29 | 7.77  |
| 8   | 6.66 | 6.34 | 6.05 | 6.53 | 6.66 | 7.00 | 7.12 | 7.49 | 8.26 | 8.57 | 8.28 | 7.75  |
| 9   | 6.63 | 6.32 | 6.04 | 6.52 | 6.71 | 7.00 | 7.13 | 7.51 | 8.27 | 8.57 | 8.27 | 7.72  |
| 10  | 6.62 | 6.31 | 6.03 | 6.50 | 6.73 | 7.01 | 7.14 | 7.53 | 8.28 | 8.57 | 8.26 | 7.69  |
| 11  | 6.61 | 6.29 | 6.01 | 6.51 | 6.75 | 7.01 | 7.14 | 7.55 | 8.30 | 8.57 | 8.25 | 7.66  |
| 12  | 6.60 | 6.27 | 6.00 | 6.52 | 6.77 | 7.02 | 7.14 | 7.57 | 8.32 | 8.57 | 8.23 | 7.63  |
| 13  | 6.59 | 6.26 | 6.00 | 6.52 | 6.77 | 7.02 | 7.15 | 7.60 | 8.34 | 8.58 | 8.22 | 7.61  |
| 14  | 6.59 | 6.25 | 6.04 | 6.52 | 6.76 | 7.02 | 7.16 | 7.62 | 8.35 | 8.58 | 8.21 | 7.59  |
| 15  | 6.58 | 6.25 | 6.02 | 6.52 | 6.79 | 7.01 | 7.15 | 7.72 | 8.38 | 8.59 | 8.19 | 7.57  |
| 16  | 6.57 | 6.25 | 6.01 | 6.51 | 6.81 | 7.01 | 7.16 | 7.74 | 8.39 | 8.59 | 8.18 | 7.55  |
| 17  | 6.56 | 6.25 | 6.00 | 6.50 | 6.81 | 7.02 | 7.17 | 7.76 | 8.40 | 8.58 | 8.17 | 7.53  |
| 18  | 6.55 | 6.25 | 6.00 | 6.50 | 6.83 | 7.02 | 7.17 | 7.78 | 8.41 | 8.58 | 8.16 | 7.51  |
| 19  | 6.54 | 6.23 | 6.02 | 6.52 | 6.83 | 7.02 | 7.18 | 7.79 | 8.42 | 8.58 | 8.15 | 7.49  |
| 20  | 6.53 | 6.21 | 6.00 | 6.52 | 6.84 | 7.03 | 7.18 | 7.80 | 8.43 | 8.57 | 8.14 | 7.47  |
| 21  | 6.51 | 6.20 | 6.00 | 6.57 | 6.86 | 7.03 | 7.19 | 7.82 | 8.44 | 8.57 | 8.13 | 7.44  |
| 22  | 6.50 | 6.17 | 6.01 | 6.60 | 6.86 | 7.03 | 7.19 | 7.85 | 8.44 | 8.57 | 8.11 | 7.43  |
| 23  | 6.48 | 6.16 | 6.04 | 6.65 | 6.86 | 7.02 | 7.20 | 7.89 | 8.44 | 8.55 | 8.10 | 7.37  |
| 24  | 6.46 | 6.15 | 6.08 | 6.65 | 6.87 | 7.01 | 7.20 | 7.93 | 8.43 | 8.55 | 8.09 | 7.35  |
| 25  | 6.49 | 6.14 | 6.16 | 6.68 | 6.87 | 7.01 | 7.21 | 7.97 | 8.43 | 8.50 | 8.07 | 7.34  |
| 26  | 6.47 | 6.12 | 6.19 | 6.87 | 6.86 | 7.01 | 7.22 | 8.02 | 8.43 | 8.48 | 8.04 | 7.33  |
| 27  | 6.45 | 6.12 | 6.33 | 6.65 | 6.88 | 7.02 | 7.23 | 8.05 | 8.49 | 8.47 | 8.01 | 7.32  |
| 28  | 6.42 | 6.11 | 6.44 | 6.65 | 6.88 | 7.02 | 7.24 | 8.07 | 8.51 | 8.44 | 7.99 | 7.30  |
| 29  | 6.40 | 6.11 | 6.49 | 6.64 | -    | 7.03 | 7.25 | 8.08 | 8.52 | 8.43 | 7.95 | 7.28  |
| 30  | 6.39 | 6.10 | 6.49 | 6.64 | -    | 7.04 | 7.25 | 8.10 | 8.52 | 8.41 | 7.92 | 7.26  |
| 31  | 6.38 | -    | 6.49 | 6.64 | -    | 7.04 | -    | 8.11 | -    | 8.40 | 7.90 | -     |

Truckee River at Tahoe, Calif.

Location.- Water-stage recorder, lat. 39°09'55", long. 120°08'45", in NW¼ sec. 7, T. 15 N., R. 17 E., at Tahoe, just below dam at outlet of Lake Tahoe. Datum of gage is 6,219.01 feet above mean sea level, datum of 1929.

Drainage area.- 519 square miles.

Records available.- July 1895 to February 1896, June 1900 to September 1941.

Average discharge.- 41 years (1900-1941), 238 second-feet.

Extremes.- Maximum daily discharge during year, 468 second-feet (regulated) Sept. 21-25, 28, 29; no flow for several months.  
1895-96; 1900-1941: Maximum daily discharge, 1,340 second-feet July 13-20, 1907; no flow during parts of 1900, 1901, 1914, 1918-41.

Remarks.- Flow regulated by operation of gates in dam at Lake Tahoe and occasionally by pumping from Lake.

Cooperation.- Record of daily discharge furnished by H. C. Dukes, Federal Court Water Master.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb.    | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|---------|----------------------|------|-----|------|------|------|-------|
| 1                       | 181              | 361  | 240     | 208     | 0       |                      |      |     | 0    | 31   | 436  | 436   |
| 2                       | 223              | 355  | 240     | 225     | 0       |                      |      |     | 0    | 31   | 436  | 436   |
| 3                       | 237              | 351  | 240     | 235     | 0       |                      |      |     | 0    | 31   | 443  | 436   |
| 4                       | 255              | 351  | 240     | 235     | 0       |                      |      |     | 0    | 31   | 447  | 436   |
| 5                       | 264              | 345  | 240     | 235     | 0       |                      |      |     | 0    | 31   | 447  | 170   |
| 6                       | 305              | 337  | 293     | 235     | 0       |                      |      |     | 0    | 31   | 447  | 328   |
| 7                       | 320              | 332  | 315     | 235     | 0       |                      |      |     | 0    | 31   | 447  | 436   |
| 8                       | 292              | 188  | 315     | 235     | 0       |                      |      |     | 0    | 38   | 442  | 436   |
| 9                       | 279              | 0    | 315     | 136     | 0       |                      |      |     | 0    | 59   | 436  | 436   |
| 10                      | 292              | 0    | 315     | 99      | 0       |                      |      |     | 0    | 59   | 436  | 436   |
| 11                      | 299              | 0    | 315     | 99      | 0       |                      |      |     | 0    | 59   | 436  | 436   |
| 12                      | 317              | 0    | 315     | 99      | 0       |                      |      |     | 0    | 59   | 436  | 195   |
| 13                      | 317              | 0    | 330     | 99      | 0       |                      |      |     | 0    | 59   | 436  | 329   |
| 14                      | 317              | 0    | 344     | 99      | 0       |                      |      |     | 0    | 59   | 436  | 462   |
| 15                      | 324              | 0    | 344     | 63      | 0       |                      |      |     | 0    | 59   | 185  | 462   |
| 16                      | 332              | 0    | 344     | 0       | 0       |                      |      |     | 0    | 59   | 60   | 462   |
| 17                      | 341              | 0    | 334     | 0       | 0       |                      |      |     | 0    | 59   | 311  | 462   |
| 18                      | 346              | 0    | 324     | 0       | 0       |                      |      |     | 0    | 59   | 436  | 462   |
| 19                      | 357              | 0    | 324     | 0       | 0       |                      |      |     | 0    | 59   | 436  | 195   |
| 20                      | 361              | 0    | 315     | 0       | 0       |                      |      |     | 0    | 59   | 436  | 333   |
| 21                      | 361              | 0    | 301     | 0       | 31      |                      |      |     | 0    | 257  | 436  | 468   |
| 22                      | 361              | 0    | 301     | 0       | 54      |                      |      |     | 0    | 423  | 185  | 468   |
| 23                      | 361              | 0    | 249     | 0       | 54      |                      |      |     | 0    | 445  | 60   | 468   |
| 24                      | 330              | 0    | 197     | 0       | 54      |                      |      |     | 0    | 445  | 328  | 468   |
| 25                      | 361              | 106  | 262     | 0       | 38      |                      |      |     | 0    | 445  | 436  | 468   |
| 26                      | 361              | 227  | 301     | 0       | 0       |                      |      |     | 0    | 445  | 436  | 197   |
| 27                      | 361              | 240  | 113     | 0       | 0       |                      |      |     | 0    | 445  | 436  | 333   |
| 28                      | 361              | 240  | 70      | 0       | 0       |                      |      |     | 0    | 435  | 436  | 468   |
| 29                      | 361              | 240  | 152     | 0       | -       |                      |      |     | 0    | 428  | 170  | 468   |
| 30                      | 361              | 240  | 152     | 0       | -       |                      |      |     | 19   | 428  | 60   | 448   |
| 31                      | 361              | -    | 171     | 0       | -       |                      |      |     | -    | 431  | 326  | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean    | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 9,899            | 361  | 181     | 319     | 19,630  |                      |      |     |      |      |      |       |
| November.....           | 3,263            | 361  | 0       | 129     | 7,660   |                      |      |     |      |      |      |       |
| December.....           | 8,311            | 344  | 70      | 268     | 16,480  |                      |      |     |      |      |      |       |
| Calendar year 1940..... | 52,946           | 428  | 0       | 145     | 105,000 |                      |      |     |      |      |      |       |
| January.....            | 2,536            | 235  | 0       | 81.8    | 5,030   |                      |      |     |      |      |      |       |
| February.....           | 231              | 54   | 0       | 8.25    | 458     |                      |      |     |      |      |      |       |
| March.....              | 0                | 0    | 0       | 0       | 0       |                      |      |     |      |      |      |       |
| April.....              | 0                | 0    | 0       | 0       | 0       |                      |      |     |      |      |      |       |
| May.....                | 0                | 0    | 0       | 0       | 0       |                      |      |     |      |      |      |       |
| June.....               | 19               | 19   | 0       | .65     | 38      |                      |      |     |      |      |      |       |
| July.....               | 5,586            | 445  | 31      | 130     | 11,020  |                      |      |     |      |      |      |       |
| August.....             | 11,332           | 447  | 60      | 366     | 22,480  |                      |      |     |      |      |      |       |
| September.....          | 12,036           | 468  | 170     | 401     | 23,870  |                      |      |     |      |      |      |       |
| Water year 1940-41..... | 53,812           | 468  | 0       | 147     | 106,700 |                      |      |     |      |      |      |       |

## Truckee River at Farad, Calif.

Location (revised).— Water-stage recorder, lat. 39°26', long. 120°02', in NE¼ sec. 12, T. 18 N., R. 17 E., 0.5 mile downstream from Farad power plant, 3 miles downstream from Bronco Creek, and ¾ miles north of Iceland. Altitude of gage, about 5,200 feet (from topographic map).

Drainage area.— 940 square miles.

Records available.— January 1938 to September 1941. September 1899 to August 1912 at Nevada-California State line, 5 miles downstream. August 1912 to December 1937 at Iceland, ¾ miles upstream.

Average discharge.— 29 years (1912-41), 648 second-feet.

Extremes.— Maximum discharge during year, 2,518 second-feet May 13 (gage height, 4.57 feet); minimum, 363 second-feet Dec. 11.

1938-41: Maximum daily discharge, 6,770 second-feet May 15, 1938; minimum daily, 290 second-feet Nov. 16, 1939.

Remarks.— Storage above station in Lakes Tahoe, Donner, Independence, and Weber.

Cooperation.— Record of daily discharge furnished by H. C. Dukes, Federal Court Water Master.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov.  | Dec.    | Jan.    | Feb.    | Mar.                 | Apr.  | May   | June  | July | Aug. | Sept. |
|-------------------------|------------------|-------|---------|---------|---------|----------------------|-------|-------|-------|------|------|-------|
| 1                       | 418              | 426   | 426     | 422     | 435     | 603                  | 575   | 998   | 1,278 | 590  | 526  | 498   |
| 2                       | 490              | 529   | 422     | 407     | 426     | 622                  | 547   | 1,048 | 1,264 | 599  | 522  | 502   |
| 3                       | 453              | 457   | 422     | 450     | 450     | 589                  | 552   | 1,140 | 1,221 | 592  | 520  | 505   |
| 4                       | 418              | 450   | 422     | 451     | 450     | 647                  | 725   | 1,153 | 1,187 | 568  | 526  | 504   |
| 5                       | 414              | 426   | 421     | 423     | 435     | 845                  | 720   | 1,374 | 1,221 | 555  | 523  | 505   |
| 6                       | 426              | 482   | 423     | 414     | 43e     | 800                  | 668   | 1,652 | 1,235 | 556  | 526  | 510   |
| 7                       | 410              | 683   | 407     | 422     | 453     | 741                  | 612   | 1,661 | 1,139 | 539  | 533  | 506   |
| 8                       | 445              | 552   | 413     | 407     | 439     | 603                  | 589   | 1,724 | 1,106 | 635  | 543  | 506   |
| 9                       | 410              | 643   | 413     | 403     | 490     | 493                  | 613   | 1,865 | 1,048 | 568  | 526  | 506   |
| 10                      | 410              | 507   | 401     | 414     | 819     | 561                  | 525   | 1,894 | 973   | 553  | 528  | 502   |
| 11                      | 403              | 503   | 384     | 414     | 1,282   | 545                  | 503   | 2,023 | 955   | 547  | 526  | 499   |
| 12                      | 403              | 486   | 384     | 414     | 1,080   | 547                  | 510   | 2,273 | 1,023 | 543  | 520  | 498   |
| 13                      | 403              | 473   | 410     | 420     | 955     | 561                  | 525   | 1,913 | 1,035 | 539  | 518  | 491   |
| 14                      | 399              | 437   | 473     | 441     | 894     | 566                  | 599   | 1,652 | 1,173 | 539  | 517  | 498   |
| 15                      | 403              | 433   | 418     | 433     | 854     | 560                  | 673   | 1,652 | 1,060 | 543  | 514  | 504   |
| 16                      | 411              | 434   | 426     | 461     | 811     | 566                  | 678   | 1,696 | 990   | 535  | 518  | 502   |
| 17                      | 418              | 434   | 441     | 451     | 802     | 699                  | 634   | 1,641 | 955   | 531  | 526  | 502   |
| 18                      | 407              | 433   | 453     | 441     | 940     | 854                  | 594   | 1,731 | 920   | 530  | 508  | 500   |
| 19                      | 418              | 418   | 443     | 433     | 919     | 784                  | 570   | 1,485 | 866   | 534  | 510  | 506   |
| 20                      | 418              | 422   | 439     | 433     | 883     | 720                  | 720   | 1,601 | 857   | 531  | 506  | 514   |
| 21                      | 418              | 426   | 561     | 437     | 777     | 688                  | 752   | 1,740 | 741   | 535  | 506  | 514   |
| 22                      | 414              | 414   | 619     | 431     | 538     | 685                  | 814   | 1,859 | 677   | 535  | 508  | 515   |
| 23                      | 414              | 410   | 613     | 439     | 403     | 702                  | 901   | 1,678 | 665   | 557  | 514  | 514   |
| 24                      | 446              | 437   | 441     | 440     | 405     | 657                  | 998   | 2,032 | 642   | 553  | 518  | 511   |
| 25                      | 512              | 426   | 403     | 437     | 416     | 566                  | 1,074 | 2,022 | 543   | 553  | 507  | 508   |
| 26                      | 441              | 407   | 441     | 439     | 410     | 592                  | 1,061 | 1,935 | 581   | 552  | 507  | 512   |
| 27                      | 433              | 413   | 561     | 437     | 449     | 632                  | 1,127 | 1,868 | 626   | 556  | 506  | 512   |
| 28                      | 430              | 433   | 688     | 430     | 507     | 637                  | 1,120 | 1,378 | 573   | 590  | 505  | 504   |
| 29                      | 426              | 426   | 678     | 430     | -       | 606                  | 1,187 | 1,705 | 562   | 533  | 506  | 507   |
| 30                      | 426              | 426   | 534     | 426     | -       | 563                  | 1,048 | 1,584 | 568   | 528  | 514  | 512   |
| 31                      | 426              | -     | 422     | 426     | -       | 589                  | -     | 1,429 | -     | 526  | 514  | -     |
| Month                   | Second-foot-days |       | Maximum | Minimum | Mean    | Run-off in acre-feet |       |       |       |      |      |       |
| October.....            | 13,142           | 512   | 399     | 424     | 26,070  |                      |       |       |       |      |      |       |
| November.....           | 13,731           | 683   | 407     | 458     | 27,240  |                      |       |       |       |      |      |       |
| December.....           | 14,399           | 688   | 384     | 464     | 28,560  |                      |       |       |       |      |      |       |
| Calendar year 1940..... | 298,298          | 5,440 | 297     | 615     | 591,700 |                      |       |       |       |      |      |       |
| January.....            | 13,266           | 461   | 403     | 429     | 26,350  |                      |       |       |       |      |      |       |
| February.....           | 18,100           | 1,282 | 403     | 646     | 35,900  |                      |       |       |       |      |      |       |
| March.....              | 19,808           | 854   | 498     | 639     | 39,290  |                      |       |       |       |      |      |       |
| April.....              | 22,239           | 1,167 | 503     | 741     | 44,110  |                      |       |       |       |      |      |       |
| May.....                | 52,306           | 2,273 | 998     | 1,687   | 103,700 |                      |       |       |       |      |      |       |
| June.....               | 27,694           | 1,278 | 543     | 923     | 54,910  |                      |       |       |       |      |      |       |
| July.....               | 17,116           | 635   | 526     | 552     | 33,950  |                      |       |       |       |      |      |       |
| August.....             | 16,039           | 543   | 505     | 517     | 31,810  |                      |       |       |       |      |      |       |
| September.....          | 15,168           | 516   | 491     | 506     | 30,090  |                      |       |       |       |      |      |       |
| Water year 1940-41..... | 243,018          | 2,273 | 384     | 666     | 482,000 |                      |       |       |       |      |      |       |



Donner Creek near Truckee, Calif.

Location.- Water-stage recorder, lat. 39°19'15", long. 120°12'10", in SE¼ sec. 16 T. 17 N., R. 16 E., 1 mile downstream from Cold Creek and 1½ miles southwest of Truckee. Altitude of gage, about 5,800 feet (from topographic map).

Drainage area.- 30 square miles.

Records available.- October 1902 to September 1915, March 1928 to September 1941.

Average discharge.- 12 years (1928-35, 1936-41), 60.5 second-feet.

Extremes.- Maximum discharge during year, 540 second-feet May 11 (gage height, 3.40 feet); minimum, 3 second-feet Sept. 16-30.

1902-15, 1928-41: Maximum discharge, 1,800 second-feet Dec. 11, 1937 (gage height, 6.2 feet on outside gage); minimum, less than 1 second-foot during many summers.

Remarks.- Flow regulated at Donner Lake.

Cooperation.- Record of daily discharge furnished by H. C. Duker, Federal Court Water Master.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 94               | 4    | 4       | 27      | 8    | 45                   | 52   | 152 | 166  | 42   | 5    | 4     |
| 2                       | 83               | 12   | 4       | 36      | 8    | 41                   | 50   | 127 | 156  | 43   | 5    | 4     |
| 3                       | 75               | 9    | 4       | 41      | 10   | 35                   | 150  | 149 | 180  | 42   | 5    | 4     |
| 4                       | 63               | 7    | 4       | 15      | 10   | 32                   | 206  | 143 | 170  | 39   | 5    | 4     |
| 5                       | 59               | 6    | 4       | 14      | 10   | 30                   | 194  | 185 | 183  | 37   | 5    | 4     |
| 6                       | 35               | 31   | 4       | 15      | 10   | 28                   | 168  | 295 | 192  | 35   | 5    | 4     |
| 7                       | 4                | 45   | 4       | 15      | 10   | 29                   | 125  | 370 | 232  | 66   | 5    | 4     |
| 8                       | 4                | 31   | 4       | 12      | 10   | 28                   | 126  | 401 | 248  | 129  | 5    | 4     |
| 9                       | 4                | 21   | 4       | 10      | 10   | 30                   | 85   | 463 | 248  | 29   | 5    | 4     |
| 10                      | 4                | 9    | 4       | 10      | 55   | 32                   | 46   | 451 | 147  | 25   | 5    | 4     |
| 11                      | 4                | 8    | 4       | 9       | 109  | 36                   | 43   | 498 | 125  | 24   | 5    | 4     |
| 12                      | 4                | 7    | 4       | 9       | 121  | 38                   | 42   | 516 | 128  | 22   | 5    | 4     |
| 13                      | 15               | 7    | 5       | 11      | 110  | 45                   | 46   | 481 | 122  | 21   | 5    | 4     |
| 14                      | 25               | 6    | 5       | 11      | 98   | 49                   | 52   | 442 | 108  | 20   | 5    | 4     |
| 15                      | 23               | 5    | 5       | 17      | 87   | 51                   | 59   | 428 | 100  | 18   | 5    | 4     |
| 16                      | 19               | 5    | 5       | 9       | 76   | 54                   | 58   | 455 | 142  | 16   | 5    | 3     |
| 17                      | 9                | 5    | 5       | 8       | 75   | 174                  | 85   | 449 | 180  | 14   | 5    | 3     |
| 18                      | 4                | 5    | 12      | 8       | 68   | 220                  | 53   | 421 | 156  | 12   | 5    | 3     |
| 19                      | 4                | 5    | 5       | 8       | 63   | 210                  | 150  | 384 | 150  | 11   | 4    | 3     |
| 20                      | 4                | 5    | 4       | 8       | 26   | 198                  | 222  | 377 | 86   | 10   | 4    | 3     |
| 21                      | 4                | 5    | 12      | 8       | 26   | 191                  | 217  | 387 | 68   | 9    | 4    | 3     |
| 22                      | 4                | 5    | 18      | 8       | 27   | 187                  | 225  | 361 | 63   | 9    | 4    | 3     |
| 23                      | 4                | 5    | 24      | 8       | 27   | 153                  | 232  | 338 | 54   | 9    | 4    | 3     |
| 24                      | 5                | 4    | 16      | 8       | 26   | 118                  | 243  | 345 | 47   | 8    | 4    | 3     |
| 25                      | 7                | 4    | 16      | 8       | 26   | 52                   | 253  | 338 | 41   | 8    | 4    | 3     |
| 26                      | 15               | 4    | 13      | 8       | 25   | 55                   | 259  | 304 | 42   | 8    | 4    | 3     |
| 27                      | 5                | 4    | 66      | 8       | 24   | 57                   | 262  | 272 | 43   | 9    | 4    | 3     |
| 28                      | 5                | 4    | 64      | 8       | 32   | 55                   | 267  | 259 | 39   | 9    | 4    | 3     |
| 29                      | 4                | 4    | 45      | 8       | -    | 54                   | 267  | 243 | 40   | 7    | 4    | 3     |
| 30                      | 4                | 4    | 51      | 8       | -    | 53                   | 182  | 250 | 41   | 7    | 4    | 3     |
| 31                      | 4                | -    | 29      | 8       | -    | 55                   | -    | 217 | -    | 6    | 4    | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 597              |      | 94      | 4       | 193  | 1,180                |      |     |      |      |      |       |
| November.....           | 276              |      | 45      | 4       | 9.20 | 547                  |      |     |      |      |      |       |
| December.....           | 427              |      | 66      | 4       | 15.8 | 847                  |      |     |      |      |      |       |
| Calendar year 1940..... | 35,024           |      | 1,018   | 3       | 95.7 | 69,470               |      |     |      |      |      |       |
| January.....            | 381              |      | 41      | 8       | 12.3 | 756                  |      |     |      |      |      |       |
| February.....           | 1,167            |      | 121     | 8       | 42.4 | 2,350                |      |     |      |      |      |       |
| March.....              | 2,465            |      | 220     | 28      | 79.5 | 4,890                |      |     |      |      |      |       |
| April.....              | 4,347            |      | 267     | 42      | 145  | 8,680                |      |     |      |      |      |       |
| May.....                | 10,481           |      | 516     | 127     | 338  | 20,810               |      |     |      |      |      |       |
| June.....               | 3,557            |      | 248     | 39      | 122  | 7,250                |      |     |      |      |      |       |
| July.....               | 744              |      | 129     | 6       | 24.0 | 1,480                |      |     |      |      |      |       |
| August.....             | 142              |      | 5       | 4       | 4.58 | 282                  |      |     |      |      |      |       |
| September.....          | 105              |      | 4       | 3       | 3.50 | 208                  |      |     |      |      |      |       |
| Water year 1940-41..... | 24,819           |      | 516     | 3       | 68.0 | 49,220               |      |     |      |      |      |       |

Note.- No gage height record Jan. 19 to Feb. 21; discharge estimated.

WARNER LAKES BASIN

Twentymile Creek near Adel, Oreg.

Location.- Water-stage recorder, lat. 42°04', long. 119°57', in SW¼NW¼ sec. 36, T. 40 S., R. 23 E., a quarter of a mile downstream from Twelvemile Creek and 10 miles southwest of Adel.

Records available.- September 1940 to September 1941. March 1910 to July 1916, December 1917 to September 1919, March 1921 to June 1922, at site 1½ miles downstream, in sec. 24.

Extremes.- 1940: Maximum discharge during period Sept. 21-30, 2.8 second-feet Sept. 22 (gage height, 0.62 feet); minimum 1.7 second-feet Aug. 24 (gage height, 0.59).

1940-41: Maximum discharge during water year, 1,060 second-feet Feb. 28 (gage height, 2.87 feet), from rating curve extended above 500 second-feet; minimum, 1.8 second-feet Aug. 24 (gage height, 0.54 foot).

1910-16, 1917-19, 1921-22, 1940-41: Maximum discharge observed, 2,610 second-feet Mar. 1, 1910 (discharge measurement by Warner Lake Irrigation Co. engineer); minimum observed, 1.4 second-feet Aug. 1, 1919.

Remarks.- Records good except those for period Mar. 18 to Apr. 25, which are fair. Many diversions above station for irrigation; no regulation.

Rating tables, Sept. 21, 1940, to Sept. 30, 1941 (gage height, in feet, and discharge, in second-feet)

| Sept. 21, 1940 to Feb. 28, 1941 |     |     |     | Mar. 1 to Sept. 30 |     |     |       |
|---------------------------------|-----|-----|-----|--------------------|-----|-----|-------|
| 0.6                             | 1.9 | 1.0 | 37  | 0.6                | 3.4 | 1.0 | 38    |
| .7                              | 4.6 | 1.2 | 67  | .7                 | 8.0 | 1.2 | 69    |
| .8                              | 14  | 1.4 | 104 | .8                 | 15  | 1.4 | 104   |
|                                 |     |     |     |                    |     | 1.6 | 150   |
|                                 |     |     |     |                    |     | 1.8 | 220   |
|                                 |     |     |     |                    |     | 2.0 | 323   |
|                                 |     |     |     |                    |     | 2.2 | 455   |
|                                 |     |     |     |                    |     | 2.4 | 615   |
|                                 |     |     |     |                    |     | 2.6 | 795   |
|                                 |     |     |     |                    |     | 2.8 | 995   |
|                                 |     |     |     |                    |     | 3.0 | 1,200 |

Discharge, in second-feet 1940

| Day | Sept. | Day | Sept. | Day | Sept. |
|-----|-------|-----|-------|-----|-------|
| 21  | 1.9   | 25  | 1.9   | 29  | 2.4   |
| 22  | 2.4   | 26  | 1.9   | 30  | 2.4   |
| 23  | 1.9   | 27  | 1.9   |     |       |
| 24  | 1.9   | 28  | 2.4   |     |       |

1940-41

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 2.4  | 3.3  | 4.2  | 3.8  | 5.7  | 714  | 220  | 86  | 50   | 16   | 2.9  | a2.3  |
| 2   | 2.8  | 5.7  | 3.8  | f3.8 | 5.2  | 427  | 247  | 88  | 46   | 14   | 2.6  | a2.8  |
| 3   | 2.8  | 5.7  | 3.8  | f3.8 | 5.2  | 200  | 150  | 95  | 42   | 22   | 2.6  | a3.4  |
| 4   | 2.8  | 4.2  | 3.8  | f4.2 | 5.2  | 125  | 192  | 81  | 40   | 17   | 2.6  | a3.4  |
| 5   | 2.8  | 3.8  | 3.8  | 3.8  | 5.7  | 108  | 266  | 86  | 58   | 14   | 2.6  | 3.4   |
| 6   | 2.8  | 3.8  | 4.2  | f4.2 | 6.6  | 130  | 192  | 90  | 38   | 12   | 2.6  | 3.4   |
| 7   | 3.3  | 4.2  | 3.8  | 4.2  | 6.6  | 192  | 165  | 91  | 50   | 11   | 2.6  | 3.4   |
| 8   | 3.3  | 5.2  | 3.8  | 4.2  | 6.6  | 311  | 128  | 119 | 48   | 10   | 2.9  | 3.4   |
| 9   | 3.3  | 5.2  | 4.2  | f4.2 | 8.1  | 282  | 114  | 114 | 41   | 8.0  | 2.9  | 3.4   |
| 10  | 3.8  | 3.8  | 3.3  | f4.2 | 17   | 277  | 106  | 119 | 34   | 6.6  | 2.9  | 3.1   |
| 11  | 4.2  | 3.8  | 1.9  | f4.7 | 47   | 323  | 90   | 130 | 30   | 6.2  | 3.1  | 3.9   |
| 12  | 4.2  | 3.8  | 2.8  | 4.2  | 37   | 354  | 90   | 138 | 30   | 6.2  | 3.4  | 3.1   |
| 13  | 4.2  | 3.8  | 3.3  | 4.2  | 29   | 282  | 86   | 126 | 26   | 5.7  | 3.1  | 3.7   |
| 14  | 4.2  | 4.2  | 3.3  | 5.7  | f22  | 180  | 83   | 102 | 26   | 5.7  | 2.6  | 3.1   |
| 15  | 4.7  | 3.8  | 5.2  | 5.2  | 17   | 180  | 83   | 95  | 24   | 4.8  | 2.3  | 2.9   |
| 16  | 4.7  | 4.2  | 5.7  | 4.7  | 14   | 342  | 71   | 90  | 23   | 4.8  | 2.3  | 2.9   |
| 17  | 4.7  | 4.2  | 5.2  | 5.2  | 17   | 506  | 63   | 21  | 22   | 4.8  | 2.3  | 2.9   |
| 18  | 4.7  | 4.7  | 5.7  | 4.2  | 21   | 427  | 56   | 88  | 28   | 3.9  | 2.9  | 2.9   |
| 19  | 4.7  | 3.3  | 6.6  | 4.7  | 29   | 238  | 50   | 72  | 38   | 3.1  | 2.6  | 2.9   |
| 20  | 4.7  | 3.3  | 9.6  | 4.2  | 28   | 174  | 47   | 66  | 32   | 3.1  | 2.3  | 3.4   |
| 21  | 4.7  | 3.8  | 12   | 4.2  | 44   | 130  | 46   | 67  | 25   | 2.9  | 2.3  | 3.9   |
| 22  | 4.7  | 3.8  | f19  | 4.2  | 86   | 148  | 46   | 72  | 22   | 2.9  | 2.0  | 3.4   |
| 23  | 4.7  | 2.8  | f12  | 4.2  | 142  | 171  | 46   | 79  | 16   | 2.6  | 2.0  | 3.4   |
| 24  | 5.2  | 4.2  | f11  | 4.2  | 128  | 118  | 48   | 64  | 17   | 2.3  | 2.0  | 3.4   |
| 25  | 7.3  | 4.2  | 8.1  | 5.2  | 91   | 132  | 52   | 91  | 17   | 2.6  | 2.0  | 3.4   |
| 26  | 6.1  | 3.3  | 6.1  | 6.6  | 94   | 208  | 53   | 97  | 16   | 2.6  | 2.0  | 3.4   |
| 27  | 5.2  | 3.3  | f10  | f5.2 | 110  | 208  | 59   | 88  | 38   | 3.1  | 2.0  | 3.4   |
| 28  | 4.7  | 4.2  | f8.8 | f5.7 | 515  | 180  | 66   | 74  | 33   | 3.4  | a2.1 | 3.1   |
| 29  | 4.7  | 4.2  | 5.7  | f5.2 | -    | 171  | 71   | 71  | 23   | 3.1  | a2.1 | 3.1   |
| 30  | 4.7  | 4.2  | 6.6  | f5.7 | -    | 150  | 72   | 61  | 18   | 3.4  | a2.8 | 2.9   |
| 31  | 4.2  | -    | f4.2 | f5.7 | -    | 135  | -    | 66  | -    | 3.1  | a2.3 | -     |

a No gage-height record; discharge computed on basis of records for Deep Creek near Adel.  
 f Computed from partly estimated gage-height record.

Monthly discharge, in second-feet, 1940-41

| Month                 | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-----------------------|------------------|---------|---------|------|----------------------|
| September 21-30, 1940 | 210              | 24      | 19      | 21.0 | 42                   |
| October 1940          | 131.3            | 7.3     | 2.4     | 4.24 | 260                  |
| November              | 122.0            | 5.7     | 2.8     | 4.07 | 242                  |
| December              | 191.5            | 19      | 1.9     | 6.18 | 380                  |
| January 1941          | 143.5            | 6.6     | 3.3     | 4.63 | 285                  |
| February              | 1,640.9          | 515     | 5.2     | 55.0 | 3,060                |
| March                 | 7,819            | 714     | 108     | 245  | 14,910               |
| April                 | 3,048            | 258     | 46      | 102  | 6,050                |
| May                   | 2,814            | 138     | 56      | 90.8 | 5,880                |
| June                  | 933              | 50      | 16      | 31.1 | 1,850                |
| July                  | 210.9            | 22      | 2.3     | 6.80 | 418                  |
| August                | 77.5             | 3.4     | 2.0     | 2.80 | 154                  |
| September             | 95.5             | 3.9     | 2.3     | 3.18 | 189                  |
| Water year 1940-41    | 18,827.1         | 714     | 1.9     | 46.1 | 53,380               |

Deep Creek above Adel, Oreg.

Location.- Water-stage recorder, lat. 42°11', long. 119°59', in E½ sec. 15, T. 39 S., R. 23 E., a third of a mile downstream from Drake Creek and 5 miles west of Adel. Altitude of gage, 4,965 feet (from river-profile survey).

Drainage area.- 249 square miles.

Records available.- September 1922 to September 1923 and October 1932 to September 1941 in reports of Geological Survey. September 1922 to September 1923 and October 1929 to September 1936 in reports of State engineer.

Average discharge.- 13 years (1922-23, 1929-41), 86.8 second-feet.

Extremes.- Maximum discharge during year, 604 second-feet May 3 (gage height, 3.42 feet); minimum, 5.5 second-feet Dec. 13 (gage height, 0.30 foot), caused by ice jam upstream.

1922-23, 1932-41: Maximum discharge, 5,030 second-feet Dec. 11, 1937, year previously published in error (gage height, 7.5 feet, from floodmark), from rating curve extended above 1,200 second-feet on basis of velocity-area studies; minimum, 1.7 second-feet July 20, 27-29, 1934.

Remarks.- Records good. Diversions above station for irrigation.

Rating table, water year 1940-41, except period of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Mar. 2-31, Aug. 1 to Sept. 30)

|     |      |     |     |     |     |
|-----|------|-----|-----|-----|-----|
| 0.3 | 5.5  | 1.3 | 73  | 2.8 | 389 |
| .5  | 12.0 | 1.6 | 115 | 3.0 | 448 |
| .7  | 22   | 2.0 | 190 | 3.4 | 595 |
| 1.0 | 43   | 2.4 | 284 |     |     |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 11   | 23   | 35   | 25   | 21   | 384  | 328  | 376 | 256  | 77   | 11   | 12    |
| 2   | 12   | 35   | 33   | 20   | 21   | 272  | 302  | 400 | 209  | 62   | 12   | 17    |
| 3   | 13   | 32   | 31   | 20   | 21   | 194  | 205  | 543 | 190  | 59   | 11   | 18    |
| 4   | 12   | 22   | 29   | 30   | 23   | 147  | 211  | 454 | 175  | 53   | 9.8  | 17    |
| 5   | 12   | 20   | 27   | 20   | 24   | 118  | 216  | 436 | 149  | 46   | 9.0  | 15    |
| 6   | 10   | 22   | 30   | 20   | 22   | 127  | 175  | 395 | 175  | 47   | 9.0  | 13    |
| 7   | 10   | 27   | 24   | 20   | 23   | 194  | 180  | 255 | 354  | 53   | 9.0  | 12    |
| 8   | 9.8  | 48   | b19  | 17   | 24   | 259  | 177  | 494 | 284  | 41   | 9.8  | 11    |
| 9   | 9.8  | 36   | b14  | 17   | 29   | 256  | 205  | 512 | 198  | 34   | 11   | 11    |
| 10  | 8.7  | 28   | *b12 | 19   | 44   | 259  | 205  | 464 | 163  | 26   | 11   | 11    |
| 11  | 8.3  | 24   | b9   | 20   | 89   | 292  | 173  | 142 | 140  | 22   | 20   | 11    |
| 12  | 8.3  | 25   | b8   | 21   | 65   | 310  | 157  | 461 | 120  | 20   | 33   | 12    |
| 13  | 8.0  | 24   | 9    | 20   | 85   | 292  | 165  | 480 | 116  | 18   | 20   | 12    |
| 14  | 8.0  | 21   | 11   | 21   | 44   | 205  | 194  | 464 | 113  | 17   | 17   | 13    |
| 15  | 7.7  | 20   | 15   | 19   | 41   | 205  | 225  | 378 | 104  | 16   | 16   | 12    |
| 16  | 7.7  | 20   | 17   | 19   | 38   | 297  | 190  | 336 | 98   | 18   | 13   | 12    |
| 17  | 8.0  | 23   | 16   | 19   | 41   | 378  | 171  | 320 | 107  | 16   | 12   | 12    |
| 18  | 8.0  | 20   | 19   | 20   | 47   | 359  | 155  | 323 | 209  | 15   | 14   | 12    |
| 19  | 8.0  | 18   | 24   | 20   | 50   | 272  | 130  | 292 | 349  | 14   | 14   | 18    |
| 20  | 8.3  | 15   | 39   | 20   | 48   | 227  | 130  | 289 | 229  | 12   | 12   | 19    |
| 21  | 9.0  | 14   | 51   | 24   | 71   | 168  | 147  | 252 | 161  | 12   | 12   | 20    |
| 22  | 9.8  | 14   | 62   | 23   | 92   | 198  | 165  | 254 | 125  | 11   | 11   | 19    |
| 23  | 9.8  | 14   | 50   | 21   | 127  | 194  | 175  | 259 | 101  | 10   | 11   | 18    |
| 24  | 13   | 14   | 46   | 21   | 120  | 167  | 207  | 279 | 94   | 9.4  | 11   | 18    |
| 25  | 27   | 14   | 32   | 22   | 65   | 190  | 242  | 523 | 110  | 8.7  | 11   | 17    |
| 26  | 23   | 14   | 34   | 20   | 75   | 258  | 259  | 403 | 108  | 9.4  | 10   | 16    |
| 27  | 20   | 14   | 29   | 23   | 90   | 258  | 272  | 403 | 165  | 10   | 9.8  | 15    |
| 28  | 17   | 14   | 39   | 28   | 302  | 266  | 292  | 315 | 130  | 11   | 10   | 14    |
| 29  | 17   | 23   | 31   | 25   | -    | 272  | 315  | 261 | 98   | 10   | 11   | 14    |
| 30  | 18   | 40   | 29   | 24   | -    | 239  | 315  | 399 | 88   | 11   | 13   | 14    |
| 31  | 19   | -    | 27   | 22   | -    | 234  | -    | 289 | -    | 12   | 12   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 371.2            | 27      | 7.7     | 12.0 | 738                  |
| November.....           | 672              | 48      | 14      | 22.4 | 1,330                |
| December.....           | 851              | 62      | 8       | 27.5 | 1,690                |
| Calendar year 1940..... | 35,994.4         | 1,180   | 4.5     | 98.3 | 71,400               |
| January.....            | 646              | 26      | 17      | 20.8 | 1,280                |
| February.....           | 1,724            | 302     | 21      | 61.6 | 3,420                |
| March.....              | 7,483            | 398     | 11.6    | 241  | 14,840               |
| April.....              | 6,253            | 323     | 130     | 209  | 13,420               |
| May.....                | 11,461           | 543     | 228     | 370  | 22,730               |
| June.....               | 4,897            | 354     | 98      | 163  | 9,710                |
| July.....               | 778.5            | 77      | 8.7     | 25.1 | 1,540                |
| August.....             | 384.4            | 23      | 9.0     | 12.4 | 782                  |
| September.....          | 435              | 20      | 11      | 14.5 | 883                  |
| Water year 1940-41..... | 35,966.1         | 543     | 7.7     | 98.5 | 71,380               |

Peak discharge.- Mar. 1 (1 a.m.) 567 sec.-ft.; May 3 (3 to 4 p.m.) 604 sec.-ft.  
\* Winter discharge measurement made on this day.  
b Stage-discharge relation affected by ice.

## Chewaucan River above Conn ditch, near Paisley, Oreg.

**Location.**- Water-stage recorder, lat. 42°41', long. 120°35', in SW¼ sec. 27, T. 33 S., R. 15 E., at bridge 20 feet downstream from power plant of R. R. Severin, 700 feet upstream from diversion dam of Conn ditch, a quarter of a mile downstream from Mill Creek, and 2½ miles west of Paisley. Datum of gage is 4,504.9 feet above mean sea level (river profile survey).

**Drainage area.**- 275 square miles.

**Records available.**- April to September 1912, May 1924 to September 1941. January 1905 to December 1907. January 1909 to April 1912 at site 2 miles downstream, below Conn ditch. November 1912 to September 1921 at site half a mile upstream, above Mill Creek. Records of yearly run-off at these sites practically equivalent.

**Average discharge.**- 31 years (1905-7, 1909-21, 1924-41), 129 second-feet.

**Extremes.**- Maximum discharge during year, 624 second-feet May 8 (gage height, 3.59 feet); minimum, 2.4 second-feet (regulated) Nov. 20 (gage height, 0.83 foot); minimum daily, 8 second-feet Nov. 23.

1905-7, 1909-21, 1924-41: Maximum discharge, 4,000 second-feet Nov. 23, 1909 (gage height, 9.40 feet, site and datum then in use), from rating curve extended above 900 second-feet; no flow part of Dec. 7, 1927, Dec. 12, 1932 (frozen); minimum daily discharge not determined.

**Remarks.**- Records good except those for periods of ice effect or no gage-height record, which are poor. Low flow partly regulated by power plant above station. About 160 acres are irrigated above station.

Rating tables, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)

| Oct. 1 to Feb. 27 |      |     |     | Feb. 28 to Sept. 30 |     |     |     |
|-------------------|------|-----|-----|---------------------|-----|-----|-----|
| 1.2               | 6.7  | 2.0 | 68  | 1.6                 | 25  | 2.6 | 182 |
| 1.4               | 13.0 | 2.2 | 98  | 1.8                 | 44  | 2.9 | 279 |
| 1.6               | 25   | 2.4 | 136 | 2.0                 | 67  | 3.2 | 407 |
| 1.8               | 44   |     |     | 2.2                 | 95  | 3.5 | 570 |
|                   |      |     |     | 2.4                 | 133 |     |     |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 29   | 46   | 42   | b22  | 45   | 236  | 184  | 352 | 247  | 80   | 35   | 34    |
| 2   | 31   | 55   | 39   | b23  | 42   | 189  | 156  | 374 | 223  | 76   | 31   | 68    |
| 3   | 31   | 53   | *42  | b26  | 40   | 111  | 138  | 418 | 210  | 70   | 30   | 61    |
| 4   | 30   | 38   | 38   | b30  | 39   | 97   | 140  | 384 | 202  | 65   | 29   | 47    |
| 5   | 30   | 43   | 41   | b34  | 41   | 90   | 138  | 368 | 193  | 62   | 29   | 42    |
| 6   | 28   | 44   | 41   | b43  | 46   | 92   | 123  | 388 | 217  | 56   | 28   | 37    |
| 7   | 27   | 50   | 32   | b56  | 44   | 100  | 129  | 379 | 233  | 53   | 25   | 33    |
| 8   | 28   | 58   | 31   | 64   | 45   | 117  | 123  | 543 | 210  | 52   | 27   | 32    |
| 9   | 29   | 48   | b25  | 59   | 47   | 117  | 135  | 498 | 182  | 48   | 30   | 32    |
| 10  | 28   | 32   | 19   | 69   | 68   | 117  | 135  | 504 | 166  | 47   | 30   | 31    |
| 11  | 28   | 42   | 8    | 60   | 102  | 125  | 123  | 526 | 156  | 44   | 61   | 33    |
| 12  | 27   | 38   | b12  | 59   | 100  | 127  | 125  | 564 | 151  | 42   | 59   | 36    |
| 13  | 26   | *31  | *b17 | 52   | 67   | 127  | 125  | 564 | 147  | 41   | 45   | 34    |
| 14  | 26   | 36   | b13  | 47   | 58   | 104  | 144  | 642 | 140  | 40   | 36   | 33    |
| 15  | 26   | 32   | b20  | 45   | 53   | 108  | 172  | 471 | 131  | 39   | 34   | 32    |
| 16  | 26   | 31   | b22  | 51   | 53   | 119  | 149  | 439 | 123  | 44   | 31   | 31    |
| 17  | 27   | 37   | b21  | 42   | 58   | 138  | 135  | 439 | 123  | 40   | 46   | 30    |
| 18  | 26   | 29   | b30  | 41   | 58   | 142  | 125  | 439 | 193  | 36   | 53   | 31    |
| 19  | 26   | 12   | b40  | 39   | 59   | 127  | 113  | 360 | 196  | 34   | 43   | 39    |
| 20  | 27   | b10  | b57  | 40   | a58  | 117  | 123  | 326 | 149  | 34   | 37   | 37    |
| 21  | 28   | b9   | 69   | 38   | a67  | 109  | 135  | 306 | 125  | 33   | 37   | 36    |
| 22  | 29   | b9   | 75   | 40   | 82   | 115  | 156  | 314 | 113  | 32   | 33   | 34    |
| 23  | 28   | b8   | 71   | 39   | 93   | 108  | 174  | 331 | 100  | 30   | 32   | 33    |
| 24  | 44   | b9   | 64   | 39   | 107  | 102  | 196  | 379 | 99   | 30   | 31   | 32    |
| 25  | 75   | b10  | 47   | 42   | 68   | 109  | 236  | 379 | 111  | 30   | 31   | 32    |
| 26  | 45   | 18   | 53   | 50   | 53   | 123  | 233  | 360 | 109  | 31   | 30   | 31    |
| 27  | 39   | 34   | 55   | 46   | 85   | 133  | 265  | 318 | 108  | 35   | 30   | 30    |
| 28  | 34   | 43   | 33   | 39   | 202  | 149  | 297  | 314 | 97   | 43   | 31   | 30    |
| 29  | 42   | 39   | 62   | 42   | -    | 172  | 306  | 365 | 98   | 38   | 37   | 31    |
| 30  | 40   | 41   | 50   | 40   | -    | 159  | 318  | 310 | 83   | 34   | 39   | 30    |
| 31  | 39   | -    | 23   | 41   | -    | 161  | -    | 275 | -    | 37   | 36   | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 968              | 75      | 26      | 32.2 | 1,990                |
| November.....           | 985              | 58      | 8       | 32.8 | 1,950                |
| December.....           | 1,197            | 75      | 8       | 38.6 | 2,370                |
| Calendar year 1940..... | 51,650           | 1,160   | 8       | 141  | 102,400              |
| January.....            | 1,358            | 69      | 22      | 43.8 | 2,690                |
| February.....           | 1,888            | 202     | 39      | 67.4 | 3,740                |
| March.....              | 3,918            | 256     | 90      | 126  | 7,770                |
| April.....              | 5,021            | 318     | 113     | 187  | 9,360                |
| May.....                | 12,554           | 564     | 275     | 405  | 24,900               |
| June.....               | 4,675            | 283     | 83      | 156  | 9,270                |
| July.....               | 1,376            | 80      | 30      | 44.4 | 2,730                |
| August.....             | 1,107            | 61      | 25      | 35.7 | 2,200                |
| September.....          | 1,072            | 68      | 30      | 35.7 | 2,130                |
| Water year 1940-41..... | 56,150           | 564     | 8       | 99.0 | 71,690               |

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for Deep Creek above Adel.

b Stage-discharge relation affected by ice.

## Silver Creek near Silver Lake, Oreg.

**Location.**- Water-stage recorder, lat. 43°07', long. 121°04', in SW¼ sec. 26, T. 28 S., R. 14 E., 1½ miles downstream from diversion dam of Silver Lake Irrigation District, 1½ miles southwest of Silver Lake post office, and 3 miles upstream from Bridge Creek. Datum of gage is 4,361.28 feet above mean sea level, datum of 1929.

**Drainage area.**- 221 square miles.

**Records available.**- December 1904 to March 1907, January 1909 to September 1941.

**Average discharge.**- 31 years (1905-6, 1909-27, 1929-41), including Silver Lake Irrigation District canal, 25.2 second-feet.

**Extremes.**- Maximum discharge during year, 47 second-feet July 1 (gage height, 2.42 feet); minimum, 1.2 second-feet Nov. 22 (gage height, 1.57 feet).

1904-7, 1909-41: Maximum discharge, 1,800 second-feet Mar. 20, 1907 (gage height, 9.08 feet, datum then in use), from rating curve extended above 700 second-feet; no flow at times in 1931, 1932, 1934, 1937.

**Remarks.**- Records good except those for periods of ice effect, which are poor. Flow regulated by reservoir (capacity, 800 acre-feet) above diversion dam 1½ miles upstream, and by Thompson Valley Reservoir (capacity, 17,400 acre-feet) 11 miles upstream, both of which are owned by the Silver Lake Irrigation District.

Rating tables, water year 1940-41, except periods of ice effect (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used May 7-21, July 3 to Aug. 8)

Oct. 1 to Apr. 26      Apr. 27 to Sept. 30

|     |     |     |      |
|-----|-----|-----|------|
| 1.6 | 1.5 | 1.6 | 1.5  |
| 1.8 | 5.9 | 1.8 | 6.7  |
| 2.0 | 15  | 2.0 | 16.5 |
| 2.2 | 27  | 2.2 | 29   |
|     |     | 2.4 | 45   |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec.  | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|-------|------|------|------|------|-----|------|------|------|-------|
| 1   | 2.3  | 2.0  | 1.7   | 4.5  | 2.8  | 3.1  | 12   | 43  | 34   | 43   | 9.0  | 4.4   |
| 2   | 2.3  | 2.0  | 1.7   | 5.5  | 2.8  | 3.4  | 13   | 44  | 35   | 43   | 9.0  | 4.4   |
| 3   | 2.3  | 2.0  | 1.8   | 7.5  | 2.8  | 3.4  | 15   | 44  | 32   | 34   | 8.5  | 3.7   |
| 4   | 2.1  | 2.0  | 1.8   | 10   | 2.6  | 3.7  | 15   | 45  | 35   | 28   | 8.5  | 3.4   |
| 5   | 2.1  | 2.0  | 1.7   | 8.8  | 2.6  | 3.7  | 16   | 44  | 35   | 28   | 9.0  | 3.4   |
| 6   | 2.1  | 2.0  | 1.8   | 7.5  | 2.6  | 3.7  | 16   | 45  | 35   | 27   | 8.5  | 3.4   |
| 7   | 2.1  | 2.0  | 1.8   | 6.7  | 2.6  | 3.9  | 16   | 40  | 35   | 28   | 8.0  | 3.0   |
| 8   | 2.1  | 2.0  | 1.8   | 5.6  | 2.6  | 4.5  | 14   | 39  | 35   | 27   | 8.5  | 3.0   |
| 9   | 2.1  | 2.0  | 1.8   | 5.1  | 2.6  | 5.1  | 16   | 36  | 35   | 27   | 5.0  | 2.8   |
| 10  | 2.1  | 2.0  | bl.8  | 5.1  | 2.8  | 5.3  | 17   | 37  | 35   | 28   | 4.1  | 2.8   |
| 11  | 2.1  | 2.0  | bl.8  | 5.3  | 2.8  | 5.9  | 17   | 38  | 35   | 28   | 3.4  | 2.8   |
| 12  | 2.1  | 2.0  | bl.8  | 5.6  | 2.8  | 6.7  | 17   | 37  | 35   | 28   | 3.0  | 2.8   |
| 13  | 2.1  | 2.0  | bl.8  | 4.5  | 2.8  | 7.5  | 17   | 38  | 35   | 22   | 2.6  | 3.0   |
| 14  | 2.1  | 2.0  | bl.8  | 3.7  | 2.8  | 8.8  | 16   | a37 | 35   | 22   | 2.8  | 3.2   |
| 15  | 2.1  | 2.0  | bl.8  | 3.1  | 2.8  | 8.8  | 16   | a36 | 35   | 22   | 7.2  | 3.2   |
| 16  | 2.0  | 2.0  | b2.0  | 3.1  | 2.8  | 9.6  | 15   | a35 | 35   | 21   | 7.6  | 3.2   |
| 17  | 2.0  | 2.0  | *b2.3 | 3.1  | 2.8  | 10   | 15   | a34 | 35   | 20   | 4.7  | 3.2   |
| 18  | 2.0  | 1.8  | b3.0  | 3.1  | 2.8  | 13   | 15   | 32  | 38   | 19   | 4.4  | 3.2   |
| 19  | 2.0  | 2.0  | b5.0  | 3.1  | 2.9  | 17   | 14   | 28  | 37   | 20   | 4.4  | 3.2   |
| 20  | 2.0  | 2.0  | b6.0  | 2.9  | 2.9  | 16   | 16   | 29  | 38   | 20   | 4.4  | 3.2   |
| 21  | 2.0  | 1.8  | 7.1   | 2.9  | 2.9  | 15   | 18   | 28  | 38   | 18   | 4.7  | 3.2   |
| 22  | 2.0  | 1.7  | 5.1   | 2.9  | 2.9  | 14   | 20   | 42  | 37   | 17   | 4.7  | 3.2   |
| 23  | 2.0  | 1.8  | 3.9   | 2.9  | 2.9  | 14   | 20   | 42  | 37   | 16   | 4.7  | 3.2   |
| 24  | 2.0  | 1.7  | 2.9   | 2.9  | 3.1  | 14   | 20   | 42  | 39   | 11   | 4.7  | 3.2   |
| 25  | 2.0  | 1.7  | 2.8   | 3.4  | 3.1  | 14   | 22   | 41  | 39   | 9.8  | 5.0  | 3.2   |
| 26  | 2.0  | 1.5  | 3.1   | 2.9  | 3.1  | 14   | 24   | 39  | 40   | 10   | 5.0  | 3.2   |
| 27  | 2.0  | 1.5  | 3.1   | 2.9  | 3.1  | 13   | 36   | 39  | 40   | 10   | 5.0  | 3.2   |
| 28  | 2.0  | 1.5  | 3.4   | 2.9  | 3.1  | 15   | 40   | 39  | 41   | 11   | 5.0  | 3.2   |
| 29  | 2.0  | 1.7  | 3.1   | 2.9  | -    | 15   | 43   | 39  | 43   | 11   | 5.0  | 3.2   |
| 30  | 2.0  | 1.7  | 2.9   | 2.9  | -    | 14   | 43   | 38  | 43   | 9.4  | 4.7  | 3.2   |
| 31  | 2.0  | -    | 3.1   | 2.9  | -    | 15   | -    | 35  | -    | 9.0  | 4.7  | -     |

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 64.1             | 2.3     | 2.0     | 2.07 | 127                  |
| November.....           | 56.4             | 2.0     | 1.5     | 1.88 | 112                  |
| December.....           | 83.3             | 7.1     | 1.7     | 2.69 | 165                  |
| Calendar year 1940..... | 5,526.3          | 110     | 1.5     | 15.1 | 10,960               |
| January.....            | 136.0            | 10      | 2.9     | 4.39 | 270                  |
| February.....           | 79.2             | 3.1     | 2.6     | 2.83 | 157                  |
| March.....              | 294.1            | 17      | 3.1     | 9.49 | 583                  |
| April.....              | 594              | 43      | 12      | 19.8 | 1,180                |
| May.....                | 1,183            | 45      | 28      | 38.2 | 2,350                |
| June.....               | 1,095            | 43      | 32      | 36.5 | 2,170                |
| July.....               | 667.2            | 43      | 9.0     | 21.5 | 1,320                |
| August.....             | 175.8            | 9.0     | 2.6     | 5.67 | 349                  |
| September.....          | 97.3             | 4.4     | 2.8     | 3.24 | 193                  |
| Water year 1940-41..... | 4,526.4          | 45      | 1.5     | 12.4 | 8,980                |

\* Winter discharge measurement made on this day.  
a No gage-height record; discharge interpolated.  
b Stage-discharge relation affected by ice.

Silver Lake Irrigation District Canal near Silver Lake, Oreg.

Location.- Staff gage, lat. 43°05', long. 121°05', in NE $\frac{1}{4}$  sec. 5, T. 29 S., R. 14 E., at diversion dam of Silver Lake Irrigation District, 2 $\frac{1}{2}$  miles southwest of Silver Lake post office.

Records available.- October 1922 to September 1923, October 1929 to September 1941.

Average discharge.- 18 years, 4.35 second-feet.

Extremes.- Maximum discharge observed during year, 15 second-feet May 21, 27 (gage height, 1.05 feet); no flow at times.  
1922-23, 1929-41: Maximum discharge observed, 60 second-feet June 26-29, 1923; no flow at times.

Remarks.- Records fair. Canal diverts from Silver Creek water that is released from Thompson Valley Reservoir. Gage read once daily at intervals; discharge interpolated for periods of no gage-height record.

Cooperation.- Gage readings furnished by Silver Lake Irrigation District.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb.  | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|-------|----------------------|------|-----|------|------|------|-------|
| 1                       |                  |      |         |         |       | 0                    | 4.5  | 7.8 | 13   | 0    | 10   |       |
| 2                       |                  |      |         |         |       | 0                    | 4.7  | 9.0 | 13   | 0    | 8.7  |       |
| 3                       |                  |      |         |         |       | 0                    | 4.9  | 10  | 12   | 0    | 8.6  |       |
| 4                       |                  |      |         |         |       | 0                    | 5.0  | 10  | 11   | 0    | 8.4  |       |
| 5                       |                  |      |         |         |       | 0                    | 5.2  | 9.5 | 11   | 0    | 8.3  |       |
| 6                       |                  |      |         |         |       | 0                    | 5.1  | 9.0 | 12   | 0    | 8.2  |       |
| 7                       |                  |      |         |         |       | 0                    | 5.0  | 8.5 | 13   | 0    | 8.1  |       |
| 8                       |                  |      |         |         |       | 0                    | 4.9  | 8.0 | 13   | 0    | 8.0  |       |
| 9                       |                  |      |         |         |       | 0                    | 4.8  | 8.5 | 12   | 0    | 8.0  |       |
| 10                      |                  |      |         |         |       | 0                    | 4.8  | 9.0 | 12   | 0    | 8.0  |       |
| 11                      |                  |      |         |         |       | 0                    | 4.7  | 9.0 | 11   | 0    | 8.0  |       |
| 12                      |                  |      |         |         |       | 0                    | 4.7  | 9.7 | 11   | 2.5  | 8.0  |       |
| 13                      |                  |      |         |         |       | 0                    | 4.6  | 12  | 11   | 5.0  | 8.0  |       |
| 14                      |                  |      |         |         |       | 0                    | 4.6  | 13  | 11   | 7.8  | 8.0  |       |
| 15                      |                  |      |         |         |       | 0                    | 4.5  | 13  | 10   | 7.6  | 4.0  |       |
| 16                      |                  |      |         |         |       | 0                    | 4.4  | 13  | 10   | 7.4  | 0    |       |
| 17                      |                  |      |         |         |       | 0                    | 4.3  | 14  | 9.7  | 7.2  | 0    |       |
| 18                      |                  |      |         |         |       | 0                    | 4.1  | 14  | 9.4  | 8.5  | 0    |       |
| 19                      |                  |      |         |         |       | 0                    | 3.9  | 14  | 9.5  | 9.9  | 0    |       |
| 20                      |                  |      |         |         |       | 0                    | 3.8  | 14  | 9.5  | 8.4  | 0    |       |
| 21                      |                  |      |         |         |       | 0                    | 3.8  | 15  | 9.6  | 6.9  | 0    |       |
| 22                      |                  |      |         |         |       | 0                    | 3.8  | 14  | 9.7  | 7.7  | 0    |       |
| 23                      |                  |      |         |         |       | 0                    | 4.3  | 14  | 7.7  | 8.2  | 0    |       |
| 24                      |                  |      |         |         |       | 0                    | 5.8  | 13  | 6.0  | 8.5  | 0    |       |
| 25                      |                  |      |         |         |       | 0                    | 7.4  | 13  | 3.5  | 8.9  | 0    |       |
| 26                      |                  |      |         |         |       | 0                    | 7.7  | 14  | 3.3  | 9.3  | 0    |       |
| 27                      |                  |      |         |         |       | 0                    | 7.0  | 15  | 3.1  | 9.6  | 0    |       |
| 28                      |                  |      |         |         |       | 0                    | 6.9  | 14  | 2.9  | 10   | 0    |       |
| 29                      |                  |      |         |         |       | 0                    | 6.8  | 14  | 1.1  | 9.4  | 0    |       |
| 30                      |                  |      |         |         |       | 0                    | 6.7  | 14  | 0    | 8.5  | 0    |       |
| 31                      |                  |      |         |         |       | 2.8                  | -    | 14  | -    | 9.2  | 0    |       |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean  | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 0                | 0    | 0       | 0       | 0     | 0                    |      |     |      |      |      |       |
| November.....           | 0                | 0    | 0       | 0       | 0     | 0                    |      |     |      |      |      |       |
| December.....           | 0                | 0    | 0       | 0       | 0     | 0                    |      |     |      |      |      |       |
| Calendar year 1940..... | 798.7            | 13   | 0       | 2.18    | 1,580 |                      |      |     |      |      |      |       |
| January.....            | 0                | 0    | 0       | 0       | 0     |                      |      |     |      |      |      |       |
| February.....           | 0                | 0    | 0       | 0       | 0     |                      |      |     |      |      |      |       |
| March.....              | 2.8              | 2.8  | 0       | .09     | 6     |                      |      |     |      |      |      |       |
| April.....              | 152.7            | 7.7  | 3.8     | 5.09    | 303   |                      |      |     |      |      |      |       |
| May.....                | 369.0            | 15   | 7.8     | 11.9    | 732   |                      |      |     |      |      |      |       |
| June.....               | 271.0            | 13   | 0       | 9.03    | 538   |                      |      |     |      |      |      |       |
| July.....               | 160.5            | 10   | 0       | 5.13    | 318   |                      |      |     |      |      |      |       |
| August.....             | 120.3            | 10   | 0       | 3.88    | 239   |                      |      |     |      |      |      |       |
| September.....          | 0                | 0    | 0       | 0       | 0     |                      |      |     |      |      |      |       |
| Water year 1940-41..... | 1,076.3          | 15   | 0       | 2.95    | 2,140 |                      |      |     |      |      |      |       |

Note.- Gage read on occasional days.

## Silvies River near Burns, Oreg.

Location.- Water-stage recorder, lat. 43°43', long. 119°11' (revised), in NW¼ sec. 31, T. 21 S., R. 30 E., 1 mile downstream from dam site for proposed lower Silvies Reservoir and 11 miles northwest of Burns.

Drainage area.- 934 square miles.

Records available.- May 1903 to July 1906, December 1908 to September 1941.

Average discharge.- 28 years (1903-5, 1909-12, 1917-21, 1922-41), 135 second-feet.

Extremes.- Maximum discharge during year, 1,270 second-feet Apr. 2 (gage height, 11.51 feet); minimum, 7 second-feet Oct. 9, 11, 1903-6, 1906-41: Maximum discharge, 4,750 second-feet Apr. 15, 1904 (gage height, 17.12 feet, site and datum then in use); no flow July 19 to Sept. 22, 1934.

Remarks.- Records good except those for periods of ice effect or no gage-height record, which are poor. Small areas on Silvies River above station are irrigated with flood waters.

Rating table, water year 1940-41, except periods of ice effect and of backwater from debris (gage height, in feet, and discharge, in second-feet)  
(Shifting-control method used Oct. 1-29)

|     |    |     |     |      |       |
|-----|----|-----|-----|------|-------|
| 1.0 | 8  | 2.6 | 117 | 7.0  | 545   |
| 1.2 | 17 | 3.0 | 153 | 8.0  | 660   |
| 1.5 | 33 | 4.0 | 243 | 9.0  | 795   |
| 1.8 | 53 | 5.0 | 342 | 10.0 | 960   |
| 2.2 | 83 | 6.0 | 442 | 11.0 | 1,160 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr.  | May  | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|-------|------|------|------|------|-------|
| 1                       | 8                | 23   | 39      | 55      | 68   | 710                  | 1,200 | 545  | 234  | 81   | 24   | 34    |
| 2                       | 9                | 34   | 39      | 51      | 67   | 1,040                | 1,270 | 737  | 243  | 73   | 29   | 40    |
| 3                       | 10               | 33   | 38      | 51      | 64   | 1,100                | 1,200 | 765  | 252  | 69   | 26   | 42    |
| 4                       | 11               | 35   | 37      | 50      | 62   | 891                  | 1,120 | 859  | 243  | 66   | 26   | 44    |
| 5                       | 11               | 31   | 38      | 50      | 60   | 684                  | 1,120 | 311  | 216  | 65   | 26   | 42    |
| 6                       | 10               | 30   | 40      | 48      | 64   | 600                  | 1,040 | 710  | 216  | 59   | 25   | 39    |
| 7                       | 9                | 32   | 35      | 50      | 65   | 534                  | 960   | 624  | 282  | 55   | 24   | 39    |
| 8                       | 8                | 36   | 35      | 50      | 66   | 612                  | 924   | 624  | 292  | 56   | 24   | 38    |
| 9                       | 8                | 35   | 37      | 47      | 69   | 723                  | 891   | 612  | 282  | 50   | 22   | 37    |
| 10                      | 9                | 34   | 37      | 46      | 80   | 697                  | 942   | 556  | 292  | 45   | 21   | 34    |
| 11                      | 7                | 33   | 28      | 46      | b75  | 697                  | 924   | 492  | 252  | 40   | 22   | 54    |
| 12                      | 8                | 34   | 27      | 47      | a70  | 723                  | 859   | 442  | 212  | 37   | 28   | 35    |
| 13                      | 8                | 27   | b20     | 48      | a52  | 710                  | 843   | 452  | 180  | 35   | 32   | 34    |
| 14                      | 8                | 26   | b17     | b50     | a57  | 589                  | 827   | 482  | 162  | 34   | 29   | 33    |
| 16                      | 8                | 34   | b15     | b57     | a53  | 545                  | 795   | 472  | 140  | 32   | 28   | 32    |
| 16                      | 8                | 33   | *b15    | b59     | a49  | 624                  | 765   | 442  | 126  | 31   | 27   | 32    |
| 17                      | 8                | 33   | b15     | 60      | a46  | 827                  | 710   | 412  | 126  | 31   | 26   | 31    |
| 18                      | 8                | 31   | b17     | 61      | a45  | 1,120                | 660   | 392  | 140  | 32   | 27   | 31    |
| 19                      | 8                | b26  | b20     | 60      | a47  | 1,080                | 612   | 352  | 148  | 31   | 27   | 31    |
| 20                      | 8                | 26   | 27      | 60      | a50  | 1,080                | 556   | 332  | 140  | 29   | 38   | 31    |
| 21                      | 8                | b25  | 65      | 62      | *b55 | 1,020                | 523   | 302  | 144  | 26   | 34   | 28    |
| 22                      | 9                | b26  | 69      | 64      | b70  | 960                  | 502   | a272 | 140  | 24   | 31   | 29    |
| 23                      | 10               | 28   | 90      | 65      | 126  | 950                  | 502   | 243  | 126  | 22   | 29   | 30    |
| 24                      | 12               | 31   | 144     | 68      | 184  | 875                  | 502   | 225  | 117  | 20   | 31   | 31    |
| 25                      | 18               | 31   | 104     | b69     | 198  | 875                  | 492   | 193  | 116  | 18   | 31   | 31    |
| 26                      | 20               | 29   | 89      | b72     | 194  | 907                  | 482   | 180  | 110  | 19   | 29   | 29    |
| 27                      | 19               | 28   | 117     | b73     | 171  | 942                  | 472   | 171  | 97   | 18   | 32   | 29    |
| 28                      | 18               | 29   | 110     | 75      | 270  | 1,040                | 462   | 153  | 91   | 20   | 32   | 29    |
| 29                      | 20               | 32   | 81      | 74      | -    | 1,150                | 452   | 207  | 88   | 24   | 32   | 29    |
| 30                      | 24               | 38   | 75      | 69      | -    | 1,150                | 452   | 216  | 84   | 24   | 32   | 28    |
| 31                      | 26               | -    | 69      | 70      | -    | 1,180                | -     | 216  | -    | 31   | 32   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |       |      |      |      |      |       |
| October.....            | 355              |      | 26      | 7       | 11.5 | 704                  |       |      |      |      |      |       |
| November.....           | 933              |      | 39      | 26      | 31.1 | 1,850                |       |      |      |      |      |       |
| December.....           | 1,609            |      | 144     | 15      | 51.9 | 3,190                |       |      |      |      |      |       |
| Calendar year 1940..... | 49,249           |      | 1,350   | 3       | 135  | 97,670               |       |      |      |      |      |       |
| January.....            | 1,807            |      | 75      | 45      | 58.3 | 3,580                |       |      |      |      |      |       |
| February.....           | 2,493            |      | 270     | 45      | 89.0 | 4,940                |       |      |      |      |      |       |
| March.....              | 26,685           |      | 1,180   | 534     | 961  | 52,930               |       |      |      |      |      |       |
| April.....              | 23,079           |      | 1,270   | 462     | 769  | 45,780               |       |      |      |      |      |       |
| May.....                | 13,511           |      | 859     | 153     | 435  | 25,900               |       |      |      |      |      |       |
| June.....               | 5,231            |      | 292     | 84      | 176  | 10,470               |       |      |      |      |      |       |
| July.....               | 1,195            |      | 81      | 19      | 38.5 | 2,370                |       |      |      |      |      |       |
| August.....             | 390              |      | 40      | 21      | 28.7 | 1,770                |       |      |      |      |      |       |
| September.....          | 1,006            |      | 44      | 28      | 33.5 | 2,000                |       |      |      |      |      |       |
| Water year 1940-41..... | 78,844           |      | 1,270   | 7       | 216  | 156,400              |       |      |      |      |      |       |

Peak discharge.- Mar. 3 (7 a.m.) 1,200 sec.-ft.; Apr. 2 (7 to 9 p.m.) 1,270 sec.-ft.

\* Winter discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for stations in Malheur River Basin.

b Stage-discharge relation affected by ice.

Donner und Blitzen River near Frenchglen, Oreg.

Location.- Water-stage recorder and concrete control, lat. 42°47', long. 118°52', in NW¼ sec. 20, T. 32 S., R. 32 E., 1½ miles upstream from upper diversions for Malheur Migratory Waterfowl Refuge, 2 miles downstream from Fish Creek, and 3½ miles south-east of Frenchglen.

Drainage area.- 180 square miles.

Records available.- December 1937 to September 1941. January 1909 to November 1910, fragmentary records at sites downstream, below several irrigation diversions. May 1910 to September 1921 at site 1½ miles downstream, in SW¼ sec. 8, above diversions, published as Donner and Blitzen River near Diamond. July 1929 to September 1930, in reports of State engineer:

Average discharge.- 11 years (1911-13, 1914-16, 1917-21, 1938-41), 125 second-feet.

Extremes.- Maximum discharge during year, 834 second-feet May 12 (gage height, 4.19 feet), from rating curve extended above 650 second-feet; minimum, 10 second-feet Dec. 11 (gage height, 1.67 feet), caused by ice jams upstream.

1909-21, 1937-41: Maximum discharge, 2,200 second-feet Mar. 3, 1931 (gage height, 6.6 feet, from floodmark, site and datum then in use), from rating curve extended above 500 second-feet; minimum, 8 second-feet Jan. 14, 1940, caused by ice jams upstream.

Remarks.- Records good. No diversion or regulation above station.

Cooperation.- Records collected in cooperation with U. S. Fish and Wildlife Service.

Rating table, water year 1940-41 (gage height, in feet, and discharge, in second-feet)

|     |    |     |     |     |     |
|-----|----|-----|-----|-----|-----|
| 0.8 | 16 | 2.4 | 66  | 3.3 | 340 |
| 2.0 | 27 | 2.7 | 120 | 3.6 | 495 |
| 2.2 | 43 | 3.0 | 210 | 4.0 | 720 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 39   | 64   | 62   | 25   | 50   | 360  | 116  | 390 | 246  | 140  | 50   | 43    |
| 2   | 39   | 186  | 61   | 26   | 47   | 203  | 114  | 370 | 238  | 145  | 47   | 56    |
| 3   | 39   | 112  | 59   | 31   | 43   | 118  | 105  | 425 | 250  | 151  | 45   | 56    |
| 4   | 39   | 62   | 54   | 53   | 47   | 97   | 103  | 355 | 252  | 138  | 44   | 50    |
| 5   | 39   | 56   | 52   | 46   | 47   | 95   | 110  | 310 | 266  | 130  | 43   | 46    |
| 6   | 38   | 62   | 51   | 39   | 66   | 85   | 99   | 286 | 300  | 128  | 42   | 44    |
| 7   | 38   | 64   | 48   | 46   | 72   | 95   | 103  | 290 | 390  | 130  | 41   | 43    |
| 8   | 38   | 56   | 48   | 45   | 64   | 114  | 105  | 370 | 278  | 116  | 42   | 43    |
| 9   | 38   | 51   | 47   | 42   | 85   | 105  | 122  | 350 | 230  | 103  | 42   | 42    |
| 10  | 37   | 46   | 29   | 40   | 185  | 92   | 116  | 390 | 222  | 94   | 41   | 42    |
| 11  | 37   | 48   | 22   | 38   | 335  | 94   | 103  | 605 | 242  | 88   | 54   | 41    |
| 12  | 36   | 47   | 23   | 39   | 166  | 94   | 99   | 678 | 274  | 83   | 59   | 46    |
| 13  | 36   | 40   | 23   | 41   | 86   | 92   | 112  | 649 | 282  | 76   | 46   | 44    |
| 14  | 36   | 47   | 28   | 48   | 74   | 81   | 120  | 522 | 282  | 74   | 43   | 43    |
| 15  | 35   | 46   | 32   | 39   | 72   | 83   | 135  | 420 | 270  | 72   | 42   | 43    |
| 16  | 35   | 47   | 41   | 40   | 75   | 88   | 114  | 400 | 242  | 74   | 41   | 42    |
| 17  | 35   | 48   | 53   | 48   | 94   | 101  | 114  | 410 | 238  | 70   | 43   | 41    |
| 18  | 35   | 48   | 58   | 45   | 100  | 116  | 110  | 355 | 324  | 66   | 66   | 40    |
| 19  | 35   | 37   | 50   | 50   | 151  | 103  | 95   | 300 | 375  | 64   | 54   | 41    |
| 20  | 35   | 40   | 50   | 47   | 140  | 97   | 101  | 282 | 246  | 61   | 47   | 42    |
| 21  | 35   | 50   | 50   | 42   | 197  | 90   | 107  | 315 | 206  | 59   | 46   | 41    |
| 22  | 35   | 41   | 48   | 42   | 275  | 95   | 120  | 385 | 189  | 56   | 45   | 41    |
| 23  | 35   | 37   | 44   | 41   | 456  | 92   | 140  | 475 | 186  | 54   | 44   | 40    |
| 24  | 35   | 52   | 43   | 41   | 385  | 86   | 148  | 506 | 182  | 53   | 43   | 40    |
| 25  | 54   | 48   | 42   | 50   | 140  | 86   | 169  | 484 | 151  | 52   | 43   | 40    |
| 26  | 47   | 39   | 41   | 52   | 95   | 94   | 169  | 539 | 132  | 52   | 42   | 39    |
| 27  | 51   | 42   | 41   | 38   | 104  | 103  | 182  | 425 | 237  | 56   | 42   | 39    |
| 28  | 56   | 50   | 36   | 37   | 400  | 120  | 189  | 330 | 214  | 55   | 42   | 39    |
| 29  | 105  | 48   | 44   | 35   | -    | 120  | 214  | 286 | 175  | 54   | 45   | 39    |
| 30  | 68   | 81   | 42   | 37   | -    | 118  | 250  | 286 | 160  | 52   | 52   | 38    |
| 31  | 50   | -    | 30   | 46   | -    | 116  | -    | 286 | -    | 51   | 45   | 45    |

  

| Month                   | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|-------------------------|------------------|---------|---------|------|----------------------|
| October.....            | 1,311            | 105     | 35      | 42.3 | 2,600                |
| November.....           | 1,695            | 186     | 37      | 56.5 | 3,360                |
| December.....           | 1,352            | 62      | 22      | 43.6 | 2,680                |
| Calendar year 1940..... | 39,740           | 622     | 18      | 109  | 78,820               |
| January.....            | 1,289            | 53      | 25      | 41.6 | 2,560                |
| February.....           | 4,049            | 456     | 43      | 145  | 8,030                |
| March.....              | 3,426            | 360     | 81      | 111  | 6,800                |
| April.....              | 3,884            | 250     | 95      | 129  | 7,700                |
| May.....                | 12,482           | 678     | 282     | 403  | 24,760               |
| June.....               | 7,289            | 390     | 132     | 243  | 14,460               |
| July.....               | 2,597            | 151     | 51      | 85.8 | 5,150                |
| August.....             | 1,424            | 66      | 41      | 45.9 | 2,820                |
| September.....          | 1,284            | 56      | 38      | 42.8 | 2,560                |
| Water year 1940-41..... | 42,082           | 678     | 22      | 115  | 83,470               |



## Donner und Blitzen River near Voltage, Oreg.

Location.- Water-stage recorder, lat. 43°16', long. 118°51', in SW<sup>1</sup>/<sub>4</sub> sec. 2, T. 27 S., R. 31 E., just downstream from Sodhouse diversion dam of U. S. Fish and Wildlife Service, 1½ miles south of Sodhouse Lane and headquarters of Malheur Migratory Waterfowl Refuge, and 2 miles southwest of former post office at Voltage. Datum of gage is 4,097.56 feet above mean sea level, datum of 1929 (levels by Biological Survey). Auxiliary staff gage at bridge at Sodhouse Lane; datum of gage is 4,091.17 feet above mean sea level, datum of 1929.

Records available.- February 1938 to September 1941 (erroneously reported discontinued Sept. 30, 1940). April 1916 to June 1919, March 1921 to June 1922, fragmentary records at site 1½ miles downstream, including diversions and overflow through 16 culverts crossing Sodhouse Lane.

Extremes.- Maximum discharge observed during year, 356 second-feet Feb. 26 (gage height, 4.35 feet); minimum discharge not determined.

1916-19, 1921-22, 1937-41: Maximum discharge observed, 800 second-feet May 21, 1917 (gage height, 3.3 feet, site and datum then in use); little or no flow at times, June to August 1918.

Remarks.- Records fair except those for periods of no gage-height record or those below 10 second-feet, which are poor. Most of flow diverted above station for irrigation and for flooding waterfowl refuge; Kado and Springer Canals divert water below station.

Cooperation.- Records collected in cooperation with Fish and Wildlife Service.

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.             | Apr.    | May     | June | July                 | Aug. | Sept. |
|-------------------------|------|------|------|------|------|------------------|---------|---------|------|----------------------|------|-------|
| 1                       | e    | 91   |      | f54  | 81   | 204              | 20      | 13      | 105  | 15                   |      | 36    |
| 2                       |      | 82   |      | f52  | 87   | 277              | 18      | 13      | 94   | 18                   |      | 36    |
| 3                       |      | 100  |      | f43  | 88   | 288              | 16      | 30      | 79   | 13                   | 14   | 42    |
| 4                       |      | 126  |      | f52  | 84   | 211              | 15      | 42      | 56   | 12                   |      | 75    |
| 5                       |      | 125  |      | f71  | 83   | 161              | 14      | 30      | 43   | 12                   |      | 75    |
| 6                       |      | 108  |      | f69  | 83   | 119              | 14      | 30      | 39   | 12                   | 8    | 56    |
| 7                       |      | 103  |      | f68  | 94   | 80               | 15      | 18      | 32   | 61                   | 8    | 32    |
| 8                       |      | 101  |      | f72  | 111  | 66               | 15      | 14      | 44   | 116                  | 8    | 26    |
| 9                       |      | 96   | 60   | f71  | 113  | 68               | 15      | 26      | 43   | 88                   | 8    | 31    |
| 10                      |      | 84   |      | f67  | 118  | 68               | 30      | 32      | 32   | 75                   | 7    | 35    |
| 11                      |      | 78   |      | f65  | 176  | 65               | 36      | 34      | 18   | 44                   | 7    | 36    |
| 12                      |      | 82   |      | f63  | 251  | 62               | 28      | 47      | 19   | 32                   | 7    | 38    |
| 13                      | 12   | 78   |      | 65   | 286  | 59               | 25      | 90      | 20   | 16                   | 14   | 42    |
| 14                      |      | 75   |      | f74  | 235  | 55               | 26      | 102     | 21   | 14                   | 37   | 45    |
| 15                      |      | 72   |      | f82  | 189  | 53               | 20      | 113     | 23   | 18                   | 36   | 44    |
| 16                      |      | 86   |      | f80  | 169  | 50               | 18      | 131     | 35   | 20                   | 24   | 42    |
| 17                      |      | 88   |      | 82   | 149  | 18               | 18      | 119     | 30   | 13                   | 9    | 40    |
| 18                      |      | 84   | 58   | 95   | 132  | 16               | 107     | 31      | 7    | 7                    | 7    | 36    |
| 19                      |      | 84   | 71   | 102  | 147  | 13               | 103     | 44      | 18   | 7                    | 34   | 34    |
| 20                      |      | 77   | 77   | 105  | 172  | 13               | 101     | 63      | 30   | 20                   | 35   | 35    |
| 21                      |      | 68   | 82   | 105  | 180  |                  | 12      | 92      | 72   | 46                   | 41   | 36    |
| 22                      |      | 80   | 84   | 97   | 182  |                  | 12      | 75      | 73   | 38                   | 38   | 35    |
| 23                      |      | 77   | 84   | 95   | 212  | 38               | 12      | 61      | 70   | 35                   | 35   | 35    |
| 24                      | 38   | 68   | 81   | 93   | 297  |                  | 16      | 56      | 60   | 32                   | 34   | 34    |
| 25                      | 42   | 76   | 76   | 93   | 339  |                  | 14      | 45      | 39   | 65                   | 35   | 33    |
| 26                      | 45   | 82   | 73   | 100  | 343  |                  | 12      | 45      | 14   | 56                   | 29   | 36    |
| 27                      | 47   | 77   | 72   | 109  | 245  |                  | 12      | 61      | 12   | 38                   | 15   | 38    |
| 28                      | 51   | 75   | 71   | 97   | 184  |                  | 12      | 85      | 13   | 30                   | 14   | 38    |
| 29                      | 61   | 80   | 68   | 82   | -    | 26               | 12      | 97      | 15   | 24                   | 16   | 39    |
| 30                      | 76   | 85   | 99   | 82   | -    | 35               | 18      | 111     | 15   | 22                   | 16   | 39    |
| 31                      | 96   | -    | 82   | 76   | -    | 32               | -       | 111     | -    | 20                   | 25   | -     |
| Month                   |      |      |      |      |      | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |      |       |
| October.....            |      |      |      |      |      | 724              | 96      | 8       | 25.4 | 1,440                |      |       |
| November.....           |      |      |      |      |      | 2,584            | 126     | 66      | 86.1 | 5,130                |      |       |
| December.....           |      |      |      |      |      | 2,098            | 99      | 58      | 67.7 | 4,160                |      |       |
| Calendar year 1940..... |      |      |      |      |      | 14,412           | 246     | -       | 39.4 | 28,590               |      |       |
| January.....            |      |      |      |      |      | 2,461            | 109     | 43      | 79.4 | 4,880                |      |       |
| February.....           |      |      |      |      |      | 4,830            | 343     | 81      | 172  | 9,580                |      |       |
| March.....              |      |      |      |      |      | 2,415            | 277     | 26      | 77.9 | 4,790                |      |       |
| April.....              |      |      |      |      |      | 515              | 36      | 12      | 17.2 | 1,020                |      |       |
| May.....                |      |      |      |      |      | 2,034            | 131     | 13      | 55.6 | 4,030                |      |       |
| June.....               |      |      |      |      |      | 1,254            | 105     | 12      | 41.8 | 2,480                |      |       |
| July.....               |      |      |      |      |      | 1,040            | 118     | 9       | 33.5 | 2,060                |      |       |
| August.....             |      |      |      |      |      | 575              | 41      | 7       | 18.5 | 1,140                |      |       |
| September.....          |      |      |      |      |      | 1,199            | 75      | 26      | 40.0 | 2,380                |      |       |
| Water year 1940-41..... |      |      |      |      |      | 21,729           | 343     | 7       | 59.5 | 43,100               |      |       |

f Computed on basis of partly estimated gage-height record.

Note.- No gage-height record Oct. 1, 3-23, Nov. 30 to Dec. 17, Mar. 17-28, Aug. 1-5; discharge interpolated or computed on basis of range of stage and weather records.

## Bridge Creek near Frenchglen, Oreg.

Location.- Water-stage recorder and concrete control, lat. 42°50', long. 118°51', in NW¼ sec. 33, T. 31 S., R. 32½ E., at mouth of canyon, 1,000 feet upstream from road crossing and 3½ miles northeast of Frenchglen.

Records available.- March 1911 to September 1916, December 1937 to September 1941.

Extremes.- Maximum discharge during year, 72 second-feet June 7 (gage height, 1.69 feet); minimum, 9 second-feet Dec. 22, 23 (gage height, 0.98 foot).

1911-16, 1937-41: Maximum discharge, 230 second-feet sometime during period Mar. 16-18, 1939 (gage height, 3.30 feet, from floodmark), from rating curve extended above 30 second-feet; minimum observed, 7 second-feet Feb. 24, 25, 1912, Dec. 30, 1937, to Jan. 4, 1938.

Remarks.- Records good. No diversion or regulation above station. Low flow is maintained by large springs.

Cooperation.- Records collected in cooperation with U. S. Fish and Wildlife Service.

Rating table, water year 1940-41 (gage height, in feet,  
and discharge, in second-feet)  
(Shifting-control method used Apr. 1 to Sept. 15)

|     |      |     |    |
|-----|------|-----|----|
| 0.9 | 6.4  | 1.2 | 21 |
| 1.0 | 10.0 | 1.3 | 28 |
| 1.1 | 14.8 | 1.5 | 47 |

Discharge, in second-feet, water year October 1940 to September 1941

| Day                     | Oct.             | Nov. | Dec.    | Jan.    | Feb. | Mar.                 | Apr. | May | June | July | Aug. | Sept. |
|-------------------------|------------------|------|---------|---------|------|----------------------|------|-----|------|------|------|-------|
| 1                       | 11               | 15   | 11      | 10      | 10   | 20                   | 12   | 22  | 13   | 10   | 11   | 12    |
| 2                       | 12               | 23   | 10      | 10      | 10   | 17                   | 12   | 23  | 12   | 10   | 11   | 12    |
| 3                       | 11               | 19   | 10      | 10      | 10   | 14                   | 12   | 25  | 12   | 10   | 11   | 12    |
| 4                       | 10               | 14   | 10      | 10      | 10   | 13                   | 12   | 24  | 12   | 10   | 11   | 11    |
| 5                       | 10               | 15   | 10      | 10      | 10   | 12                   | 12   | 22  | 12   | 10   | 11   | 11    |
| 6                       | 10               | 15   | 10      | 10      | 10   | 12                   | 12   | 22  | 12   | 10   | 11   | 11    |
| 7                       | 10               | 15   | 10      | 10      | 10   | 12                   | 12   | 20  | 45   | 10   | 11   | 11    |
| 8                       | 11               | 13   | 10      | 10      | 11   | 12                   | 11   | 24  | 27   | 11   | 11   | 11    |
| 9                       | 11               | 12   | 10      | 10      | 11   | 12                   | 12   | 22  | 22   | 11   | 11   | 11    |
| 10                      | 11               | 11   | 10      | 10      | 13   | 12                   | 13   | 22  | 19   | 11   | 11   | 11    |
| 11                      | 11               | 11   | 10      | 10      | 18   | 13                   | 13   | 21  | 17   | 11   | 12   | 11    |
| 12                      | 10               | 11   | 10      | 10      | 19   | 12                   | 12   | 22  | 15   | 11   | 11   | 11    |
| 13                      | 10               | 10   | 10      | 10      | 14   | 12                   | 12   | 24  | 15   | 11   | 11   | 11    |
| 14                      | 10               | 10   | 10      | 10      | 12   | 11                   | 12   | 27  | 14   | 11   | 11   | 11    |
| 15                      | 10               | 10   | 10      | 10      | a12  | 10                   | 13   | 21  | 13   | 11   | 11   | 11    |
| 16                      | 10               | 10   | 10      | 10      | a12  | 10                   | 13   | 19  | 12   | 11   | 11   | 11    |
| 17                      | 10               | 10   | 10      | 10      | a14  | 12                   | 13   | 19  | 12   | 11   | 11   | 11    |
| 18                      | 10               | 10   | 10      | 10      | a16  | 13                   | 13   | 19  | 14   | 11   | 11   | 11    |
| 19                      | 10               | 10   | 10      | 10      | 18   | 11                   | 12   | 17  | 20   | 11   | 11   | 11    |
| 20                      | 11               | 10   | 10      | 10      | 14   | 11                   | 12   | 16  | 14   | 11   | 11   | 11    |
| 21                      | 11               | 10   | 10      | 10      | 14   | 10                   | 12   | 15  | 12   | 11   | 12   | 11    |
| 22                      | 11               | 10   | 9       | 10      | 20   | 11                   | 12   | 14  | 11   | 11   | 12   | 11    |
| 23                      | 11               | 10   | 9       | 10      | 31   | 11                   | 13   | 13  | 11   | 11   | 12   | 11    |
| 24                      | 11               | 10   | 10      | 10      | 26   | 11                   | 14   | 13  | 11   | 11   | 12   | 11    |
| 25                      | 11               | 10   | 10      | 11      | 16   | 11                   | 15   | 13  | 11   | 11   | 12   | 11    |
| 26                      | 13               | 10   | 10      | 11      | 14   | 11                   | 15   | 15  | 11   | 11   | 11   | 11    |
| 27                      | 17               | 10   | 10      | 11      | 13   | 11                   | 15   | 16  | 11   | 11   | 11   | 11    |
| 28                      | 23               | 10   | 10      | 11      | 20   | 11                   | 16   | 14  | 12   | 11   | 11   | 11    |
| 29                      | 45               | 11   | 10      | 11      | -    | 12                   | 17   | 14  | 11   | 11   | 12   | 11    |
| 30                      | 19               | 13   | 10      | 11      | -    | 12                   | 15   | 13  | 11   | 11   | 12   | 11    |
| 31                      | 15               | -    | 10      | 10      | -    | 12                   | -    | 14  | -    | 11   | 12   | -     |
| Month                   | Second-foot-days |      | Maximum | Minimum | Mean | Run-off in acre-feet |      |     |      |      |      |       |
| October.....            | 396              |      | 45      | 10      | 12.8 | 785                  |      |     |      |      |      |       |
| November.....           | 358              |      | 23      | 10      | 11.9 | 710                  |      |     |      |      |      |       |
| December.....           | 309              |      | 11      | 9       | 10.0 | 613                  |      |     |      |      |      |       |
| Calendar year 1940..... | 4,173            |      | 45      | 8       | 11.4 | 8,270                |      |     |      |      |      |       |
| January.....            | 316              |      | 11      | 10      | 10.8 | 687                  |      |     |      |      |      |       |
| February.....           | 408              |      | 31      | 10      | 14.6 | 809                  |      |     |      |      |      |       |
| March.....              | 374              |      | 20      | 10      | 12.1 | 742                  |      |     |      |      |      |       |
| April.....              | 392              |      | 18      | 11      | 15.1 | 778                  |      |     |      |      |      |       |
| May.....                | 555              |      | 27      | 13      | 18.9 | 1,160                |      |     |      |      |      |       |
| June.....               | 444              |      | 45      | 11      | 14.8 | 881                  |      |     |      |      |      |       |
| July.....               | 354              |      | 11      | 10      | 10.8 | 682                  |      |     |      |      |      |       |
| August.....             | 350              |      | 12      | 11      | 11.3 | 694                  |      |     |      |      |      |       |
| September.....          | 333              |      | 12      | 11      | 11.1 | 660                  |      |     |      |      |      |       |
| Water year 1940-41..... | 4,599            |      | 45      | 9       | 12.6 | 9,120                |      |     |      |      |      |       |

a No gage-height record; discharge computed on basis of weather records and records for Donner and Blitzen River near Frenchglen.

Trout Creek near Denio, Oreg.

Location.- Water-stage recorder, lat. 42°10', long. 118°28', in SW $\frac{1}{4}$  sec. 26, T. 39 S., R. 36 E., 0.4 mile upstream from bridge at mouth of canyon, 5 miles east of Trout Creek Ranch, and 14 miles northeast of Denio. Datum of gage is 4,351.59 feet (revised) above mean sea level, datum of 1929.

Records available.- March 1911 to March 1912, April 1922 to November 1923, April 1925 to September 1941 (incomplete prior to 1932).

Average discharge.- 10 years (1922-23, 1932-41), 12.4 second-feet.

Extremes.- Maximum discharge during year, 124 second-feet May 12 (gage height, 3.31 feet); minimum, 1.4 second-feet Aug. 22.

1911-12, 1922-23, 1925-41: Maximum discharge, 343 second-feet Aug. 1, 1933, from rating curve extended above 125 second-feet; probably no flow at times.

Maximum stage known, 6.0 feet (caused by cloudburst), sometime between 1922 and 1932.

Remarks.- Records good except those for period Dec. 12 to Jan. 1, which are poor. Some diversions above station for irrigation of small fields; large diversions below station for irrigation.

Rating tables, water year 1940-41, except for periods of ice effect (gage height, in feet, and discharge, in second-feet)

(Shifting-control method used Dec. 17 to Jan. 1)

| Oct. 1 to Feb. 10 |     |     |     | Feb. 11 to Sept. 30 |     |     |      |     |    |
|-------------------|-----|-----|-----|---------------------|-----|-----|------|-----|----|
| 1.6               | 2.9 | 1.9 | 9.1 | 1.5                 | 1.5 | 2.0 | 11.5 | 2.8 | 70 |
| 1.7               | 4.5 | 2.0 | 12  | 1.8                 | 2.8 | 2.2 | 19.5 | 3.0 | 90 |
| 1.8               | 6.6 |     |     | 1.7                 | 4.4 | 2.4 | 34   |     |    |
|                   |     |     |     | 1.9                 | 6.3 | 2.6 | 52   |     |    |

Discharge, in second-feet, water year October 1940 to September 1941

| Day | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. |
|-----|------|------|------|------|------|------|------|-----|------|------|------|-------|
| 1   | 4.0  | 7.1  | 8.1  | 4.9  | 8.1  | 25   | 24   | 72  | 38   | 14   | 4.1  | 3.4   |
| 2   | 4.3  | 12   | 7.8  | 4.9  | 7.4  | 23   | 24   | 83  | 32   | 13   | 3.8  | 3.9   |
| 3   | 4.5  | 11   | 7.8  | 4.5  | 6.6  | 21   | 22   | 82  | 28   | 13   | 3.1  | 4.1   |
| 4   | 4.2  | 11   | 7.8  | 6.2  | 7.1  | 21   | 23   | 77  | 28   | 12   | 2.5  | 3.9   |
| 5   | 4.2  | 11   | 7.6  | 7.1  | 7.1  | 20   | 23   | 87  | 27   | 11   | 2.3  | 3.6   |
| 6   | 4.0  | 11   | 7.6  | 6.4  | 7.8  | 18   | 22   | 86  | 36   | 11   | 2.3  | 3.4   |
| 7   | 3.7  | 11   | 7.6  | 6.8  | 7.8  | 18   | 21   | 87  | 45   | 9.8  | 2.4  | 3.3   |
| 8   | 3.7  | 11   | 7.6  | 6.8  | 7.8  | 18   | 20   | 82  | 35   | 8.7  | 2.4  | 3.1   |
| 9   | 3.9  | 11   | 7.6  | 4.9  | 8.1  | 17   | 20   | 82  | 28   | 7.3  | 2.4  | 2.7   |
| 10  | 3.7  | 10   | 5.1  | 6.2  | 13   | 17   | 22   | 90  | 23   | 6.3  | 2.5  | 2.8   |
| 11  | 3.7  | 10   | 3.5  | 5.8  | 18   | 18   | 22   | 99  | 22   | 5.7  | 4.1  | 2.3   |
| 12  | 3.5  | 10   | 22.5 | 6.0  | 13   | 18   | 22   | 112 | 20   | 5.7  | 5.2  | 2.5   |
| 13  | 3.4  | 9.4  | 22.5 | 5.8  | 11   | 18   | 23   | 101 | 20   | 5.2  | 4.2  | 2.5   |
| 14  | 3.4  | 10   | 25.0 | 6.2  | 10   | 18   | 25   | 88  | 22   | 4.8  | 3.9  | 2.7   |
| 15  | 3.2  | 9.7  | 24.0 | 5.8  | 10   | 18   | 24   | 72  | 22   | 4.4  | 3.4  | 2.8   |
| 16  | 3.2  | 9.1  | 25.5 | 5.1  | 10   | 18   | 26   | 84  | 20   | 5.0  | 3.3  | 2.8   |
| 17  | 3.2  | 9.1  | 27.4 | 6.6  | 10   | 18   | 27   | 65  | 20   | 5.5  | 3.4  | 2.7   |
| 18  | 3.1  | 9.1  | 9.4  | 6.6  | 11   | 20   | 25   | 66  | 23   | 5.9  | 3.8  | 2.8   |
| 19  | 3.2  | 7.4  | 9.1  | 6.8  | 11   | 21   | 24   | 58  | 23   | 4.1  | 3.3  | 3.0   |
| 20  | 3.4  | 7.6  | 8.8  | 6.8  | 11   | 21   | 21   | 55  | 18   | 4.1  | 3.8  | 3.1   |
| 21  | 3.4  | 8.6  | 8.8  | 6.8  | 12   | 20   | 21   | 49  | 17   | 4.1  | 2.8  | 2.7   |
| 22  | 3.5  | 8.4  | 8.8  | 6.8  | 13   | 20   | 15   | 54  | 15   | 3.9  | 1.5  | 2.7   |
| 23  | 3.5  | 5.8  | 8.8  | 6.8  | 19   | 20   | 17   | 57  | 15   | 3.8  | 1.8  | 3.0   |
| 24  | 3.9  | 8.6  | 8.8  | 6.8  | 19   | 19   | 20   | 57  | 15   | 3.4  | 1.8  | 3.0   |
| 25  | 4.7  | 8.4  | 8.1  | 7.1  | 18   | 19   | 26   | 57  | 15   | 3.6  | 2.0  | 2.7   |
| 26  | 8.4  | 7.1  | 8.1  | 7.6  | 18   | 19   | 30   | 57  | 14   | 3.6  | 2.3  | 2.7   |
| 27  | 7.6  | 7.6  | 5.8  | 8.4  | 18   | 19   | 32   | 57  | 20   | 4.4  | 2.4  | 3.3   |
| 28  | 6.2  | 8.4  | 7.4  | 8.8  | 20   | 21   | 40   | 48  | 18   | 4.6  | 3.0  | 3.6   |
| 29  | 6.4  | 8.1  | 9.1  | 8.6  | -    | 23   | 47   | 44  | 15   | 4.4  | 3.4  | 4.2   |
| 30  | 6.8  | 8.4  | 8.6  | 5.6  | -    | 23   | 57   | 42  | 14   | 4.1  | 4.1  | 4.1   |
| 31  | 6.8  | -    | 6.4  | 7.4  | -    | 23   | -    | 39  | -    | 4.1  | 3.8  | -     |

| Month              | Second-foot-days | Maximum | Minimum | Mean | Run-off in acre-feet |
|--------------------|------------------|---------|---------|------|----------------------|
| October            | 134.3            | 8.4     | 3.1     | 4.35 | 268                  |
| November           | 276.9            | 12      | 5.8     | 9.28 | 549                  |
| December           | 221.8            | 9.4     | 2.5     | 7.15 | 440                  |
| Calendar year 1940 | 4,785.3          | 86      | 0.5     | 13.1 | 9,490                |
| January            | 192.1            | 7.6     | 4.5     | 6.20 | 381                  |
| February           | 324.6            | 20      | 6.6     | 11.7 | 648                  |
| March              | 818              | 25      | 17      | 19.7 | 1,210                |
| April              | 783              | 57      | 15      | 25.4 | 1,510                |
| May                | 2,107            | 112     | 39      | 65.0 | 4,180                |
| June               | 688              | 45      | 14      | 22.9 | 1,360                |
| July               | 200.3            | 14      | 3.4     | 8.46 | 397                  |
| August             | 94.9             | 5.2     | 1.5     | 3.06 | 188                  |
| September          | 93.6             | 4.2     | 2.3     | 3.12 | 188                  |
| Water year 1940-41 | 6,708.3          | 112     | 1.5     | 15.8 | 11,320               |

\* Winter discharge measurement made on this day.  
 a No gage-height record; discharge computed on basis of weather records.  
 b Stage-discharge relation affected by ice.

In addition to the records of stream flow obtained at gaging stations in the Great Basin and reported in the preceding pages, measurements of flow were made at other points, as shown in the following table:

Miscellaneous discharge measurements in the Great Basin during the water year  
October 1940 to September 1941

| Great Salt Lake Basin          |                                    |                                  |  |                      |
|--------------------------------|------------------------------------|----------------------------------|--|----------------------|
| Date                           | Stream                             | Tributary to or diverting from-  | Locality   | Discharge (sec.-ft.) |
| July 8                         | Bear River.....                    | Great Salt Lake....              | Sec. 30, T. 3 N., R. 10 E., 2 miles south of Utah-Wyoming State line.  | 253                  |
| 9                              | .....do.....                       | .....do.....                     | Sec. 17, T. 14 N., R. 119 W., 2 miles west of Knight, Wyo.   | 149                  |
| 21                             | .....do.....                       | .....do.....                     | .....do.....   | 98                   |
| 10                             | .....do.....                       | .....do.....                     | Sec. 9, T. 9 N., R. 7 E., 2 miles northeast of Woodruff, Utah.   | 7.4                  |
| 11                             | .....do.....                       | .....do.....                     | Sec. 27, T. 20 N., R. 7 E., 3 miles east of Randolph, Utah.  | 68                   |
| 12                             | .....do.....                       | .....do.....                     | Sec. 36, T. 25 N., R. 120 W., 11 miles south of Cokeville, Wyo.  | 149                  |
| 16                             | .....do.....                       | .....do.....                     | Sec. 8, T. 14 S., R. 45 E., below Rainbow Dam, 2 miles west of Dingle, Idaho.  | 11.4                 |
| 8                              | Mill Creek.....                    | Bear River.....                  | Sec. 26, T. 13 N., R. 120 W., at mouth, 7 miles southwest of Knight, Wyo.  | .5                   |
| 18                             | .....do.....                       | .....do.....                     | .....do.....   | .5                   |
| 9                              | Sulphur Creek....                  | .....do.....                     | Sec. 8, T. 14 N., R. 119 W., at mouth, 2 miles southwest of Knight, Wyo.   | 21.4                 |
| 20                             | .....do.....                       | .....do.....                     | .....do.....   | 70                   |
| 12                             | Smiths Fork.....                   | .....do.....                     | Sec. 4, T. 27 N., R. 118 W., above all diversions, 20 miles northeast of Cokeville, Wyo.   | 198                  |
| 14                             | .....do.....                       | .....do.....                     | Sec. 6, T. 14 N., R. 119 W., at mouth, at Cokeville, Wyo.  | all.7                |
| 15                             | Thomas Fork.....                   | .....do.....                     | Sec. 10, T. 14 S., R. 46 E., at mouth, 2 miles west of Borden, Wyo.  | 32.3                 |
| Dec. 17                        | Gwenford Mill ditch.               | Malad River.....                 | Sec. 11, T. 15 S., R. 35 E., 3/8 mile below point of diversion, 250 feet northeast of gaging station on Malad River near Samaria, Idaho, and 1 1/2 miles north of Samaria. | 0                    |
| Mar. 31                        | .....do.....                       | .....do.....                     | .....do.....   | 0                    |
| May 8                          | .....do.....                       | .....do.....                     | .....do.....   | 0                    |
| 19                             | .....do.....                       | .....do.....                     | .....do.....   | 1.71                 |
| July 3                         | .....do.....                       | .....do.....                     | .....do.....   | 2.11                 |
| Aug. 4                         | .....do.....                       | .....do.....                     | .....do.....   | 0                    |
| 30                             | .....do.....                       | .....do.....                     | .....do.....   | 0                    |
| Sept. 19                       | American Fork....                  | Utah Lake.....                   | NE 1/4 sec. 26, T. 4 S., R. 2 E., at Utah Power & Light Co.'s gaging station, 1,000 feet above intake at upper plant and 10 miles east of American Fork, Utah.             | 28.8                 |
| 20                             | Utah Power & Light Co.'s tailrace. | Santaquin Creek....              | NE 1/4 sec. 13, T. 10 S., R. 1 E., at Utah Power & Light Co.'s gaging station at power plant, 2 miles south of Santaquin, Utah.  | 11.2                 |
| a Total of four branches.      |                                    |                                  |  |                      |
| Antelope Valley Basin          |                                    |                                  |  |                      |
| Feb. 24                        | Punch Bowl Creek.                  | Rock Creek.....                  | At mouth, near Valyermo, Calif.....  | b8                   |
| Mar. 22                        | .....do.....                       | .....do.....                     | .....do.....   | b4                   |
| July 9                         | .....do.....                       | .....do.....                     | .....do.....   | .30                  |
| b Estimated.                   |                                    |                                  |  |                      |
| Malheur and Harney Lakes Basin |                                    |                                  |  |                      |
| May 29                         | Cow Creek.....                     | Malheur Lake.....                | Sec. 26, T. 22 S., R. 32 1/2 E., near Harney, Oreg.  | 6.0                  |
| June 2                         | Silver Creek.....                  | Harney Lake.....                 | Sec. 30, T. 22 S., R. 26 E., near Suntext, Oreg.   | 28.3                 |
| 15                             | .....do.....                       | .....do.....                     | .....do.....   | 16.5                 |
| May 6                          | East Fork of Silver Creek.         | Braided channel of Silver Creek. | Sec. 31, T. 22 S., R. 26 E., near Suntext, Oreg.   | 52.1                 |
| 6                              | West Fork of Silver Creek.         | .....do.....                     | Two channels in sec. 31, T. 22 S., R. 26 E., near Suntext, Oreg.   | 34.8                 |
| Catlow Valley Basin            |                                    |                                  |  |                      |
| Apr. 6                         | Rock Creek.....                    | Catlow Valley.....               | Sec. 10, T. 35 S., R. 26 E.....  | 6.9                  |
| 7                              | .....do.....                       | .....do.....                     | NE 1/4 sec. 3, T. 35 S., R. 26 E., below Lyons Ranch and Hart Mountain headquarters of U. S. Fish and Wildlife Service.  | 7.1                  |
| May 26                         | .....do.....                       | .....do.....                     | .....do.....   | 17.8                 |
| June 7                         | .....do.....                       | .....do.....                     | .....do.....   | 26.3                 |
| Apr. 7                         | .....do.....                       | .....do.....                     | Sec. 18, T. 33 S., R. 28 E., above Rock Creek Ranch.   | 6.1                  |

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