Surface Water Supply of the United States 1951

Part 13. Snake River Basin

Prepared under the direction of C. G. PAULSEN, *Chief Hydraulic Engineer*

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1217

Prepared in cooperation with the States of Idaho, Oregon, Utah, Washington, and Wyoming and with other agencies

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PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Idaho, Oregon, Utah, Washington, and Wyoming and with other agencies, by personnel of the Water Resources Division under the direction of:

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J. V. B. Wells---------- Chief, Surface Water Branch
B. J. Peterson---------- Chief, Annual Reports Section

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ILLUSTRATIONS

SURFACE WATER SUPPLY OF SNAKE RIVER BASIN, 1951

SCOPE OF WORK

This volume is one of a series of 18 reports presenting measurements of stage, discharge, and content of streams, lakes, and reservoirs in the United States during the water year ending September 30, 1951. Since 1888, when the United States Geological Survey first studied streamflow in relation to problems of irrigation, similar measurements have been made at more than 12,400 gaging stations in the 48 States and at many others in the Territories of Alaska and Hawaii. On September 30, 1951, the Geological Survey and cooperating organizations were maintaining 6,730 gaging stations, including those in Alaska and Hawaii. Miscellaneous discharge measurements were made at many other points in the 1951 water year.

COOPERATION

Many State, municipal, and private organizations have cooperated with the Geological Survey in this work by either furnishing or helping to collect data. Organizations that supplied data are acknowledged in station descriptions, and organizations that assisted in the collection of data through cooperative agreements with the Survey are:

Idaho: Idaho Department of Reclamation, M. R. Kulp, State reclamation engineer; Idaho State Fish and Game Commission, T. B. Murray, director; and Big Lost River Irrigation District.

Oregon: Office of the State Engineer, C. E. Stricklin.

Utah: Office of the State Engineer, J. M. Tracy.

Washington: State Department of Conservation and Development, J. V. Rogers, director, succeeded by W. A. Galbraith, and C. J. Bartholet, supervisor of hydraulics.

Wyoming: Office of the State Engineer, L. C. Bishop.

Assistance in the form of funds or services was given by the Corps of Engineers, Department of the Army, in collecting records published herein for 18 gaging stations, of which 11 were in Idaho, 3 in Oregon, and 4 in Wyoming.

Assistance was also furnished by the Forest Service of the Department of Agriculture and the Office of Indian Affairs and the Bureau of Reclamation of the United States Department of the Interior.

The following organizations aided in collecting records:

Idaho: Board of Control for Boise Project; Idaho Power Co., Idaho Water District 36, North Side Canal Co., Twin Falls Canal Co., Utah Power & Light Co., Washington Water Power Co., and watermasters for Big Lost, Little Lost, Big Wood, Little Wood, Boise, and Weiser Rivers, Lake Fork Payette River, and Mud Lake.

Oregon: Baker, Malheur, Union, and Wallowa Counties, Pacific Power & Light Co., and Warmsprings Irrigation District.

Washington: Bonneville Power Administration, Washington Water Power Co.

DIVISION OF WORK

The stream gaging was done by the Water Resources Division of the Geological Survey, Carl G. Paulsen, chief hydraulic engineer, and Joseph V. B. Wells, chief of the Surface Water Branch. The data for stations in the several States were collected and prepared for publication under the supervision of the district engineers at the offices listed below. The records were reviewed and the manuscript prepared for publication under the direction of B. J. Peterson, chief, Annual Reports Section.

State	District office	Address
Idaho a/	Boise	429 Federal Building.
Idaho b/	Idaho Falls	204 Federal Building.
Nevada c/	Salt Lake City, Utah	300 Federal Building.
Oregon d/	Portland	606 Post Office Building.
Washington	Tacoma	207 Federal Building.
Wyoming e/	Denver, Colo.	Denver Federal Center.

a/ Except stations on Snake River between Irwin and Milner, stations on tributaries of Snake River above American Falls Reservoir (but including Teton River near Victor, Teton Creek and Horseshoe Creek near Driggs), diversions from Snake River at and above Milner, and Clear Creek near Naf, but including Salmon Falls Creek above Upper Vineyard ditch, near Contact, Nev., Salmon Falls Creek near Jacinto, Nev., Snake River at Oxbow, Oreg., and Jordan Creek above Lone Tree Creek, near Jordan Valley, Oreg., Pacific Creek near Moran, Wyo., Buffalo Fork near Moran, Wyo., Gros Ventre River at Kelly, Wyo., and Hoback River near Jackson, Wyo.

b/ Stations on Snake River between Irwin and Milner, stations on tributaries of Snake River above American Falls Reservoir (except Teton River near Victor, Teton Creek and Horseshoe Creek near Driggs), diversions from Snake River at and above Milner, and Grassy Lake, Jackson Lake, and Snake River at Moran, Wyo.

c/ Except for Salmon Falls Creek above Upper Vineyard ditch, near Contact and near Jacinto, but including Clear Creek near Naf, Idaho.

d/ Except for Snake River at Oxbow and Jordan Creek above Lone Tree Creek, near Jordan Valley.

e/ Except for Pacific Creek near Moran, Buffalo Fork near Moran, Gros Ventre River at Kelly, Hoback River near Jackson, Grassy Lake, Jackson Lake, and Snake River at Moran.

Information of a more detailed nature than that published for most of the gaging stations given in this report is on file in the district offices listed above. Provisional records of discharge prior to publication, and other unpublished data concerning the gaging station records may usually be obtained from the district office.

DEFINITION OF TERMS AND ABBREVIATIONS

The terms of streamflow and other hydrologic data, as used in this report, are defined as follows:

Cubic foot per second (cfs) 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.

Cubic feet per second per square mile (cfsm) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Runoff 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. The term is used for comparing runoff with rainfall, which is also usually expressed in inches.

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 relation to storage for irrigation.

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

Stage-discharge relation is the relation between gage height and the amount of water flowing in a channel, expressed as volume per unit of time.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, a long reach of the channel, or an artificial structure.

Contents is the volume of water in a reservoir. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

The drainage area of a stream at a specified location is that area, measured in a horizontal plane, which is so enclosed by a topographic divide that direct surface runoff from precipitation normally would drain by gravity into the river above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

NEW DOWNSTREAM ORDER OF LISTING GAGING STATIONS

Beginning with the series of reports for the water year ending September 30, 1951, the order of listing gaging-station records has been changed. In this report, in a downstream direction along the main stem all stations on a tributary entering above a main-stem station are listed before that station. If a tributary enters between two main-stem stations, it is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. To indicate the rank of any tributary on which a gaging station is situated and the stream to which it is immediately tributary, each indention in the listing of gaging stations in the table of contents of this report represents one rank. This new downstream order and system of indention show which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

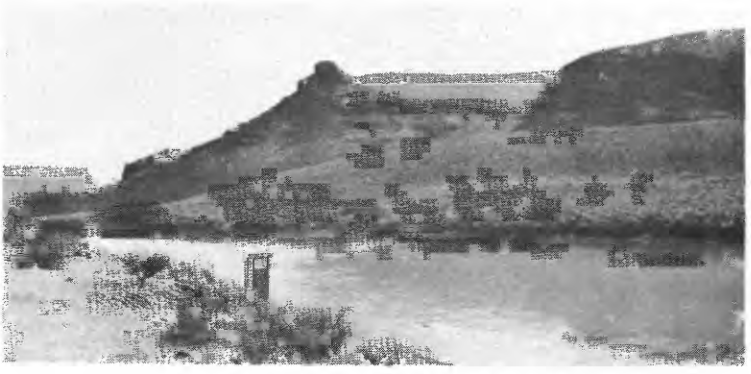
The order of listing used before the publication of the 1951 report listed first all stations on the main stem from headwaters toward mouth, then all stations on the uppermost tributary to the main stem from the tributary's source to mouth, and then all stations from source to mouth of the uppermost tributary to the tributary.

EXPLANATION OF DATA

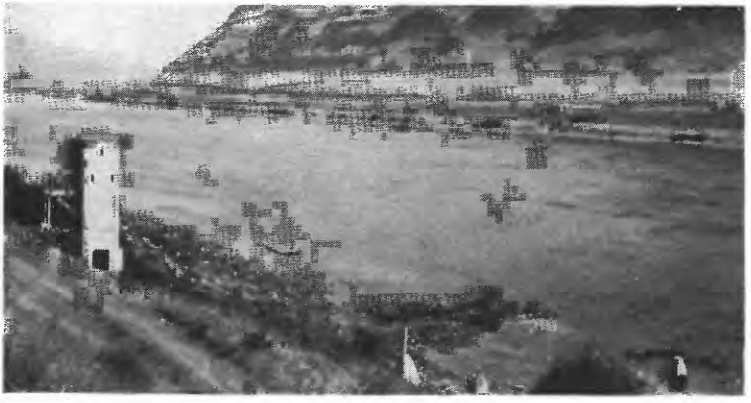
The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. The records of stage are obtained either from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of fluctuations. Measurements of discharge are made with a current meter by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and are also outlined in standard textbooks on the measurement of stream discharge. Typical structures in use at gaging stations are shown in figure 1.

Rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs, and by other methods), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating

A, SNAKE RIVER AT KING HILL, IDAHO.



B, SNAKE RIVER NEAR MURPHY, IDAHO.



C, SNAKE RIVER NEAR CLARKSTON, WASH.

FIGURE 1.—GAGING-STATION STRUCTURES

tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is essentially the shifting-control method.

At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining 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. If so, 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, and it becomes 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 other stations in the same or nearby basins. If the stage-discharge relation is affected by ice, this information is given in a note to the table. No mention is made of occasional days of ice effect if the degree of accuracy of daily records is not changed.

The data herein presented generally comprise a description of the station, a skeleton rating table, and a table showing the daily discharge and monthly and yearly discharge and runoff of the stream.

The description of the station gives the location, drainage area, records available, type and history of gages, average discharge, extremes of discharge, general remarks, and notations of revisions of the previously published record. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "Location" for some stations, is that determined and used by the Corps of Engineers unless otherwise noted. Under "Gage" are given the type of gage currently in use and the datum of the present gage above mean sea level, and a condensed history of the types of gages, locations, and datums of previous gages for which discharge records are generally equivalent to those at the present site. Under "Average discharge" is given the average discharge for the number of years indicated. It is not given for stations having fewer than five complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (unless it is of no importance). Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder, a crest-stage indicator, or a non-

recording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge, it is given separately. Information pertaining to the accuracy of the records and conditions which affect the natural flow at the gaging station is given under "Remarks."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual reports. In order to make it easier to find such revised records, a paragraph headed "Revisions (water years)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the report number, "W" means water-supply paper. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge are concerned in the revision, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)' that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff, in inches, are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff, in inches, resulting from a revision of the drainage area only are usually not published in the annual series of reports.

Skeleton rating tables are published for all stations except those at which the daily discharge for the greater part of the open-water period was determined by the shifting-control method, the slope method, or other special methods involving an equivalent adjustment to the gage height of more than one-tenth foot.

For stations equipped with water-stage recorders, except those on streams subject to sudden or rapid fluctuation, the daily 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. For stations equipped with nonrecording gages, the table of daily discharge gives the discharge corresponding to once-daily readings of the gage, or to the mean of twice-daily readings, or to the mean gage height determined from gage-height graphs based on gage readings. For periods of rapidly changing stage, the daily mean discharge is determined from gage-height graphs based on gage readings, the frequency of which is stated in the station description.

In the table of daily discharge, the values for the maximum day and the minimum day for each month are underlined. If the value is repeated, it is underlined only on the first day of its occurrence.

In the monthly summary below the daily table, the line headed "Total" gives the sum of the daily values; it is the total cfs-days for the month. The line headed "Mean" gives the average flow in cubic feet per second during the month. Runoff for the month may be expressed in cubic feet per second per square mile (line headed "Cfsm"), or in inches (line headed "In."), or in acre-feet (line headed "Ac-ft"). Values for cubic feet per second per square mile and runoff, in inches, are omitted if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches.

In the yearly summary below the monthly summary, the values of maximum are the maximum daily discharges, not the momentary discharges when the water was at crest stage. Likewise, the minimums in this summary are the minimum daily discharges.

Peak discharges and the times of their occurrence and corresponding gage heights of most stations are listed below the table of daily and monthly discharge. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year will be presented. Peak discharges are not published for canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man.

Footnotes to the table of daily discharge indicate periods when discharge was computed or estimated by unusual or special methods during periods of no gage-height record and ice effect, or by other effects that reduce the degree of accuracy of the records. Days on which discharge measurements were made are indicated by asterisk and footnote unless they were made at frequent regular intervals, in which instance the general frequency of discharge measurements is given under "Remarks" in the station description.

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

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description states the degree of accuracy of the records. "Excellent" indicates that, in general, the error in the daily records is believed to be less than 5 percent; "good," less than 10 percent; "fair," less than 15 percent; and "poor," probably more than 15 percent. The records of monthly and yearly mean discharge and runoff are, in general, more nearly accurate than the daily records.

Runoff at some stations, as indicated by the monthly mean, may vary widely from natural runoff, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, values of cubic feet per second per square mile and runoff, in inches, are not published unless storage or diversion records are included to indicate the extent of the regulation or di-

version, or unless satisfactory adjustments can be made for changes in contents of reservoirs or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur when relatively large negative adjustments are made or when evaporation is large in comparison with the observed discharge.

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 actually show the water supply available at the stations for further development, because water must first be supplied to existing irrigation systems.

PUBLICATIONS

To facilitate publication of the annual series of reports, the area of the United States is divided into 14 parts whose boundaries coincide with certain natural drainage lines. Formerly, the results of streamflow measurements were published in 14 volumes, one for each of the 14 parts. Beginning with the reports for 1951, the records are published in 18 volumes, there being 2 volumes each for Parts 1, 2, 3, and 6. The boundaries of the various parts are indicated by the following list and the map in figure 2.

Part 1. North Atlantic slope basins, in two volumes:
- A, North Atlantic slope basins, Maine to Connecticut.
- B, North Atlantic slope basins, New York to York River.

2. South Atlantic slope and eastern Gulf of Mexico basins, in two volumes:
- A, South Atlantic slope basins, James River to Savannah River.
- B, South Atlantic slope and eastern Gulf of Mexico basins, Ogeechee River to Pearl River.

3. Ohio River basin, in two volumes:
- A, Ohio River basin except Cumberland and Tennessee River basins.
- B, Cumberland and Tennessee River basins.

4. St. Lawrence River basin.
5. Hudson Bay and upper Mississippi River basins.
6. Missouri River basin, in two volumes:
- A, Missouri River basin above Sioux City, Iowa.
- B, Missouri River basin below Sioux City, Iowa.

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 purchased or consulted as follows:

1. Copies may be purchased from the Superintendent of Documents, Government Printing Office, Washington 25, D. C., who will, on application, furnish lists giving prices. A list of Geological Survey publications may also be obtained by applying to the Director, Geological Survey, Washington, D. C.

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 offices of the Water Resources Division of the Geological Survey. Addresses of the offices in the area covered by this report are given on page 2.

Early records of the flow of streams in the United States are published in the reports listed below. In many of these reports records for years earlier than those indicated have been included for some streams.

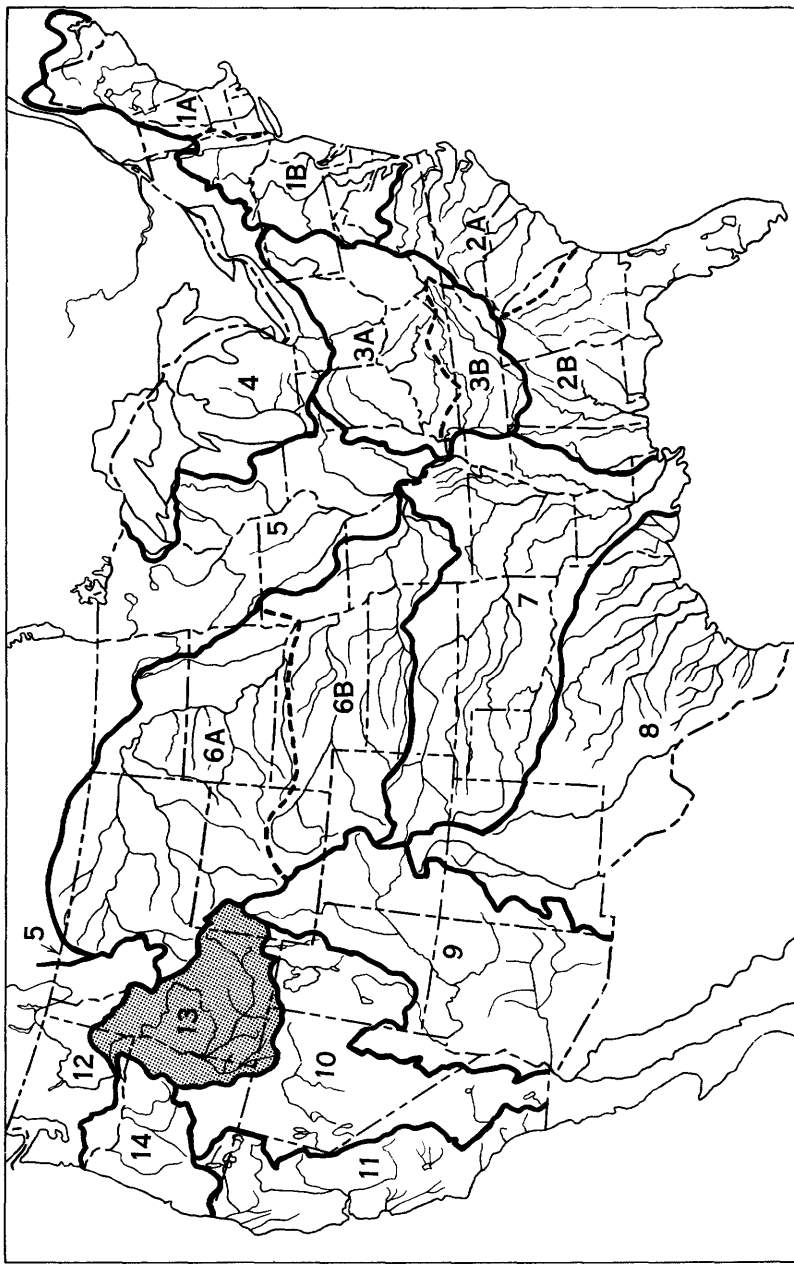


Figure 2.--Map of the United States showing areas covered by the 18 annual volumes on surface-water supply. The area covered by this report is shaded.

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

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

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.	
11th A, pt. 2	Monthly discharge and descriptive information.....	1884 to September 1890.
12th A, pt. 2	....do.....	1884 to June 30, 1891.
13th A, pt. 3	....do.....	1884-92.
14th A, pt. 2	Monthly discharge.....	1888-93.
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.	1895.
W 11.....	Gage heights.....	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge..	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 stream west of the Mississippi River, except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge.	1897.
W 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.
W 28.....	Measurements, ratings, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries.	1898.
20th A, pt. 4	Monthly discharge.....	1898.
W 35 to 39...	Descriptions, measurements, gage heights, and ratings.....	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52...	Descriptions, measurements, gage heights, and ratings.....	1900.
22d A, pt. 4.	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.....	1901.
W 75.....	Monthly discharge.....	1901.

Reports on surface-water supply containing records from 1899 to date for drainage basins in this report are listed below. The data for any particular gaging station will, in general, be found in the reports covering the years during which the station was maintained.

Numbers of water-supply papers containing results of stream measurements in Snake River basin, 1899-1951

Year	W.S.P.	Year	W.S.P.	Year	W.S.P.	Year	W.S.P.	Year	W.S.P.
1899	38	1911	312	1922	553	1932	738	1942	963
1900	51	1912	332-B	1923	573	1933	753	1943	983
1901	66, 75	1913	362-B	1924	593	1934	768	1944	1013
1902	85	1914	393	1925	613	1935	793	1945	1043
1903	100	1915	413	1926	633	1936	813	1946	1063
1904	135	1916	443	1927	653	1937	833	1947	1093
1905	178	1917	463	1928	673	1938	863	1948	1123
1906	214	1918	483	1929	693	1939	883	1949	1153
1907-8	252	1919-20	513	1930	708	1940	903	1950	1183
1909	272	1921	533	1931	723	1941	933	1951	1217
1910	292								

The records at most of the stations discussed in these reports extend over many 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 are listed in the same order as the streams and gaging stations in the body of the report. An index of the records obtained before 1904 has been published in Water-Supply Paper 119.

Each of the reports on the surface-water supply for the year 1939 (Water-Supply Paper 883 for the Snake River basin) contains, for the area included in that report, a summary of yearly discharge at gaging stations at which 10 or more complete years of record had been collected. These summaries were reprinted separately.

Reports also 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 may have been revised), as well as some records not contained in the annual series of water-supply papers. The following table contains a list of these reports for the area covered by this report.

Reports containing compilations of records of discharge by States and drainage basins

Water-Supply Paper	Period	Report
370.....	1878-1910	Surface water supply of Oregon.
469.....	1894-1921	Surface waters of Wyoming and their utilization.
492.....	1878-1919	Summary of hydrometric data in Washington.
870.....	1919-35	Summary of records of surface waters of Washington.

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

State reports containing compilations of records of discharge

State	Period	Report	Issued by
Oregon.....	1878-1914	Bull. 4, Water resources of the State of Oregon..	Office of the State Engineer.
Do.....	1914-24	Bull. 7, Water resources of the State of Oregon..	Do.
Do.....	1924-30	Bull. 8, Water resources of the State of Oregon..	Do.
Do.....	1930-36	Bull. 9, Water resources of the State of Oregon..	Do.
Do.....	1936-41	Bull. 10, Water resources of the State of Oregon.	Do.
Utah.....	1889-1905	5th biennial report.....	Do.
Do.....	1906-10	7th biennial report.....	Do.
Do.....	1911-16	10th biennial report.....	Do.
Washington...	1878-1933	Bull. 5, Monthly and yearly summaries of hydrometric data.	Department of Conservation and Development.

Note.--In addition to the records contained in the reports listed above, the States of Idaho, Nevada, Oregon, Washington, and Wyoming have issued annual or biennial reports in which are contained records of discharge.

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 special reports also contain other pertinent hydrologic information and analyses and compilations of data relating to earlier notable floods. The following list gives the numbers and titles of these reports:

Water-Supply Paper	Title
771.....	Floods in the United States, magnitude and frequency.
847.....	Maximum discharges at stream-measurement stations through September 1938.
1080.....	Floods of May-June 1948 in Columbia River Basin.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The table below contains a list of gaging stations for the area covered by this report, at which records of discharge were collected during the water year October 1950 to September 1951 by agencies other than the Geological Survey. The records of these stations are not contained in publications of the Geological Survey, nor have they been published elsewhere.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
American Falls Reservoir, inflow to.	Near American Falls, Idaho.....	1927-28, 1932-51	Idaho Water District 36.
Burnt River, South Fork	SW¼ sec. 14, T. 13 S., R. 36 E., above Whited Reservoir, 3½ miles west of Unity, Colo.	1951	Oregon State engineer.
Do.....	NW¼ sec. 13, T. 13 S., R. 36 E., 200 ft below Whited Reservoir, 2¼ miles west of Unity, Colo.	1951	Do.
Malheur River.....	SW¼ sec. 32, T. 20 S., R. 41 E., near Namorf, Oreg.	1931-51†	Do.
Do.....	SW¼ sec. 21, T. 18 S., R. 45 E., below Nevada Dam, near Vale, Oreg.	1936-42, 1944-50†	Do.
Snake River tributaries	Near Irwin, Idaho.....	1940-51‡	Idaho Water District 36.
Teton basin tributaries	Near Driggs, Idaho.....	1934-51‡	Do.

† Records for some earlier years published in water-supply papers of the Geological Survey.
‡ Fragmentary.
Note.--Of the records for the stations operated by the Oregon State engineer, those for 1925-30 are published in Bulletin 8 of the State engineer, and those for 1931-36 (including some to December 1936) in Bulletin 9; those for 1937-41 in Bulletin 10; those for 1942-51 have not been published. Records for the stations operated by Idaho Water District 36 are published in the annual reports of that organization.

HYDROLOGIC CONDITIONS

The water year 1951 was characterized by well above normal runoff over most of the area covered by this report. Local flooding occurred during February, July, and August. For two key gaging stations in the area covered by this report, a comparison of monthly and annual mean discharges during the 1951 water year with the median discharge for the 25-year period 1921-45 is shown in figure 3 below.

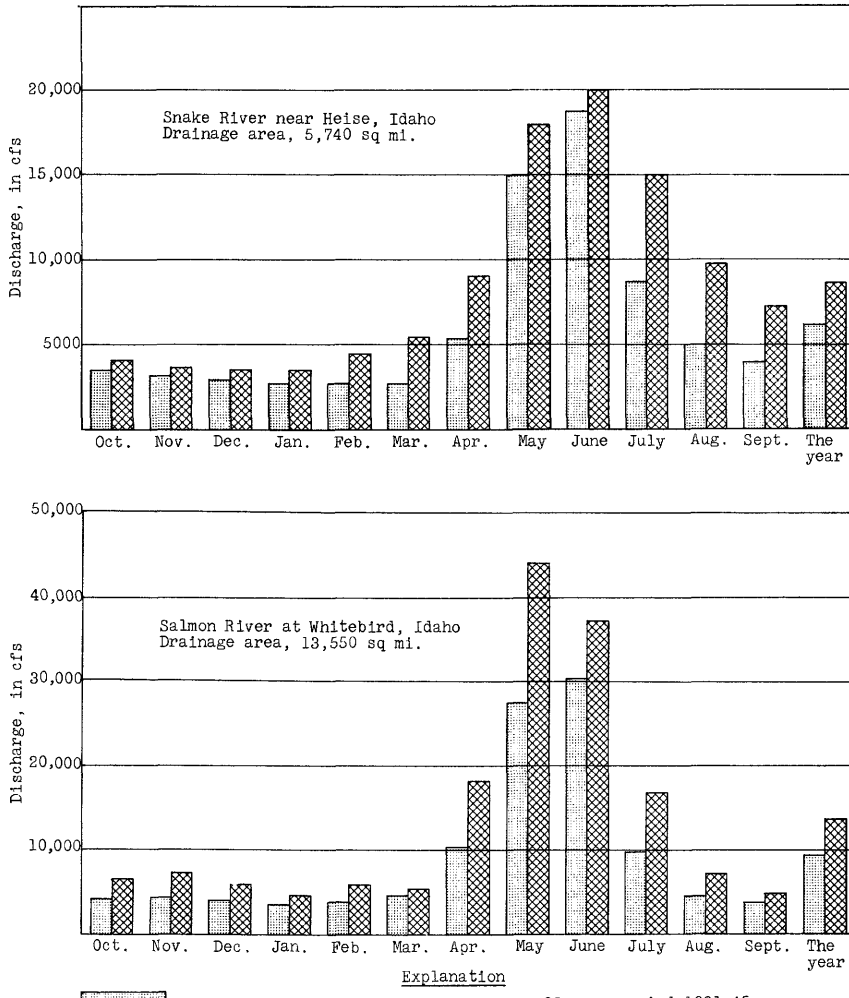


Figure 3.--Comparison of discharge at two key gaging stations during 1951 water year with median discharge for 25-year period.

SNAKE RIVER MAIN STEM

Jackson Lake at Moran, Wyo.

Location.--Lat 43°51', long. 110°35', in sec. 18, T. 45 N., R. 114 W., near left end of spillway over dam on Snake River at Moran.
Drainage area.--824 sq mi (revised).
Records available.--July 1908 to September 1951 (1908-10 fragmentary).
Gage.--Electric tape gage read once daily. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to June 1941, staff gage at site 300 ft upstream at same datum.
Extremes.--Maximum contents during year 852,610 acre-ft June 27 (elevation, 6,769.22 ft); minimum, 410,120 acre-ft Apr. 11, 12 (elevation, 6,750.77 ft).
1908-51: Maximum contents, 857,220 acre-ft June 23, 1937 (elevation, 6,769.40 ft); no usable contents on several days during period August to October 1919.
Remarks.--Reservoir was formed by log crib dam in 1906 with a usable capacity of 300,000 acre-ft. This dam washed out in July 1910 and was replaced by an earth dam, forming a reservoir with a usable capacity of 380,000 acre-ft. The earth dam was raised in 1916 increasing the usable capacity to 790,000 acre-ft. In 1917, by dredging the outlet, the capacity was further increased to 847,000 acre-ft between elevations 6,730 ft (top of baffles to sluices) and 6,769 ft (top of spillway gates). Water is used for irrigation in Snake River Valley, Idaho. Contents as given herein are for 8 a. m.; all available for release.
Cooperation.--Reservoir elevation and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	571,330	608,110	646,000	658,090	647,200	593,590	453,960	441,910	717,380	849,530	821,780	742,580
2	572,040	610,740	648,650	658,090	645,040	590,980	448,050	443,730	726,750	850,300	820,770	739,360
3	572,980	611,460	650,100	658,090	642,630	588,610	442,140	445,550	733,920	850,560	819,000	736,150
4	573,690	612,410	652,040	658,090	643,600	586,240	436,690	447,360	739,360	851,580	818,750	732,690
5	575,100	613,610	653,250	658,090	645,040	584,340	431,720	449,410	741,090	852,100	820,260	730,210
6	576,750	614,800	653,970	657,850	643,840	581,970	426,540	453,500	741,830	851,330	820,260	726,750
7	578,170	615,760	655,430	658,090	643,110	578,650	421,120	458,050	743,070	850,820	817,990	722,550
8	579,360	618,380	656,640	658,330	643,110	574,160	416,160	462,850	743,560	849,530	816,470	715,910
9	580,540	619,340	657,120	658,330	641,670	569,680	411,460	467,660	744,310	849,530	814,200	709,280
10	581,490	620,290	657,610	658,330	639,510	564,500	410,790	472,240	744,550	851,580	812,180	703,390
11	582,680	621,010	658,330	658,580	636,860	561,440	410,120	477,510	745,540	852,100	809,900	697,740
12	584,100	621,730	658,580	658,580	634,220	554,840	410,120	484,850	748,030	852,100	807,630	692,620
13	585,290	622,200	658,820	658,580	631,330	549,210	410,340	492,010	753,760	851,070	805,110	687,980
14	586,480	623,160	658,820	658,580	628,680	543,830	410,790	497,780	762,720	850,820	801,820	683,840
15	587,660	624,128	659,060	658,820	625,800	538,680	411,680	502,630	770,940	850,300	798,790	680,670
16	589,080	624,840	659,060	658,820	623,160	534,000	412,580	508,180	781,720	849,280	796,010	679,450
17	590,980	626,760	658,820	659,060	620,530	528,860	413,250	515,150	791,750	848,510	791,250	677,980
18	591,930	629,650	658,820	659,300	617,910	523,980	414,360	524,680	800,050	848,250	786,230	674,570
19	592,880	631,570	658,820	659,540	615,520	519,330	415,710	535,170	805,610	847,230	778,210	669,960
20	593,830	632,770	658,820	660,030	613,370	514,450	417,520	544,060	816,980	845,950	771,690	666,080
21	594,780	635,900	658,820	660,270	611,930	509,340	419,540	553,900	828,400	844,680	765,960	660,750
22	595,960	637,340	658,820	660,750	610,740	504,240	520,670	587,330	838,830	843,410	761,720	656,150
23	596,670	638,300	658,820	660,750	608,590	499,630	422,250	578,170	848,250	841,880	758,980	651,310
24	597,620	639,020	658,820	660,510	605,720	494,550	423,600	595,250	849,530	839,340	756,490	647,680
25	598,570	639,990	658,580	659,540	603,340	489,700	425,410	609,550	850,560	836,540	756,240	642,870
26	599,760	640,710	658,580	658,330	600,950	484,390	426,990	622,680	852,100	833,740	756,000	639,270
27	601,190	641,670	658,330	657,400	598,810	479,800	430,370	639,990	852,610	829,920	755,250	635,180
28	602,380	642,630	658,330	654,700	596,200	474,990	434,210	652,760	852,100	827,120	751,510	631,090
29	603,810	643,350	658,330	652,760	-	470,180	436,010	673,840	852,100	825,850	750,020	627,240
30	605,720	644,560	658,330	651,070	-	464,910	439,180	691,880	851,580	824,580	748,030	622,680
31	606,920	-	658,330	649,130	-	459,640	-	706,090	-	823,310	745,540	-

Monthly elevations and contents, water year October 1950 to September 1951

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	6,757.73	570,390	-
Oct. 31	6,759.27	606,920	+36,530
Nov. 30	6,760.84	644,560	+37,640
Dec. 31	6,761.41	658,330	+13,770
Calendar year 1950	-	-	+303,150
Jan. 31	6,761.03	649,130	-9,200
Feb. 28	6,758.82	596,200	-52,930
Mar. 31	6,752.96	459,640	-136,560
Apr. 30	6,752.06	439,180	-20,460
May 31	6,763.37	706,090	+266,910
June 30	6,769.18	851,580	+145,490
July 31	6,768.07	823,310	-28,270
Aug. 31	6,764.97	745,540	-77,770
Sept.30	6,759.93	622,680	-122,860
Water year 1950-51	-	-	+52,290

Snake River at Moran, Wyo.

Location.--Lat 43°51', long. 110°35', in sec. 18, T. 45 N., R. 114 W., on left bank at Moran and 1,000 ft downstream from Jackson Lake Dam.

Drainage area.--824 sq mi (revised).

Records available.--September 1903 to September 1951. Prior to 1911 published as South Fork of Snake River at Moran.

Gage.--Water-stage recorder. Datum of gage is 6,725.61 ft above mean sea level (Bureau of Reclamation benchmark). Prior to July 26, 1915, staff gage at datum 4.00 ft lower, July 26, 1915, to June 13, 1917, staff gage at datum 5.00 ft lower, and June 14, 1917, to May 20, 1940, water-stage recorder at datum 5.00 ft lower; all at site 1½ miles downstream.

Average discharge.--48 years, 1,417 cfs.

Extremes.--Maximum discharge during year, 5,860 cfs Aug. 20 (gage height, 7.70 ft); minimum daily, 34 cfs Oct. 4 to Dec. 10.
1903-51: Maximum discharge, 15,100 cfs June 12, 1918 (gage height, 10.41 ft, site and datum then in use); minimum (revised), 2 cfs Nov. 21, 1944, to Apr. 14, 1945.
Flood during early June 1894 probably considerably higher than that of June 12, 1918.

Remarks.--Records excellent. Flow regulated by Jackson Lake (see preceding page).

Cooperation.--Gage-height record furnished by Bureau of Reclamation.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.3	28	3.0	580	6.0	3,250
1.6	70	3.5	860	7.0	4,670
2.0	168	4.0	1,210	8.0	6,300
2.5	345	5.0	2,110		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	34	34	555	1,330	2,000	3,370	510	737	4,100	2,330	2,570
2	35	34	34	555	1,330	2,000	3,350	500	784	3,590	2,320	2,310
3	35	34	34	555	1,330	2,000	3,330	505	789	3,600	2,300	2,300
4	34	34	34	555	1,330	2,000	3,320	510	2,100	3,670	1,920	2,300
5	34	34	34	555	1,330	2,000	3,320	510	3,050	4,250	1,630	2,510
6	34	34	34	555	1,330	2,310	3,300	510	3,060	4,260	2,650	3,050
7	34	34	34	555	1,330	2,530	3,280	505	3,060	4,190	2,540	3,750
8	34	34	34	555	1,330	3,090	3,260	510	3,060	3,460	2,530	4,400
9	34	34	34	555	1,720	3,430	1,960	505	3,050	2,200	2,520	4,020
10	34	34	34	555	2,030	3,420	1,040	510	3,050	1,900	2,510	4,010
11	34	34	179	555	2,030	3,410	713	510	3,060	2,630	2,510	3,680
12	34	34	324	555	2,030	3,410	480	510	3,070	3,060	2,500	3,250
13	34	34	320	560	2,030	3,390	476	505	2,500	2,620	2,860	2,650
14	34	34	320	560	2,030	3,380	476	510	2,220	2,920	2,500	2,240
15	34	34	440	560	2,030	3,380	476	495	2,270	3,170	2,500	1,550
16	34	34	560	560	2,020	3,370	476	495	3,080	3,130	3,020	1,550
17	34	34	555	560	2,020	3,340	466	500	4,310	2,920	*4,420	2,090
18	34	34	555	560	2,020	3,330	471	500	4,640	2,930	4,490	3,020
19	34	34	560	560	1,700	3,320	471	500	2,060	3,010	4,670	3,020
20	34	34	560	560	1,160	3,300	471	500	273	3,210	4,310	3,010
21	34	34	560	560	1,160	3,280	476	505	273	3,100	3,720	3,000
22	34	34	560	1,000	1,160	3,260	476	596	276	2,880	3,290	2,980
23	34	34	560	1,370	1,440	3,250	480	602	*2,850	3,000	2,860	2,950
24	34	34	560	1,350	2,000	3,220	485	602	3,810	3,340	1,850	2,820
25	34	34	560	1,350	2,000	3,200	485	630	3,330	3,590	1,300	2,710
26	34	34	560	1,350	2,000	3,180	485	646	3,750	3,770	1,300	2,700
27	34	34	*560	1,340	2,000	3,170	495	652	4,640	3,940	1,990	2,700
28	34	34	560	1,340	2,000	3,460	545	662	4,360	3,920	2,250	2,840
29	34	34	560	1,340	-	*3,420	515	668	4,550	3,610	2,250	2,830
30	34	34	555	1,340	-	3,390	525	701	4,720	2,890	2,240	2,830
31	34	-	555	1,340	-	3,390	-	756	-	2,380	2,240	-
Total	1,057	1,020	10,863	24,820	47,220	94,630	39,473	17,120	82,812	101,240	82,320	85,640
Mean	34.1	34.0	350	801	1,686	3,053	1,316	552	2,760	3,266	2,655	2,855
Ac-ft	2,100	2,020	21,550	49,230	93,660	187,700	78,290	33,960	164,300	200,800	163,300	169,900

Calendar year 1950: Max 7,910 Min 4 Mean 1,237 Ac-ft 895,900
Water year 1950-51: Max 4,720 Min 34 Mean 1,612 Ac-ft 1,167,000

* Discharge measurement made on this day.
Note.--Computed from staff-gage readings Oct. 1 to June 3.

Pacific Creek near Moran, Wyo.

Location.--Lat 43°51'00", long. 110°31'20", in sec. 23, T. 45 N., R. 114 W., on left bank 50 ft downstream from bridge on U. S. Highway 287, 0.5 mile upstream from mouth, and 3 miles southeast of Moran.

Drainage area.--160 sq mi.

Records available.--July to November 1906 (gage heights only), July 1917 to September 1918 (no winter record), September 1944 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,720 ft (from topographic map). July 31 to Nov. 11, 1906, staff gage at site 0.4 mile downstream at different datum. July 20, 1917, to Sept. 30, 1918, staff gage at site 0.1 mile downstream at different datum.

Average discharge.--7 years (1944-51), 274 cfs.

Extremes.--Maximum discharge during year, 2,260 cfs May 28 (gage height, 5.60 ft); minimum observed, 29 cfs Mar. 3 (discharge measurement), but may have been less during period of ice effect; minimum gage height, 1.81 ft Sept. 27.
1917-18, 1944-51: Maximum discharge observed, 3,030 cfs June 15, 1918 (gage height, 3.98 ft, former site and datum); minimum observed, that of Mar. 3, 1951.

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

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 28				May 29 to Sept. 30			
2.1	74	4.0	920	1.8	59	3.5	640
2.4	119	4.5	1,310	2.0	92	4.0	960
2.7	191	5.0	1,720	2.3	160	4.5	1,340
3.0	297	5.5	2,170	2.8	250	5.1	1,840
3.5	572			3.0	390		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	103	95	78	55		80	425	1,400	838	230	115
2	101	106	95	75	60		75	387	1,240	818	240	110
3	106	92	90	80	65	(*)	80	382	1,120	799	300	105
4	108	103	85	85	65		80	430	1,070	825	336	100
5	112	100	82	75	66		90	566	1,050	825	304	95
6	134	101	83	70	66		100	745	1,050	792	290	95
7	119	103	84	65	66		103	815	1,120	748	270	90
8	117	105	*86	65	66		106	787	1,100	712	260	87
9	123	88	89	68	66		112	801	1,040	646	250	85
10	127	82	90	68	66		112	843	1,100	596	220	83
11	123	84	92	70	64	50	110	969	1,230	568	214	87
12	127	88	92	70	60		112	1,180	1,320	515	195	94
13	127	92	92	75	54		125	1,100	1,490	476	178	90
14	125	95	88	75	48		140	983	1,500	466	169	85
15	127	92	82	75	46		142	990	*1,570	448	166	79
16	130	95	80	76	48		150	1,210	1,690	430	155	76
17	119	98	75	78			175	1,340	1,660	404	145	76
18	112	92	75	78			*219	*1,500	1,540	378	142	72
19	106	94	78	72			250	1,470	1,460	346	135	72
20	105	103	82	66			261	1,410	1,410	343	138	70
21	*101	103	85	65		52	257	1,450	1,340	336	135	68
22	100	101	85	66		58	232	1,530	1,230	301	152	70
23	98	98	80	67	50	55	236	1,610	1,110	271	163	71
24	95	94	78	*68		60	240	1,670	1,060	*244	160	66
25	98	95	76	70		70	257	1,690	1,030	238	158	66
26	98	90	75	70		70	306	1,680	982	226	*138	66
27	100	89	72	70		70	352	1,790	939	235	130	65
28	100	90	72	70		60	387	2,120	939	241	130	65
29	105	94	78	65	-	60	465	1,840	904	354	130	64
30	105	95	85	60	-	70	465	1,740	858	300	125	64
31	106	-	82	58	-	75	-	1,640	-	260	120	-
Total	3,454	2,865	2,583	2,193	1,561	1,700	5,819	37,093	36,552	14,979	5,878	2,431
Mean	111	95.5	83.3	70.7	55.8	54.8	194	1,197	1,218	483	190	81.0
Cfsm	0.694	0.597	0.521	0.442	0.349	0.342	1.21	7.48	7.61	3.02	1.19	0.506
In.	0.80	0.67	0.60	0.51	0.36	0.40	1.35	8.62	8.50	3.48	1.37	0.57
Ac-ft	6,850	5,680	5,120	4,350	3,100	3,370	11,540	73,570	72,500	29,710	11,660	4,820

Calendar year 1950: Max 2,430 Min - Mean 301 Cfsm 1.88 In. 25.52 Ac-ft 217,800
Water year 1950-51: Max 2,120 Min - Mean 321 Cfsm 2.01 In. 27.23 Ac-ft 232,300

Peak discharge (base, 1,300 cfs).--May 28 (10 p.m.) 2,260 cfs (5.60 ft); June 17 (12:30 a.m.) 1,850 cfs (5.11 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 9, 10, 13, 15, 16, Nov. 24 to Apr. 5. No gage-height record Jan. 10-12, 23, Mar. 12-16, 24-30, July 30 to Aug. 3, Aug. 6-9, 12, Aug. 28 to Sept. 1, Sept. 3-8; discharge estimated on basis of weather records and records for stations on nearby streams.

Buffalo Fork near Moran, Wyo.

Location.--Lat 43°50', long. 110°31', in sec. 26, T. 45 N., R. 114 W., on right bank 30 ft below highway bridge, half a mile upstream from mouth, 2¾ miles downstream from Lava Creek, and 4 miles southeast of Moran.

Drainage area.--378 sq mi.

Records available.--July to November 1906 (gage heights only), July 1917 to September 1918 (no winter records), September 1944 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,720 ft (from topographic map).

Average discharge.--7 years (1944-51), 621 cfs.

Extremes.--Maximum discharge during year, 4,210 cfs June 17 (gage height, 5.45 ft); minimum, 96 cfs Nov. 10 (gage height, 0.79 ft), but may have been less during period of ice effect.

1917-18, 1944-51: Maximum discharge observed, 5,840 cfs June 13, 1918 (gage height, 6.78 ft, datum then in use), from discharge measurement; minimum recorded, 86 cfs Dec. 17, 1946 (gage height, 0.95 ft), but may have been less during periods of ice effect.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	122	2.5	835
1.1	177	3.0	1,300
1.5	317	4.0	2,370
2.0	543	5.3	4,000

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	302	272	206	165	130	140	160	497	2,380	2,490	1,500	502
2	294	275	171	165	135	*140	160	444	1,990	2,590	1,420	478
3	313	233	160	165	150	150	160	412	1,720	2,720	1,380	454
4	333	283	174	170	160	150	170	458	1,550	2,970	1,710	449
5	345	272	187	170	170	150	180	604	1,490	3,070	1,720	440
6	399	275	195	160	170	150	190	812	1,450	2,990	1,440	430
7	341	268	203	160	170	150	200	873	1,470	2,990	1,250	430
8	341	261	*219	160	170	150	210	850	1,360	2,830	1,100	412
9	386	183	220	160	170	150	220	850	1,260	2,610	1,080	408
10	382	127	225	160	170	140	220	889	1,320	2,390	913	395
11	370	187	225	165	170	135	230	1,000	1,580	2,160	873	408
12	395	257	230	165	165	130	240	1,270	1,790	1,930	858	435
13	395	294	230	170	160	150	280	1,250	2,170	1,890	820	408
14	382	265	210	170	160	160	333	1,050	2,500	2,140	776	408
15	391	247	200	170	160	160	321	1,000	*2,800	2,200	727	386
16	382	206	200	175	160	160	302	1,230	3,560	2,270	695	370
17	353	223	200	175	160	160	333	1,500	3,990	2,480	682	361
18	337	250	200	175	160	160	*404	*1,910	3,880	2,360	670	357
19	321	240	200	175	160	160	440	2,030	3,750	2,450	645	357
20	313	240	200	165	160	160	440	1,940	3,640	2,390	628	349
21	*306	254	200	165	150	160	417	1,950	3,450	2,390	604	349
22	298	250	190	165	150	160	357	2,200	3,140	2,200	657	345
23	287	229	180	165	150	160	341	2,530	2,710	2,050	734	341
24	275	229	180	*165	150	160	333	2,830	2,600	*1,880	701	333
25	287	226	175	170	150	160	345	2,710	2,550	1,780	695	325
26	275	233	170	170	150	160	408	2,610	2,540	1,720	*582	321
27	279	209	170	170	150	160	487	2,830	2,610	1,640	548	317
28	261	187	170	160	150	160	497	3,360	2,620	1,570	543	313
29	287	187	170	150	-	160	554	3,640	2,690	1,990	610	313
30	290	209	170	135	-	160	565	3,230	2,490	1,820	565	309
31	290	-	170	130	-	160	-	2,840	-	1,550	528	-
Total	10,210	7,071	6,000	5,085	4,410	4,765	9,497	51,599	73,050	70,510	27,654	11,503
Mean	329	236	194	164	158	154	317	1,664	2,435	2,275	892	383
Cfsm	0.870	0.624	0.513	0.434	0.418	0.407	0.839	4.40	6.44	6.02	2.36	1.01
In.	1.00	0.70	0.59	0.50	0.43	0.47	0.93	5.08	7.19	6.94	2.72	1.13
Ac-ft	20,250	14,030	11,900	10,090	8,750	9,450	18,840	102,300	144,900	139,900	54,850	22,820

Calendar year 1950: Max 3,840 Min - Mean 730 Cfsm 1.93 In. 26.21 Ac-ft 528,500
Water year 1950-51: Max 3,990 Min 127 Mean 771 Cfsm 2.04 In. 27.68 Ac-ft 558,100

Peak discharge (base, 3,100 cfs).--May 29 (5 a.m.) 3,870 cfs (5.20 ft); June 17 (11 a.m.) 4,210 cfs (5.45 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 9 to Apr. 13 (no gage-height record Jan. 2-4, 8-12, Jan. 29 to Feb. 4, Mar. 12-16, 19-23, 29, 30, July 22, 23; discharge computed on basis of weather records and records for Gros Ventre River at Kelly and Hoback River near Jackson).

Gros Ventre River at Kelly, Wyo.

Location.--Lat 43°37'20", long. 110°37'30", in NW¼ sec. 11, T. 42 N., R. 115 W., on left bank at former bridge site on private road, 0.3 mile south of Kelly post office and 3 miles downstream from Turpin Creek.

Drainage area.--622 sq mi.

Records available.--June to September 1918, October 1944 to September 1951.

Gage.--Staff gage read once daily. Altitude of gage is 6,750 ft (from topographic map). June 16 to Sept. 30, 1918, staff gage at site 1 mile upstream at different datum. Oct. 1, 1944, to Aug. 8, 1949, wire-weight gage on bridge 25 ft downstream at present datum.

Average discharge.--7 years (1944-51), 498 cfs.

Extremes.--Maximum discharge observed during year, 4,140 cfs May 29 (gage height, 7.09 ft); minimum observed, 144 cfs Feb. 1 (gage height, 1.12 ft); minimum gage height observed, 1.10 ft Sept. 29, 30.

1918, 1944-51: Maximum discharge observed, 6,220 cfs June 16, 1918 (gage height, 9.95 ft, site and datum then in use); minimum observed, 102 cfs Dec. 16, 1944; minimum gage height observed, 1.06 ft Feb. 2, 1950.

Flood of May 18, 1927, was considerably higher than flood of June 16, 1918 (landslide about 2 miles upstream washed out and released about 60,000 acre-ft of impounded water); discharge not determined.

Remarks.--Records fair. Diversions above and below station for irrigation.

Revisions.--W 1043: Drainage area.

Rating tables, water year 1950-51,(gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Jan. 12, May 26-31)

Oct. 1 to May 31				June 1 to Sept. 30			
1.2	144	4.0	1,320	1.1	249	4.0	1,550
1.5	199	5.0	2,040	1.5	351	5.0	2,310
2.0	321	6.0	2,880	2.0	492	6.0	3,190
2.5	500	7.4	4,200	2.5	678	6.9	4,090
3.0	735			3.0	927		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	280	277	218	185	144	165	193	612	2,960	1,790	955	419
2	280	265	218	185	154	163	170	509	2,510	1,750	873	411
3	290	260	214	195	165	*165	185	432	2,060	1,820	873	389
4	290	245	205	193	179	179	187	409	1,900	1,820	927	378
5	304	255	197	197	195	175	197	467	1,680	1,980	1,100	364
6	324	255	187	185	195	175	210	694	1,580	1,980	1,130	346
7	358	245	191	170	195	174	220	877	1,540	1,820	961	335
8	348	255	*193	168	195	172	234	866	1,540	1,750	847	325
9	339	241	199	175	195	174	245	794	1,470	1,650	705	320
10	345	218	207	179	193	165	253	821	1,400	1,540	656	312
11	342	193	207	175	195	152	253	900	1,510	1,510	595	299
12	342	189	210	179	191	147	245	1,200	1,680	1,510	558	312
13	342	197	212	181	183	168	255	1,450	2,020	1,300	518	320
14	348	210	195	185	175	181	285	1,290	2,550	1,110	477	322
15	374	218	195	189	174	172	327	1,080	2,870	1,110	492	315
16	368	218	195	193	172	175	342	1,220	*3,280	1,170	477	299
17	348	214	195	197	172	175	324	*1,560	3,830	1,170	462	296
18	336	222	193	197	183	160	354	1,830	4,080	1,180	445	289
19	318	222	189	187	181	168	*432	2,100	3,680	1,170	433	282
20	307	218	207	179	168	168	504	2,150	3,330	1,130	427	279
21	296	227	212	174	175	174	517	2,190	3,090	1,180	433	279
22	*285	232	199	183	179	177	471	2,430	2,640	1,160	439	282
23	277	232	193	179	170	177	420	2,650	2,460	*1,060	480	279
24	270	227	191	183	174	183	398	3,010	2,180	961	492	274
25	260	218	193	*185	177	193	413	3,320	2,020	905	486	269
26	262	218	181	187	175	179	428	3,320	2,020	873	474	264
27	270	218	183	191	172	181	459	3,370	2,020	863	*442	254
28	265	218	183	187	165	172	517	3,550	1,940	863	420	254
29	265	212	179	170	-	175	602	4,140	1,940	972	422	249
30	265	214	185	152	-	175	694	3,740	1,860	1,250	422	249
31	275	-	195	147	-	179	-	3,550	-	1,130	427	-
Total	9,573	6,833	6,121	5,632	4,991	5,338	10,334	56,531	69,640	41,477	18,848	9,265
Mean	309	228	197	182	178	172	344	1,824	2,321	1,338	608	309
Cfsm	0.497	0.367	0.317	0.293	0.286	0.277	0.553	2.93	3.73	2.15	0.977	0.497
In.	0.57	0.41	0.37	0.34	0.30	0.32	0.62	3.38	4.16	2.48	1.13	0.55
Ac-ft	18,990	13,550	12,140	11,170	9,900	10,590	20,500	112,100	138,100	82,270	37,380	18,380

Calendar year 1950: Max 3,510 Min 118 Mean 606 Cfsm 0.974 In. 13.23 Ac-ft 438,800
Water year 1950-51: Max 4,140 Min 144 Mean 670 Cfsm 1.08 In. 14.63 Ac-ft 485,100

* Discharge measurement made on this day.

Hoback River near Jackson, Wyo.

Location.--Lat 43°17'55", long. 110°40'10", in sec. 32, T. 39 N., R. 115 W., on right bank at Camp Creek Camp, a quarter of a mile downstream from Willow Creek, 4 miles upstream from mouth, and 13½ miles southeast of Jackson.

Drainage area.--564 sq mi.

Records available.--July 1917 to September 1918 (published as "near Cheney"), November 1944 to September 1951.

Gage.--Staff gage read once daily. Altitude of gage is 6,040 ft (from topographic map). July 9, 1917, to Sept. 30, 1918, at site 3¾ miles downstream at different datum.

Average discharge.--6 years (1945-51), 747 cfs.

Extremes.--Maximum discharge observed during year, 4,730 cfs May 29 (gage height, 6.45 ft); minimum observed, 174 cfs Mar. 18 (gage height, 2.22 ft).
1917-18, 1944-51: Maximum discharge observed, 6,160 cfs June 16, 1918 (gage height, 13.46 ft, former site and datum); minimum observed, 90 cfs Dec. 18, 1946 (gage height, 1.70 ft).

Remarks.--Records fair. Small diversions above station for irrigation.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.2	168	4.0	1,460
2.4	235	4.5	1,980
2.7	391	5.0	2,550
3.0	600	6.0	3,980
3.5	1,000	6.5	4,830

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	398	344	311	248	b190	*202	228	1,740	3,240	2,510	1,260	541
2	436	332	285	228	224	202	266	1,430	3,070	2,490	1,390	512
3	398	338	b290	258	240	198	285	1,240	2,740	2,570	1,280	491
4	379	344	296	266	240	220	316	2,000	2,450	2,680	1,430	484
5	379	338	b280	258	253	231	344	2,500	2,320	2,740	1,530	477
6	385	327	b270	183	266	209	385	2,320	2,170	2,620	1,280	470
7	379	350	*b270	b180	248	216	456	2,300	2,110	2,510	1,190	463
8	367	398	b270	b180	266	205	505	2,430	2,010	2,390	1,030	450
9	398	290	b270	b180	253	220	622	2,490	1,880	2,260	988	450
10	379	290	b270	b180	266	189	645	2,510	1,920	2,120	886	417
11	379	276	262	192	271	b180	578	2,500	2,040	2,210	835	456
12	367	316	276	224	258	b175	622	2,890	2,210	1,880	819	477
13	410	327	296	228	209	b190	739	2,760	2,740	1,840	787	456
14	398	322	240	248	195	205	1,020	2,170	*3,260	1,920	747	443
15	379	306	262	262	192	228	1,160	2,040	3,440	1,890	707	417
16	385	296	b250	258	202	216	1,040	2,370	4,170	1,860	675	404
17	367	306	b240	266	216	186	*1,180	*2,660	4,610	1,950	668	379
18	356	316	231	276	228	174	1,520	3,130	4,240	1,910	638	373
19	344	316	b240	262	235	192	1,850	3,240	3,930	1,900	630	373
20	*356	327	b250	240	202	220	1,830	3,160	3,730	1,880	600	362
21	344	311	266	216	216	231	1,740	3,070	3,540	1,950	630	373
22	327	296	258	198	209	258	1,330	3,440	3,300	*1,750	683	373
23	327	285	b240	*244	224	186	1,340	3,570	2,890	1,570	691	362
24	316	266	228	248	248	192	1,580	4,030	2,670	1,470	668	356
25	367	276	231	248	240	216	1,440	4,100	2,610	1,430	652	367
26	344	266	220	258	228	248	1,680	3,700	2,710	1,390	615	356
27	332	b260	209	271	228	240	1,820	4,010	2,680	1,360	*578	350
28	356	240	228	258	177	189	2,010	4,610	2,810	1,340	548	356
29	338	248	248	b230	-	195	2,370	4,730	2,710	1,530	593	373
30	373	306	271	b210	-	244	2,220	4,200	2,590	1,470	608	356
31	356	-	266	b200	-	258	-	4,010	-	1,340	548	-
Total	11,419	9,213	8,024	7,198	6,424	6,515	33,121	91,350	86,790	60,730	26,184	12,517
Mean	368	307	259	232	229	210	1,104	2,947	2,893	1,959	845	417
Cfsm	0.652	0.544	0.459	0.411	0.406	0.372	1.96	5.23	5.13	3.47	1.50	0.739
In.	0.75	0.61	0.53	0.47	0.42	0.43	2.18	6.02	5.72	4.00	1.73	0.83
Ac-ft	22,650	18,270	15,920	14,280	12,740	12,920	65,690	181,200	172,100	120,500	51,940	24,830

Calendar year 1950: Max 4,290 Min 158 Mean 921 Cfsm 1.63 In. 22.16 Ac-ft 666,600
Water year 1950-51: Max 4,730 Min 174 Mean 985 Cfsm 1.75 In. 23.69 Ac-ft 713,000

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

Snake River below Greys River, at Alpine, Idaho

Location.--Lat 43°10'20", long. 111°02'30", in SW¼ sec. 19, T. 37 N., R. 118 W., sixth principal meridian, Wyoming, at State line bridge on U. S. Highway 89, a quarter of a mile south of Alpine, 1½ miles upstream from Salt River, and 2 miles downstream from Greys River.

Drainage area.--3,940 sq mi.

Records available.--October 1944 to September 1951.

Gage.--Wire-weight gage read once daily. Datum of gage is 5,543.89 ft above mean sea level (levels by Bureau of Reclamation). Prior to Nov. 6, 1944, chain gage at datum 4.29 ft lower.

Average discharge.--7 years, 5,456 cfs.

Extremes.--Maximum discharge observed during year, 24,500 cfs June 18 (gage height, 9.71 ft); minimum daily, 1,800 cfs Dec. 6; minimum gage height observed, 2.85 ft Dec. 5. 1944-51: Maximum discharge observed, 24,500 cfs July 2, 1950, June 18, 1951; maximum gage height observed, 9.71 ft June 18, 1951; minimum daily discharge, 1,050 cfs Jan. 25-31, 1949; minimum gage height observed, 2.29 ft Mar. 6, Apr. 3, 1945.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Some regulation by Jackson Lake (see p. 13). Diversions for irrigation of about 91,000 acres above gage.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.6	1,650	5.0	6,810
3.0	2,300	6.0	10,200
3.5	3,200	8.0	17,600
4.0	4,210	9.7	24,500

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,700	2,490	2,330	b2,200	b2,600	*3,370	5,020	5,970	18,200	16,200	9,480	5,750
2	2,720	2,470	2,220	b2,200	b2,700	3,430	5,080	5,510	15,700	16,000	9,070	5,830
3	2,700	2,450	b2,110	b2,300	b2,800	3,410	5,200	5,510	14,000	16,100	9,140	5,590
4	2,720	2,450	b2,100	b2,300	b2,900	3,530	5,310	5,780	12,600	16,200	9,240	5,640
5	2,740	2,400	a1,950	b2,300	b2,900	b3,600	5,490	7,030	13,100	16,800	9,760	5,590
6	2,850	2,450	b1,800	b2,150	b2,900	3,410	5,940	8,350	13,400	17,100	9,030	a5,800
7	2,830	2,540	*b1,900	b2,000	3,050	b3,600	6,220	9,240	13,500	15,800	8,560	a6,200
8	2,790	2,850	2,000	b2,000	3,070	3,920	6,160	9,420	13,700	a14,700	8,320	a6,800
9	2,810	2,810	2,000	b2,200	3,070	4,250	5,570	8,760	13,500	a13,500	8,050	a7,200
10	2,810	2,130	2,110	b2,200	3,730	4,320	4,730	8,900	13,100	a13,000	7,820	a7,000
11	2,830	2,200	2,160	b2,200	b3,900	4,660	4,450	9,940	13,100	a13,000	7,720	6,870
12	2,830	2,250	b2,400	b2,200	b3,800	4,680	4,570	11,700	14,200	a14,500	7,430	6,930
13	2,780	2,320	b2,450	b2,200	3,670	4,710	4,950	11,300	16,400	a12,000	7,310	5,540
14	2,760	2,350	2,450	b2,300	3,650	4,640	5,380	9,870	*17,100	a12,000	7,150	a5,300
15	2,790	2,350	2,380	2,380	3,690	4,760	5,540	10,000	18,600	a12,000	6,840	a4,700
16	2,810	2,110	2,420	2,420	3,730	4,710	5,180	10,500	20,800	12,000	6,780	4,230
17	2,780	2,270	2,510	2,350	3,650	4,610	*5,490	*11,500	23,900	11,700	8,280	4,300
18	2,700	2,300	2,490	2,330	3,590	4,590	6,250	13,900	24,200	11,700	8,420	5,440
19	2,670	2,300	2,520	2,350	3,550	4,610	6,930	14,400	23,400	11,800	7,880	5,440
20	*2,580	2,370	2,520	2,380	2,970	4,710	6,780	15,000	19,800	12,000	8,280	5,410
21	2,540	2,540	2,560	2,370	b2,800	4,660	6,570	15,100	19,400	12,100	7,650	5,360
22	2,520	2,470	2,350	2,390	b2,800	4,610	5,780	16,200	21,800	*12,000	7,850	5,310
23	2,440	2,370	2,470	*2,610	b2,800	4,610	5,700	18,800	17,200	a11,500	7,650	5,310
24	2,450	2,300	2,440	3,090	3,430	4,590	5,640	19,200	17,200	a11,000	5,890	5,230
25	2,490	2,250	2,420	3,050	3,510	4,640	5,640	19,500	16,500	a10,500	5,860	5,150
26	2,510	2,230	2,380	3,050	3,490	4,640	6,140	21,400	16,200	a10,800	5,590	5,120
27	2,610	2,220	2,320	3,090	3,510	4,680	6,840	22,200	17,000	a10,900	*5,360	4,950
28	2,510	2,200	2,300	b2,900	3,470	4,710	7,310	22,400	17,700	a11,200	6,360	4,920
29	2,540	2,180	2,330	b2,700	-	4,760	7,560	23,600	17,000	a11,500	6,280	4,950
30	2,580	2,160	2,370	b2,500	-	4,920	6,570	22,600	16,600	a11,300	5,970	5,050
31	2,490	-	2,440	b2,600	-	5,020	-	21,300	-	9,870	5,860	-
Total	82,880	70,780	71,200	75,310	91,730	135,360	173,990	414,880	508,900	400,770	234,880	166,910
Mean	2,674	2,359	2,297	2,429	3,276	4,366	5,800	13,380	16,960	12,930	7,577	5,564
Ac-ft	164,400	140,400	141,200	149,400	181,900	268,500	345,100	822,900	‡1,009	794,900	465,900	331,100

Calendar year 1950: Max 24,400 Min 1,160 Mean 5,965 Ac-ft 4,318,000
Water year 1950-51: Max 24,200 Min 1,800 Mean 6,651 Ac-ft 4,815,000

* Discharge measurement made on this day.
‡ Expressed in thousands.
a No gage-height record; discharge estimated on basis of records for stations at Moran and near Irwin and weather records.
b Stage-discharge relation affected by ice.

Salt River near Smoot, Wyo.

Location.--Lat 42°36'20", long. 110°55'10", in sec. 7, T. 30 N., R. 118 W., on left bank 1¼ miles south of Smoot, 1½ miles upstream from Willow Creek, and 4 miles upstream from Cottonwood Creek.

Drainage area.--47.8 sq mi.

Records available.--June 1932 to September 1951 (no winter records 1933-35, 1936-37).

Gage.--Water-stage recorder. Altitude of gage is 6,600 ft (from topographic map). Prior to Apr. 11, 1934, chain gage and Apr. 11 to Oct. 1, 1934, water-stage recorder at same site at datum 1.00 ft higher.

Average discharge.--15 years (1935-36, 1937-51), 37.9 cfs.

Extremes.--Maximum discharge during year, 353 cfs May 29 (gage height, 3.15 ft); minimum not determined.
1932-51: Maximum discharge, 430 cfs May 15, 1936, from rating curve extended above 200 cfs; no flow Jan. 25-28, 1949.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Water rights totaling 58.21 cfs (priorities 1886 to 1939), for irrigation of about 3,980 acres, adjucated by Wyoming for diversion above station.

Revisions.--W 1123: Drainage area.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 18 to May 4)

Oct. 1 to Feb. 28		Mar. 1 to Sept. 30			
1.3	10	1.3	14	2.2	146
1.4	14	1.5	27	3.1	342
		1.7	50		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	13			(*)	13	19	84	*263	110	33	24
2	14	14				*14	18	82	230	*112	39	23
3	14	*13		(*)		13	18	*84	201	110	36	21
4	14	13	(*)			12	19	86	*186	110	39	*21
5	14	13				13	21	138	168	110	36	21
6	14	13				13	25	142	158	104	33	21
7	14	12				13	30	177	158	102	32	20
8	14	12				14	34	184	152	100	*32	19
9	14	12				15	33	186	148	98	31	19
10	14	13				13	*32	203	150	92	30	19
11	13	14				11	39	217	154	96	28	20
12	13	14				12	52	214	154	90	27	20
13	13	13				14	76	188	162	86	27	20
14	13	12				15	88	160	177	80	26	19
15	13	12				14	90	*146	190	78	25	19
16	*13	13	12	11	12	14	90	152	225	76	24	19
17	12	13				13	98	162	245	71	24	19
18	12	14				13	106	188	230	64	23	19
19	12	12				14	120	210	210	64	24	19
20	12	12				15	98	221	197	67	24	18
21	12	14				17	84	225	181	67	24	18
22	12	11				16	80	234	173	58	24	19
23	12	12				15	80	265	146	55	25	18
24	12	12				17	88	285	126	50	25	18
25	13	12				18	84	294	122	44	24	18
26	12	12				16	84	296	118	44	24	17
27	14	12				15	88	287	120	44	23	17
28	14	12				14	100	311	120	42	24	18
29	14	12			-	16	134	333	114	39	24	19
30	13	12			-	20	98	302	110	37	24	18
31	13	-			-	20	-	276	-	34	24	-
Total	407	378	372	341	336	452	2,026	6,332	5,088	2,334	858	580
Mean	13.1	12.6	12	11	12	14.6	67.5	204	170	75.3	27.7	19.3
Ac-ft	807	750	738	676	666	897	4,020	12,560	10,090	4,630	1,700	1,150

Calendar year 1950: Max 349 Min 7.6 Mean 56.4 Ac-ft 40,810
Water year 1950-51: Max 333 Min - Mean 53.4 Ac-ft 38,680

Peak discharge (base, 170 cfs).--May 11 (11 p.m.) 243 cfs (2.58 ft); May 29 (9 a.m.) 353 cfs (3.15 ft); June 17 (7 to 8 a.m.) 254 cfs (2.64 ft).
* Discharge measurement made on this day.
Note.--Stage discharge relation affected by ice Nov. 7 to Mar. 31 (no gage-height record Dec. 5 to Mar. 1; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby stations).

Cottonwood Creek near Smoot, Wyo.

Location.--Lat 42°36'40", long. 110°53'30", in sec. 4, T. 30 N., R. 118 W., on right bank 0.3 mile upstream from headgate of highest diversion, 1¼ miles downstream from Porcupine Creek, 1½ miles southeast of Smoot, and 4½ miles upstream from mouth.

Drainage area.--26.3 sq mi.

Records available.--October 1932 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,750 ft (from topographic map). Prior to Apr. 8, 1934, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.--19 years, 43.7 cfs.

Extremes.--Maximum discharge during year, 399 cfs June 18 (gage height, 3.07 ft), from rating curve extended above 250 cfs; minimum, 9.7 cfs Jan. 22 (gage height, 1.08 ft). 1932-51: Maximum discharge, that of June 18, 1951; minimum, 6.4 cfs Mar. 11, 1948; minimum gage height, 0.95 ft Jan. 19, 1950.

Remarks.--Records good except those for periods of ice effect, which are fair. No diversion above station. Flow regulated by Cottonwood Lake.

Revisions (water years).--W 933: Drainage area. W 1153: 1933.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 20 to July 2)

1.1	12
1.4	32
1.8	76
2.2	150
3.1	390

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	27	23	18	b19	*b18	17	43	*248	209	86	54
2	28	27	22	18	*b18	18	18	40	214	*206	86	51
3	27	*26	22	*18	18	18	19	*40	186	209	85	50
4	27	26	*23	18	18	18	21	41	*161	194	85	50
5	27	26	23	18	18	18	23	45	150	191	84	*49
6	27	26	23	19	18	18	25	51	139	177	80	48
7	27	26	23	19	18	18	26	60	132	177	79	48
8	27	27	22	18	17	18	29	62	128	174	*76	47
9	26	26	22	18	14	18	30	62	126	170	75	47
10	26	25	21	18	21	18	*29	63	130	168	72	46
11	26	25	21	18	18	18	29	70	137	161	69	46
12	26	25	21	18	18	18	30	76	150	152	68	46
13	26	25	21	19	18	17	33	76	170	143	66	45
14	26	25	21	18	18	16	36	72	199	137	66	44
15	26	25	21	19	18	16	38	*69	232	137	65	43
16	*26	24	20	19	18	16	38	69	271	132	63	43
17	26	24	20	19	18	16	40	73	312	130	63	43
18	26	24	20	18	18	16	44	86	363	124	62	43
19	26	24	20	18	18	16	46	100	312	120	62	43
20	26	23	19	19	18	16	44	106	292	122	62	42
21	26	23	19	19	18	16	43	110	279	116	61	42
22	26	23	19	18	18	16	41	122	277	108	61	42
23	26	23	19	18	18	16	41	157	253	101	60	41
24	26	23	19	16	18	16	41	172	232	98	60	40
25	26	23	19	18	18	16	40	194	225	96	58	40
26	26	23	18	18	18	16	41	212	225	93	57	40
27	27	23	18	18	18	16	40	225	219	91	56	39
28	26	23	18	18	18	16	42	269	225	90	56	39
29	27	23	18	b17	-	16	45	290	227	88	55	40
30	26	23	18	b16	-	16	44	258	219	86	55	39
31	26	-	18	b16	-	16	-	251	-	85	54	-
Total	818	736	631	559	503	521	1,033	3,564	6,433	4,285	2,087	1,330
Mean	26.4	24.5	20.4	18.0	18.0	16.8	34.4	115	214	138	67.3	44.3
Ac-ft	1,620	1,460	1,250	1,110	998	1,030	2,050	7,070	12,760	8,500	4,140	2,640

Calendar year 1950: Max 237 Min 11 Mean 53.2 Ac-ft 38,590
Water year 1950-51: Max 363 Min 14 Mean 61.6 Ac-ft 44,630

Peak discharge (base, 140 cfs).--May 28 (1:30 a.m.) 330 cfs (2.90 ft); June 18 (3:30 a.m.) 399 cfs (3.07 ft).

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

Swift Creek near Afton, Wyo.

Location.--Lat 42°43'30", long. 110°54'00", in SE¼ sec. 29, T. 32 N., R. 118 W., on right bank 1 mile upstream from mouth of canyon and 1½ miles east of Afton.

Drainage area.--27.4 sq mi.

Records available.--May 1943 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,400 ft (from topographic map).

Average discharge.--8 years, 90.7 cfs.

Extremes.--Maximum discharge during year, 545 cfs May 28 (gage height, 3.41 ft), from rating curve extended above 360 cfs; minimum daily, 31 cfs Feb. 6.
1943-51: Maximum discharge, 560 cfs June 10, 1948, from rating curve extended above 360 cfs; maximum gage height, that of May 28, 1951; minimum daily discharge, 28 cfs Apr. 3, 4, 1945.

Remarks.--Records fair. Pipe line (adjudication, 2.5 cfs) diverts water above station for town of Afton. Diurnal fluctuation caused by small powerplant and reservoir (adjudication, 48.45 acre-ft per year) a quarter of a mile upstream. No diversion for irrigation above station.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 20 to July 29)

1.8	24	2.5	150
1.9	32	2.9	300
2.1	60	3.3	490

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	60	54	44	*a33	*41	38	62	*287	296	153	80
2	57	*58	54	41	a35	40	37	60	260	*296	147	80
3	56	56	51	*45	a37	38	37	*58	222	323	156	78
4	57	57	*58	42	a37	38	40	58	*207	328	153	80
5	56	54	56	42	36	37	44	68	193	318	150	*78
6	54	57	52	44	31	40	46	72	179	314	136	78
7	54	54	54	36	33	40	50	82	169	305	133	78
8	52	57	52	a37	36	37	51	82	163	296	*128	76
9	56	56	51	a39	40	38	*51	86	160	282	122	74
10	56	54	52	a42	36	40	50	86	172	269	118	76
11	52	54	52	a45	35	38	45	102	207	248	115	74
12	52	54	48	a43	38	36	46	115	233	229	113	74
13	52	56	52	a45	38	36	52	113	282	229	113	74
14	*60	54	50	a47	37	40	57	109	346	226	109	74
15	66	54	51	50	42	35	57	*98	378	229	109	72
16	66	54	50	45	a38	38	58	a100	406	226	104	70
17	66	52	48	40	a39	38	60	a110	416	222	102	72
18	64	56	51	45	42	37	66	a135	387	214	100	70
19	64	54	50	41	45	35	66	a170	411	214	102	74
20	62	56	46	42	a40	36	64	a180	383	233	96	72
21	62	54	50	50	*45	36	64	a190	341	214	96	70
22	58	54	45	41	46	38	57	a200	328	189	96	70
23	64	52	44	41	45	37	62	a240	296	176	98	70
24	62	54	45	44	45	38	64	a290	265	169	90	70
25	64	54	46	37	44	37	57	a330	248	169	88	70
26	62	54	44	45	41	37	60	a400	260	166	86	68
27	60	56	46	40	45	37	57	a440	269	160	84	68
28	62	50	44	36	40	38	62	485	300	160	84	70
29	62	52	44	a35	-	37	64	475	305	160	86	70
30	58	54	46	a34	-	36	60	337	291	156	86	70
31	57	-	42	a33	-	37	-	328	-	150	82	-
Total	1,831	1,641	1,528	1,291	1,099	1,166	1,622	5,661	8,364	7,166	3,435	2,200
Mean	59.1	54.7	49.3	41.6	39.2	37.6	54.1	183	279	231	111	73.3
Ac-ft	3,630	3,250	3,030	2,560	2,180	2,310	3,220	11,230	16,590	14,210	6,810	4,360

Calendar year 1950: Max 485 Min 30 Mean 101 Ac-ft 73,360
Water year 1950-51: Max 485 Min 31 Mean 101 Ac-ft 73,380

Peak discharge (base, 390 cfs).--May 28 (6:30 a.m.) 545 cfs (3.41 ft); June 19 (1 p.m.) 465 cfs (3.33 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for nearby stations.

Salt River at Wyoming-Idaho State line

Location.--Lat 43°09'50", long. 111°03'50", in sec. 16, T. 3 S., R. 46 E., on left bank 350 ft upstream from highway bridge, 400 ft downstream from Trout Creek, half a mile upstream from mouth, and three-quarters of a mile west of Wyoming-Idaho State line.

Drainage area.--890 sq mi.

Records available.--April 1934 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,580 ft (from topographic map).

Average discharge.--17 years, 725 cfs.

Extremes.--Maximum discharge during year, 2,280 cfs May 12 (gage height, 3.84 ft); minimum daily, 429 cfs Mar. 18.
1934-51: Maximum discharge, 3,520 cfs May 6, 1936 (gage height, 4.64 ft), minimum, 216 cfs May 17, 1934 (gage height, 1.30 ft); minimum daily, 220 cfs May 17, 1934.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Some diurnal fluctuation at low flow caused by many small powerplants on tributaries. Water rights totaling 960.63 cfs (priorities 1886 to 1942) for irrigation of about 65,840 acres, 471.10 cfs (priorities 1889 to 1939) for industry and power, and 7.18 cfs (priorities 1887 to 1941) for domestic and municipal supply, adjudicated by Wyoming for diversion above station. Two small reservoirs above station in Wyoming for power and fish culture (total adjudication 52.22 acre-ft per year).

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	420
2.0	575
3.0	1,350
3.9	2,350

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	906	759	724	557	b440	*470	500	1,900	2,070	1,010	1,070	928
2	878	*808	703	*557	b480	475	539	1,790	*2,110	*1,020	1,070	920
3	857	787	696	563	b520	470	608	1,690	2,010	1,040	1,060	906
4	836	766	710	545	b580	470	682	*1,660	*1,920	1,050	1,060	*892
5	829	745	*696	557	588	465	794	1,750	1,850	1,030	1,050	a885
6	836	738	647	545	527	456	906	1,910	1,730	1,080	1,060	a880
7	829	745	682	539	545	460	1,060	2,030	1,640	1,120	1,070	871
8	808	822	682	b520	582	456	1,210	2,090	1,550	1,060	*1,070	857
9	808	829	689	b540	539	452	*1,340	2,050	1,440	1,010	1,080	864
10	801	738	675	b550	527	452	1,400	2,060	1,380	1,010	1,060	843
11	787	731	668	545	527	434	1,380	2,110	1,310	1,000	1,030	850
12	780	745	661	533	545	434	1,430	2,220	1,300	1,020	1,010	836
13	773	738	661	533	539	452	1,630	2,190	1,360	1,000	992	836
14	773	745	654	527	521	442	1,940	2,070	1,320	1,000	952	822
15	787	731	647	527	510	442	1,990	*1,980	1,280	1,010	928	808
16	*787	710	640	533	510	447	1,850	1,990	1,260	1,010	920	794
17	773	717	627	533	510	442	1,880	2,060	1,300	976	878	780
18	766	752	614	533	505	429	1,990	2,130	1,370	928	871	773
19	759	801	614	533	495	442	2,150	2,150	1,350	936	857	773
20	752	780	614	533	490	434	2,090	2,160	1,290	952	857	759
21	745	836	608	521	490	442	1,980	2,170	1,240	1,020	864	752
22	745	829	594	527	485	480	1,800	2,170	1,190	1,060	913	752
23	745	787	575	527	480	475	1,720	2,160	1,220	1,080	913	745
24	745	766	588	521	485	470	1,720	2,170	1,210	1,070	913	731
25	745	752	572	521	480	475	1,810	2,170	1,170	1,070	928	724
26	745	745	563	515	475	485	1,850	2,150	1,110	1,060	920	710
27	766	731	575	521	480	485	1,970	2,120	1,060	1,060	913	a710
28	794	717	575	515	475	480	2,070	2,150	1,030	1,060	913	a710
29	787	703	575	485	-	470	2,060	2,150	1,030	1,060	936	a720
30	766	724	575	a470	-	475	2,030	2,160	1,020	1,060	944	717
31	759	-	575	a450	-	490	-	2,150	-	1,060	928	-
Total	24,467	22,777	19,689	16,376	14,330	14,251	46,379	63,710	42,120	31,922	30,030	24,148
Mean	789	759	635	528	512	460	1,546	2,055	1,404	1,030	969	805
Ac-ft	48,530	45,180	39,050	32,480	28,420	28,270	91,990	126,400	83,540	63,320	59,560	47,900

Calendar year 1950: Max 3,080 Min 400 Mean 1,025 Ac-ft 741,700
Water year 1950-51: Max 2,220 Min 429 Mean 959 Ac-ft 694,600

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for nearby stations.
b Stage-discharge relation affected by ice.

Snake River near Irwin, Idaho

Location.--Lat 43°21', long. 111°13', in NE¼ sec. 7, T. 1 S., R. 45 E., on right bank 2 miles upstream from Palisades Creek and 5 miles southeast of Irwin.

Drainage area.--5,225 sq mi (revised).

Records available.--April 1934 to October 1936, March 1939 to September 1941, May 1949 to September 1951. Published as "at Calamity Point, near Irwin" April to August 1934 and March 1939 to September 1941.

Gage.--Water-stage recorder. Datum of gage is 5,353.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Apr. 21 to Aug. 4, 1934, and Mar. 30, 1939, to Sept. 30, 1941, water-stage recorder at site 2½ miles upstream at different datum. Mar. 30, 1935, to Oct. 31, 1936, at site 3½ miles downstream at different datum. May 1, 1949, to Mar. 22, 1950, staff gage 1,100 ft downstream at datum 1.9 ft higher.

Extremes.--Maximum discharge during year, 28,800 cfs May 29 (gage height, 12.69 ft); minimum, 2,370 cfs Jan. 8 (gage height, 5.11 ft).
1934-36, 1939-41, 1949-51: Maximum discharge, that of May 29, 1951; minimum daily determined, 1,590 cfs Feb. 3, 1950.
Flood during early June 1894 probably much higher than that of May 29, 1951.

Remarks.--Records excellent. Flow partly regulated by Jackson Lake (see p. 13). About 93,000 acres in Wyoming and Idaho irrigated by diversions from tributaries above station.

Cooperation.--Gage-height record furnished by Bureau of Reclamation.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

5.0	2,110	9.0	13,000
5.5	2,960	10.0	16,900
6.0	4,050	11.0	21,100
7.0	6,610	12.0	25,500
8.0	9,600	12.8	29,100

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,980	3,410	3,060	2,940	3,220	4,150	5,900	9,950	22,700	18,900	10,900	7,290
2	3,820	3,570	2,940	2,810	3,330	4,220	6,050	8,870	20,300	18,200	10,900	7,430
3	3,750	3,390	2,850	2,920	3,590	4,190	6,310	8,170	18,000	17,700	10,600	7,030
4	3,750	3,290	2,960	3,020	3,680	4,240	6,610	8,350	16,100	17,900	11,500	6,860
5	3,770	3,290	2,810	3,040	3,820	4,340	6,970	9,500	16,300	18,600	11,700	6,830
6	3,890	3,260	2,570	2,920	3,800	4,190	7,400	11,400	16,400	18,800	11,000	*6,950
7	3,940	3,310	2,700	2,660	3,870	4,430	7,870	12,500	15,800	18,500	11,400	7,400
8	3,870	3,640	2,860	2,540	4,070	4,700	8,320	12,400	15,300	17,800	10,600	8,020
9	3,820	3,410	2,880	2,750	4,000	5,200	8,740	12,200	14,700	16,400	*10,200	8,440
10	3,820	3,000	2,880	2,850	4,310	5,430	7,810	12,600	14,500	14,600	9,790	8,140
11	3,800	2,960	2,920	2,900	4,940	5,330	6,690	13,400	14,900	14,200	9,440	8,080
12	3,750	3,020	2,980	2,920	4,990	5,330	6,480	14,900	16,100	14,100	9,150	7,930
13	*3,750	3,060	3,180	2,880	4,730	5,460	6,920	15,200	18,500	13,700	8,960	7,550
14	3,750	3,100	3,100	2,960	4,530	5,400	8,230	*13,400	20,200	13,000	9,060	6,860
15	3,770	3,080	3,120	3,040	4,480	5,430	8,870	12,300	21,000	13,600	8,530	6,480
16	3,820	2,900	3,200	3,020	4,530	5,510	*8,290	13,000	23,400	*13,800	8,350	5,720
17	3,750	3,000	3,330	3,020	4,530	5,350	8,590	14,800	27,000	13,800	8,770	5,610
18	3,640	3,160	3,240	2,980	4,530	5,220	9,630	17,200	28,200	13,600	9,700	5,950
19	3,550	3,400	3,240	2,920	4,480	5,330	10,700	18,700	*27,500	13,300	9,760	6,690
20	3,520	3,300	3,260	2,850	4,170	5,330	10,700	18,900	24,100	13,600	9,820	6,670
21	3,480	3,420	*3,260	2,850	*3,680	5,430	10,100	18,900	21,500	14,000	9,660	6,670
22	3,440	*3,520	3,140	3,040	3,590	5,720	8,930	20,000	20,300	13,200	9,220	6,640
23	3,390	3,370	3,080	*3,120	3,570	5,530	8,380	21,500	18,700	12,300	9,380	6,610
24	3,350	3,200	3,160	3,730	3,730	5,460	8,440	23,300	19,800	12,000	8,870	6,500
25	3,390	3,120	3,160	3,870	4,270	5,460	8,500	24,000	19,500	11,900	7,960	6,340
26	3,370	3,060	3,120	3,840	4,310	*5,510	9,120	23,500	19,000	12,000	7,030	6,180
27	3,440	3,000	2,980	3,820	4,290	5,530	9,860	24,000	19,100	12,000	6,920	*6,130
28	3,520	2,940	3,000	3,700	4,190	5,530	10,800	26,300	19,800	12,200	7,140	6,160
29	3,590	2,900	3,000	3,440	-	5,610	11,400	28,700	19,500	12,700	7,750	6,290
30	3,500	3,000	3,080	3,160	-	5,690	11,200	27,300	19,300	13,100	7,600	6,260
31	3,410	-	3,140	3,220	-	5,770	-	*25,600	-	11,900	7,400	-
Total	113,390	96,080	94,200	95,730	115,230	160,020	253,810	520,840	587,500	451,400	289,060	205,710
Mean	3,658	3,203	3,039	3,088	4,115	5,162	8,460	16,800	19,580	14,560	9,325	6,857
Ac-ft	224,900	190,600	186,800	189,900	228,600	317,400	503,400	‡1,033	‡1,165	895,300	573,300	408,000

Calendar year 1950: Max 27,300 Min 1,590 Mean 7,563 Ac-ft 5,475,000
Water year 1950-51: Max 28,700 Min 2,540 Mean 8,173 Ac-ft 5,916,000

* Discharge measurement made on this day.
‡ Expressed in thousands.

Snake River near Heise, Idaho

Location.--Lat 43°37', long. 111°40', in sec. 5, T. 3 N., R. 41 E., on left bank about 500 ft upstream from Anderson canal headgate, 3 miles upstream from Heise, 6 miles east of Ririe, and 23 miles upstream from Henrys Fork.

Drainage area.--5,752 sq mi (revised).

Records available.--September 1910 to September 1951. Prior to 1911, published as South Fork of Snake River near Heise.

Gage.--Water-stage recorder. Altitude of gage is 5,015 ft (from river-profile survey). Prior to July 8, 1913, staff gage and July 9, 1913, to Sept. 29, 1922, water-stage recorder at present site at datum 2.65 ft higher. Sept. 30, 1922, to Oct. 5, 1933, water-stage recorder at present site at datum 2.0 ft higher than present datum.

Average discharge.--41 years, 6,815 cfs.

Extremes.--Maximum discharge during year, 30,400 cfs May 29, 30 (gage height, 9.11 ft); minimum, 2,970 cfs Jan. 8 (gage height, 2.11 ft).
1910-51: Maximum discharge, about 60,000 cfs May 19, 1927, result of washing out of landslide on Gros Ventre River (gage height, about 16.0 ft, present datum); minimum, 1,210 cfs Jan. 22, 1935 (gage height, 1.15 ft).
Flood during early June 1894 probably as great as flood of May 19, 1927.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow partly regulated by Jackson Lake (see p. 13). Station is above all irrigation diversions from main river except Riley ditch (5,060 acre-ft diverted during year) which diverts 1 mile upstream from station. About 106,000 acres in Wyoming and Idaho irrigated by diversions from tributaries above station.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 10-28, June 27 to Sept. 30)

2.0	2,660	6.0	14,400
2.5	3,580	7.0	19,100
3.0	4,680	8.0	24,200
4.0	7,210	9.0	30,000
5.0	10,400		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,660	3,880	3,560	b3,400	b3,540	4,520	6,140	11,300	24,300	19,200	11,500	7,870
2	4,430	3,970	3,500	b3,350	b3,700	4,560	6,240	10,000	21,400	18,600	11,500	7,900
3	4,320	3,970	3,400	b3,400	b3,950	4,590	6,520	9,150	19,000	18,100	11,200	7,580
4	4,300	3,810	3,440	3,460	b4,050	4,630	6,890	9,020	16,900	18,200	12,000	7,430
5	4,300	3,770	3,400	3,460	b4,150	4,700	7,240	10,100	16,400	18,800	12,700	7,320
6	4,340	3,770	3,270	3,320	b4,150	4,590	7,690	12,400	16,800	19,400	11,900	*7,290
7	4,380	3,790	3,280	3,150	b4,250	4,560	8,080	13,800	16,200	19,100	11,800	7,660
8	4,360	3,920	3,270	3,120	b4,420	5,020	8,640	13,900	15,900	18,700	11,200	7,990
9	4,320	4,100	3,280	3,230	b4,400	5,180	9,050	13,600	15,200	17,500	10,800	8,920
10	4,270	3,500	3,300	3,360	4,520	5,760	8,860	13,900	14,800	15,700	*10,300	8,480
11	4,230	3,380	3,320	3,360	5,260	5,710	7,290	14,800	15,000	14,700	9,860	8,450
12	4,210	3,460	3,360	3,380	5,410	5,760	7,050	16,100	16,100	14,700	9,520	8,450
13	4,190	3,500	3,500	3,320	5,210	5,840	7,270	17,000	18,300	14,400	9,220	7,990
14	4,120	3,540	3,640	3,340	4,970	5,780	8,540	*15,300	20,300	13,500	9,280	7,410
15	4,160	3,580	3,500	3,380	4,870	5,760	9,490	13,700	21,100	14,000	8,830	7,080
16	4,230	3,440	3,580	3,400	4,900	5,860	*9,050	13,900	23,100	*14,200	8,610	6,260
17	4,160	3,440	3,710	3,340	4,850	5,740	9,120	15,700	26,500	14,200	8,610	6,060
18	4,080	3,620	3,680	3,420	4,870	5,580	10,100	18,100	28,900	14,000	9,830	6,060
19	3,990	3,830	3,640	3,340	4,850	5,610	11,300	20,000	*28,700	13,600	9,940	7,020
20	3,940	3,730	3,660	3,300	4,750	5,660	11,900	20,300	25,700	13,800	10,100	7,080
21	3,900	3,880	*3,680	3,360	*4,160	5,810	11,300	20,200	21,800	14,500	10,000	7,020
22	3,860	*4,050	3,600	3,440	4,050	5,960	10,100	20,700	20,600	13,900	9,760	7,020
23	3,810	3,860	3,460	*3,340	3,940	5,880	9,250	22,200	19,300	12,900	9,690	6,970
24	3,770	3,730	3,500	3,880	3,970	5,740	9,050	24,100	19,500	12,300	9,690	6,890
25	3,770	3,580	3,540	4,160	4,520	5,710	9,220	25,300	20,100	12,300	8,760	6,760
26	*3,790	3,540	3,500	4,160	4,630	*5,780	9,800	24,700	19,200	12,400	7,610	6,630
27	3,830	3,480	3,460	4,100	4,630	5,810	10,600	24,600	19,300	12,400	7,410	*6,520
28	3,990	3,440	3,560	4,030	4,610	5,810	11,900	26,900	20,100	12,800	7,430	6,470
29	3,990	3,400	3,500	b3,800	-	5,880	12,500	29,700	19,800	13,100	8,050	6,550
30	3,940	3,460	3,500	b3,500	-	5,910	12,800	29,300	19,500	13,800	8,170	6,580
31	3,900	-	3,600	b3,520	-	5,960	-	*27,300	-	12,800	8,020	-
Total	127,540	110,420	108,190	108,120	125,580	169,660	272,980	557,070	599,800	467,600	303,290	217,710
Mean	4,114	3,681	3,490	3,488	4,485	5,473	9,099	17,970	19,990	15,080	9,784	7,257
Ac-ft	253,000	219,000	214,600	214,500	249,100	336,500	541,400	1,105,000	1,190,000	927,500	601,600	431,800

Calendar year 1950: Max 28,300 Min 1,850 Mean 8,143 Ac-ft 5,895,000
Water year 1950-51: Max 29,700 Min 3,120 Mean 8,679 Ac-ft 6,284,000

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

Diversions from Snake River between Heise and Shelley gaging stations, Idaho

Between Heise and Shelley gaging stations, 47 canals divert water from Snake River for irrigation; of these 36 divert above mouth of Henrys Fork. Records available during each irrigation season from 1919 to 1951. One of the canals is equipped with a water-stage recorder, the others with staff gages, which are read once daily. Discharge combined to show total diverted flow. Records include Riley ditch which diverts 1 mile above Heise gaging station. Records good.

Discharge, in cubic feet per second, May to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								786	7,380	8,520	8,390	4,550
2								802	7,440	8,820	8,230	4,640
3								846	7,140	8,730	8,280	5,300
4								983	7,080	8,710	6,110	5,330
5								1,300	7,350	9,100	4,680	5,720
6								1,710	7,660	9,530	4,640	6,260
7								1,860	7,910	9,450	4,560	6,470
8								1,860	7,820	9,340	4,630	6,500
9								2,170	7,850	9,670	4,400	6,680
10								2,190	7,820	9,570	4,590	6,620
11								2,310	8,150	9,290	4,630	6,500
12								2,350	8,520	9,350	5,370	6,330
13								2,270	8,650	9,340	6,250	6,160
14								2,350	8,410	9,290	6,810	6,020
15								2,700	8,460	9,350	7,280	5,940
16								2,920	8,910	9,500	7,510	5,660
17								3,440	8,980	9,670	7,760	5,500
18								3,790	9,240	9,630	7,870	5,540
19								4,380	9,470	9,740	7,700	5,810
20								4,760	9,510	9,670	7,760	5,990
21								5,310	9,340	9,610	7,280	5,990
22								6,140	9,440	9,360	7,080	5,910
23								6,700	8,920	9,520	6,430	5,790
24								7,120	8,290	9,140	5,890	5,660
25								7,220	8,380	9,520	4,960	5,460
26								7,340	8,370	9,590	4,670	5,220
27								7,180	8,640	9,640	5,300	5,200
28								7,150	8,690	9,550	5,120	5,180
29								7,340	8,670	8,350	4,790	5,120
30								7,140	8,580	8,380	4,590	5,120
31								7,230	-	8,350	4,520	-
Total								121,647	251,070	287,280	188,080	172,170
Mean								3,924	8,369	9,267	6,067	5,739
Ac-ft								241,300	498,000	569,800	373,100	341,500

Calendar year : Max Min Mean Ac-ft
The season : Max - Min - Mean - Ac-ft 2,024,000

Henry Fork near Lake, Idaho

Location.--Lat 44°36', long. 111°21', in SW¼ sec. 26, T. 15 N., R. 43 E., on left bank a quarter of a mile downstream from Henrys Lake Dam and 4 miles south of Lake.

Drainage area.--98 sq mi, approximately, including 6 sq mi of Dry Creek basin.

Records available.--May 1920 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 6,450.62 ft above mean sea level, levels by Bureau of Reclamation (Corps of Engineers benchmark). Prior to September 1922, staff gage at site 3 miles downstream and below mouth of Dry Creek.

Average discharge.--31 years, 47.8 cfs.

Extremes.--Maximum discharge during year, 186 cfs July 7; maximum gage height, 2.39 ft Aug. 10; minimum daily, 14 cfs Oct. 10, 11, 14, leakage through reservoir gates.
1920-51: Maximum discharge, 907 cfs June 13, 1926 (gage height, 5.40 ft); minimum, 0.1 cfs Oct. 3-31, 1937.
Outflow from Henrys Lake was reported to have ceased entirely late in summer of 1889.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by Henry Lake (see p. 44). Since 1923 floodwaters of Dry Creek have been diverted at times into Henrys Lake (none diverted in 1951).

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	15					33	46	86	96	133	85
2	15	15					33	46	80	95	131	85
3	15	15					33	47	73	89	130	80
4	15	15					*33	47	73	88	137	77
5	15	15					33	47	78	86	131	77
6	15	16					34	47	80	84	129	76
7	15	16					34	*48	85	86	124	74
8	15	16					35	51	90	82	*124	74
9	*15	16			(*)		35	52	90	82	120	72
10	14	*16					36	52	89	80	119	*72
11	14	16					36	51	86	85	119	74
12	15	16					36	51	89	84	111	70
13	15	16					37	55	102	85	110	70
14	14	16					40	60	103	82	108	73
15	15	16					40	63	107	80	104	68
16	15	16	18	20	30	32	40	57	111	78	103	68
17	15	16					40	57	115	78	102	70
18	15	16					41	62	115	76	100	68
19	15	16					43	64	113	76	99	67
20	15	16					43	66	119	80	94	71
21	15	16					43	65	115	83	90	60
22	15	16					43	62	108	80	89	*58
23	15	16					43	63	108	78	89	58
24	15	16					42	65	108	88	88	58
25	15	16					41	68	110	*111	86	58
26	15	16					41	66	104	106	84	58
27	15	16					42	72	*111	103	*84	59
28	15	16					44	73	112	113	88	60
29	15	16			-		44	*80	107	123	88	60
30	15	16			-		46	83	96	127	88	60
31	15	-			-		-	84	-	137	86	-
Total	462	475	558	620	840	992	1,164	1,850	2,963	2,821	3,288	2,060
Mean	14.9	15.8	18	20	30	32	38.8	59.7	98.8	91.0	106	68.7
Ac-ft	916	942	1,110	1,230	1,670	1,970	2,310	3,670	5,880	5,600	6,520	4,090

Calendar year 1950: Max 292 Min - Mean 36.2 Ac-ft 26,240
Water year 1950-51: Max 137 Min - Mean 49.6 Ac-ft 35,910

* Discharge measurement made on this day.
N e.--No gage-height record Nov. 11 to Apr. 3; discharge estimated on basis of 1 discharge measurement, weather records, and records for other streams in the basin.

HENRYS FORK BASIN

Island Park Reservoir near Island Park, Idaho

Location.--Lat 44°25', long. 111°24', a quarter of a mile south of quarter corner between secs. 28 and 29, T. 13 N., R. 43 E., in gatehouse shaft at dam on Henrys Fork, a quarter of a mile upstream from Buffalo River, and 2 miles west of Island Park.

Drainage area.--481 sq mi (revised).

Records available.--November 1938 to September 1951.

Gage.--Electric tape gage read once daily. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Extremes.--Maximum contents during year, 136,175 acre-ft May 24-31 (elevation, 6,303.12 ft), minimum, 86,175 acre-ft Sept. 30 (elevation, 6,296.10 ft).
1938-51: Maximum contents, 137,805 acre-ft June 8, 1945 (elevation, 6,303.32 ft); minimum after first filling of reservoir in May 1939, 16,855 acre-ft Sept. 27, 1940 (elevation, 6,274.22 ft).

Remarks.--Reservoir is formed by earth-fill, rock-faced dam. Storage began Nov. 15, 1938. Capacity, 127,265 acre-ft between elevations, 6,239 ft (normal low-water level with outlet gates open) and 6,302 ft (crest of spillway). Natural flow passing through reservoir when outlet gates are open prevents withdrawal of storage to elevation 6,230 ft (sill of lower outlet). Dead storage negligible. Water is used for irrigation of lands in Fremont-Madison irrigation district between Ashton and Rexburg. Contents given herein are for 8 a.m.; all available for release.

Cooperation.--Reservoir elevations and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	87,905	88,215	102,050	111,810	116,555	116,555	114,865	128,830	136,015	134,075	115,890	106,335
2	88,090	88,215	102,390	112,095	116,555	116,480	114,790	129,300	135,690	133,990	115,745	105,985
3	88,090	88,090	102,730	112,530	116,555	116,410	114,715	129,775	135,450	133,990	115,520	105,705
4	88,280	88,030	103,005	112,820	116,850	116,480	114,645	130,170	135,365	133,990	115,815	105,360
5	88,280	87,905	103,280	113,255	117,000	116,555	114,645	130,640	135,530	133,670	115,815	105,080
6	88,405	87,780	103,560	113,550	116,925	116,555	114,645	131,195	135,530	133,590	115,745	104,800
7	88,655	87,660	103,905	113,840	116,925	116,555	114,790	132,150	135,530	133,590	115,520	104,455
8	88,905	87,780	104,385	114,060	117,075	116,555	115,010	133,270	135,450	133,510	115,230	103,695
9	88,905	87,780	104,800	114,350	117,075	116,555	115,155	133,670	135,450	133,350	114,935	103,075
10	88,965	87,780	105,150	114,645	117,075	116,480	115,230	133,830	135,365	133,350	114,865	102,595
11	89,030	87,780	105,430	114,935	117,075	116,410	115,450	133,830	135,205	132,870	114,570	101,710
12	89,090	87,285	105,705	115,300	117,075	116,335	115,595	134,800	135,205	132,630	114,280	101,235
13	89,280	87,285	105,915	115,520	116,925	116,260	115,890	135,770	135,690	132,390	114,060	100,625
14	89,280	87,410	106,125	115,745	116,850	116,185	116,185	136,015	135,770	132,070	113,915	100,015
15	89,470	87,660	106,475	115,965	116,780	116,040	116,410	135,770	135,690	131,590	113,695	99,345
16	89,660	88,655	106,965	116,260	116,705	116,040	116,705	135,610	135,530	130,960	113,255	98,740
17	89,280	89,660	107,245	116,705	116,630	116,040	117,150	135,120	135,530	130,405	112,600	98,205
18	88,905	90,730	107,525	117,075	116,630	116,040	117,670	134,880	135,450	129,065	111,880	97,080
19	89,280	92,000	107,810	117,370	116,555	115,965	118,190	135,365	135,205	127,690	111,090	96,355
20	89,215	92,710	108,090	117,295	116,555	115,890	118,635	135,770	134,800	127,030	110,085	95,235
21	88,905	93,480	108,375	117,220	116,555	115,670	119,235	135,935	134,800	125,865	109,155	94,250
22	88,715	94,455	108,660	117,150	116,480	115,595	120,215	136,015	134,640	124,395	107,880	93,355
23	88,530	95,105	108,945	117,150	116,410	115,520	120,820	136,015	134,800	123,095	107,595	92,450
24	88,340	95,695	109,230	117,075	116,260	115,520	121,575	136,175	134,720	122,030	107,740	91,555
25	88,215	96,950	109,585	117,075	116,555	115,520	122,185	136,175	134,555	120,970	107,740	90,605
26	88,090	97,875	109,870	117,220	116,555	115,520	122,870	136,175	134,555	119,835	107,525	89,660
27	87,905	98,810	110,155	117,150	116,555	115,375	123,475	136,175	134,475	118,710	107,315	88,780
28	88,215	99,480	110,440	117,000	116,555	115,300	124,550	136,175	134,395	118,415	107,105	87,905
29	88,340	100,355	110,730	116,925	-	115,230	126,020	136,175	134,235	117,815	106,895	87,100
30	88,215	101,440	111,090	116,780	-	115,080	127,421	136,175	134,235	117,150	106,895	86,175
31	88,215	-	111,520	116,630	-	115,010	-	136,175	-	116,410	106,685	-

Monthly elevation and contents, water year October 1950 to September 1951

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	6,296.34	87,660	-
Oct. 31	6,296.43	88,215	+555
Nov. 30	6,298.46	101,440	+13,225
Dec. 31	6,299.40	111,520	+10,080
Calendar year 1950	-	-	+42,445
Jan. 31	6,300.60	116,630	+5,110
Feb. 28	6,300.59	116,555	-75
Mar. 31	6,300.38	115,010	-1,545
Apr. 30	6,302.02	127,421	+12,411
May 31	6,303.12	136,175	+8,754
June 30	6,302.88	134,235	-1,940
July 31	6,300.57	116,410	-17,825
Aug. 31	6,299.22	106,685	-9,725
Sept.30	6,296.10	86,175	-20,510
Water year 1950-51	-	-	-1,485

Henrys Fork near Island Park, Idaho

Location.--Lat 44°25', long. 111°24', in SW¼ sec. 28, T. 13 N., R. 43 E., on left bank an eighth of a mile upstream from Buffalo River, an eighth of a mile downstream from Island Park Dam, and 2 miles west of Island Park.

Drainage area.--481 sq mi (revised).

Records available.--January 1933 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,225 ft (from river-profile map). Prior to May 15, 1935, staff gage at site three-quarters of a mile upstream at different datum. May 15 to Nov. 30, 1935, water-stage recorder at site 1,000 ft downstream.

Average discharge.--18 years, 519 cfs.

Extremes.--Maximum discharge during year, 1,260 cfs July 20; maximum gage height, 4.29 ft Aug. 20-22; minimum daily, 10 cfs Nov. 16-29.
1933-51: Maximum discharge, 2,770 cfs Apr. 26, 1946 (gage height, 6.15 ft); minimum daily, 1 cfs Nov. 16 to Dec. 7, 1938.

Remarks.--Records good. Flow regulated by Henrys Lake (see p. 44) and Island Park Reservoir (see preceding page).

Cooperation.--Gage-height record and one discharge measurement furnished by Bureau of Reclamation.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	418	543	295	299	445	450	458	533	900	655	787	713
2	418	543	295	299	445	450	458	562	865	655	782	713
3	418	543	295	299	445	450	458	596	865	645	777	713
4	418	543	295	299	445	450	*458	635	836	640	782	713
5	418	548	295	299	445	450	458	704	846	635	777	723
6	418	548	295	303	445	450	458	782	860	625	777	723
7	418	548	295	303	445	450	458	*895	865	610	777	777
8	418	548	295	303	445	450	458	992	880	591	777	851
9	*418	548	295	303	*445	450	458	1,060	885	689	738	851
10	418	*495	295	303	445	450	458	1,070	856	777	718	851
11	418	414	295	308	445	450	463	808	821	797	723	856
12	418	414	295	308	445	450	463	782	836	782	723	856
13	404	414	*295	308	445	450	463	900	885	753	718	856
14	400	414	295	308	445	450	463	1,100	900	787	723	860
15	472	128	295	308	445	450	463	1,130	890	865	728	860
16	533	10	295	308	445	450	463	1,180	890	895	777	860
17	533	10	295	308	450	450	463	1,040	865	1,010	935	956
18	533	*10	295	308	450	450	463	880	841	1,100	930	1,010
19	538	10	295	393	450	450	463	865	826	1,090	925	1,010
20	538	10	295	436	450	450	463	915	777	1,160	1,020	1,010
21	538	10	295	436	450	450	463	935	767	1,210	1,160	1,010
22	538	10	295	436	450	450	463	976	767	1,210	841	*1,010
23	538	10	295	436	450	450	463	992	767	1,180	699	1,010
24	538	10	295	436	450	450	463	1,020	753	1,110	694	1,000
25	538	10	295	436	450	450	463	1,000	723	1,110	694	997
26	538	10	295	440	450	450	463	976	728	*1,100	689	992
27	538	10	295	440	450	454	463	971	*713	1,060	*689	986
28	538	10	295	440	450	454	463	992	694	992	694	986
29	538	10	295	440	-	454	463	*961	674	1,020	699	981
30	538	188	295	440	-	454	481	940	664	1,020	699	981
31	543	-	295	440	-	458	-	930	-	997	708	-
Total	14,890	7,519	9,145	11,123	12,520	13,974	13,858	28,142	24,439	27,770	24,160	26,715
Mean	480	251	295	359	447	451	462	908	815	896	779	890
Ac-ft	29,530	14,910	18,140	22,060	24,830	27,720	27,490	55,820	48,470	55,080	47,920	52,990

Calendar year 1950: Max 1,620 Min 9 Mean 485 Ac-ft 351,200
Water year 1950-51: Max 1,210 Min 10 Mean 587 Ac-ft 425,000

* Discharge measurement made on this day.
Note.--Discharge for periods Nov. 16-29 and Dec. 30 to Mar. 3 computed from once-daily staff gage readings.

Henrys Fork at Warm River, Idaho

Location.--Lat 44°07', long. 111°20', in sec. 12, T. 9 N., R. 43 E., on left bank 1,000 ft upstream from Warm River and half a mile northwest of Warm River railroad siding.

Drainage area.--656 sq mi (revised).

Records available.--September 1910 to March 1915, April 1918 to September 1951. Prior to 1911, published as North Fork of Snake River at Warm River.

Gage.--Water-stage recorder. Altitude of gage is 5,255 ft (from river-profile map). Prior to June 29, 1923, staff gage at same site and datum.

Average discharge.--37 years (1910-14, 1918-51), 989 cfs.

Extremes.--Maximum discharge during year, 1,920 cfs May 15 (gage height, 6.19 ft); minimum, 353 cfs Jan. 28 (gage height, 3.62 ft).
1910-15, 1918-50: Maximum discharge, 3,540 cfs May 18, 1927; maximum gage height, 7.80 ft Apr. 27, 1946; minimum discharge, 217 cfs Dec. 11, 12, 1949 (gage height, 3.12 ft).

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Henrys Lake (see p. 44) and Island Park Reservoir (see p. 28). Some water diverted above station for irrigation of meadows on headwaters.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a870	1,040	734	674	b800	*897	903	1,190	1,430	1,070	1,250	1,110
2	a870	1,010	712	712	b850	891	*903	1,160	1,370	1,060	1,150	1,100
3	a870	1,010	739	750	975	903	921	1,140	1,340	1,060	1,150	1,100
4	a870	1,000	750	745	993	909	939	1,160	1,330	1,050	1,230	1,110
5	*861	1,000	679	700	975	963	945	1,250	1,320	1,040	1,190	1,100
6	873	1,000	695	690	933	963	957	1,350	1,360	1,020	1,160	1,110
7	867	1,010	789	700	*909	933	969	*1,500	1,360	1,000	1,160	1,090
8	855	*1,020	756	695	891	915	975	1,690	1,380	999	1,170	1,200
9	855	993	728	773	873	909	993	1,770	1,380	975	1,140	1,220
10	855	1,010	722	*734	867	897	999	1,760	1,340	1,180	1,070	1,220
11	855	903	*717	728	849	939	987	1,660	1,290	1,210	1,070	1,230
12	855	849	717	722	843	957	999	1,430	1,280	1,200	1,070	1,240
13	855	843	717	717	843	903	1,030	1,600	1,380	1,160	1,070	1,240
14	837	849	717	728	897	891	1,070	1,700	1,380	1,150	1,070	*1,240
15	861	825	717	722	921	861	1,080	1,850	1,360	1,220	1,060	1,240
16	1,020	443	712	706	861	909	1,070	1,800	1,360	1,290	1,060	1,230
17	999	466	706	637	861	921	1,130	1,780	1,330	1,310	1,240	1,250
18	993	470	700	717	867	939	1,220	1,640	1,300	1,540	1,300	1,390
19	987	466	700	717	867	885	1,290	1,530	1,260	1,530	1,310	1,390
20	981	452	700	873	861	891	1,240	1,540	1,220	1,510	*1,310	1,400
21	981	452	700	873	867	855	1,240	1,540	1,190	1,640	1,530	1,400
22	981	456	695	891	861	909	1,120	1,560	1,200	1,610	1,530	1,410
23	981	443	695	855	867	885	1,080	1,560	1,200	1,610	1,110	1,400
24	981	443	695	861	897	891	1,100	1,590	1,180	1,530	1,140	1,400
25	981	443	695	861	897	885	1,110	1,590	1,170	1,500	1,110	1,410
26	993	439	700	843	897	891	*1,150	1,530	*1,160	*1,510	1,110	1,410
27	1,010	439	722	837	891	891	1,160	1,500	1,150	1,520	1,110	1,420
28	1,020	439	706	563	897	891	1,200	1,530	1,130	1,420	1,120	1,410
29	1,030	434	706	b620	-	885	1,200	1,500	1,090	1,440	1,140	1,410
30	1,020	461	712	b850	-	891	1,200	*1,440	1,080	1,420	1,130	1,420
31	1,050	-	728	b870	-	897	-	1,460	-	1,410	1,110	-
Total	28,917	21,108	22,161	23,364	24,810	28,047	32,180	47,300	38,320	40,184	36,370	38,300
Mean	933	704	715	754	886	905	1,073	1,526	1,277	1,296	1,173	1,277
Ac-ft	57,360	41,870	43,960	46,340	49,210	55,630	63,830	93,820	76,010	79,700	72,140	75,970

Calendar year 1950: Max 2,460 Min 364 Mean 962 Ac-ft 696,700
Water year 1950-51: Max 1,850 Min 434 Mean 1,044 Ac-ft 755,800

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for stations near Island Park and Ashton.
b Stage-discharge relation affected by ice.

Henrys Fork near Ashton, Idaho

Location.--Lat 44°05', long. 111°30', in sec. 28, T. 9 N., R. 42 E., on right bank a quarter of a mile downstream from powerplant and 3 miles west of Ashton.

Drainage area.--1,040 sq mi, approximately (revised).

Records available.--April 1890 to June 1891, August 1902 to June 1909, April 1920 to September 1951. Published as Henrys Fork in canyon above Fall River, 1890-91, and as North Fork of Snake River near Ora, 1902-9.

Gage.--Water-stage recorder. Altitude of gage is 5,095 ft (from river-profile map). April 1890 to June 1891, staff gage at site 6 miles downstream at different datum. August 1902 to Apr. 15, 1921, staff gage and Apr. 16, 1921, to May 3, 1930, water-stage recorder at site 1½ miles downstream from present site at different datum.

Average discharge.--32 years (1903-8, 1924-51), 1,300 cfs.

Extremes.--Maximum discharge during year, 3,330 cfs May 7; maximum gage height, 7.76 ft Aug. 22; minimum discharge, 224 cfs Apr. 14 (gage height, 5.14 ft); minimum daily, 718 cfs Nov. 16, Jan. 28.
1890-91, 1902-9, 1920-51: Maximum discharge, 6,220 cfs May 7, 1925; minimum discharge, 65 cfs Oct. 16, 1935 (gage height, 4.59 ft); minimum daily, 440 cfs Dec. 5, 1931.

Remarks.--Records excellent. Diurnal fluctuation caused by powerplant above station. Flow regulated by Henrys Lake (see p. 44) and Island Park Reservoir (see p. 28). About 17,500 acres irrigated by diversions above station.

Cooperation.--Gage-height record during non-irrigation season furnished by Utah Power and Light Co.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,100	1,380	1,060	892	1,000	*1,190	1,270	2,040	*2,040	1,530	1,730	1,480
2	1,140	1,320	1,010	1,030	1,130	1,190	*1,260	1,940	1,880	1,480	1,480	1,530
3	1,140	1,320	1,090	1,040	1,230	1,170	1,270	*1,830	1,880	1,500	1,520	1,520
4	1,160	1,280	1,100	1,080	1,300	1,100	1,330	1,860	1,770	1,520	1,730	1,530
5	1,190	1,330	928	976	1,320	1,130	1,330	2,060	1,810	1,480	1,700	1,520
6	1,170	1,280	952	976	1,320	1,300	1,380	2,300	1,840	1,440	1,600	1,470
7	1,170	1,320	1,140	928	1,340	1,320	1,400	2,510	1,840	1,470	1,650	1,530
8	1,170	*1,340	1,090	988	1,280	1,170	1,440	2,720	1,810	1,450	1,530	1,560
9	*1,140	1,260	1,010	1,140	1,260	1,200	1,480	2,780	1,840	1,420	1,550	1,660
10	1,160	1,210	1,040	*1,040	1,230	1,170	1,420	2,680	1,730	1,700	1,440	1,630
11	1,190	1,210	*1,040	1,090	1,230	1,140	1,400	2,610	1,730	1,660	1,380	1,610
12	1,120	1,160	1,030	1,030	1,210	1,140	1,450	2,340	1,720	1,720	1,440	1,660
13	1,160	1,120	1,040	1,040	1,190	1,190	1,480	2,530	1,960	1,610	1,360	1,650
14	1,140	1,170	1,040	1,080	*1,160	1,190	1,680	2,530	1,900	1,530	1,440	*1,600
15	1,160	1,160	1,030	1,080	1,190	1,160	1,630	2,630	1,830	1,630	1,360	1,630
16	1,380	718	1,040	1,080	1,200	1,140	1,600	2,490	1,810	1,720	1,390	1,600
17	1,360	792	1,040	952	1,160	1,160	1,660	2,570	1,830	1,700	1,580	1,630
18	1,280	803	1,010	1,100	1,230	1,140	1,840	2,470	1,770	1,980	1,610	1,830
19	1,280	781	1,040	1,030	1,190	1,170	1,980	2,320	1,720	1,960	1,660	1,830
20	1,280	792	1,010	1,130	1,170	1,170	1,900	2,340	1,700	1,920	*1,650	1,750
21	1,280	792	1,040	1,140	1,160	1,130	1,940	2,300	1,610	2,120	1,940	1,790
22	1,300	803	1,010	1,230	1,170	1,240	1,680	2,260	1,720	2,060	2,060	1,810
23	1,260	803	1,010	1,140	1,170	1,190	1,680	2,260	1,720	2,020	1,420	1,790
24	1,300	738	1,030	1,170	1,240	1,200	1,700	2,300	1,650	1,940	1,530	1,790
25	1,270	781	1,000	1,130	1,200	1,210	1,770	2,220	1,680	1,880	1,520	1,790
26	1,320	770	988	1,140	1,170	1,200	1,840	2,140	*1,630	*1,900	1,480	1,750
27	1,320	760	1,000	1,120	1,170	1,210	2,040	2,060	1,650	1,920	1,500	1,750
28	1,360	770	1,050	718	1,170	1,190	2,120	2,200	1,610	1,860	1,580	1,750
29	1,340	770	1,010	728	-	1,170	2,100	2,060	1,560	1,860	1,580	1,770
30	1,340	792	1,010	1,090	-	1,200	2,140	1,980	1,480	1,810	1,550	1,750
31	1,400	-	1,060	1,160	-	1,210	-	2,040	-	1,790	1,520	-
Total	38,380	30,525	31,948	32,468	33,790	36,690	49,210	71,370	52,720	53,580	48,480	49,960
Mean	1,238	1,018	1,031	1,047	1,207	1,184	1,640	2,302	1,757	1,728	1,564	1,665
Ac-ft	76,130	60,550	63,370	64,400	67,020	72,770	97,610	141,600	104,600	106,300	96,160	99,090

Calendar year 1950: Max 3,470 Min 453 Mean 1,362 Ac-ft 985,900
Water year 1950-51: Max 2,780 Min 718 Mean 1,450 Ac-ft 1,050,000

* Discharge measurement made on this day.

Diversions from Henrys Fork between Ashton and St. Anthony gaging stations, Idaho

Between Ashton and St. Anthony gaging stations seven canals divert water from Henrys Fork for irrigation. Records available each irrigation season from 1919 to 1951. Discharge of canals computed from daily or twice-weekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

Discharge, in cubic feet per second, May to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								680	1,340	1,050	1,010	354
2								718	1,290	1,020	1,050	354
3								689	1,260	1,000	1,030	354
4								699	1,280	999	1,050	356
5								741	1,270	1,010	757	469
6								736	1,320	1,000	589	517
7								782	1,280	1,030	442	502
8								675	1,240	1,040	438	555
9								689	1,250	1,040	449	549
10								708	1,230	1,060	455	581
11								819	1,240	997	552	581
12								868	1,050	993	465	631
13								843	1,350	986	548	616
14								723	1,230	965	671	453
15								780	1,080	1,030	776	460
16								809	1,170	981	776	460
17								877	1,200	974	862	460
18								882	1,200	1,030	861	460
19								849	1,210	1,260	920	460
20								1,020	1,160	1,200	916	459
21								1,110	1,130	1,230	884	458
22								1,180	1,080	1,180	716	454
23								1,080	1,030	1,170	548	450
24								1,350	941	1,170	470	448
25								1,360	958	1,180	422	446
26								1,370	935	1,180	417	445
27								1,390	1,000	1,150	416	447
28								1,450	1,020	1,140	373	448
29								1,440	1,020	1,120	375	439
30								1,380	1,030	1,070	375	435
31								1,360	-	836	329	-
Total								30,057	34,794	33,091	19,942	14,101
Mean								970	1,160	1,067	643	470
Ac-ft								59,620	69,010	65,640	39,550	27,970

Calendar year : Max Min Mean Ac-ft
The season : Max - Min - Mean - Ac-ft 261,800

Diversions from Fall River above gaging station near Squirrel, Idaho

Above Squirrel gaging station two canals divert water from Fall River for irrigation. Records available for part of each irrigation season from 1919 to 1951. Discharge of canals computed from daily or twice-weekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

Discharge, in cubic feet per second, May to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	40	251	239	85
2								0	40	251	238	86
3								0	40	252	241	94
4								0	40	253	220	65
5								0	40	255	201	61
6								0	50	257	174	62
7								0	60	257	171	56
8								0	70	258	145	41
9								0	80	257	134	2
10								0	100	248	134	2
11								0	120	256	131	1
12								0	140	252	131	1
13								0	160	252	129	1
14								0	160	249	122	2
15								0	180	246	121	2
16								0	180	240	120	2
17								0	190	242	126	2
18								0	195	250	129	2
19								0	199	263	139	1
20								0	200	261	173	1
21								0	200	264	216	1
22								0	200	261	218	1
23								39	201	261	199	1
24								39	203	261	167	1
25								39	204	261	135	1
26								39	216	259	130	1
27								39	236	256	137	1
28								39	246	261	125	1
29								39	251	256	78	1
30								39	251	246	82	1
31								39	-	240	87	-
Total								351	4,492	7,876	4,792	579
Mean								11.3	150	254	155	19.3
Ac-ft								696	8,910	15,620	9,500	1,150

Calendar year : Max Min Mean Ac-ft
The season : Max - Min - Mean - Ac-ft 35,880

Fall River near Squirrel, Idaho

Location.--Lat 44°04', long. 111°15', in NE¼ sec. 34, T. 9 N., R. 44 E., on right bank a quarter of a mile upstream from road bridge, half a mile downstream from headgates of Marysville canal, 4 miles northeast of Squirrel, and 10 miles upstream from Conant Creek.

Drainage area.--351 sq mi (revised).

Records available.--August 1902 to June 1909 (gage heights only prior to 1905), May 1918 to September 1951. Published as "at Wilson's Mill, near Marysville" 1902, as "near Marysville" 1903, and as "at Fremont" 1904-9.

Gage.--Water-stage recorder. Prior to Jan. 1, 1904, staff gage at site 3 miles upstream at different datum. Jan. 1, 1904, to Nov. 6, 1937, staff gage 200 ft upstream from present site at different datum. Nov. 7, 1937, to Oct. 7, 1948, staff gage 100 ft downstream from present site at datum 0.29 ft lower than present datum.

Average discharge.--38 years (1904-8, 1917-51), 750 cfs.

Extremes.--Maximum discharge during year, 3,200 cfs May 29; maximum gage height, 4.58 ft Jan. 30; minimum discharge, 262 cfs Jan. 28, Feb. 1 (gage height, 0.71 ft).
1902-9, 1918-51: Maximum discharge observed, 6,440 cfs June 27, 1927; minimum observed, 72 cfs Feb. 9, 1930.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow since October 1939 partly regulated by Grassy Lake (see p.44). About 16,000 acres irrigated from two diversions above station.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	235	2.0	1,130
.8	296	2.5	1,650
1.0	375	3.0	2,310
1.5	690	3.6	3,310

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	630	668	566	458	375	*430	452	1,200	*2,210	1,340	668	630
2	615	645	545	469	458	425	*469	1,070	1,750	1,340	645	615
3	615	608	559	469	500	420	480	995	1,510	1,330	630	601
4	622	594	573	b460	493	390	500	1,130	1,380	1,380	887	615
5	*622	594	532	b450	486	b367	526	1,430	1,350	1,310	986	615
6	660	594	519	b445	480	395	559	1,810	1,350	1,240	905	615
7	622	608	545	b440	*486	415	594	2,040	1,360	1,190	968	622
8	622	*645	532	b450	486	410	615	2,040	1,320	1,140	860	630
9	622	545	526	b470	519	415	630	1,980	1,310	1,080	818	652
10	601	519	532	*b491	493	410	622	1,960	1,320	986	766	660
11	594	559	*532	b490	464	410	594	1,960	1,390	905	758	675
12	594	552	526	b490	452	425	608	2,200	1,550	843	750	682
13	580	552	519	b485	436	420	682	1,840	2,180	826	724	668
14	573	552	512	b485	b420	420	792	1,510	2,340	869	716	660
15	608	538	512	b485	b420	430	809	1,430	2,250	818	707	660
16	622	519	506	b480	430	436	784	1,590	2,520	784	690	645
17	587	545	500	b470	430	415	869	1,840	2,720	750	682	645
18	566	573	500	b440	436	410	1,010	2,090	2,560	698	675	645
19	559	587	500	b425	430	415	1,100	2,180	2,360	660	652	645
20	552	566	500	b435	430	410	1,150	2,180	2,300	660	*615	615
21	552	750	493	442	436	420	1,140	2,240	2,210	660	594	594
22	545	675	480	447	436	447	986	2,320	2,060	622	638	*601
23	538	615	493	452	436	430	977	2,460	1,770	594	690	601
24	538	587	486	442	452	425	1,040	2,520	1,600	*594	690	594
25	587	580	486	442	442	425	1,160	2,440	1,500	615	732	594
26	594	573	469	442	436	442	*1,320	2,370	*1,460	652	645	587
27	615	559	486	436	436	436	1,530	2,510	1,410	660	615	587
28	615	545	493	b370	436	425	1,500	2,930	1,410	698	630	580
29	675	538	480	b350	-	415	1,550	3,020	1,420	784	675	580
30	660	580	486	b360	-	415	1,410	2,680	1,400	682	660	580
31	707	-	486	b365	-	430	-	2,650	-	645	638	-
Total	18,692	17,565	15,874	13,835	12,634	12,978	26,458	62,615	53,270	27,355	22,309	18,693
Mean	603	586	512	446	451	419	882	2,020	1,776	882	720	623
Ac-ft	37,080	34,840	31,490	27,440	25,060	25,740	52,480	124,200	105,700	54,260	44,250	37,080

Calendar year 1950: Max 2,930 Min 300 Mean 818 Ac-ft 592,000
Water year 1950-51: Max 3,020 Min 350 Mean 828 Ac-ft 599,600

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

Diversions from Fall River between Squirrel and Chester gaging stations, Idaho

Between Squirrel and Chester gaging stations eight canals divert water from Fall River for irrigation. Records available for part of each irrigation season from 1919 to 1951. Discharge of canals computed from daily or twice-weekly staff gage readings, or interpolated, and combined to show total diverted flow. Records good.

Discharge, in cubic feet per second, May to September 1951

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	149	647	770	577	300	16	189	758	734	430	217
2	149	643	765	576	259	17	189	759	752	427	217
3	150	628	765	567	257	18	193	760	714	453	216
4	154	617	768	568	255	19	198	781	596	544	216
5	161	594	765	364	251	20	250	800	588	562	214
6	161	625	752	346	249	21	376	794	598	510	212
7	164	655	742	288	247	22	321	777	604	502	211
8	166	650	739	283	244	23	334	766	599	460	202
9	166	659	736	290	263	24	350	763	597	418	202
10	166	661	676	289	243	25	414	767	609	414	202
11	152	680	674	292	241	26	451	771	533	385	227
12	146	727	708	292	241	27	501	771	612	383	238
13	148	742	695	387	211	28	587	745	613	388	250
14	151	744	692	429	229	29	674	779	597	309	250
15	167	747	699	428	228	30	643	782	603	308	225
						31	656	-	590	308	-
Total							8,676	21,592	20,885	12,777	7,017
Mean							280	720	674	412	234
Ac-ft							17,210	42,830	41,420	25,340	13,920

The season : Max - Min - Mean - Ac-ft 140,700

Fall River near Chester, Idaho

Location.--Lat 44°01', long. 111°34', in sec. 13, T. 8 N., R. 41 E., on right bank 500 ft upstream from highway bridge, half a mile upstream from mouth, and 2 miles north of Chester.

Drainage area.--520 sq mi (revised).

Records available.--April 1920 to September 1951 (irrigation seasons only).

Gage.--Water-stage recorder. Datum of gage is 5,051.9 ft above mean sea level, datum of 1929. Prior to Aug. 9, 1920, staff gage at site 200 ft downstream at same datum. Aug. 9, 1920, to Apr. 28, 1921, staff gage at present site and datum.

Extremes.--Maximum discharge during period May to September, 3,030 cfs May 29 (gage height, 4.68 ft); minimum, 76 cfs July 24 (gage height, 1.38 ft).

1920-51: Maximum discharge recorded, 6,380 cfs June 27, 1927 (gage height, 6.60 ft); minimum recorded, 9 cfs Aug. 7, 1923 (gage height, 1.01 ft).

Remarks.--Records excellent. Flow since October 1939 partly regulated by Grassy Lake (see p.44). About 42,000 acres of land irrigated by diversions above station. Station is below all diversions from Fall River.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.3	63	3.0	900
1.6	127	4.0	1,990
2.0	265	5.0	3,560
2.5	515		

Discharge, in cubic feet per second, May to September 1951

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	1,440	2,000	690	192	454	16	1,850	1,980	144	400	500
2	1,270	1,490	666	192	444	17	2,130	2,260	114	390	496
3	*1,140	1,200	643	178	454	18	2,410	2,120	107	319	493
4	1,260	*1,030	762	454	460	19	2,480	1,850	135	253	482
5	1,600	900	682	864	476	20	2,420	1,740	112	210	*471
6	2,070	927	622	864	476	21	2,470	1,640	120	*203	449
7	2,400	927	560	828	476	22	2,560	1,500	104	245	449
8	2,520	891	515	746	482	23	2,620	1,220	89	365	449
9	2,440	864	471	690	476	24	2,640	1,030	79	375	432
10	2,380	855	395	636	488	25	2,530	918	100	471	390
11	2,350	918	337	622	493	26	2,330	846	172	400	390
12	2,590	1,030	278	615	515	27	2,280	*778	120	360	390
13	2,350	1,580	237	615	515	28	2,660	738	162	400	380
14	1,870	1,910	233	504	504	29	2,900	722	214	498	370
15	1,700	1,800	152	405	504	30	2,480	722	*233	498	365
						31	2,400	-	188	466	-
Total							68,540	38,386	9,436	14,258	13,723
Mean							2,211	1,280	304	460	457
Ac-ft							135,900	76,140	18,720	28,280	27,220

The period : Max - Min - Mean - Ac-ft 286,300

* Discharge measurement made on this day.

Henrys Fork at St. Anthony, Idaho

Location.--Lat 43°58', long. 111°41', in sec. 1, T. 7 N., R. 40 E., on right bank half a mile upstream from bridge on main street of St. Anthony and 6 miles downstream from Fall River.
Drainage area.--1,770 sq mi (revised).
Records available.--March 1919 to September 1951 (irrigation seasons only).
Gage.--Water-stage recorder. Altitude of gage is 4,950 ft (from river-profile map). March 1919 to Apr. 13, 1923, staff gages and Apr. 14, 1923, to Aug. 14, 1932, water-stage recorder at site 150 ft downstream at datum 0.075 ft lower.
Extremes.--Maximum discharge recorded during year, 4,870 cfs May 9 (gage height, 5.37 ft); minimum recorded, 794 cfs July 15.
1919-51: Maximum discharge recorded, 9,030 cfs May 8, 1925 (gage height, 6.70 ft); minimum daily recorded, 413 cfs July 22, 1931.
Remarks.--Records excellent. Diversions above station for irrigation. Flow regulated by powerplant 17 miles above station and by Henrys Lake (see p. 44), Island Park Reservoir (see p. 28), and Grassy Lake (see p. 44).

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

3.0	580
3.5	1,040
4.0	1,760
5.0	3,870
6.0	6,790

Discharge, in cubic feet per second, May to September 1951

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	2,880	3,070	1,260	1,110	1,660	16	3,680	2,960	910	1,160	1,700
2	2,600	2,390	*1,220	860	1,630	17	4,070	3,210	910	1,240	1,710
3	*2,230	2,040	1,220	840	1,650	18	4,300	3,070	985	1,220	1,900
4	2,370	*1,740	1,340	1,400	1,660	19	4,220	2,710	890	1,200	1,880
5	2,770	1,580	1,240	2,290	1,660	20	4,120	2,520	890	1,140	*1,830
6	3,530	1,630	1,150	2,250	1,570	21	4,040	2,350	1,020	*1,260	1,790
7	4,070	1,650	1,060	2,440	1,500	22	3,900	2,270	1,030	1,660	1,830
8	4,570	1,620	1,010	2,350	1,500	23	3,940	2,070	996	1,600	1,830
9	4,650	1,630	952	2,310	1,570	24	3,940	1,900	985	1,630	1,810
10	4,540	1,540	1,020	2,000	1,550	25	3,750	1,760	963	1,740	1,780
11	4,410	1,550	1,050	1,760	1,550	26	3,530	1,620	1,040	1,550	1,740
12	4,200	1,580	1,060	1,830	1,620	27	3,280	1,500	1,020	1,550	1,730
13	4,330	2,290	996	1,650	1,710	28	3,650	1,440	1,050	1,630	1,710
14	3,820	2,880	890	1,410	1,700	29	3,870	1,280	1,100	1,860	1,710
15	3,770	2,880	850	1,160	1,710	30	3,440	1,250	*1,160	1,830	1,700
						31	3,320	-	1,240	1,780	-
Total							115,790	61,980	32,507	49,710	50,890
Mean							3,735	2,066	1,049	1,604	1,696
Ac-ft							229,700	122,900	64,480	98,600	100,900

The period : Max - Min - Mean - Ac-ft 616,600

* Discharge measurement made on this day.

Diversions from Henrys Fork between St. Anthony and Rexburg gaging stations, Idaho

Between St. Anthony and Rexburg gaging stations four canals divert water from Henrys Fork for irrigation. Records available for part of each irrigation season from 1919 to 1951. Discharge of canals computed from daily or twice-weekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

Discharge, in cubic feet per second, May to September 1951

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	541	1,170	794	704	433	16	830	866	826	698	352
2	561	1,110	773	680	463	17	857	967	874	696	352
3	585	1,140	781	735	462	18	886	990	979	683	352
4	602	1,110	781	575	455	19	942	1,010	858	754	352
5	674	1,050	795	573	453	20	948	1,040	861	720	367
6	642	1,060	826	388	482	21	999	1,030	877	700	389
7	643	1,020	832	324	524	22	1,050	961	868	580	385
8	552	971	849	318	513	23	1,090	826	810	409	380
9	735	925	829	287	513	24	1,130	779	819	378	375
10	785	937	804	304	517	25	1,140	780	785	336	373
11	794	973	765	418	502	26	1,200	808	815	388	372
12	797	994	760	417	501	27	1,210	805	798	388	370
13	783	1,000	754	491	455	28	1,190	798	799	415	368
14	857	908	746	642	380	29	1,190	821	773	430	367
15	833	841	805	657	366	30	1,180	806	691	425	365
						31	1,180	-	698	409	-
Total							27,406	28,496	25,025	15,922	12,538
Mean							884	950	807	514	418
Ac-ft							54,360	56,520	49,640	31,580	24,870

The season : Max - Min - Mean - Ac-ft 217,000

Teton River near Victor, Idaho

Location.--Lat 43°33'50", long. 111°04'00", on line between secs. 19 and 30, T. 3 N., R. 46 E., on right bank 100 ft downstream from Moose Creek, 200 ft upstream from String Canal, and 3½ miles southeast of Victor.

Drainage area.--47.6 sq mi.

Records available.--May 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,450 ft (from topographic map). Prior to July 29, 1949, at datum 1.54 ft higher.

Average discharge.--5 years, 81.7 cfs.

Extremes.--Maximum discharge during year, 398 cfs June 17 (gage height, 3.49 ft); minimum daily, 30 cfs Jan. 30; minimum gage height, 1.45 ft sometime during period Mar. 15-28.

1946-51: Maximum discharge observed, 398 cfs June 8, 1948, June 17, 1951; maximum gage height, 3.57 ft June 8, 1948, present datum; minimum recorded, 22 cfs Feb. 20, 1947 (gage height, 1.39 ft, present datum), but may have been less during periods of ice effect or no gage-height record.

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

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 28, June 21 to Sept. 30				Mar. 1 to June 20			
1.4	27	2.5	152	1.5	32	2.5	170
1.7	43	3.0	262	1.7	46	3.0	279
2.0	70	3.3	338	2.0	82	3.4	375

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	49	44	39	32	35	34	55	270	238	101	70
2	53	49	43	38	35	35	35	54	244	236	98	70
3	53	47	43	38	36	35	36	54	222	238	100	69
4	54	48	43	38	37	*35	36	56	207	238	112	68
5	55	48	40	38	37	34	37	61	198	233	101	68
6	58	47	40	37	37	36	39	68	*192	222	*98	68
7	56	47	45	36	37	35	40	74	188	213	94	68
8	55	48	45	36	37	34	41	75	182	206	90	66
9	54	44	*43	38	37	35	41	76	174	195	88	66
10	54	46	42	37	37	34	40	78	176	187	84	66
11	53	48	42	37	37	32	40	85	188	176	83	68
12	53	47	42	37	35	34	40	100	205	168	82	66
13	52	47	42	37	35	*35	44	95	261	164	82	64
14	52	47	42	37	35	34	46	87	289	162	80	63
15	54	46	42	37	35	35	47	85	313	160	78	63
16	53	44	42	37	35	35	47	93	*365	154	78	63
17	52	45	42	37	35	35	50	106	375	150	78	61
18	51	45	42	35	35	35	53	*133	363	144	78	62
19	*50	45	42	33	35	35	54	147	351	139	76	61
20	50	44	42	33	35	35	*53	151	337	*144	75	61
21	49	45	41	34	36	35	53	166	322	133	75	60
22	49	44	41	34	36	34	51	190	310	128	82	60
23	49	44	41	33	36	34	50	215	280	122	82	60
24	49	44	41	33	36	35	50	231	270	119	80	59
25	49	45	41	*36	36	36	50	240	270	*115	76	59
26	50	44	38	36	36	36	52	242	270	113	74	59
27	50	43	38	36	36	35	55	263	260	112	73	59
28	50	43	40	34	35	35	55	320	257	115	*75	59
29	50	43	40	31	-	34	57	356	252	133	78	59
30	50	42	40	30	-	33	58	327	243	113	73	58
31	50	-	40	31	-	34	-	303	-	105	73	-
Total	1,611	1,368	1,289	1,103	1,001	1,074	1,384	4,586	7,834	5,075	2,597	1,903
Mean	52.0	45.6	41.6	35.6	35.8	34.6	46.1	148	261	164	83.8	63.4
Cfsm	1.09	0.958	0.874	0.748	0.752	0.727	0.966	3.11	5.48	3.45	1.76	1.33
In.	1.26	1.07	1.01	0.86	0.78	0.84	1.08	3.58	6.12	3.97	2.03	1.49
Ac-ft	3,200	2,710	2,560	2,190	1,990	2,130	2,750	9,100	15,540	10,070	5,150	3,770

Calendar year 1950: Max 346 Min - Mean 85.1 Cfsm 1.79 In. 24.27 Ac-ft 61,590
Water year 1950-51: Max 375 Min 30 Mean 84.5 Cfsm 1.78 In. 24.09 Ac-ft 61,160

Peak discharge (base, 200 cfs).--May 29 (3 to 4 a.m.) 368 cfs (3.37 ft); June 17 (2 to 3 a.m.) 398 cfs (3.49 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 2-12, Nov. 9 to Dec. 8, Dec. 27-31, Jan. 9-24, Jan. 29 to Mar. 3, Mar. 12, 15-28; discharge estimated on basis of weather records, recorded range in stage, and records for Teton Creek near Driggs and other nearby streams.

Teton Creek near Driggs, Idaho

Location.--Lat 43°45'30", long. 110°58'00", on right bank 1½ miles upstream from Mill Creek, 1.6 miles west of Boy Scout camp, 4.2 miles east of Wyoming-Idaho State line, and 7½ miles northeast of Driggs.

Drainage area.--33.8 sq mi.

Records available.--June 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,660 ft (from topographic map).

Average discharge.--5 years, 111 cfs.

Extremes.--Maximum discharge during year, 941 cfs June 17 (gage height, 3.88 ft); minimum recorded, 6.5 cfs Mar. 29 (gage height, -0.02 ft).
1946-51: Maximum discharge, 992 cfs June 29, 1950 (gage height, 4.11 ft); minimum recorded, 6.0 cfs Apr. 7, 1948, Mar. 30, 1949; minimum gage height recorded, -0.06 ft Apr. 7, 1948.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0	6.9	1.6	158
0.2	13	2.0	256
.4	23	2.5	402
.7	43	3.0	577
1.0	67	3.7	863
1.3	101		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	28	19	13	a9.2	8.7	8.5	56	389	536	225	59
2	22	28	18	14	a9.5	8.7	8.7	53	280	555	198	55
3	22	26	18	14	a10	8.7	9.5	50	215	585	193	52
4	25	26	18	13	11	9.0	10	53	179	650	300	50
5	24	27	16	13	11	9.2	13	70	165	619	305	47
6	28	26	17	12	11	8.7	16	97	156	592	230	46
7	26	26	18	13	11	8.7	22	110	152	585	167	44
8	25	26	18	12	9.0	8.5	24	104	139	544	141	43
9	34	19	*17	13	10	8.5	25	100	129	504	122	39
10	34	22	16	12	11	8.5	24	111	148	435	110	38
11	39	24	17	12	10	b8.2	24	129	228	373	101	38
12	49	23	17	12	10	b8.2	24	165	331	343	98	38
13	49	23	17	12	10	8.2	30	143	518	380	95	36
14	48	23	16	12	b10	8.2	40	116	518	418	87	34
15	52	22	16	12	*10	8.2	46	108	588	418	80	32
16	48	21	16	12	9.5	8.5	46	137	*786	425	*78	30
17	44	22	15	12	9.5	8.2	53	203	777	425	78	29
18	*40	22	15	11	9.5	b8.2	63	305	719	412	75	29
19	38	22	15	9.5	9.5	8.2	67	*340	698	386	73	29
20	36	22	15	9.5	9.2	8.2	*67	343	678	*364	70	28
21	34	22	14	9.8	9.2	8.5	63	364	623	334	67	27
22	32	21	14	9.8	9.2	8.5	57	442	540	297	84	26
23	30	20	14	9.5	9.2	8.2	54	508	462	267	97	24
24	29	19	14	9.5	9.2	7.9	52	536	480	256	91	23
25	29	19	14	12	9.0	8.2	51	500	504	246	90	23
26	28	19	13	12	9.0	8.5	53	494	518	238	71	22
27	28	19	13	12	9.0	8.5	59	562	483	225	64	22
28	27	19	14	b11	9.0	b8.5	60	833	522	246	*66	21
29	30	19	14	b8.8	-	8.2	63	723	536	508	86	21
30	30	20	14	a8.6	-	*8.5	61	570	522	358	72	20
31	30	-	14	a9.0	-	8.5	-	500	-	272	64	-
Total	1,032	675	486	355.0	272.7	261.5	1,193.7	8,825	12,983	12,796	3,678	1,025
Mean	33.3	22.5	15.7	11.5	9.74	8.44	39.8	285	433	413	119	34.2
Cfsm	0.985	0.666	0.464	0.340	0.288	0.250	1.18	8.43	12.8	12.2	3.52	1.01
In.	1.14	0.74	0.53	0.39	0.30	0.29	1.31	9.71	14.29	14.08	4.05	1.13
Ac-ft	2,050	1,340	964	704	541	519	2,370	17,500	25,750	25,380	7,300	2,030

Calendar year 1950: Max 816 Min - Mean 118 Cfsm 3.49 In. 47.54 Ac-ft 85,700
Water year 1950-51: Max 833 Min 7.9 Mean 119 Cfsm 3.52 In. 47.96 Ac-ft 86,450

Peak discharge (base, 600 cfs).--May 28 (10:30 p.m.) 876 cfs (3.73 ft); June 17 (12:30 a.m.) 941 cfs (3.88 ft); July 4 (11 p.m.) 748 cfs (3.43 ft); July 29 (12:30 p.m.) 727 cfs (3.38 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Horseshoe Creek near Driggs, Idaho

Location.--Lat 43°44'00", long. 111°15'30", in sec. 27, T. 5 N., R. 44 E., on left bank at mouth of canyon 90 ft upstream from bridge on old railroad grade, 4 miles upstream from mouth, and 7½ miles west of Driggs.

Drainage area.--11.7 sq mi.

Records available.--May 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,200 ft (from topographic map).

Average discharge.--5 years, 11.8 cfs.

Extremes.--Maximum discharge during year, 65 cfs May 21 (gage height, 3.74 ft); minimum recorded, 1.9 cfs Sept. 9, 10 (gage height, 1.55 ft), but may have been less during winter period.

1946-51: Maximum discharge, 77 cfs May 19, 1949; maximum gage height, 4.16 ft May 23, 1950; minimum discharge, 0.7 cfs Nov. 12, 1946, but may have been less during winter period; minimum gage height observed, 0.96 ft Feb. 11, 1947.

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

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	7.4	5.4				5.0	32	38	17	8.8	4.4
2	7.1	7.4	5.5				6.0	29	36	17	8.3	4.0
3	7.4	6.9	5.7				8.0	28	33	15	8.1	3.9
4	7.3	6.8	5.2				10	30	31	16	14	3.5
5	7.1	6.6					13	34	30	16	11	3.5
6	7.1	6.6					16	38	30	15	9.3	3.4
7	6.8	6.5					19	39	29	15	8.6	3.2
8	6.8	7.4		4			20	40	27	15	8.0	2.8
9	6.5	5.4	(*)				22	42	26	15	8.0	2.8
10	6.5	5.5	5				21	42	25	14	7.4	2.6
11	6.5	6.5				3	20	44	24	14	6.9	3.7
12	6.3	6.0				(*)	20	47	25	14	6.6	4.8
13	6.1	5.8					24	44	28	13	6.0	4.6
14	6.1	6.0					27	41	27	12	5.8	4.2
15	6.0	5.5			(*)		24	40	26	12	5.5	3.1
					3							
16	5.8	6.0					24	41	25	12	5.5	3.1
17	5.7	6.1					25	43	*25	11	4.8	3.0
18	5.5	6.8					28	47	24	10	4.4	3.4
19	*5.7	6.3					32	*50	24	10	4.3	3.1
20	5.7	7.1					*31	50	23	*9.7	4.8	3.1
21	5.7	9.0					30	51	22	9.2	6.1	3.9
22	5.5	7.3					27	48	22	9.0	9.0	4.2
23	5.7	6.6					26	48	21	8.6	10	3.9
24	6.3	6.1	4.5	3.5			26	48	20	8.1	9.9	3.7
25	7.3	6.1					27	47	20	8.0	8.8	3.5
26	7.4	6.0				3.5	29	46	19	7.3	6.5	4.2
27	8.1	5.8					35	45	19	8.5	5.5	4.3
28	8.1	5.5					37	47	18	9.9	*6.0	4.9
29	8.5	5.5			-		38	45	18	12	6.5	4.9
30	7.4	6.0			-		34	42	17	10	5.4	4.4
31	7.6	-			-		-	41	-	9.0	4.8	-
Total	206.4	192.5	148.8	116.0	84.0	98.5	704.0	1,309	752	372.3	224.6	112.1
Mean	6.66	6.42	4.80	3.74	3.00	3.18	23.5	42.2	25.1	12.0	7.25	3.74
Cfsm	0.569	0.549	0.410	0.320	0.256	0.272	2.01	3.61	2.15	1.03	0.620	0.320
In.	0.66	0.61	0.47	0.37	0.27	0.31	2.24	4.16	2.39	1.18	0.71	0.36
Ac-ft	409	382	295	230	167	195	1,400	2,600	1,490	738	445	222

Calendar year 1950: Max 68 Min - Mean 15.1 Cfsm 1.29 In. 17.51 Ac-ft 10,930
Water year 1950-51: Max 51 Min - Mean 11.8 Cfsm 1.01 In. 13.73 Ac-ft 8,570

Peak discharge (base, 50 cfs).--Apr. 29 (5 a.m.) 51 cfs (3.54 ft); May 12 (5 p.m.) 53 cfs (3.48 ft); May 21 (10:30 p.m.) 65 cfs (3.74 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 5 to Apr. 6 (no gage-height records Dec. 5-8, Jan. 1 to Feb. 2; discharge estimated on basis of weather records and records for other streams in Teton River basin.

Teton River near Tetonia, Idaho

Location.--Lat 43°51', long. 111°15', in sec. 15, T. 6 N., R. 44 E., on right bank $1\frac{3}{4}$ miles downstream from Highway bridge, 4 miles downstream from Packsaddle Creek, and 6 miles northwest of Tetonia.

Drainage area.--471 sq mi (revised).

Records available.--October 1929, March 1930 to September 1932, May to September 1934, July to September 1935, May to September 1940, and June 1941 to September 1951 in reports of Geological Survey. October and November 1932, July to September 1936, and July to September 1937 in reports of Water District No. 36, State of Idaho.

Gage.--Water-stage recorder. Datum of gage is 5,910.7 ft above mean sea level, unadjusted. Since November 1941, supplementary staff gage at site $1\frac{3}{4}$ miles upstream.

Average discharge.--12 years (1930-32, 1941-51), 399 cfs.

Extremes.--Maximum discharge during year, 1,400 cfs May 30 (gage height, 2.55 ft); minimum daily, 150 cfs Jan. 31, Feb. 1.
1929-32, 1934-35, 1940-51: Maximum discharge observed, 1,900 cfs June 28, 1945 (gage height, 2.97 ft); minimum observed, 62 cfs Jan. 16, 17, 1943.

Remarks.--Records good except those for periods of ice effect or no recorder record, which are fair. Many diversions from tributaries above station for irrigation.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	535	*408	330	215	150	210	360	515	1,140	521	984	552
2	516	408	314	210	160	210	660	425	984	515	880	545
3	510	386	290	220	180	210	680	386	873	521	830	512
4	478	370	250	*230	200	210	720	359	773	533	1,050	515
5	454	364	220	230	220	210	740	354	703	552	1,190	508
6	443	354	*230	220	240	210	710	364	682	545	1,170	508
7	437	344	250	210	260	210	689	397	655	558	1,030	502
8	425	349	290	210	*299	210	527	443	615	539	887	490
9	410	339	300	215	310	210	*577	466	596	533	822	472
10	400	310	305	220	310	210	502	437	552	*545	773	466
11	390	330	305	225	310	190	392	425	539	583	717	466
12	380	330	300	225	300	*175	380	552	533	622	668	484
13	375	325	290	225	290	200	397	577	696	583	628	478
14	380	325	280	225	280	215	402	515	924	558	596	460
15	392	320	275	230	270	*220	354	454	910	545	577	448
16	397	310	270	230	260	220	329	431	954	545	570	448
17	386	330	270	230	250	223	329	443	1,110	545	552	443
18	370	354	270	230	240	200	329	472	1,200	545	545	437
19	359	380	265	220	230	208	349	521	1,160	545	539	431
20	354	380	260	210	220	210	349	583	*1,040	577	539	419
21	349	400	260	210	220	220	359	655	932	609	577	419
22	349	480	260	210	230	235	386	*738	822	609	675	419
23	349	400	260	220	235	230	349	837	738	583	873	419
24	349	350	260	230	235	223	*329	962	648	558	902	402
25	359	324	260	235	220	230	349	1,000	589	558	858	392
26	364	320	250	230	210	250	344	977	545	564	745	397
27	397	310	240	225	210	245	431	954	527	577	648	386
28	472	305	230	215	210	245	448	1,080	515	682	*609	*380
29	454	300	215	190	-	242	431	1,310	502	880	615	375
30	402	305	220	160	-	270	539	1,360	508	1,100	596	380
31	397	-	225	150	-	324	-	1,260	-	*1,190	570	-
Total	12,632	10,510	8,244	6,705	6,749	6,875	13,740	20,252	22,965	18,920	23,215	13,562
Mean	407	350	266	216	241	222	458	653	766	610	749	452
Ac-ft	25,060	20,850	16,350	13,300	13,390	13,640	27,250	40,170	45,550	37,530	46,050	26,900

Calendar year 1950: Max 1,420 Min 100 Mean 456 Ac-ft 329,900
Water year 1950-51: Max 1,360 Min 150 Mean 450 Ac-ft 326,000

* Discharge measurement made on this day.

Note.--No recorder record Nov. 10 to Apr. 6 (stage-discharge relation affected by ice Nov. 11, Dec. 9 to Feb. 24); discharge computed on basis of 6 discharge measurements, weekly readings on supplementary staff gage, weather records, and records for station near St Anthony.

Teton River near St. Anthony, Idaho

Location.--Lat 43°56', long. 111°37', in sec. 15, T. 7 N., R. 41 E., on right bank half a mile upstream from railroad bridge and 4 miles southeast of St. Anthony.

Drainage area.--890 sq mi (revised).

Records available.--January 1890 to September 1893, April 1903 to June 1909, April 1920 to September 1951 (no winter records 1903, 1920, 1921, 1923-33). Published as "near Wilford" or "at Chase's Ranch" 1890-93.

Gage.--Water-stage recorder. Datum of gage is 4,971.8 ft above mean sea level, datum of 1929. Apr. 5, 1890, to Sept. 30, 1893, staff gage at site 1 mile downstream at different datum. Apr. 23, 1903, to June 30, 1909, staff gage at site three-quarters of a mile upstream from present site at different datum. Apr. 19, 1920, to May 1, 1921, staff gage and May 2, 1921, to Nov. 5, 1933, water-stage recorder at site 400 ft downstream from present site at different datum.

Average discharge.--18 years (1933-51), 754 cfs.

Extremes.--Maximum discharge during year, 3,490 cfs May 29 (gage height, 6.03 ft); minimum, 205 cfs Jan. 28 (gage height, 1.49 ft).
1890-93, 1903-9, 1920-51: Maximum discharge, 7,820 cfs June 5, 1909 (gage height, 6.90 ft, site and datum then in use); minimum, 88 cfs Mar. 12, 1906 (gage height, 1.00 ft, site and datum then in use).

Remarks.--Records excellent except those for periods of ice effect, which are fair. About 40,000 acres of land irrigated from diversions above station. Water is diverted at times during irrigation season from Henrys Fork through Cross Cut Canal to Teton River about three-quarters of a mile above station (1,020 acre-ft diverted into river during 1951 irrigation season).

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	756	*644	549	b380	b280	b415	618	1,120	2,500	1,150	1,490	866
2	750	628	526	b390	b350	b390	888	954	2,040	*1,150	1,320	844
3	743	618	466	b410	b440	b360	1,040	837	1,760	1,160	1,250	810
4	719	592	b450	*b430	b500	b360	1,010	789	1,530	1,210	1,470	796
5	706	578	b400	b450	b500	b365	1,070	844	1,390	1,250	1,820	789
6	689	568	*b400	b420	b500	b365	1,090	1,120	1,310	1,230	1,720	762
7	683	563	b430	b380	b505	b380	1,050	1,350	1,290	1,220	1,530	750
8	678	563	b460	b380	*b507	391	998	1,410	1,220	1,190	1,350	731
9	666	530	b460	b390	b530	466	*939	1,450	1,180	1,140	1,230	725
10	661	462	489	b390	b550	430	902	*1,430	1,110	1,100	1,160	719
11	644	539	484	b400	b590	408	756	1,410	1,110	1,090	1,090	712
12	634	526	489	b410	b570	*417	706	1,670	1,220	1,120	1,040	731
13	628	516	494	b420	b530	435	743	1,730	*1,760	1,110	991	737
14	623	521	494	b430	b510	412	837	1,440	2,240	1,100	932	719
15	628	512	476	b430	b490	426	789	1,250	2,020	1,090	909	706
16	661	480	484	435	b470	422	737	1,250	2,240	1,060	917	700
17	644	521	476	435	b460	399	737	1,510	2,490	1,070	866	689
18	623	530	471	374	b450	382	776	1,830	2,480	1,070	816	689
19	602	644	462	b360	b440	412	852	2,060	2,300	1,120	803	683
20	592	639	458	b350	435	399	873	2,110	2,120	1,090	789	*672
21	587	655	453	b370	435	426	873	2,190	1,940	1,100	*823	666
22	578	776	444	b390	435	530	844	2,390	1,720	1,080	939	666
23	578	613	417	412	440	476	769	2,600	1,530	1,040	1,250	666
24	573	558	444	435	448	466	725	2,810	1,570	1,010	1,310	661
25	578	539	444	444	444	489	712	2,810	1,260	991	1,310	655
26	592	530	408	458	440	578	743	2,650	1,220	976	1,210	644
27	608	521	b400	458	435	544	917	2,680	1,190	991	1,070	644
28	672	507	b390	391	430	507	1,150	3,010	1,170	1,080	1,000	634
29	683	498	b395	301	-	484	1,100	3,410	1,180	1,330	961	628
30	666	516	b400	b290	-	507	1,150	3,160	1,150	*1,530	939	628
31	644	-	b400	b280	-	568	-	2,860	-	1,650	895	-
Total	20,089	16,887	14,013	12,293	13,114	13,609	26,394	58,134	49,040	35,498	35,200	21,322
Mean	648	563	452	397	468	439	880	1,875	1,635	1,145	1,135	711
Ac-ft	39,850	33,490	27,790	24,380	26,010	26,990	52,350	115,300	97,270	70,410	69,820	42,290

Calendar year 1950: Max 2,950 Min 240 Mean 873 Ac-ft 632,300
Water year 1950-51: Max 3,410 Min 280 Mean 865 Ac-ft 626,000

Peak discharge (base, 1,800 cfs).--May 29 (3 p.m.) 3,490 cfs (6.03 ft); June 17 (1 p.m.) 2,620 cfs (5.02 ft); Aug. 5 (11 p.m.) 2,700 cfs (5.08 ft).

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

Diversions from Teton River between St. Anthony gaging station and mouth, Idaho

Between St. Anthony gaging station and mouth, 17 canals divert water from Teton River for irrigation. Records available for part of each irrigation season from 1919 to 1951. Discharge of canals computed from daily or twice-weekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

Discharge, in cubic feet per second, May to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								144	1,190	1,110	764	353
2								160	1,110	1,160	696	310
3								119	1,040	1,090	670	312
4								117	1,030	1,090	614	333
5								118	1,030	1,090	475	329
6								122	1,010	1,140	361	468
7								162	1,020	1,200	329	445
8								174	1,020	1,200	319	414
9								168	1,020	1,180	304	457
10								173	1,010	1,150	320	449
11								173	1,020	1,130	320	437
12								183	1,120	1,160	329	452
13								198	1,270	1,120	376	392
14								208	1,360	1,080	415	382
15								207	1,340	1,110	494	381
16								219	1,320	1,140	511	361
17								152	1,350	1,090	633	367
18								234	1,360	1,020	659	419
19								232	1,320	1,140	704	423
20								372	1,350	1,080	717	427
21								452	1,320	1,060	683	427
22								608	1,290	1,040	674	418
23								756	1,200	998	544	440
24								864	1,110	962	442	467
25								920	1,080	924	425	443
26								971	1,080	942	395	419
27								1,070	1,050	956	386	411
28								1,210	1,060	995	373	417
29								1,220	1,070	966	383	415
30								1,200	1,040	838	365	406
31								1,180	-	887	356	-
Total								14,086	34,590	33,048	15,036	12,174
Mean								454	1,153	1,066	485	406
Ac-ft								27,940	68,610	65,550	29,820	24,150

Calendar year : Max Min Mean Ac-ft

The season : Max - Min - Mean - Ac-ft 216,100

Henrys Fork near Rexburg, Idaho

Location.--Lat 43°50', long. 111°54', in sec. 30, T. 6 N., R. 39 E., on right bank 200 ft downstream from highway bridge, downstream from all tributaries, and 7 miles west of Rexburg.

Drainage area.--2,920 sq mi (revised), approximately.

Records available.--April 1909 to September 1951. Prior to 1911, published as North Fork of Snake River near Rexburg.

Gage.--Water-stage recorder. Datum of gage is 4,807.7 ft above mean sea level, datum of 1929. Apr. 13, 1909, to Sept. 28, 1912, staff gage at datum 0.67 ft higher. Sept. 29, 1912, to Apr. 4, 1913, staff gage at present datum.

Average discharge.--42 years (1909-51), 1,898 cfs.

Extremes.--Maximum discharge during year, 5,210 cfs May 14 (gage height, 8.33 ft); minimum, 695 cfs July 18 (gage height, 3.10 ft).
1909-51: Maximum discharge, 9,490 cfs June 29, 1927 (gage height, 9.90 ft); minimum, 183 cfs Mar. 24-28, 1934 (gage height, 1.45 ft).

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by operation of powerplant near Ashton and by Henrys Lake (see following page), Island Park Reservoir (see p. 28), and Grassy Lake Reservoir (see following page). About 172,000 acres irrigated by diversions above station. Part of the return flow escapes westward beneath the Snake River plains above gaging station.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,320	2,650	1,830	1,850	1,630	2,000	2,160	3,550	4,020	1,350	1,900	2,490
2	2,300	2,590	1,960	1,710	1,770	2,020	2,290	3,240	3,470	*1,350	1,730	2,300
3	2,290	2,480	1,920	1,830	1,900	2,000	2,480	2,840	2,720	1,330	1,520	2,270
4	2,270	2,440	1,970	1,870	2,100	1,940	2,590	2,570	*2,150	1,340	1,750	2,180
5	2,290	2,440	1,800	1,850	2,150	1,910	2,630	2,670	1,660	1,380	2,970	2,120
6	2,290	2,430	*1,650	1,820	2,180	2,100	2,710	3,140	1,560	1,280	3,610	2,040
7	2,300	2,390	1,850	1,730	2,180	2,070	2,700	3,810	1,580	1,090	4,010	1,860
8	2,280	2,370	2,050	1,850	2,180	2,030	2,660	4,390	1,640	968	4,170	1,740
9	2,250	2,410	2,080	1,880	2,160	2,060	2,620	4,940	1,600	914	3,990	1,790
10	2,210	2,200	2,070	1,800	2,170	2,080	2,580	*5,170	1,520	872	3,620	1,820
11	2,200	2,230	2,060	1,830	2,120	1,990	*2,380	5,070	1,400	1,030	3,070	1,780
12	2,190	2,330	2,040	1,800	2,090	*1,900	2,260	4,940	1,300	1,050	2,840	1,840
13	2,140	2,320	*2,030	1,800	2,060	2,010	2,340	5,000	*1,440	1,000	2,640	2,100
14	2,130	2,310	2,020	1,800	*2,050	2,050	2,450	5,170	2,480	914	*2,270	*2,160
15	2,130	2,280	2,010	*1,800	2,070	2,040	2,620	4,730	3,170	808	1,860	2,120
16	2,200	2,210	1,980	1,840	2,070	2,020	2,540	4,350	3,220	758	1,630	2,080
17	2,370	1,910	1,960	1,850	2,070	1,980	2,440	4,160	3,490	720	1,400	2,030
18	2,350	1,920	1,950	1,810	2,050	1,920	2,580	4,480	3,830	705	1,350	2,060
19	2,290	1,900	1,940	1,830	2,080	1,930	2,850	4,800	3,660	753	1,230	2,140
20	2,270	1,930	1,940	1,780	2,040	1,990	3,030	4,910	3,160	758	1,210	2,110
21	2,250	1,910	1,900	1,830	2,020	2,020	2,970	4,830	2,810	786	1,200	2,080
22	2,230	2,080	1,930	*1,890	2,020	2,170	2,920	4,730	2,550	902	1,680	2,080
23	2,310	2,080	1,880	1,850	2,020	2,220	*2,460	4,570	2,480	*902	2,390	2,110
24	2,260	1,940	1,900	1,880	2,040	2,030	2,350	4,480	2,370	872	2,600	2,110
25	2,290	1,800	1,900	1,860	2,070	2,080	2,350	4,410	2,190	878	2,890	2,090
26	2,350	1,800	1,830	1,870	2,000	2,180	2,510	4,180	1,900	830	2,880	2,050
27	2,410	1,780	1,780	1,800	2,000	2,220	2,790	3,860	1,680	872	2,700	2,080
28	2,440	1,750	1,790	1,500	2,000	2,140	3,320	3,900	1,560	974	2,540	2,090
29	2,490	1,720	1,870	1,350	-	2,080	3,520	4,200	1,400	1,190	2,740	2,070
30	*2,510	1,740	1,890	1,400	-	2,050	3,600	4,360	1,330	1,620	2,710	2,050
31	2,550	-	1,880	1,700	-	2,070	-	4,190	-	1,820	2,630	-
Total	71,160	64,340	59,660	55,260	57,290	63,300	79,700	131,640	69,340	32,016	75,730	61,840
Mean	2,295	2,145	1,925	1,783	2,046	2,042	2,657	4,246	2,311	1,033	2,443	2,061
Ac-ft	141,100	127,600	118,300	109,600	113,600	125,600	158,100	261,100	137,500	63,500	150,200	122,700

Calendar year 1950: Max 6,440 Min 781 Mean 2,224 Ac-ft 1,610,000
Water year 1950-51: Max 5,170 Min 705 Mean 2,250 Ac-ft 1,629,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 4-9, Jan. 3 to Feb. 28, Mar. 6-8.

Smaller reservoirs in Henrys Fork basin

Henrys Lake.--Staff gage, lat 44°36', long. 111°21', at dam on Henrys Fork in SW¼ sec. 26, T. 15 N., R. 43 E., 4 miles south of former Lake, Idaho, post office. Datum of gage is 6,457.16 ft above mean sea level (levels by Bureau of Reclamation). Drainage area, 98 sq mi (revised) approximately, including that of Dry Creek. Records available, June 1923 to September 1951 (fragmentary). Maximum contents observed during year, 82,542 acre-ft June 27 (gage height, 15.50 ft); minimum observed, 69,956 acre-ft Oct. 9 (gage height, 13.50 ft). Maximum contents observed during period 1923-51, 83,184 acre-ft June 12, 1947; minimum observed, 140 acre-ft Nov. 8, 1934 (gage height, 0.03 ft).

Reservoir is formed on natural lake by concrete dam; storage began Sept. 21, 1922; dam completed July 1923. Capacity, 79,351 acre-ft between gage heights 0.0 ft (normal low-water level of Henrys Lake prior to construction of dam) and 15.0 ft (top of 5-foot flashboards on spillway). Floodwaters of Dry Creek are diverted into Henrys Lake at times (none diverted during water year 1950-51). Water used for irrigation near St. Anthony. Gage read occasionally. Records given herein represent usuable contents. Capacity table furnished by North Fork Reservoir Co.

Grassy Lake.--Mercury pressure gage, lat 44°08', long. 110°49', in gatehouse at dam on Grassy Creek, approximately in sec. 7, T. 48 N., R. 116 W. (unsurveyed), half a mile upstream from mouth and 24 miles northwest of Moran, Wyo. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Drainage area, 12 sq mi, approximately, including basin of Cascade Creek, from which water is diverted into Grassy Lake. Records available, October 1939 to September 1951. Maximum contents during year, 15,260 acre-ft June 13 (elevation, 7,210.25 ft); minimum, 12,114 acre-ft Aug. 23-25 (elevation, 7,199.75 ft). Maximum contents during period 1939-51, 15,446 acre-ft July 2, 1943 elevation, 7,210.85 ft); no contents Oct. 2-5, 1940.

Reservoir is formed by earth-fill, rock-faced dam; storage began Oct. 18, 1939. Capacity, 15,182 acre-ft between elevations 7,135.0 ft (sill of trash rack) and 7,210.0 ft (crest of spillway). Water is used for irrigation of lands in Fremont-Madison irrigation district, Idaho. Gage read once daily about 7 a.m. except for period November to June when occasional readings were made. Records given herein represent usable contents. Gage-height record and capacity table furnished by Bureau of Reclamation.

Monthly elevations or gage heights and contents, water year October 1950 to September 1951

Date	Henrys Lake			Grassy Lake		
	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	a69,100	-	7,199.95	12,172	-
Oct. 31	-	a71,830	+2,730	-	a12,280	+108
Nov. 30	-	a74,200	+2,370	-	a12,490	+210
Dec. 31	-	a75,600	+1,400	-	a12,710	+220
Calendar year 1950	-	-	+17,000	-	-	+10
Jan. 31	-	a76,600	+1,000	-	a12,910	+200
Feb. 28	-	a77,100	+500	-	a13,110	+200
Mar. 31	-	a77,400	+300	-	a13,250	+140
Apr. 30	-	a79,500	+2,100	-	a13,460	+210
May 31	-	a81,600	+2,100	-	a15,070	+1,610
June 30	-	a82,000	+400	7,210.00	15,182	+112
July 31	-	a79,000	-3,000	7,207.85	14,516	-666
Aug. 31	-	a75,000	-4,000	7,199.80	12,129	-2,387
Sept.30	-	a71,400	-3,600	7,199.80	12,129	0
Water year 1950-51	-	-	+2,300	-	-	-43

a No gage-height record; contents interpolated.

Snake River near Shelley, Idaho

Location.--Lat 43°24'50", long. 112°08'05", in SW¼ sec. 17, T. 1 N., R. 37 E., on right bank a quarter of a mile upstream from Woodville bridge, a quarter of a mile southeast of Woodville, and 2½ miles north of Shelley.

Drainage area.--9,790 sq mi, approximately.

Records available.--March 1915 to September 1951 (summer months only for some years).

Gage.--Water-stage recorder. Datum of gage is 4,599.0 ft above mean sea level, datum of 1929.

Average discharge.--18 years (1931-35, 1937-51), 5,122 cfs.

Extremes.--Maximum discharge during year, 26,600 cfs May 31 (gage height, 12.27 ft); minimum, 2,630 cfs Jan. 9 (gage height, 5.56 ft).
1915-51: Maximum discharge, 47,200 cfs June 17, 1918 (gage height, 16.97 ft); minimum, 288 cfs Nov. 5, 1934 (gage height, 2.22 ft).
Maximum discharge known, 70,000 cfs (estimated) June 6, 1894, at former station at Eagle Rock (now Idaho Falls), 7 miles upstream from present site.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Some regulation by Jackson Lake (see p. 13), Henrys Lake (see preceding page), Island Park Reservoir (see p. 28), and Grassy Lake (see preceding page). Many diversions above station for irrigation.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 13 to June 30)

5.5	2,540	10.0	17,500
6.0	3,500	11.0	21,600
7.0	6,370	12.0	26,000
8.0	9,790	12.9	30,000
9.0	13,500		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,900	4,900	4,100	b4,100	b3,050	6,000	a7,650	15,100	24,700	13,400	7,290	7,390
2	5,150	5,060	4,300	b3,650	b3,100	5,890	a7,900	13,400	21,700	13,000	6,600	6,960
3	5,030	5,120	4,440	b3,350	3,190	5,760	a8,250	a12,200	18,500	12,100	6,210	6,600
4	4,900	5,190	4,490	b3,600	3,400	5,600	a8,700	a10,700	15,500	11,500	7,290	5,760
5	4,810	5,030	4,520	b3,950	4,750	5,280	a9,000	10,400	12,500	11,500	10,600	5,310
6	4,840	4,810	4,300	b3,950	5,280	5,310	a9,500	a12,500	11,800	11,500	12,200	4,720
7	4,940	4,900	4,000	b3,600	5,470	6,050	9,860	a14,000	11,500	11,500	12,200	4,200
8	5,000	4,940	4,000	b3,100	5,670	6,770	10,300	a15,000	11,100	11,200	12,600	4,070
9	5,000	4,780	4,750	2,810	6,020	6,340	10,800	16,300	10,600	10,500	12,300	4,220
10	4,940	a4,900	a4,650	3,270	6,150	6,500	11,100	16,500	9,860	9,080	11,700	4,940
11	4,840	4,690	a4,600	3,710	6,240	6,900	10,500	16,700	9,320	7,770	10,700	*4,840
12	4,720	4,870	a4,560	b4,100	6,700	6,730	9,150	17,400	8,700	7,290	9,470	5,060
13	4,720	4,970	4,520	b4,500	7,100	6,800	8,870	18,900	9,500	7,130	*8,280	5,350
14	4,380	5,000	4,610	4,440	6,700	7,160	9,150	19,300	12,000	6,670	6,700	5,280
15	4,490	*5,000	4,720	4,520	6,400	7,030	10,500	17,600	14,800	6,050	5,730	4,840
16	4,460	5,000	4,640	4,550	6,320	7,130	11,500	16,100	16,200	6,240	4,550	4,580
17	4,490	4,750	4,690	4,690	6,280	7,130	11,000	15,800	18,200	6,020	3,730	3,900
18	4,550	4,460	4,840	*4,550	6,270	6,900	11,000	16,900	21,000	*6,050	3,590	3,620
19	4,460	4,660	*4,810	b4,300	6,300	6,770	12,400	18,700	22,500	5,760	4,550	3,570
20	4,300	4,720	4,780	b4,150	*6,350	*6,930	*13,800	20,100	22,500	5,730	4,780	4,140
21	4,250	4,640	4,780	b4,000	6,200	7,100	14,200	*20,300	*19,500	6,210	4,870	4,120
22	4,140	4,750	4,780	4,100	6,080	7,360	13,400	19,500	16,100	6,860	5,540	4,250
23	4,040	5,060	4,660	b4,400	5,700	7,630	12,100	19,300	15,200	6,470	6,400	4,520
24	3,920	5,000	4,460	b4,600	5,540	7,500	11,000	20,000	14,400	5,730	7,530	4,460
25	3,850	4,660	4,520	4,870	5,920	7,330	11,000	21,000	15,200	5,280	8,280	4,360
26	4,070	4,410	4,520	b5,200	6,300	7,390	a10,600	21,900	14,800	4,810	8,140	4,440
27	4,330	4,330	4,300	b5,000	6,200	7,530	a10,300	21,600	13,800	4,810	6,930	4,440
28	4,410	4,220	4,410	b4,300	6,100	7,390	12,500	21,500	13,400	4,970	6,730	4,380
29	4,640	4,170	4,460	b3,700	-	7,390	14,100	23,100	13,800	6,730	6,900	4,410
30	4,690	4,070	4,580	b3,000	-	7,360	15,000	25,300	13,400	7,560	7,560	4,550
31	4,810	-	b4,500	b3,030	-	7,430	-	26,300	-	8,150	7,600	-
Total	142,070	143,060	140,290	125,090	158,780	210,390	325,130	553,400	452,080	247,560	237,550	143,280
Mean	4,583	4,769	4,525	4,035	5,671	6,787	10,840	17,850	15,080	7,986	7,663	4,776
Ac-ft	281,800	283,800	278,300	248,100	314,900	417,300	644,900	‡1,098	896,700	491,000	471,200	284,200

Calendar year 1950: Max 27,300 Min 1,750 Mean 7,471 Ac-ft 5,409,000
Water year 1950-51: Max 26,300 Min 2,810 Mean 7,887 Ac-ft 5,710,000

* Discharge measurement made on this day.
‡ Expressed in thousands.
a No gage-height record; discharge estimated on basis of records for stations near Heise and Blackfoot.
b Stage-discharge relation affected by ice.

Diversions from Snake River between Shelley and Blackfoot gaging stations, Idaho

Between Shelley and Blackfoot gaging stations, 13 canals divert water from Snake River for irrigation. Records available during each irrigation season from 1919 to 1951. The two largest canals are equipped with recorders, the others with staff gages, which are read once daily. Discharge combined to show total diverted flow. Records good.

Discharge, in cubic feet per second May to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								1,030	3,140	3,690	3,320	2,400
2								1,060	3,060	3,750	3,310	2,370
3								1,170	2,890	3,780	3,290	2,450
4								1,210	2,860	3,720	3,280	2,740
5								1,280	2,770	3,810	2,890	2,780
6								1,420	2,820	3,790	2,890	2,820
7								1,630	2,930	3,850	2,800	2,870
8								1,790	2,940	3,880	2,700	2,990
9								1,950	3,020	3,880	2,290	3,030
10								1,970	3,200	3,900	2,340	3,180
11								2,070	3,390	3,910	2,230	3,090
12								2,120	3,570	3,680	2,570	2,920
13								2,160	3,700	3,910	2,760	2,780
14								2,230	3,720	3,800	2,930	2,720
15								2,410	3,860	3,830	2,970	2,620
16								2,530	3,830	3,840	3,080	2,540
17								2,730	3,810	3,790	3,060	2,480
18								2,800	3,860	3,800	2,820	2,440
19								2,850	3,880	3,940	2,880	2,460
20								2,830	3,860	3,960	2,770	2,480
21								2,890	3,800	3,950	2,850	2,480
22								2,950	3,760	3,920	2,860	2,340
23								2,980	3,540	3,800	2,600	2,220
24								3,060	3,300	3,810	2,590	2,200
25								3,110	3,210	3,790	2,380	2,160
26								3,160	3,180	3,840	2,320	2,100
27								3,010	3,330	3,860	1,930	2,070
28								3,000	3,460	3,880	2,210	2,000
29								3,110	3,620	3,530	2,410	1,870
30								3,250	3,640	3,490	2,510	1,800
31								3,220	-	3,430	2,500	-
Total								72,980	101,950	117,810	84,340	75,400
Mean								2,354	3,398	3,800	2,721	2,513
Ac-ft								144,800	202,200	233,700	167,300	149,600

Calendar year : Max Min Mean Ac-ft
The season : Max - Min - Mean - Ac-ft 897,600

Blackfoot River near Blackfoot, Idaho

Location.--lat 43°07'50", long. 112°28'35" (revised), at east quarter corner of sec. 28, T. 3 S., R. 34 E., on left bank 125 ft downstream from highway bridge, 2 miles upstream from mouth and 8 miles southwest of Blackfoot.

Drainage area.--1,295 sq mi (revised).

Records available.--July 1913 to September 1951 (summer months only for many years).

Gage.--Water-stage recorder. Altitude of gage is 4,420 ft (from river-profile survey). Prior to May 7, 1926, staff gages and May 8, 1926, to June 25, 1937, water-stage recorder at site half a mile upstream at different datum.

Average discharge.--17 years (1931-37, 1940-51), 151 cfs.

Extremes.--Maximum discharge during year, 785 cfs May 5 (gage height, 6.61 ft); minimum, 11 cfs July 20 (gage height, 1.25 ft).
1913-51: Maximum discharge, 868 cfs May 21, 1921; no flow on many days.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Flow regulated by Blackfoot Marsh Reservoir (capacity, 413,000 acre-ft). Many diversions above station for irrigation. Most of flow during nonirrigation season and part of that during irrigation season is supplied by waste from Snake River canals.

Cooperations--Gage-height record furnished by Office of Indian Affairs.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	428	564	356	a275	120	a200	266	726	255	111	151	357
2	554	568	a350	258	150	a200	280	736	*185	123	175	294
3	559	*516	a350	217	200	a200	329	751	235	112	162	181
4	556	392	350	205	260	a200	336	770	272	93	166	98
5	558	343	358	200	310	a200	342	761	276	*71	213	68
6	553	287	321	190	*367	a200	*378	743	207	65	290	62
7	546	210	314	180	430	a200	420	739	127	50	312	51
8	529	191	*314	175	520	a210	466	741	114	27	418	42
9	517	178	379	*172	600	*219	411	*761	119	30	482	43
10	524	202	412	170	530	a200	523	768	107	18	*393	42
11	516	280	a400	170	472	a190	580	761	81	18	246	48
12	478	329	a385	165	475	a195	*619	743	53	21	125	57
13	425	333	374	175	*450	206	612	751	45	31	85	73
14	385	325	368	185	311	*251	590	753	55	32	97	79
15	389	291	374	190	232	254	601	739	*70	39	96	78
16	429	270	381	190	236	293	612	707	69	37	85	79
17	426	305	356	190	240	337	622	*657	62	24	69	*75
18	428	333	315	190	246	311	601	612	70	21	*57	52
19	a428	349	316	180	238	273	594	564	62	*15	78	51
20	428	343	308	170	202	269	599	546	75	18	111	56
21	407	346	300	170	204	337	602	544	64	39	107	58
22	381	309	277	175	219	469	607	522	64	51	111	67
23	367	377	260	180	a230	535	640	481	93	69	139	79
24	358	392	254	185	a240	396	670	422	145	45	139	90
25	358	420	302	190	a230	336	*697	363	217	36	161	109
26	391	367	307	190	a225	a340	697	367	194	18	190	119
27	439	339	295	185	a220	344	686	341	149	20	225	127
28	506	346	a290	170	a215	316	676	346	109	27	276	157
29	544	350	a300	155	-	287	688	242	87	58	274	178
30	541	349	a305	140	-	259	712	342	71	173	322	191
31	559	-	a290	130	-	269	-	309	-	*161	358	-
Total	14,509	10,204	10,261	5,717	8,372	8,476	16,456	18,608	3,732	1,653	6,113	3,061
Mean	468	340	331	184	299	273	549	600	124	53.3	197	102
Ac-ft	28,780	20,240	20,350	11,340	16,610	16,810	32,640	36,910	7,400	3,280	12,120	6,070

Calendar year 1950 : Max 695 Min 22 Mean 286 Ac-ft 206,900
Water year 1950-51 : Max 770 Min 15 Mean 294 Ac-ft 212,600

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Snake River near Blackfoot.
Note.--Stage-discharge relation affected by ice Jan. 4 to Feb. 10.

Snake River near Blackfoot, Idaho

Location.--Lat 43°07', long. 112°31', in SE¼ sec. 30, T. 3 S., R. 34 E., on right bank 1,000 ft downstream from highway bridge, a quarter of a mile downstream from Blackfoot River, and 10 miles southwest of Blackfoot.

Drainage area.--11,310 sq mi.

Records available.--June 1910 to September 1951. Published as "at Clough ranch, near Blackfoot" 1924-46.

Gage.--Water-stage recorder. Altitude of gage is, 4,401 ft (from river-profile map). Prior to July 6, 1913, staff gages at practically same site and datum.

Average discharge.--25 years (1926-51), 3,899 cfs.

Extremes.--Maximum discharge during year, 23,400 cfs May 31 (gage height, 10.34 ft); minimum, 916 cfs July 27 (gage height, 1.57 ft).
1910-51: Maximum discharge, 46,200 cfs June 18, 1918 (gage height, 14.80 ft); minimum, 111 cfs Nov. 10, 1934 (gage height, 0.80 ft).
Late in summer of 1905 there was no flow in Snake River for a distance of 10 miles in vicinity of Blackfoot. On Aug. 9, 1905, discharge of Snake River just below mouth of Blackfoot River 39 cfs, supplied by ground-water inflow a short distance upstream.

Remarks.--Records excellent. Some regulation by Jackson Lake (see p. 13), Henrys Lake (see p. 44), Island Park Reservoir (see p. 28), Grassy Lake (see p. 44), and Blackfoot-Marsh Reservoir, having a combined capacity of 1,483,000 acre-ft. About 694,000 acres of land irrigated by diversions above station.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,990	5,030	4,370	4,320	2,900	5,840	7,240	14,000	22,500	10,300	4,620	5,430
2	4,740	5,150	4,370	3,990	2,950	5,750	7,400	12,300	*20,000	10,200	3,980	5,010
3	4,740	*5,230	4,480	3,510	3,100	5,770	7,730	11,300	17,600	9,150	3,520	4,640
4	4,670	5,190	4,610	3,320	3,260	5,500	8,220	10,000	14,200	8,420	3,860	3,530
5	4,610	5,090	4,650	4,010	4,110	5,460	8,730	9,500	11,400	*8,220	6,400	2,860
6	4,610	4,860	4,370	4,080	*4,970	4,970	*9,120	10,900	10,000	8,000	9,290	2,430
7	4,690	4,820	4,440	3,880	5,860	5,770	9,780	12,100	9,490	7,970	9,720	1,810
8	4,710	4,880	*4,080	3,360	5,940	6,140	10,200	13,900	9,200	7,760	10,100	1,320
9	4,670	4,820	4,710	*2,980	6,360	*6,490	10,700	*15,100	8,670	7,170	10,600	1,270
10	4,710	5,170	4,860	2,770	6,320	6,240	11,100	15,100	7,950	5,840	*10,100	1,730
11	4,610	5,030	4,820	3,300	6,280	6,750	10,400	15,200	7,150	4,710	9,090	1,910
12	4,820	5,130	4,740	3,720	6,510	6,680	9,320	15,600	6,080	3,990	7,810	2,160
13	4,730	5,230	4,710	3,940	6,890	6,660	9,060	16,600	6,180	3,720	6,240	2,530
14	4,540	5,250	4,730	4,310	6,980	6,840	9,540	17,700	7,860	3,400	4,780	2,790
15	4,520	5,230	4,880	4,200	6,640	6,980	10,300	16,600	*10,600	2,770	3,620	2,680
16	4,560	5,210	4,820	4,330	6,300	6,980	11,500	14,700	12,100	2,650	2,580	2,470
17	4,540	5,110	4,820	4,460	6,140	7,080	11,500	13,900	13,600	2,440	1,550	*2,130
18	4,650	4,940	4,880	4,510	6,180	6,930	11,300	14,500	16,100	2,360	*1,020	1,580
19	4,570	4,950	4,880	4,290	6,100	6,730	12,100	15,900	18,100	2,140	1,690	1,420
20	4,410	5,010	4,840	4,150	6,080	6,730	13,100	17,400	18,900	1,860	2,420	1,550
21	4,260	4,990	4,840	4,050	6,220	6,890	13,900	18,000	17,500	2,010	2,400	1,980
22	4,080	4,880	4,820	3,950	5,750	7,150	13,600	17,600	13,500	2,670	2,710	2,160
23	3,940	5,210	4,780	4,200	5,620	7,520	12,600	16,800	12,400	3,050	*3,530	2,570
24	3,790	5,190	4,670	4,420	5,620	7,520	11,100	17,100	12,100	2,280	4,490	2,770
25	3,760	5,010	4,630	4,470	5,500	7,200	*10,700	17,900	12,300	1,790	5,600	2,680
26	3,810	4,760	4,650	4,910	5,900	7,150	10,400	18,600	12,600	1,170	5,880	2,720
27	4,350	4,590	4,460	5,260	6,200	7,270	10,600	18,700	11,300	*996	5,710	2,850
28	4,440	4,540	4,260	4,910	6,040	7,270	11,300	18,600	10,700	1,020	4,860	2,840
29	4,630	4,440	4,480	4,190	-	7,200	13,500	19,200	10,700	2,090	4,780	3,000
30	4,780	4,390	4,820	3,520	-	7,200	14,000	20,800	10,400	4,100	5,200	3,140
31	4,920		4,670	2,860	-	7,220	-	22,900	-	*4,800	5,540	-
Total	138,850	149,330	144,140	124,170	156,720	205,880	320,040	488,500	371,180	139,046	163,690	77,960
Mean	4,479	4,978	4,650	4,005	5,597	6,641	10,670	15,760	12,370	4,485	5,280	2,599
Ac-ft	275,400	296,200	285,900	246,300	310,800	408,400	634,800	968,900	736,200	265,800	324,700	154,600

Calendar year 1950: Max 26,100 Min 588 Mean 6,404 Ac-ft 4,636,000
Water year 1950-51: Max 22,900 Min 996 Mean 6,793 Ac-ft 4,918,000

* Discharge measurement made on this day.

Portneuf River at Topaz, Idaho

Location.--Lat 42°38', long. 112°06', in sec. 23, T. 9 S., R. 37 E., on old bridge piling near left bank at upstream side of Oregon Short Line Railroad bridge, a quarter of a mile west of Topaz, 1¼ miles upstream from diversion dam of Portneuf-Marsh Valley Canal Co., 3 miles downstream from Dempsey Creek, and 6 miles southeast of McCammon.

Drainage area.--420 sq mi, approximately.

Records available.--January 1913 to September 1915, July 1919 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is 4,917.0 ft above mean sea level, preliminary, unadjusted. Prior to July 20, 1919, staff gage at site 200 ft downstream at datum 1.0 ft lower.

Average discharge.--32 years (1913-14, 1919-22, 1923-51), 195 cfs.

Extremes.--Maximum discharge observed during year, 434 cfs Feb. 10 (gage height, 2.60 ft); minimum observed, 136 cfs Sept. 19 (gage height, 1.20 ft).
1913-15, 1919-51: Maximum discharge observed, 902 cfs Apr. 3, 1913 (gage height, 6.1 ft, site and datum then in use); minimum observed, 65 cfs Oct. 9, 1934 (gage height, 0.81 ft).

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Portneuf-Marsh Valley Reservoir (capacity, 16,410 acre-ft) and Chesterfield Reservoir on Twentyfourmile Creek (capacity, 685 acre-ft). Diversions above station for irrigation of about 22,000 acres.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 7 to Sept. 30)

1.0	132
1.5	231
2.0	328
2.7	454

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	247	223	a195	184	172	218	241	309	251	229	243	202
2	239	223	192	182	180	214	245	313	251	216	239	172
3	223	214	196	180	176	210	245	298	247	223	247	168
4	227	210	196	180	172	206	245	301	243	231	243	168
5	223	210	192	180	176	194	249	309	223	233	235	160
6	218	208	192	176	*182	194	253	286	210	233	223	157
7	218	206	200	176	284	198	261	301	227	235	216	155
8	210	202	196	176	359	194	269	305	229	239	216	155
9	202	198	192	176	414	198	253	305	251	237	212	151
10	202	198	192	176	434	196	249	298	261	241	216	151
11	218	202	*192	174	333	198	265	309	271	231	220	149
12	223	202	192	176	364	194	269	309	275	223	208	147
13	220	*202	192	176	231	194	288	309	275	210	202	145
14	218	202	192	176	227	*202	292	298	263	241	194	143
15	216	202	192	174	214	210	288	305	263	245	194	143
16	218	214	192	172	210	227	300	301	251	237	202	143
17	220	218	192	176	210	223	300	298	*251	243	194	140
18	220	223	190	176	235	235	303	286	247	243	192	140
19	216	227	188	176	223	251	*315	*296	241	239	192	136
20	208	231	188	176	231	255	303	301	229	*239	196	140
21	204	223	190	176	235	267	296	279	227	243	196	149
22	208	218	192	176	239	282	288	275	259	282	192	157
23	208	214	192	176	227	290	284	275	261	275	192	153
24	212	210	190	180	223	290	280	286	269	271	*202	153
25	216	a218	188	180	210	267	280	284	271	259	198	153
26	216	a210	180	176	206	263	277	290	267	241	200	149
27	220	a205	182	174	214	259	273	271	261	241	200	149
28	216	a205	184	176	223	243	280	267	257	237	212	149
29	216	a200	184	172	-	249	330	263	247	241	208	149
30	214	a200	184	180	-	265	318	257	239	233	209	149
31	218	-	180	176	-	253	-	259	-	241	204	-
Total	6,734	6,318	5,899	5,480	6,804	7,139	8,339	9,043	7,517	7,432	6,497	4,575
Mean	217	211	190	177	243	230	278	292	251	240	210	152
Ac-ft	13,360	12,530	11,700	10,870	13,500	14,160	16,540	17,940	14,910	14,740	12,890	9,070

Calendar year 1950: Max 657 Min 143 Mean 277 Ac-ft 200,840
Water year 1950-51: Max 434 Min 136 Mean 224 Ac-ft 162,210

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for station at Pocatello.

Portneuf River at Pocatello, Idaho

Location.--Lat 42°51'40", long. 112°27'25", in NE¼NE¼ sec. 34, T. 6 S., R. 34 E., on right bank 30 ft upstream from bridge at Pocatello and 2.5 miles upstream from Pocatello Creek. Prior to Oct. 17, 1950, at site 0.8 mile downstream.

Drainage area.--1,000 sq mi, approximately.

Records available.--May 1897 to October 1899, August 1911 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,430 ft (from topographic map). May 18, 1897, to Oct. 14, 1899, staff gage at site 0.6 mile upstream at different datum. Aug. 31, 1911, to May 14, 1927, and Oct. 13, 1927, to June 14, 1928, staff gages at sites near Carson Street bridge 0.8 mile downstream at different datums. May 14, 1927, to Oct. 13, 1927, and June 14, 1928, to Sept. 28, 1950, water-stage recorder at sites near Carson Street bridge 0.8 mile downstream at different datums.

Average discharge.--38 years (1912-16, 1917-51), 258 cfs.

Extremes.--Maximum discharge during year, 630 cfs Feb. 11 (gage height, 6.10 ft); minimum, 40 cfs July 5, 7 (gage height, 3.99 ft).
1897-99, 1911-51: Maximum discharge, more than 2,000 cfs sometime during period May 13 to June 14, 1917; minimum, 5 cfs July 31, 1942, from rating curve extended below 40 cfs.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by Portneuf-Marsh Valley Reservoir (capacity, 16,410 acre-ft) and Chesterfield Reservoir (capacity, 685 acre-ft). Diversions above station for irrigation of about 33,000 acres.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

4.0	41	5.0	246
4.2	65	5.5	412
4.5	116	6.1	630

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	g318	334	337	291	b320	364	440	500	168	56	106	160
2	*g324	354	334	288	b320	364	450	482	153	53	112	163
3	g291	364	331	268	b325	368	458	464	148	53	106	153
4	g285	351	347	b250	*b330	361	475	458	144	48	129	155
5	g272	341	378	b280	334	364	496	450	144	45	129	144
6	g304	337	361	b280	378	364	507	447	137	45	135	142
7	g294	334	341	b260	416	368	522	447	116	44	144	137
8	g294	331	347	249	464	361	544	478	110	46	144	131
9	g285	330	358	294	540	*378	551	493	90	53	133	131
10	g285	321	361	301	607	392	555	458	68	51	129	131
11	g285	318	*351	308	615	385	536	430	82	44	122	124
12	g285	334	341	b290	574	375	525	426	92	48	116	120
13	g281	341	337	291	551	371	529	447	97	51	112	116
14	290	*344	337	294	500	381	562	430	94	51	114	112
15	300	351	331	294	436	398	592	398	101	48	114	114
16	g311	347	328	298	405	422	600	368	88	48	108	116
17	314	347	328	301	388	412	600	347	90	49	99	110
18	308	368	328	311	381	402	596	341	*83	51	99	110
19	304	409	324	308	375	398	607	*328	76	50	106	112
20	308	409	321	301	354	402	*607	321	72	*51	112	108
21	301	402	318	294	347	426	596	311	76	51	106	106
22	281	392	318	304	354	472	570	298	78	50	163	106
23	285	371	314	298	364	493	551	265	77	57	*126	110
24	308	361	314	308	381	472	511	246	78	68	137	114
25	311	364	308	311	388	464	458	227	80	70	137	110
26	314	358	304	314	385	472	450	203	74	72	139	110
27	321	354	301	318	381	472	419	176	77	77	142	110
28	351	354	301	314	*375	458	412	181	78	87	137	112
29	354	347	298	215	-	444	433	168	68	92	139	116
30	347	341	298	b290	-	440	486	165	62	94	160	118
31	337	-	301	b320	-	444	-	165	-	114	160	-
Total	9,448	10,609	10,196	9,043	11,588	12,687	15,638	10,918	2,901	1,817	3,915	3,701
Mean	305	354	329	292	414	409	521	352	96.7	58.6	126	123
Ac-ft	18,740	21,040	20,220	17,940	22,980	25,160	31,020	21,660	5,754	3,604	7,765	7,341

Calendar year 1950: Max 895 Min 108 Mean 401 Ac-ft 290,100
Water year 1950-51: Max 615 Min 44 Mean 281 Ac-ft 203,200

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
g Computed from once-daily staff-gage reading.

American Falls Reservoir at American Falls, Idaho.

Location.--Lat 42°46', long. 112°53', in sec. 30, T. 7 S., R. 31 E., near right end of dam at outlet gates of reservoir on Snake River at American Falls.

Drainage area.--13,580 sq mi.

Records available.--March 1926 to September 1951.

Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Extremes.--Maximum contents during year, 1,729,000 acre-ft June 26 (elevation, 4,355.02 ft); minimum, 926,840 acre-ft Oct. 1 (elevation, 4,338.63 ft).
1926-51: Maximum contents, that of June 26, 1951; minimum since full capacity was attained on July 13, 1927, 17,200 acre-ft Oct. 22, 1931 (elevation, 4,299.72 ft).

Remarks.--Reservoir is formed by concrete gravity dam with earth dikes at each end; partial storage began in 1926, full storage in 1927. Capacity, 1,700,000 acre-ft between elevations 4,295.66 ft (bottom of outlet gate) and 4,354.50 ft (top of spillway radial gates). Small amount of dead storage. Water is used for irrigation by canals diverting from Snake River at Minidoka and Milner Dams. Contents given herin are computed from mean daily elevations; all available for release.

Cooperation.--Reservoir elevations and capacity table furnished by Bureau of Reclamation.

Contents, in thousands of acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	928	1,129	1,384	1,569	1,485	1,424	1,391	1,632	1,661	1,721	1,389	1,222
2	930	1,140	1,393	1,569	1,475	1,421	1,392	1,641	1,671	1,721	1,380	1,218
3	936	1,147	1,400	1,569	1,464	1,416	1,392	1,648	1,674	1,720	1,370	1,213
4	942	1,156	1,407	1,576	1,456	1,414	1,394	1,646	1,675	1,714	1,363	1,207
5	948	1,161	1,421	1,578	1,451	1,409	1,396	1,644	1,670	1,713	1,356	1,199
6	950	1,174	1,427	1,582	1,448	1,408	1,398	1,640	1,668	1,709	1,355	1,190
7	961	1,180	1,431	1,586	1,448	1,402	1,402	1,635	1,660	1,703	1,356	1,179
8	969	1,197	1,439	1,589	1,449	1,402	1,405	1,641	1,659	1,698	1,361	1,162
9	972	1,204	1,444	1,586	1,451	1,397	1,408	1,653	1,659	1,693	1,367	1,153
10	978	1,209	1,454	1,581	1,452	1,397	1,423	1,664	1,657	1,692	1,372	1,140
11	985	1,215	1,466	1,577	1,451	1,396	1,425	1,673	1,655	1,679	1,378	1,127
12	991	1,225	1,469	1,573	1,451	1,395	1,434	1,674	1,652	1,668	1,377	1,119
13	998	1,237	1,475	1,569	1,451	1,394	1,440	1,674	1,646	1,657	1,374	1,110
14	1,004	1,242	1,480	1,566	1,451	1,393	1,452	1,679	1,643	1,644	1,369	1,102
15	1,009	1,252	1,483	1,565	1,452	1,391	1,461	1,676	1,642	1,631	1,360	1,096
16	1,016	1,258	1,489	1,561	1,451	1,388	1,470	1,670	1,645	1,617	1,347	1,090
17	1,021	1,267	1,496	1,560	1,450	1,391	1,477	1,663	1,652	1,603	1,334	1,083
18	1,026	1,276	1,505	1,559	1,446	1,392	1,488	1,658	1,661	1,588	1,320	1,075
19	1,034	1,286	1,511	1,556	1,445	1,391	1,501	1,658	1,677	1,573	1,305	1,066
20	1,039	1,301	1,514	1,555	1,444	1,390	1,517	1,658	1,697	1,554	1,292	1,061
21	1,045	1,308	1,519	1,554	1,442	1,390	1,529	1,663	1,714	1,539	1,280	1,054
22	1,054	1,313	1,522	1,550	1,440	1,383	1,546	1,661	1,724	1,524	1,266	1,048
23	1,063	1,326	1,526	1,545	1,437	1,388	1,561	1,656	1,721	1,510	1,256	1,045
24	1,071	1,335	1,533	1,539	1,434	1,390	1,572	1,648	1,717	1,494	1,246	1,038
25	1,076	1,344	1,543	1,533	1,431	1,390	1,583	1,643	1,722	1,481	1,243	1,033
26	1,081	1,354	1,546	1,527	1,429	1,387	1,591	1,644	1,728	1,466	1,240	1,029
27	1,084	1,365	1,549	1,522	1,427	1,389	1,599	1,644	1,726	1,451	1,237	1,030
28	1,094	1,372	1,551	1,519	1,425	1,391	1,608	1,638	1,721	1,434	1,236	1,024
29	1,104	1,379	1,555	1,512	-	1,391	1,618	1,642	1,722	1,419	1,232	1,022
30	1,114	1,384	1,554	1,503	-	1,389	1,631	1,639	1,722	1,406	1,226	1,021
31	1,122	-	1,563	1,494	-	1,389	-	1,647	-	1,397	1,225	-

Monthly elevation and contents, water year October 1950 to September 1951

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,338.60	925,620	-
Oct. 31	4,343.13	1,121,550	+195,930
Nov. 30	4,348.58	1,384,160	+262,610
Dec. 31	4,352.01	1,562,900	+178,740
Calendar year 1950	-	-	+353,670
Jan. 31	4,350.72	1,494,460	-68,440
Feb. 28	4,349.39	1,425,390	-69,070
Mar. 31	4,348.68	1,389,200	-36,190
Apr. 30	4,353.25	1,630,520	+241,320
May 31	4,353.54	1,646,550	+16,030
June 30	4,354.89	1,722,020	+75,470
July 31	4,348.84	1,397,270	-324,750
Aug. 31	4,345.33	1,224,580	-172,690
Sept.30	4,340.88	1,021,300	-203,280
Water year 1950-51	-	-	+95,680

Snake River at Neeley, Idaho

Location (revised).--Lat 42°46'20", long. 112°52'45", in SW¼ sec. 31, T. 7 S., R. 31 E., on right bank 400 ft upstream from Fish Hatchery buildings and 0.9 mile downstream from American Falls Dam. Records computed to show flow at former site in sec. 11, T. 8 S., R. 30 E., half a mile north of Neeley and 2½ miles downstream from present site, by adding inflow between sites.

Drainage area.--13,600 sq mi, approximately, excluding non-tributary area on Snake River plains.

Records available.--March 1906 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,241.6 ft above mean sea level (levels by Bureau of Reclamation). Prior to Aug. 7, 1910, staff gages and Aug. 8, 1910, to June 6, 1930, water-stage recorder at site 2½ miles downstream at different datum. June 7, 1930, to Mar. 19, 1945, water-stage recorder at site 0.4 mile upstream from present site and at datum 0.4 ft higher than present datum.

Average discharge.--25 years (1926-51), 6,600 cfs.

Extremes.--Maximum discharge during year, 22,400 cfs May 15 (gage height, 8.62 ft); minimum, 134 cfs Nov. 21 (gage height, 1.49 ft).
1906-51: Maximum daily discharge, 48,400 cfs June 20, 1918 (gage height, 13.5 ft, site and datum then in use); minimum, 50 cfs Oct. 22, 23, Nov. 14-16, 1941.

Remarks.--Records excellent. Flow regulated by American Falls Reservoir (see preceding page) and other reservoirs, having a usable capacity of 3,200,000 acre-ft. About 740,000 acres of land irrigated by water diverted from river and tributaries upstream from station.

Cooperation.--Gage-height record furnished by Bureau of Reclamation.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 20 to July 14)

1.5	134	3.0	830	6.0	8,770
1.7	165	3.5	1,350	7.0	13,600
2.0	240	4.0	2,050	8.0	19,100
2.5	470	5.0	4,630	9.0	25,000

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,780	3,930	4,540	6,330	10,300	10,200	10,200	15,100	18,500	12,500	11,900	*10,300
2	5,240	3,990	4,560	5,730	10,400	10,200	10,200	15,200	*18,600	12,500	11,700	10,500
3	4,470	4,010	1,780	5,670	10,300	10,200	10,200	15,200	18,700	12,600	11,500	10,600
4	4,220	4,010	4,580	5,690	10,400	10,200	10,200	15,200	17,700	12,400	11,200	10,700
5	4,600	303	4,530	5,690	10,400	10,200	10,200	15,100	16,200	12,000	11,100	10,600
6	4,570	4,000	4,570	5,660	10,300	10,100	10,200	15,100	15,600	*11,800	11,000	10,600
7	4,550	3,990	4,590	2,740	10,300	10,100	10,200	13,300	14,200	12,200	10,600	10,600
8	4,540	3,980	4,560	7,120	10,300	10,100	10,200	12,100	12,300	12,500	10,300	10,600
9	4,820	3,960	4,550	8,280	10,300	10,100	10,200	12,100	11,500	12,400	*10,200	10,600
10	5,430	3,910	213	8,230	10,400	10,100	10,200	12,200	11,600	12,800	10,200	10,600
11	4,570	3,970	5,330	8,230	10,400	10,100	9,180	13,200	11,300	12,500	10,500	10,600
12	*4,570	200	5,330	*8,230	10,300	10,100	*8,540	17,600	11,200	12,300	11,200	10,200
13	4,570	3,940	5,340	8,230	*10,300	10,100	7,870	18,500	11,200	12,200	11,600	9,700
14	4,600	3,940	*5,370	8,280	10,300	*10,100	7,430	20,500	*11,300	12,200	12,300	9,280
15	4,600	3,940	5,370	8,280	10,300	10,100	7,470	22,300	11,400	12,200	12,000	8,860
16	4,600	*3,980	5,370	8,280	10,300	10,100	9,180	*20,900	11,400	12,300	11,800	8,720
17	4,600	3,980	1,540	8,280	10,300	10,100	8,540	18,700	11,400	12,400	*11,800	8,680
18	4,630	3,970	5,370	8,280	10,300	10,100	7,520	18,000	11,500	*12,500	11,800	*8,680
19	4,630	195	5,470	8,280	10,300	10,100	7,560	18,000	11,300	12,500	11,700	8,360
20	4,280	3,900	5,870	8,230	10,300	10,100	7,780	18,000	11,200	12,600	11,700	8,140
21	3,970	3,900	5,870	8,320	10,200	10,100	8,820	20,000	12,400	12,800	11,700	8,140
22	283	3,960	5,900	9,510	10,200	10,100	8,820	21,400	16,500	12,900	11,600	7,960
23	4,030	3,960	5,770	10,600	10,200	10,100	8,860	21,400	16,200	12,700	11,200	7,870
24	4,010	3,980	569	10,600	10,200	10,100	8,860	21,300	12,900	12,600	10,600	7,870
25	3,970	4,010	5,600	10,600	10,200	10,100	8,910	21,300	11,500	11,200	*10,100	7,740
26	4,000	198	5,820	10,500	10,200	10,100	8,910	21,200	14,400	12,500	9,650	7,560
27	4,040	4,040	5,760	10,600	10,200	10,100	8,910	21,700	16,400	12,600	9,650	7,000
28	4,040	4,060	5,690	10,500	10,200	10,100	8,910	21,500	14,600	12,800	9,890	6,660
29	295	4,080	5,690	10,400	-	10,200	8,910	21,300	12,900	12,600	9,940	6,660
30	4,000	4,450	5,780	10,300	-	10,200	12,600	21,300	12,600	*11,800	10,100	6,660
31	3,990	-	2,180	10,300	-	10,200	-	19,500	-	11,700	10,200	-
Total	130,498	104,736	143,462	255,970	288,100	313,900	275,580	558,200	408,500	383,600	340,730	271,040
Mean	4,210	3,491	4,628	8,257	10,290	10,130	9,186	18,010	13,620	12,370	10,990	9,035
Ac-ft	258,800	207,700	284,600	507,700	571,400	622,600	546,600	‡1,107	810,200	760,900	675,800	537,600

Calendar year 1950: Max 28,900 Min 195 Mean 8,898 Ac-ft 6,442,000
Water year 1950-51: Max 22,300 Min 195 Mean 9,519 Ac-ft 6,891,000

* Discharge measurement made on this day.
‡ Expressed in thousands.

Clear Creek near Naf, Idaho

Location.--Lat 41°58'15", long. 113°17'15", in NE¼SW¼ sec. 1, T. 14 N., R. 13 W., Salt Lake meridian, on right bank 2 miles south of Utah-Idaho State line, 3 miles south of Naf, and 20 miles upstream from mouth.

Drainage area.--19 sq mi, approximately.

Records available.--January 1910 to June 1911 (fragmentary), June to December 1912 (gage heights only), November 1944 to September 1951.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,400 ft. Prior to December 1912, staff gage at site 30 ft upstream at different datum. November 1944 to Mar. 28, 1950, water-stage recorder at site 600 ft upstream at different datum, above one small diversion.

Average discharge.--7 years (1944-51), 10.8 cfs.

Extremes.--Maximum discharge during year, 112 cfs May 28 (gage height, 2.03 ft); minimum, 0.5 cfs Dec. 26.
1910-11, 1944-51: Maximum discharge observed, 180 cfs May 13, 1910; minimum, 0.2 cfs Aug. 15, 1949, Aug. 23, 24, 1950, caused by irrigation diversion.

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

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.1	0.7	1.6	33
1.2	2.4	1.8	65
1.3	7.1	2.0	105
1.4	13		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.1	3.4	1.9				2.8	*11	63	26	5.9	2.4
2	*2.1	4.8	1.7				2.9	10	*51	25	5.4	2.4
3	2.1	3.4	2.7				3.1	10	43	24	7.7	2.1
4	2.1	3.0	2.7				*3.4	11	36	23	12	2.1
5	1.9	2.7	1.9		(*)		3.8	12	32	20	10	1.9
6	1.9	2.7	1.7				4.3	15	30	17	8.9	1.7
7	2.1	2.7	2.4				4.8	19	29	15	7.7	1.7
8	2.1	3.0	*2.1				5.4	19	28	14	7.1	1.5
9	2.1	*1.7	2.1			(*)	6.5	19	27	15	5.9	1.5
10	2.1	1.7	1.9			2	6.5	21	25	15	5.4	1.5
11	1.9	2.1	2.1				5.9	24	25	15	2.7	1.7
12	1.9	2.4	2.1	(*)			6.5	26	27	14	4.3	1.9
13	1.9	2.4	1.9				7.7	24	29	12	*4.3	1.9
14	1.9	2.4	1.9				8.9	21	39	12	4.3	1.7
15	3.4	2.1	1.9				8.3	19	*49	11	3.8	1.5
16	2.4	2.1	1.9	2	2		8.3	19	60	11	3.8	1.5
17	2.1	2.4	1.9				8.9	22	60	12	3.4	1.2
18	2.1	3.0	1.9				9.5	*27	53	12	3.0	1.3
19	2.1	2.7	1.7				9.5	37	46	11	1.2	1.2
20	2.1	3.0	1.7				9.5	49	43	*9.5	2.7	1.2
21	2.4	3.4	1.5			2.1	8.9	49	40	9.5	5.4	1.5
22	2.1	2.4	1.3			2.1	8.9	48	34	8.3	5.9	1.5
23	2.1	2.1	1.5			2.2	8.9	60	32	7.7	3.0	1.5
24	2.4	2.1	1.5			2.2	9.5	79	30	8.3	5.4	1.5
25	2.7	2.1	1.5			2.3	8.9	83	*32	7.7	3.8	*1.3
26	2.4	2.1	1.5			2.3	11	91	31	7.1	2.7	1.3
27	2.4	2.1	1.7			2.4	9.5	99	29	7.1	*2.4	1.5
28	2.4	2.1	1.7			2.4	11	105	29	7.1	2.7	1.3
29	2.7	1.9	2.1		-	2.5	13	95	28	7.7	2.7	1.5
30	2.1	2.1	1.7		-	2.6	11	87	27	7.1	3.0	1.3
31	3.0	-	1.7		-	2.7	-	75	-	6.5	2.7	-
Total	69.1	76.1	57.8	62	56	65.8	227.1	1,286	1,107	397.6	149.2	48.1
Mean	2.23	2.54	1.86	2	2	2.12	7.57	41.5	36.9	12.8	4.81	1.60
Ac-ft	137	151	115	123	111	131	450	2,550	2,200	789	296	95.4

Calendar year 1950: Max 84 Min - Mean 11.1 Ac-ft 8,010
Water year 1950-51: Max 105 Min - Mean 9.87 Ac-ft 7,150

Peak discharge (base, 70 cfs).--May 28 (2 a.m.) 112 cfs (2.03 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 23-25, Jan. 1-13. No gage-height record Jan. 14 to Apr. 3; discharge estimated on basis of 4 discharge measurements and weather records.

Raft River at Peterson Ranch, near Bridge, Idaho

Location.--Lat 42°04', long. 113°27', in sec. 5, T. 16 S., R. 26 E., on left bank 100 ft upstream from One Mile Creek, 400 ft downstream from road bridge, 7½ miles southwest of Bridge, and 16 miles south of Malta.

Drainage area.--412 sq mi.

Records available.--September 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,980 ft (by barometer).

Average discharge.--5 years, 21.8 cfs.

Extremes.--Maximum discharge during year, 1,090 cfs Feb. 5 (gage height, 4.52 ft), from rating curve extended above 200 cfs on basis of slope-area determination of peak flow; minimum, 3.6 cfs Jan. 6 (gage height, 1.10 ft), caused by ice jam upstream.
1946-51: Maximum discharge, that of Feb. 5, 1951; minimum, 1.2 cfs Jan. 13, 1950 (gage height, 0.90 ft), caused by ice jam upstream.

Remarks.--Records good. Diversions above station for irrigation.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.2	5.8	2.2	90
1.3	8.9	2.6	152
1.4	14	3.0	230
1.6	28	3.4	335
1.9	54	3.8	490

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.3	9.4	12	13	12	26	38	82	84	13	8.6	10
2	8.0	9.4	12	15	*13	*31	37	81	80	12	8.6	11
3	8.3	8.9	12	16	13	29	44	*76	75	12	10	10
4	8.0	8.6	19	15	61	31	58	71	71	10	12	9.9
5	8.3	8.6	20	15	*469	31	70	67	63	10	12	9.9
6	8.0	9.4	16	14	319	28	76	64	62	10	12	9.9
7	8.0	10	20	13	170	31	82	64	55	10	11	9.9
8	8.3	10	20	12	235	36	84	91	49	9.9	10	9.4
9	8.0	10	*21	12	128	38	82	85	43	9.9	9.4	8.6
10	8.0	*9.4	20	12	91	28	84	84	46	9.4	8.9	8.9
11	8.3	9.9	21	13	100	26	89	91	39	9.4	8.9	8.6
12	8.3	11	21	14	*77	26	84	108	35	9.9	8.3	8.6
13	8.3	11	21	14	56	32	84	118	46	9.4	8.3	8.9
14	8.3	11	20	14	44	28	84	107	39	8.3	8.3	9.9
15	8.3	11	23	15	43	34	87	91	*32	8.3	8.3	9.4
16	8.0	11	22	16	43	49	86	85	28	8.6	8.3	8.9
17	7.7	11	22	16	40	32	82	86	26	8.9	8.3	8.6
18	7.7	13	21	16	42	28	*81	86	29	8.9	8.3	8.6
19	8.0	15	21	14	34	32	80	84	26	*8.9	8.6	8.6
20	8.0	17	23	13	33	45	80	91	23	9.4	8.9	8.6
21	8.3	18	22	14	34	76	77	96	22	9.9	9.9	8.9
22	8.3	18	20	15	38	73	73	*91	20	9.4	9.4	9.4
23	8.3	16	19	15	37	47	71	82	20	8.9	8.9	9.9
24	8.3	16	19	16	35	40	71	84	18	8.6	9.4	9.9
25	8.3	15	18	34	34	43	71	85	18	8.3	9.9	9.9
26	8.3	15	18	28	36	48	75	89	18	8.3	8.9	9.9
27	8.3	14	16	28	31	48	71	84	17	8.6	*8.6	9.9
28	8.3	13	16	23	28	39	69	85	15	8.6	8.3	9.9
29	8.3	11	18	19	-	35	77	98	14	8.6	8.6	9.9
30	8.6	12	20	16	-	37	91	104	13	8.9	9.4	9.9
31	9.9	-	18	14	-	41	-	86	-	8.9	9.9	-
Total	255.3	362.6	591	504	2,296	1,168	2,238	2,696	1,126	293.2	288.2	283.7
Mean	8.24	12.1	19.1	16.3	82.0	37.7	74.6	87.0	37.5	9.46	9.30	9.46
Ac-ft	506	719	1,170	1,000	4,550	2,320	4,440	5,350	2,230	582	572	563

Calendar year 1950: Max 51 Min 5.8 Mean 18.9 Ac-ft 13,670
Water year 1950-51: Max 469 Min 7.7 Mean 33.2 Ac-ft 24,000

* Discharge measurement made on this day.

Lake Walcott near Minidoka, Idaho

Location.--Lat 42°40', long. 113°29', in sec. 1, T. 9 S., R. 25 E., on south wall in powerhouse at Minidoka Dam on Snake River and 6 miles southeast of Minidoka.

Drainage area.--15,700 sq mi.

Records available.--April 1909 to September 1951.

Gage.--Staff gage and glass tubes connected to lake through pipes read at 8 a.m. and 4 p.m. Datum of gage is 4,200 ft above datum of Bureau of Reclamation, which is 49.52 ft below mean sea level. Prior to Feb. 1, 1941, hook gages at approximately same site at same datum.

Extremes.--Maximum contents during year, 101,570 acre-ft May 2 (gage height, 45.53 ft); minimum, 60,200 acre-ft Dec. 25 (gage height, 41.90 ft).
1909-51: Maximum contents, 110,740 acre-ft Aug. 8, 1922 (gage height, 46.28 ft); minimum, -101,410 acre-ft Nov. 17, 1941 (gage height, 15.19 ft).

Remarks.--Reservoir is formed by rock-fill dam with concrete core; storage began in 1906. Capacity, 107,240 acre-ft between gage heights 36.00 ft (sill of powerhouse penstock) and 46.00 ft (top of flashboards). Dead storage below gage height 36.00 ft, about 115,000 acre-ft. Water used for power development and irrigation on Minidoka project of Bureau of Reclamation. Contents given herein are above gage height 36.0 ft. Figures of daily contents computed from mean of twice-daily readings.

Cooperation.--Gage-height record and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	91,920	84,940	67,650	64,140	78,240	90,530	90,180	98,800	95,430	93,670	96,630	94,490
2	91,230	85,870	68,530	66,660	78,350	89,600	89,830	100,490	95,550	93,090	96,030	94,370
3	91,570	86,800	68,090	68,530	78,800	89,130	89,360	99,040	95,670	94,840	95,910	94,250
4	90,760	88,430	63,040	69,190	79,260	90,060	89,360	97,110	95,550	94,020	95,670	94,600
5	87,850	87,500	66,440	69,630	80,040	90,180	89,130	98,200	95,910	94,950	95,670	94,370
6	86,330	82,860	66,990	70,070	79,370	90,530	89,480	98,320	95,430	94,720	95,790	94,020
7	87,730	84,470	67,210	68,420	79,930	89,600	90,060	97,350	96,150	94,140	96,030	94,140
8	87,960	85,400	68,090	67,870	80,380	90,530	90,410	96,870	95,430	93,900	95,670	92,620
9	86,570	87,030	68,310	72,720	79,820	89,010	88,080	97,110	95,670	93,900	95,670	94,250
10	88,200	87,730	66,440	75,420	79,710	90,530	89,830	96,990	95,310	95,910	95,180	94,490
11	88,550	88,900	60,850	75,980	79,930	90,290	88,430	95,670	95,070	95,430	94,370	92,860
12	88,430	88,200	62,820	75,980	79,370	90,180	86,330	95,310	94,720	95,790	93,550	95,310
13	87,960	83,540	65,010	76,320	79,140	89,830	86,330	96,630	94,720	95,910	93,320	95,180
14	87,380	84,240	66,000	76,550	79,030	89,480	87,150	97,110	94,950	95,670	93,550	95,180
15	87,150	85,870	67,430	76,440	78,800	89,710	86,570	96,630	94,720	95,790	94,720	95,550
16	87,270	85,640	68,420	76,100	78,350	87,960	86,570	96,750	94,720	95,430	94,840	95,180
17	85,640	89,920	67,210	76,100	78,800	90,290	91,920	95,790	94,490	95,430	95,180	94,490
18	84,940	87,270	62,820	76,320	79,030	89,940	92,390	95,430	94,250	95,670	95,180	94,720
19	85,170	86,100	64,900	75,420	78,580	89,480	93,090	95,070	94,950	95,430	95,430	94,720
20	85,170	90,950	66,440	75,870	78,350	89,130	93,550	94,490	94,720	94,950	95,430	93,550
21	86,450	78,130	67,430	76,100	78,800	88,550	94,490	94,720	94,020	95,180	95,550	93,790
22	86,330	76,100	67,980	76,320	81,170	86,800	96,870	94,140	95,670	95,910	95,910	94,020
23	80,830	74,970	68,310	78,350	82,190	89,360	97,840	93,550	96,630	96,630	96,150	94,490
24	82,410	73,390	66,220	79,030	83,310	89,600	97,590	93,900	95,670	96,870	96,150	96,150
25	83,770	69,410	64,800	79,030	83,770	90,180	98,080	94,020	96,990	94,720	96,390	95,550
26	85,050	66,770	61,500	78,800	84,240	88,660	97,350	95,550	97,590	94,020	96,390	95,670
27	84,820	61,940	63,040	79,260	87,730	88,310	97,350	95,670	97,110	94,020	95,180	96,630
28	86,800	63,590	65,010	79,260	89,360	89,130	97,350	94,250	95,910	94,490	95,180	95,670
29	87,270	65,230	66,550	78,130	-	89,360	97,840	95,910	95,670	96,150	94,250	94,950
30	82,520	66,770	67,870	78,350	-	88,430	97,840	94,720	94,370	96,630	94,250	94,020
31	83,430	-	66,990	78,350	-	89,250	-	95,550	-	95,550	94,490	-

Monthly gage height and contents, water year October 1950 to September 1951

Date	Gage-height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	44.83	93,200	-
Oct. 31	43.99	83,430	-9,770
Nov. 30	42.50	66,770	-16,660
Dec. 31	42.52	66,990	+220
Calendar year 1950	-	-	-1,210
Jan. 31	43.54	78,350	+11,360
Feb. 28	44.50	89,360	+11,010
Mar. 31	44.49	89,250	-110
Apr. 30	45.22	97,840	+8,590
May 31	45.03	95,550	-2,290
June 30	44.93	94,370	-1,180
July 31	45.03	95,550	+1,180
Aug. 31	44.94	94,490	-1,060
Sept.30	44.90	94,020	-470
Water year 1950-51	-	-	+820

North Side Minidoka Canal near Minidoka, Idaho

Location.--Lat 42°40', long. 113°29', in sec. 1, T. 9 S., R. 25 E., on left bank 600 ft downstream from headgates at Minidoka Dam and 6 miles south of Minidoka.

Records available.--May 1909 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,180.33 ft above mean sea level (Bureau of Reclamation benchmark). April to November 1910 at datum 0.08 ft higher.

Extremes.--Maximum discharge during year, 1,700 cfs July 10-13; maximum gage height, 9.83 ft July 10; no flow during winter.
1909-51: Maximum discharge, 1,780 cfs July 11, 1943; maximum gage height, 10.00 ft May 7, 1943; no flow during winters.

Remarks.--Records excellent. Flow controlled by headgates. Canal diverts water from Snake River for irrigation of 64,000 acres of land under North Side Minidoka project.

Cooperation.--Gage-height record furnished by Bureau of Reclamation.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.0	43	4.0	394
1.5	79	6.0	780
2.0	125	8.0	1,240
3.0	241	10.0	1,760

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	640						0	698	1,540	1,630	1,380	1,000
2	636						0	700	1,500	1,630	1,370	1,060
3	636						0	696	1,500	1,640	1,330	1,100
4	634						0	692	1,500	1,630	1,310	1,150
5	630						0	692	1,430	1,640	1,310	1,240
6	624						0	692	1,390	1,670	1,210	1,280
7	*628						0	688	*1,390	1,690	1,100	1,280
8	628						0	758	1,390	1,690	*1,100	1,240
9	622						57	805	1,390	1,690	1,100	1,190
10	626						176	805	1,380	1,700	1,170	1,190
11	628						269	900	1,380	1,700	1,280	1,190
12	628						374	894	*1,380	1,700	1,370	1,130
13	630						480	842	1,380	1,700	1,440	1,020
14	628						*590	*894	1,380	1,690	1,520	970
15	626						626	1,010	1,380	1,690	1,570	970
16	626						771	1,110	1,380	1,660	*1,570	967
17	622						*1,020	1,270	1,380	1,640	1,580	965
18	620						1,100	1,380	1,380	1,670	1,580	*965
19	622						1,180	1,400	1,380	1,690	1,580	965
20	207						1,320	1,450	*1,380	1,690	1,570	965
21	0						1,390	1,560	1,380	1,660	*1,450	963
22	0						1,410	1,600	1,390	1,650	1,430	862
23	0						1,440	1,600	1,390	1,650	1,290	812
24	0						1,430	1,610	1,390	1,650	1,090	816
25	0						1,380	1,610	1,390	*1,630	1,010	816
26	0						1,330	1,610	1,400	1,590	1,010	816
27	0						1,260	1,610	1,390	1,570	1,010	820
28	0						1,220	1,600	1,450	1,540	1,000	818
29	0						981	1,610	*1,560	1,450	1,000	818
30	0						766	*1,600	1,620	1,410	999	814
31	0						-	1,610	-	1,410	1,000	-
Total	12,141	0	0	0	0	0	20,570	35,996	42,570	50,650	39,729	30,192
Mean	392	0	0	0	0	0	686	1,160	1,419	1,634	1,282	1,006
Ac-ft	24,080	0	0	0	0	0	40,800	71,400	84,440	100,500	78,800	59,880

Calendar year 1950: Max 1,690 Min 0 Mean 601 Ac-ft 435,400
Water year 1950-51: Max 1,700 Min 0 Mean 635 Ac-ft 459,900

* Discharge measurement made on this day.

South Side Minidoka Canal near Minidoka, Idaho

Location.--Lat 42°40', long. 113°29', in sec. 12, T. 9 S., R. 25 E., on right bank 900 ft downstream from headgates at Minidoka Dam and 6 miles south of Minidoka.

Records available.--April 1909 to September 1951.

Gage.--Water stage recorder. Datum of gage is 4,184 ft above mean sea level (Bureau of Reclamation benchmark). Prior to 1910, at site 600 ft upstream at same datum.

Extremes.--Maximum discharge during year, 1,370 cfs May 25; maximum gage height, 6.04 ft Aug. 20; no flow during winter.
1909-51: Maximum discharge, 1,400 cfs June 10, 12, 14, 1948, and July 3, 25, 1950; no flow during winters.

Remarks.--Records excellent. Flow controlled by headgates. Canal diverts water from Snake River for irrigation of 54,000 acres under South Side Minidoka project.

Cooperation.--Gage-height record furnished by Bureau of Reclamation.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	823						0	323	1,300	1,290	1,180	957
2	597						0	308	1,290	1,290	1,190	963
3	461						0	304	1,250	1,310	1,140	963
4	480						0	306	1,220	1,290	1,010	1,030
5	499						0	306	1,210	1,270	859	1,120
6	478						0	306	1,190	1,250	751	1,120
7	*432						0	306	1,170	1,260	651	1,130
8	406						0	306	1,170	1,280	*608	1,140
9	408						96	336	1,170	1,290	616	1,140
10	427						206	432	1,170	1,320	732	1,110
11	444						267	532	1,190	1,340	859	1,100
12	461						267	532	*1,210	*1,340	1,070	1,100
13	497						280	509	1,210	1,340	1,230	1,010
14	514						*399	504	1,190	1,340	1,310	914
15	512						480	504	1,090	1,340	*1,310	826
16	763						552	524	1,040	1,320	1,310	740
17	917						*635	648	1,030	1,320	1,310	715
18	637						737	701	1,020	1,330	1,310	*709
19	490						812	774	1,070	*1,340	1,310	712
20	164						856	898	1,110	1,350	1,310	729
21	0						871	1,120	1,100	1,330	1,300	701
22	0						874	1,280	1,100	1,300	1,250	670
23	0						877	1,350	1,110	1,300	1,110	643
24	0						874	1,360	1,110	1,280	976	618
25	0						797	1,360	1,150	1,270	823	629
26	0						715	1,350	*1,210	1,290	774	632
27	0						729	1,340	1,250	1,290	841	635
28	0						729	1,340	1,290	*1,250	*895	637
29	0						613	1,330	1,310	1,230	895	746
30	0						415	*1,310	1,300	1,220	889	809
31	0						-	1,300	-	1,170	908	-
Total	10,410	0	0	0	0	0	13,081	23,799	35,230	40,140	31,727	25,948
Mean	336	0	0	0	0	0	436	768	1,174	1,295	1,023	865
Ac-ft	20,650	0	0	0	0	0	25,950	47,200	69,880	79,620	62,930	51,470

Calendar year 1950: Max 1,390 Min 0 Mean 512 Ac-ft 370,700
Water year 1950-51: Max 1,360 Min 0 Mean 494 Ac-ft 357,700

* Discharge measurement made on this day.

Snake River near Minidoka, Idaho

Location.--Lat 42°40', long. 113°30', in sec. 2, T. 9 S., R. 25 E., on right bank 1 mile downstream from Minidoka Dam and 6 miles south of Minidoka.

Drainage area.--15,700 sq mi.

Records available.--August 1895 to December 1899, May 1901 to September 1951. Prior to January 1902, published as "at Montgomery Ferry," as "at Montgomery Ferry, near Minidoka" in 1902, and as "below Minidoka Dam, at Howell's Ferry" in 1911.

Gage.--Water-stage recorder. Datum of gage is 4,132.2 ft above mean sea level (river-profile survey). Prior to Apr. 21, 1910, staff gage at site 6 miles downstream at different datum. Apr. 21, 1910, to Aug. 28, 1911, staff gage at present site and datum.

Average discharge.--25 years (1926-51), 5,572 cfs.

Extremes.--Maximum discharge during year, 21,300 cfs May 15 (gage height, 11.23 ft); minimum, 2,290 cfs Oct. 30 (gage height, 4.70 ft).
1895-99, 1901-51: Maximum discharge, 47,500 cfs May 29, 30, 1897 (gage height, 12.6 ft, former site and datum); minimum, 59 cfs Nov. 18, 1936 (gage height, 1.56 ft).

Remarks.--Records good. Flow regulated by American Falls Reservoir (see p. 51), Lake Walcott (see p. 55), and other reservoirs having a combined usable capacity of about 3,300,000 acre-ft; many diversions above station for irrigation.

Cooperation.--Gage-height record furnished by Bureau of Reclamation.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 17 to Sept. 20)

5.0	2,680	9.0	13,500
6.0	4,740	10.0	16,900
7.0	7,240	11.1	21,000
8.0	10,300		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,420	3,560	4,280	4,720	b11,100	b10,100	10,200	13,900	16,200	10,200	9,300	8,300
2	4,700	3,620	4,610	4,920	b11,000	b10,000	10,800	15,100	16,100	9,800	9,180	8,480
3	3,790	3,620	4,560	5,210	b11,100	b10,000	10,500	15,100	16,000	9,390	9,050	8,540
4	3,760	3,580	4,280	5,520	11,100	b10,000	10,600	14,600	15,500	9,550	8,930	8,570
5	3,810	3,640	4,230	b5,680	12,400	b10,100	10,100	13,900	14,200	9,300	8,840	8,480
6	3,910	3,640	4,560	*5,710	11,400	b10,100	10,300	14,000	13,400	9,080	8,930	8,330
7	*3,740	3,620	4,340	b4,600	11,600	b10,200	10,200	13,400	*12,600	9,580	8,870	8,120
8	3,700	3,660	4,520	b5,200	12,000	b10,200	10,200	11,400	10,600	9,890	*8,600	8,330
9	4,060	3,600	4,850	b6,700	11,500	10,300	10,900	11,300	9,330	9,640	8,540	8,090
10	3,870	3,560	4,520	b7,700	11,000	b10,300	10,900	11,100	9,240	9,670	8,450	8,090
11	3,580	3,560	4,060	b8,600	10,900	b10,400	10,200	11,600	9,110	9,610	8,480	8,450
12	3,510	3,580	4,410	b8,800	11,200	10,500	8,450	15,400	*8,750	*9,580	8,810	8,000
13	3,680	3,530	4,430	8,600	10,900	b10,500	7,380	16,800	8,750	9,270	8,810	7,760
14	3,680	3,580	4,920	8,420	10,700	10,600	*7,070	18,700	8,780	9,330	8,930	7,360
15	3,700	3,560	4,810	8,660	10,800	10,400	6,600	20,700	8,750	9,390	8,990	7,100
16	3,680	3,870	5,260	8,570	10,700	b9,600	6,230	19,700	8,750	9,610	*8,930	7,100
17	3,700	*4,080	4,960	8,840	*10,600	b10,400	*5,590	17,600	8,780	9,580	8,930	6,930
18	3,700	4,120	4,480	8,780	10,600	b10,300	5,490	*16,400	8,810	9,450	8,900	*6,760
19	3,660	4,120	4,630	8,660	b10,700	b10,400	5,520	16,100	8,870	*9,580	8,990	6,740
20	3,640	4,670	5,080	8,480	b10,800	b10,400	5,330	15,800	*8,780	9,700	9,020	6,820
21	3,640	5,440	5,490	8,450	9,760	b10,400	5,560	16,900	9,020	9,730	8,960	6,360
22	3,640	5,260	5,520	9,140	9,830	10,200	5,730	18,700	12,700	9,640	9,020	6,000
23	3,620	5,030	5,730	10,400	9,760	b10,400	6,230	18,000	13,700	9,640	9,050	5,800
24	3,580	5,800	5,540	10,800	10,200	*10,100	6,650	17,800	10,900	9,640	8,840	5,830
25	3,580	*5,730	4,850	10,800	10,400	b9,850	6,990	18,200	8,870	9,640	8,420	5,920
26	3,580	4,120	4,830	10,800	9,640	b10,000	6,960	18,400	11,300	9,480	8,360	5,950
27	3,660	3,530	4,870	b10,400	8,960	b10,200	7,020	18,400	14,300	9,360	8,450	5,710
28	3,510	3,450	4,920	b9,500	10,000	b10,500	6,880	18,500	13,300	*9,330	*8,420	5,540
29	3,580	3,470	5,080	b6,000	-	b10,200	6,790	18,800	*11,100	9,420	8,300	5,540
30	3,470	3,620	5,370	b10,500	-	b9,900	10,600	*18,400	10,400	9,360	8,300	5,490
31	3,640	-	5,140	b11,100	-	b10,000	-	17,500	-	9,300	8,240	-
Total	116,790	120,220	149,130	250,260	300,650	316,550	241,970	502,200	336,890	295,740	271,840	214,490
Mean	3,767	4,007	4,811	8,073	10,740	10,210	8,066	16,200	11,230	9,540	8,769	7,150
Ac-ft	231,600	238,500	295,800	496,400	596,300	627,900	479,900	996,100	668,200	586,600	539,200	425,400

Calendar year 1950: Max 26,700 Min 2,800 Mean 7,989 Ac-ft 5,784,000
Water year 1950-51: Max 20,700 Min 3,450 Mean 8,539 Ac-ft 6,182,000

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

Goose Creek above Trapper Creek, near Oakley, Idaho

Location.--Lat 42°07', long. 113°56', in sec. 13, T. 15 S., R. 21 E., on right bank 5 miles upstream from Trapper Creek and 10 miles south of Oakley.

Drainage area.--600 sq mi, approximately.

Records available.--April 1911 to September 1916, March 1919 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,770 ft (by barometer). Prior to Aug. 29, 1912, at site 200 ft downstream at different datum.

Average discharge.--28 years (1911-14, 1926-51), 41.9 cfs.

Extremes.--Maximum discharge during year, 858 cfs Feb. 7 or 8 (gage height, 5.78 ft, from high-water mark); minimum, 5.3 cfs Nov. 15 (gage height, 1.38 ft), caused by temporary storage behind ice jam upstream.
1911-16, 1919-51: Maximum discharge, 1,670 cfs Jan. 23 or Feb. 24, 1943 (gage height, 7.6 ft, from floodmark), from rating curve extended above 600 cfs by logarithmic plotting; no flow July 22 to Aug. 10, Aug. 22-30, 1934, Aug. 15 to Oct. 3, 1935, July 22 to Sept. 25, 1940, Sept. 14, 1947.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above station for irrigation. Flow of artesian well, completed in 1935, enters below. Practically entire flow passing station is stored in Oakley Reservoir.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	5.7	3.0	149
1.6	12	3.5	237
1.8	20	4.0	336
2.1	38	4.5	453
2.4	66	5.2	660
2.7	105		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	20	28	b19	*b14	*b45	63	222	137	20	22	15
2	14	20	26	19	b20	b45	67	216	132	19	20	15
3	15	21	24	23	30	47	77	*195	124	18	22	14
4	14	21	24	b25	40	47	87	175	112	17	28	13
5	14	22	39	b24	100	47	98	167	108	16	40	11
6	14	24	50	b20	250	47	112	174	99	16	36	9.8
7	14	22	41	b18	400	47	122	205	94	15	27	9.4
8	14	21	41	b15	650	47	134	243	90	13	23	8.4
9	15	*21	*42	b18	450	b47	149	271	81	11	21	7.9
10	15	b19	40	b22	350	b45	155	277	81	11	19	7.6
11	15	b18	38	b25	375	45	162	273	77	10	18	6.5
12	15	b19	37	b25	200	45	167	275	71	9.8	16	6.8
13	15	20	36	b25	140	b55	163	287	74	9.4	15	7.9
14	16	23	35	b26	110	b65	167	297	71	8.4	14	7.9
15	16	21	34	27	90	b150	180	267	*58	7.9	14	7.6
16	18	22	32	28	95	b225	195	241	47	7.6	13	7.3
17	17	25	33	28	80	131	205	222	38	7.6	13	7.6
18	17	25	32	28	80	62	*209	211	36	7.6	11	7.6
19	18	25	31	26	65	62	214	213	28	*9.1	11	7.9
20	18	27	31	b20	55	130	216	222	26	11	11	6.8
21	17	31	30	b24	70	239	214	229	26	11	11	6.8
22	17	32	30	25	60	252	216	*222	28	13	12	7
23	17	31	25	34	55	122	214	211	29	15	12	8
24	18	29	25	36	50	82	209	202	29	16	13	8
25	19	29	b23	36	45	94	200	195	29	14	13	8
26	19	28	b23	35	50	105	193	187	31	14	13	8
27	19	27	b22	35	50	95	184	180	29	13	13	8
28	19	26	b23	b30	45	70	180	165	26	13	*13	9
29	19	25	b24	b22	-	65	200	159	26	14	14	10
30	19	27	b24	b15	-	70	226	151	22	17	16	11
31	19	-	b22	b14	-	67	-	142	-	29	15	-
Total	509	721	965	767	4,019	2,695	4,978	6,696	1,859	413.4	539	268.8
Mean	16.4	24.0	31.1	24.7	144	86.9	166	216	62.0	13.3	17.4	8.96
Ac-ft	1,010	1,430	1,910	1,520	7,970	5,350	9,870	13,280	3,690	820	1,070	533

Calendar year 1950: Max 226 Min 4.3 Mean 43.8 Ac-ft 31,680
Water year 1950-51: Max 650 Min 6.5 Mean 66.9 Ac-ft 48,450

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Feb. 3-28, Mar. 3-8, 11, 12, Sept. 22-30; discharge estimated on basis of weather records, records for nearby streams, and storage records for Oakley Reservoir.

Trapper Creek near Oakley, Idaho

Location.--Lat 42°10', long. 113°59', in sec. 34, T. 14 S., R. 21 E., on left bank 4 miles upstream from Oakley Dam and 7 miles southwest of Oakley.

Drainage area.--32 sq mi, approximately.

Records available.--May 1911 to September 1916, March 1919 to September 1951.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 4,820 ft (by barometer). Prior to Sept. 1, 1912, water-stage recorder at approximately present site at different datum. Sept. 1-30, 1912, staff gage at site three-quarters of a mile downstream at different datum. Apr. 8, 1913, to Sept. 30, 1916, and Mar. 28, 1919, to Aug. 15, 1931, water-stage recorder at site 1 mile upstream from present site at different datum.

Average discharge.--27 years (1911-12, 1913-14, 1926-51), 14.0 cfs.

Extremes.--Maximum discharge during year, 52 cfs May 11; maximum gage height, 5.36 ft Feb. 7, May 11; minimum discharge, 3.1 cfs Jan. 6 (gage height, 4.62 ft), ice jam upstream. 1911-16, 1919-51: Maximum discharge recorded, 270 cfs Aug. 17, 1941 (gage height, 6.99 ft), from rating curve extended above 100 cfs on basis of velocity-area studies and peak flow over weir (a higher flow may have occurred Aug. 15, 1931); minimum recorded, 2.3 cfs Feb. 22, 1949.

Remarks.--Records good. A few small diversions above station. Flow of artesian well, completed in 1936, enters above. Practically entire flow passing station is stored in Oakley Reservoir.

Cooperation.--Water-stage recorder inspected occasionally by Oakley Canal Co.

Revisions (water years).--W 1063: 1941, 1943.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

4.7	4.5	5.1	26
4.8	8.0	5.4	51
4.9	13		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	11	12	12	*10	*12	17	41	38	17	12	11
2	11	12	12	12	11	14	18	40	37	16	12	10
3	10	11	14	12	14	13	19	*37	35	15	12	10
4	10	11	15	12	17	14	21	34	32	15	14	10
5	10	10	13	12	29	13	23	36	32	15	12	10
6	11	10	12	7.3	20	13	25	37	31	15	12	10
7	11	10	14	9.0	28	13	26	45	31	14	12	10
8	10	11	14	12	23	13	27	47	30	14	12	9.5
9	10	*10	*12	13	20	13	28	48	29	14	12	9.5
10	10	8.5	12	12	20	12	29	48	28	14	11	9.5
11	10	10	12	12	21	12	28	49	27	14	11	9.5
12	10	10	12	12	19	12	29	49	28	14	10	10
13	10	10	12	12	17	13	30	49	28	12	10	10
14	10	10	12	12	17	15	32	47	26	12	10	10
15	11	10	12	12	16	16	36	45	*25	12	10	10
16	11	10	12	12	15	16	36	43	23	12	10	10
17	11	10	12	12	15	14	37	43	22	12	10	10
18	10	11	12	12	15	14	*40	46	22	12	10	10
19	10	12	12	12	15	14	40	47	22	*12	10	10
20	10	12	12	9.0	14	18	43	49	21	12	12	10
21	10	12	12	12	14	21	41	50	20	13	12	10
22	10	12	12	13	14	18	40	*50	20	12	12	11
23	10	11	12	12	15	16	40	49	20	12	12	10
24	10	11	12	14	14	17	40	49	19	12	12	10
25	10	12	12	14	14	18	40	50	19	12	12	10
26	10	12	12	13	14	18	40	48	19	12	10	10
27	10	12	12	13	14	18	40	46	18	12	10	10
28	10	12	12	11	14	17	43	45	17	14	*12	10
29	10	12	12	6.2	-	17	46	45	17	13	12	11
30	10	12	12	7.6	-	18	44	41	17	12	12	11
31	11	-	12	10	-	17	-	40	-	12	12	-
Total	319	327.5	382	456.1	469	469	998	1,393	753	409	352	302.0
Mean	10.3	10.9	12.3	11.5	16.8	15.1	33.3	44.9	25.1	13.2	11.4	10.1
Ac-ft	633	650	758	706	930	930	1,980	2,760	1,490	811	698	599

Calendar year 1950: Max 47 Min 7.0 Mean 16.2 Ac-ft 11,740
Water year 1950-51: Max 50 Min 6.2 Mean 17.9 Ac-ft 12,940

* Discharge measurement made on this day.

Oakley Reservoir near Oakley, Idaho

Location.--Lat 42°12', long. 113°55', in sec. 19, T. 14 S., R. 22 E., just upstream from right abutment of dam on Goose Creek, 4 miles southwest of Oakley.

Drainage area.--670 sq mi, approximately.

Records available.--October 1912 to September 1951.

Gage.--Staff gage. Altitude of gage is 4,630 ft (by barometer).

Extremes.--Maximum contents observed during year, 41,500 acre-ft May 29, June 1 (gage height, 102.1 ft); minimum not determined.
1912-51: Maximum contents observed, 74,600 acre-ft June 15, 1921 (gage height, 136.2 ft); reservoir drained at close of seasons in 1915, 1919, 1920, 1926, 1933, 1949, 1950.

Remarks.--Reservoir is formed by earth dam constructed in 1911-13; storage began in 1911. Capacity, 74,350 acre-ft between gage heights 0.0 ft (bottom of diversion tunnel) and 136.0 ft (crest of spillway). Dead storage negligible. Water is used for irrigation of lands along Goose Creek in Oakley Canal Co. project. Figures given herein represent usable contents. Gage read occasionally and contents shown on days observations were made.

Cooperation.--Gage readings and capacity table furnished by Oakley Canal Co.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	4,190	6,880	-	18,500	24,600	33,100	41,500	36,100	-	19,200
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	33,900	41,300	-	-	-
4	-	-	-	-	-	-	-	34,100	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	18,600
6	-	-	-	-	9,720	-	25,900	34,500	-	-	22,800	-
7	528	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	19,200	-	-	-	-	-	-
9	-	-	5,040	7,360	-	-	-	-	-	34,700	-	-
10	-	2,550	5,160	-	15,100	19,500	-	-	40,600	-	-	-
11	1,060	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	27,200	-	-	-	22,200	-
13	-	-	-	-	-	-	-	37,200	-	-	-	17,000
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	2,880	5,620	7,740	17,000	19,900	-	38,100	39,900	31,100	21,800	-
16	1,100	-	-	-	-	-	29,000	-	-	-	-	-
17	-	-	5,740	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	29,800	-	39,400	-	-	-
19	-	-	-	-	-	-	-	-	-	28,600	21,200	-
20	-	-	-	-	-	-	-	40,000	-	-	-	-
21	-	-	-	-	17,800	-	-	-	-	-	-	15,800
22	-	-	-	-	-	-	31,500	40,600	-	27,200	-	-
23	1,430	3,580	-	-	-	22,000	-	-	-	-	-	-
24	-	-	-	8,480	-	-	-	-	-	-	-	-
25	-	-	6,380	-	-	-	-	-	38,000	-	-	-
26	1,690	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	41,400	-	-	-	-
28	-	-	-	-	a18,400	-	-	-	-	-	20,100	15,300
29	-	-	-	-	-	-	32,800	41,500	-	24,400	-	-
30	-	a4,110	-	-	-	-	a33,000	-	a36,400	-	-	a14,800
31	1,920	-	a6,810	9,120	-	a24,300	-	a41,500	-	a24,000	a19,400	-

a No gage-height record; contents interpolated.

Monthly elevation and contents, water year October 1950 to September 1951

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	0	0	-
Oct. 31	22.9	1,920	+1,920
Nov. 30	-	a4,110	+2,190
Dec. 31	-	a6,810	+2,700
Calendar year 1950	-	-	-2,530
Jan. 31	48.0	9,120	+2,310
Feb. 28	-	a18,400	+9,280
Mar. 31	-	a24,300	+5,900
Apr. 30	-	a33,000	+8,700
May 31	-	a41,500	+8,500
June 30	-	a36,400	-5,100
July 31	-	a24,000	-12,400
Aug. 31	-	a19,400	-4,600
Sept.30	-	a14,800	-4,600
Water year 1950-51	-	-	+14,800

a No gage-height record; contents interpolated.

P. A. lateral near Milner, Idaho

Location.--Lat 42°32', long. 114°01', in sec. 22, T. 10 S., R. 21 E., on left bank 600 ft downstream from pumping station and 2½ miles northeast of Milner.

Records available.--April 1919 to September 1951. Records collected by North Side Canal Co. 1916-18 (yearly summaries only published in W.S.P. 883).

Gage.--Staff gage read twice daily. Altitude of gage is 4,196 ft (river survey).

Extremes.--Maximum discharge during year, 73 cfs on several days during June and July; no flow Oct. 1 to Apr. 25, Sept. 28-30.
1916-18, 1919-51: Maximum discharge, 73 cfs on many days during 1949, 1950, and 1951; no flow for many days.

Remarks.--Records excellent. Flow regulated by pumping plant which lifts water from Snake River for irrigation on North Side Twin Falls tract.

Cooperation.--Gage-height record furnished by North Side Canal Co.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

0.7	9.6
.8	14
1.0	25
1.3	50
1.6	80

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	0	*64	73	68	60
2							0	2	64	72	68	61
3							0	31	62	72	70	61
4							0	31	62	61	70	61
5							0	47	62	72	71	61
6							0	47	62	72	72	61
7							0	47	62	72	*70	62
8							0	47	62	72	70	62
9							0	60	62	72	69	62
10							0	60	62	72	69	60
11							0	60	*62	72	69	60
12							0	62	62	72	69	60
13							0	62	62	72	70	58
14							0	62	62	73	70	48
15							0	62	62	72	72	48
16							0	62	62	72	72	48
17							0	62	62	72	72	48
18							0	62	62	72	72	48
19							0	64	62	73	72	*48
20							0	64	62	72	71	48
21							0	64	62	73	71	48
22							0	64	62	73	70	47
23							0	64	*62	72	71	45
24							0	64	62	72	72	45
25							0	64	73	71	62	43
26							14	64	73	72	62	0
27							16	64	73	73	61	0
28							*32	64	73	73	62	0
29							32	64	72	41	62	0
30							4	64	73	58	60	0
31							-	64	-	55	60	-
Total	0	0	0	0	0	0	98	1,698	1,929	2,165	2,119	1,353
Mean	0	0	0	0	0	0	3.3	54.8	64.3	69.8	68.4	45.1
Ac-ft	0	0	0	0	0	0	194	3,370	3,830	4,290	4,200	2,680

Calendar year 1950: Max 73 Min 0 Mean 26.2 Ac-ft 18,930
Water year 1950-51: Max 73 Min 0 Mean 25.6 Ac-ft 18,560

* Discharge measurement made on this day.

Milner low-lift canal near Milner, Idaho

Location.--Lat 42°31', long. 114°01', in sec. 32, T. 10 S., R. 21 E., at head of canal and 1½ miles south of Milner.

Records available.--June 1921 to September 1951. Prior to October 1922 published as Murtaugh Canal near Milner.

Gage.--Rated pumps. Prior to May 1, 1945, water-stage recorder at site 600 ft downstream.

Extremes.--Maximum discharge during year, 212 cfs Sept. 27 (capacity test measurement); no flow for many days.
1921-51: Maximum discharge, that of Sept. 27, 1951; no flow for many days.

Remarks.--Records excellent. Flow controlled by pumping plant, which lifts water from Snake River above Milner Dam for irrigation of 9,130 acres of land in Milner low-lift irrigation district. Pumps rated by current-meter measurements.

Cooperation.--Records of pump discharges furnished by Milner low-lift irrigation district.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	0	171	172	201	179
2							0	80	171	172	201	179
3							0	127	171	172	201	179
4							0	127	171	172	201	179
5							0	*127	171	172	155	179
6							0	129	171	180	0	179
7							0	140	171	198	0	175
8							0	150	171	198	88	159
9							0	150	171	198	75	159
10							0	150	171	*198	109	159
11							0	150	171	198	150	159
12							0	150	172	198	150	159
13							0	150	172	198	*171	159
14							0	150	172	199	171	159
15							0	150	172	199	171	159
16							28	150	172	199	171	159
17							37	150	172	199	191	159
18							*54	150	172	199	201	159
19							54	150	172	200	201	*156
20							80	150	172	200	201	140
21							80	150	*172	200	201	140
22							80	150	172	200	201	138
23							80	150	172	200	201	130
24							90	162	172	201	201	130
25							127	171	172	*201	201	130
26							44	171	172	201	201	122
27							68	171	172	201	201	124
28							150	171	172	201	188	120
29							150	171	172	201	179	120
30							19	171	172	201	*179	111
31							-	*171	-	201	179	-
Total	0	0	0	0	0	0	1,141	4,489	5,149	6,029	5,141	4,559
Mean	0	0	0	0	0	0	38.0	145	172	194	166	152
Ac-ft	0	0	0	0	0	0	2,260	8,900	10,210	11,960	10,200	9,040

Calendar year 1950: Max 200 Min 0 Mean 73.2 Ac-ft 52,970
Water year 1950-51: Max 201 Min 0 Mean 72.6 Ac-ft 52,570

* Discharge measurement made on this day

Gooding Canal at Milner, Idaho

Location.--Headgates of canal, lat 42°31', long. 114°01', in sec. 28, T. 10 S., R. 21 E., at Milner dam.

Records available.--May 1930 to September 1951.

Gage.--Water-stage recorder on Milner-Gooding Canal at site 3 miles downstream from headgates. Staff gage on A lateral 1½ miles below headgates and differential recorder on control gates of diversion 3 miles downstream from headgates.

Extremes.--Maximum daily discharge during year, 2,660 cfs July 21-23, 25, no flow for many days.
1930-51: Maximum daily discharge, 2,680 cfs July 26, 28, 1949; no flow for many days.

Remarks.--Record good. Gooding canal diverts water from Snake River for Milner-Gooding project of Bureau of Reclamation and in part for project of North Side Canal Co. The latter project also receives water through the North Side Twin Falls Canal and P. A. lateral. Discharge of canal is computed by combining the discharge of Milner-Gooding diversion and that of North Side Canal Co. diversions below their division point and adding 35 cfs to that sum for loss between headgates and division point.

Cooperation.--Gage-height record furnished by North Side Canal Co. and American Falls Reservoir District No. 2.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	1,820	2,560	2,540	2,560	2,390
2							0	1,820	2,550	2,540	2,570	2,390
3							0	1,920	2,540	2,550	2,560	2,400
4							0	1,980	2,550	2,500	2,560	2,420
5							0	1,950	2,530	2,510	2,560	2,420
6							0	1,990	2,540	2,510	2,560	2,410
7							0	2,060	2,560	2,550	2,550	2,380
8							0	2,060	2,550	2,560	2,530	2,370
9							0	2,030	2,530	2,540	2,540	2,400
10							0	1,990	2,550	2,610	2,530	2,400
11							0	2,010	2,550	2,610	2,500	2,340
12							0	2,070	2,550	2,610	2,480	2,410
13							0	2,070	2,550	2,600	2,480	2,400
14							0	2,060	2,560	2,580	2,460	2,390
15							0	2,070	2,560	2,570	2,470	2,330
16							0	2,070	2,540	2,590	2,470	2,300
17							430	2,050	2,540	2,630	2,460	2,300
18							990	2,060	2,550	2,630	2,470	2,290
19							1,170	2,060	2,530	2,620	2,470	2,290
20							1,350	2,160	2,530	2,620	2,480	2,240
21							1,530	2,240	2,520	2,660	2,480	2,250
22							1,700	2,270	2,540	2,660	2,500	2,250
23							1,780	2,340	2,540	2,660	2,480	2,250
24							1,810	2,410	2,530	2,650	2,460	2,220
25							1,910	2,400	2,530	2,660	2,470	2,190
26							1,930	2,400	2,540	2,650	2,420	2,200
27							1,950	2,490	2,560	2,650	2,400	2,210
28							1,940	2,510	2,540	2,640	2,400	2,190
29							1,950	2,540	2,550	2,630	2,400	1,200
30							1,890	2,520	2,530	2,630	2,400	0
31							-	2,540	-	2,580	2,380	-
Total	0	0	0	0	0	0	22,330	66,960	76,300	80,540	77,050	66,230
Mean	0	0	0	0	0	0	744	2,160	2,543	2,598	2,485	2,208
Ac-ft	0	0	0	0	0	0	44,290	132,800	151,300	159,700	152,800	131,400
Distribution to projects in acre-feet												
(†)	0	0	0	0	0	0	22,750	73,090	93,440	96,850	90,880	72,730
(‡)	0	0	0	0	0	0	21,540	59,720	57,900	62,900	61,940	58,630

Calendar year 1950: Max 2,620 Min 0 Mean 1,024 Ac-ft 741,400
Water year 1950-51: Max 2,660 Min 0 Mean 1,067 Ac-ft 772,300

† To Milner-Gooding project, total for water year 449,700 acre-ft.
‡ To North Side Canal Co. project, total for water year 322,600 acre-ft.

North Side Twin Falls Canal at Milner, Idaho

Location.--Lat 42°32', long. 114°01', in sec. 20, T. 10 S., R. 21 E., on right bank half a mile north of Milner and three-quarters of a mile downstream from headgates at Milner Dam.

Records available.--May 1909 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,123.4 ft above mean sea level, datum of 1929. Prior to Apr. 1, 1916, staff gages at two sites within half a mile of present site at slightly different datum.

Extremes.--Maximum discharge, 2,830 cfs July 10; no flow for several days. 1909-51: Maximum daily discharge, 3,200 cfs July 5-7, 29-31, 1921, May 15, 1928, June 2, July 23, 1929; no flow at times when headgates were closed.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow controlled by headgates. Water diverted by this canal and by P. A. lateral and part of that diverted by Gooding Canal, all at Milner, is used for irrigation of 163,000 acres of land under the North Side Canal Co. system. Diversions began in spring of 1909.

Cooperation.--Gage-height record furnished by North Side Canal Co.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,590	729	584	517	b400	387	390	1,490	*2,470	2,640	2,720	2,320
2	1,440	685	588	529	b450	390	407	1,360	2,450	2,640	2,720	2,320
3	1,340	729	584	539	495	381	395	1,280	2,450	*2,620	2,620	2,290
4	1,210	*722	561	558	492	392	378	1,280	2,450	2,720	2,600	2,250
5	1,060	714	561	545	489	392	464	*1,480	2,450	2,720	2,590	2,260
6	1,130	711	561	*555	486	404	611	1,580	2,450	2,740	*2,590	2,140
7	1,150	703	565	539	434	392	685	1,440	2,440	2,710	2,590	2,050
8	1,110	671	561	501	437	395	800	1,330	*2,440	2,720	2,580	2,060
9	1,070	685	*568	539	449	381	946	1,550	2,440	2,710	2,620	2,160
10	1,150	674	578	b530	428	369	1,210	1,730	2,460	*2,800	2,540	2,160
11	*1,050	700	571	b530	431	375	1,080	1,790	2,550	2,760	2,510	2,090
12	988	703	559	b530	407	372	1,030	1,820	2,580	2,760	2,530	2,190
13	988	718	555	b530	401	375	1,120	1,800	*2,600	2,730	*2,530	2,170
14	309	642	561	542	392	378	1,190	1,800	2,620	2,680	2,540	2,110
15	0	625	571	539	387	372	1,250	1,790	2,580	2,680	2,600	*2,020
16	0	625	574	536	384	347	1,220	1,810	2,580	2,720	2,540	1,960
17	0	*622	578	532	384	361	1,180	1,950	2,600	*2,740	2,540	1,890
18	0	608	542	b525	378	381	*1,190	2,050	2,580	2,740	2,530	1,830
19	0	581	542	b525	384	372	1,180	*2,050	2,570	2,720	2,540	*1,810
20	0	565	552	b525	392	375	1,180	2,030	2,560	2,710	*2,540	1,700
21	150	581	561	b525	390	378	1,190	2,030	2,540	2,750	2,520	1,640
22	109	574	561	b525	367	358	1,250	2,040	*2,590	2,740	2,540	1,450
23	653	565	542	b504	369	378	1,300	2,180	2,570	*2,720	2,530	1,320
24	1,020	555	542	483	381	378	1,310	2,260	2,550	2,730	2,460	1,330
25	1,000	581	526	483	387	369	1,300	2,290	2,550	2,740	2,440	1,300
26	957	578	523	455	384	367	1,290	2,330	2,570	2,720	2,420	1,210
27	826	558	529	*440	355	375	1,430	2,350	2,570	*2,740	2,440	1,160
28	785	574	529	443	364	390	1,490	2,460	2,560	2,730	2,370	988
29	818	574	532	b400	-	390	1,490	2,430	2,600	2,730	*2,320	*1,160
30	770	574	526	b400	-	384	1,510	2,430	2,640	2,720	2,310	1,520
31	740	-	529	b400	-	*387	-	2,460	-	2,720	2,290	-
Total	23,413	19,126	17,216	15,724	11,497	11,765	31,486	58,670	76,060	84,300	78,210	54,858
Mean	755	638	555	507	411	380	1,049	1,893	2,535	2,719	2,523	1,829
Ac-ft	46,440	37,940	34,150	31,190	22,800	23,340	62,410	116,400	150,900	167,200	155,100	108,800

Calendar year 1950: Max 2,850 Min 0 Mean 1,349 Ac-ft 976,500
Water year 1950-51: Max 2,800 Min 0 Mean 1,321 Ac-ft 956,700

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

South Side Twin Falls Canal at Milner, Idaho

Location.--Lat 42°31', long. 114°01', in sec. 29, T. 10 S., R. 21 E., on left bank 50 ft upstream from highway bridge and 700 ft downstream from headgates at Milner Dam.

Records available.--May 1909 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,121.5 ft above mean sea level, datum of 1929. Prior to May 13, 1913, staff gage and May 13, 1913, to Apr. 24, 1914, water-stage recorder, at highway bridge 50 ft downstream at present datum.

Extremes.--Maximum discharge during year, 3,720 cfs July 25 (gage height, 10.56 ft); minimum, 26 cfs Oct. 26-31 (gage height, 0.90 ft).
1909-51: Maximum daily discharge, 4,600 cfs Aug. 12, 1918, including about 1,200 cfs wasted through spillway below station and returned to river; no flow Sept. 20, 1920.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow controlled by headgates. Diversion began in March 1905 when 30,000 acres were reported as irrigated. By 1912 this had increased to 147,000 acres and during recent years irrigated area has been reported as 202,000 acres.

Cooperation.--Gage-height record furnished by Twin Falls Canal Co.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,610	855	548	529	b455	483	65	2,310	3,440	3,510	3,570	3,470
2	1,530	490	545	545	b452	486	65	2,620	3,420	3,520	3,570	3,470
3	1,500	407	551	565	b454	494	65	2,800	3,450	*3,510	3,560	3,500
4	1,420	*551	545	559	b455	489	393	2,820	3,460	3,520	3,580	3,500
5	1,370	838	534	b561	b475	480	568	*2,810	3,420	3,560	3,560	3,460
6	1,390	746	534	*b547	b476	475	587	2,850	3,400	3,560	*3,570	3,390
7	1,280	394	540	b467	b465	502	675	2,830	3,420	3,580	3,570	3,340
8	1,250	425	534	b431	b477	510	720	2,820	*3,330	3,540	3,570	3,310
9	1,170	449	*529	b488	494	526	749	2,800	3,310	3,490	3,560	3,360
10	*1,100	534	532	b494	508	*505	791	2,970	3,310	*3,500	3,500	3,310
11	1,060	621	529	b515	526	489	794	3,120	3,350	3,520	3,470	3,310
12	980	621	532	b520	491	486	787	3,030	3,360	3,590	3,480	3,190
13	969	624	532	b520	513	489	801	2,940	*3,350	3,610	*3,480	3,060
14	972	582	532	524	491	508	904	2,940	3,350	3,650	3,530	2,930
15	965	562	540	516	499	521	990	2,990	3,340	3,660	3,580	2,810
16	1,020	559	543	513	505	524	1,150	3,020	3,340	3,650	3,600	2,750
17	1,030	*559	545	518	497	521	1,500	3,020	3,360	*3,650	3,600	2,670
18	1,050	573	543	b505	502	516	*1,810	3,090	3,330	3,650	2,100	2,640
19	1,060	568	543	b479	502	497	2,010	3,150	3,290	3,660	1,800	*2,630
20	1,060	548	548	b436	491	467	2,270	3,160	3,290	3,650	*2,840	2,660
21	1,050	545	548	b479	459	459	2,210	3,160	3,290	3,650	3,610	2,580
22	1,060	537	537	b497	451	464	2,140	3,170	*3,310	3,670	3,580	2,470
23	1,060	540	529	b513	494	457	2,240	3,280	3,270	*3,690	3,560	2,280
24	1,060	537	532	b516	497	454	2,490	3,500	3,290	3,690	3,560	2,140
25	1,010	540	529	554	508	446	2,740	3,500	3,300	3,690	3,580	2,110
26	767	537	529	548	508	472	2,740	3,500	3,350	3,670	3,580	2,100
27	26	537	529	537	475	491	2,890	3,510	3,410	*3,640	3,610	2,110
28	26	545	529	548	478	483	2,910	3,420	3,460	3,630	3,570	2,090
29	26	545	537	b424	-	205	2,660	3,380	3,500	3,600	3,530	*2,000
30	26	548	537	b437	-	65	2,400	3,370	3,490	3,580	*3,480	1,930
31	307	-	524	b462	-	*65	-	*3,430	-	3,590	3,470	-
Total	30,204	16,917	16,639	15,747	13,598	14,029	43,114	95,310	100,990	111,680	106,220	84,570
Mean	974	564	537	508	486	453	1,437	3,075	3,366	3,603	3,426	2,819
Ac-ft	59,910	33,560	33,000	31,230	26,970	27,830	85,520	189,000	200,300	221,500	210,700	167,700

Calendar year 1950: Max 3,720 Min 24 Mean 1,750 Ac-ft 1,267,000
Water year 1950-51: Max 3,690 Min 26 Mean 1,778 Ac-ft 1,287,000

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

Snake River at Milner, Idaho

Location.--Lat 42°32', long. 114°01', in sec. 29, T. 10 S., R. 21 E., on left bank 200 ft downstream from highway bridge at Milner and a quarter of a mile downstream from Milner Dam.

Drainage area.--17,180 sq mi, approximately.

Records available.--May 1909 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,062.9 ft above mean sea level, datum of 1929. Prior to May 28, 1919, staff gages at slightly different sites and datums.

Average discharge.--25 years (1926-51), 1,990 cfs.

Extremes.--Maximum discharge during year, 14,800 cfs May 15, 16 (gage height, 16.63 ft); minimum, 57 cfs Jan. 29 (gage height, 2.46 ft).
1909-51: Maximum discharge, 44,400 cfs June 12, 1909 (gage height, 20.10 ft, site and datum then in use); minimum, 2 cfs Mar. 17-28, 1936 (gage height, 1.18 ft).

Remarks.--Records good. Flow regulated by American Falls Reservoir (see p. 51), Lake Walcott (see p. 55), and other reservoirs having a combined usable capacity of about 3,300,000 acre-ft. About 1,340,000 acres of land irrigated by diversions from river and its tributaries above station, from which the return flow in large part enters Snake River between Milner and King Hill stations. Flow includes some stored water released for use downstream by Idaho Power Co.

Cooperation.--Gage-height record furnished by Twin Falls Canal Co. and North Side Canal Co.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

2.5	68	6.0	1,400	12.0	7,910
3.0	134	7.0	2,390	14.0	10,600
3.5	234	8.0	3,580	16.0	13,800
4.0	373	9.0	4,530	18.0	17,600
5.0	748	10.0	5,550		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,600	3,340	2,680	4,090	10,500	9,380	9,870	8,430	7,940	1,150	595	325
2	3,900	3,350	3,280	3,720	10,200	9,470	8,640	9,470	8,070	713	572	322
3	3,570	1,190	3,750	4,390	10,100	9,070	10,100	10,100	7,780	*626	638	322
4	3,120	*1,350	3,680	4,670	10,500	9,580	9,830	8,850	7,770	254	638	322
5	2,380	3,090	3,710	4,820	11,500	9,520	9,510	6,070	6,260	405	634	325
6	1,640	2,920	3,740	4,660	11,800	9,890	8,910	*7,260	5,260	116	*824	328
7	2,170	2,890	3,740	4,440	11,100	9,580	8,740	7,330	4,800	124	942	534
8	2,190	2,870	3,750	3,700	11,000	9,790	8,660	4,980	*3,340	972	431	438
9	1,980	3,020	*3,830	4,420	11,000	9,540	7,730	5,600	1,460	333	415	336
10	*2,200	3,040	3,920	6,410	10,900	*9,590	8,870	4,510	1,080	*504	319	392
11	2,280	3,380	3,830	7,270	10,300	9,830	7,960	4,030	824	519	322	325
12	2,250	3,520	3,700	7,910	9,960	9,790	6,300	6,430	610	472	322	610
13	2,250	2,080	3,750	7,920	10,400	9,730	5,060	9,760	*296	313	322	679
14	2,950	2,470	3,840	8,010	10,200	9,960	4,500	11,300	431	285	319	497
15	3,350	2,410	4,040	8,010	10,000	9,490	4,310	14,200	497	307	307	333
16	3,390	*2,460	4,210	7,990	9,840	8,790	4,280	14,200	305	310	319	508
17	3,500	2,960	4,500	7,680	9,860	9,980	2,220	11,100	239	*313	330	599
18	3,670	3,150	4,410	7,880	9,440	9,970	1,710	8,950	299	310	2,070	515
19	3,780	3,230	4,180	7,730	9,800	9,700	*1,330	8,900	530	310	2,090	*534
20	3,550	3,260	4,110	6,790	10,100	9,760	541	8,260	501	307	1,110	479
21	3,210	3,990	4,410	7,530	9,840	9,790	232	8,790	*222	351	425	722
22	3,060	4,650	4,740	7,830	8,960	9,020	239	11,600	2,870	683	501	373
23	2,140	4,560	4,820	9,130	9,000	9,760	442	10,400	5,640	646	819	465
24	1,860	4,470	4,960	9,890	9,090	9,720	1,210	9,110	3,120	319	662	814
25	2,170	4,760	4,790	9,960	9,370	9,410	1,550	9,340	280	*4 6	438	704
26	3,530	4,670	4,510	9,770	9,550	9,140	1,250	10,200	1,300	591	405	717
27	2,560	3,680	4,330	*9,560	8,350	9,440	984	9,980	5,180	386	330	1,040
28	2,160	2,970	4,290	9,400	8,590	10,000	753	9,420	5,140	402	330	1,050
29	3,170	2,690	4,120	5,080	-	9,940	735	10,700	2,520	658	*330	1,740
30	3,140	2,630	4,190	9,890	-	9,720	3,850	9,790	1,470	771	330	3,470
31	3,230	-	4,320	10,300	-	9,860	-	9,290	-	545	330	-
Total	87,750	95,050	126,130	220,650	281,250	298,210	140,316	280,350	86,034	14,481	18,419	19,818
Mean	2,831	3,168	4,069	7,118	10,040	9,620	4,677	9,044	2,868	467	594	661
Ac-ft	174,000	188,500	250,200	437,700	557,900	591,500	278,300	556,100	170,600	28,720	36,530	39,310

Calendar year 1950: Max 18,400 Min 26 Mean 4,074 Ac-ft 2,950,000
Water year 1950-51: Max 14,200 Min 116 Mean 4,571 Ac-ft 3,309,000

* Discharge measurement made on this day.

Devils Washbowl Spring near Kimberly, Idaho

Location.--Lat 42°35', long. 114°21', in NE¼ sec. 4, T. 10 S., R. 18 E., 400 ft downstream from Devils Washbowl Spring, half a mile upstream from mouth which is half a mile upstream from Twin Falls of Snake River, and 3½ miles north of Kimberly, Idaho.

Records available.--April 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,540 ft (from river-profile map).

Extremes.--1950-51: Maximum daily discharge, 27 cfs Sept. 19, 22-25, 1951; minimum daily, 18.5 cfs May 13-15, 1950.

Remarks.--Records good. No diversion or regulation above station. Flow at station is from principal outlet only. On Mar. 20, 1951, a discharge measurement of total spring flow of 25.6 cfs (adjusted for surface inflow) was made.

Rating table, water year 1950-51 (ıge height, in feet, and discharge, in cubic feet per second)

1.7	17
1.8	21
2.0	32

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	24.5	22.5	22	21	22	21	20.5	20.5	23	23.5	24
2	24	24.5	22.5	22.5	21	22	21	20.5	20.5	22.5	22.5	24
3	24	24.5	23	22	21	22	21	20.5	21	21.5	22.5	24.5
4	*24	24	22.5	22	21	22	21	20.5	21	21.5	22.5	24.5
5	24	24	22.5	21.5	21	22	21	20.5	20.5	21.5	23	24.5
6	24	24	22.5	21.5	21	22	21	20.5	20.5	21.5	23.5	24.5
7	24	24	22.5	21	21	22	21	20.5	20.5	21.5	23.5	24
8	24	24	22.5	21	21	22	21	20.5	20.5	21.5	24.5	24.5
9	24	23.5	22	21	21	22	21	20	20.5	21.5	24.5	24.5
10	24	23.5	22	21	21	21.5	21	20	20.5	21.5	24.5	25
11	24	23.5	22	21.5	21	*21.5	21	20	21	22	23.5	24.5
12	24	24	22	21.5	21	21	21	20	21.5	22	23.5	24
13	24	24.5	*22	21.5	*21	21	21	20	*22	22	23	24.5
14	24	24.5	22	22.5	21	21	21	20	21.5	22	22.5	25
15	24	*24	22	22.5	21	21	21	19.5	22	22	22.5	24.5
16	24	23.5	22	22.5	21	20.5	21	19.5	21.5	22.5	22.5	25.5
17	24	23.5	22	22.5	21	20.5	21	*19.5	21.5	22	22.5	26.5
18	24	23.5	22	23	21	20.5	21	20	22	22	22.5	26.5
19	24	23	22	22.5	21	20.5	21	20	21.5	*22	22.5	26.5
20	24	23	22	22	21.5	20.5	*21	20	21.5	22	23	26.5
21	24	23	21.5	22.5	22	20.5	21.5	20	21.5	22	22.5	26.5
22	24	22.5	21.5	22.5	22	20.5	21	20	21.5	22	23	27
23	24	22.5	21.5	22	22.5	20.5	21	20	21.5	22	23	26.5
24	24	22.5	21.5	22	22.5	20.5	21	20	21.5	22.5	22.5	26.5
25	23.5	22.5	21.5	22	22.5	20.5	21	20	22	22.5	22.5	27
26	24	22.5	21.5	21.5	22.5	20.5	21	20	22.5	22.5	23.5	26.5
27	24.5	22	21.5	21	22	20.5	21	20	22.5	22.5	23.5	26.5
28	24.5	22	21.5	21	22	20.5	21	20	23	22.5	23.5	26
29	24.5	22	21.5	21	-	21	21	20.5	23.5	*22.5	23.5	26
30	24.5	22	22	21	-	21	21	20.5	23	24	23.5	26
31	24.5	-	22.5	21	-	21	-	20.5	-	24	23.5	-
Total	746.0	701.0	682.5	675.0	598.5	654.5	630.5	624.0	644.5	687.0	717.0	762.5
Mean	24.1	23.4	22.0	21.8	21.4	21.1	21.0	20.1	21.5	22.2	23.1	25.4
Ac-ft	1,480	1,390	1,350	1,340	1,190	1,300	1,250	1,240	1,280	1,360	1,420	1,510

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 27 Min 19.5 Mean 22.3 Ac-ft 16,110

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 28 to Feb. 12; discharge estimated on basis of records for Box Canyon Springs near Wendell and Blue Lakes Spring near Twin Falls.

Snake River near Kimberly, Idaho

Location.--Lat 42°36', long. 114°22', in NW¼ sec. 4, T. 10 S., R. 18 E., on left bank 1,200 ft downstream from Twin Falls powerplant, 2¼ miles upstream from Shoshone Falls, and 4 miles north of Kimberly.

Records available.--July 1923 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 3,362.67 ft above mean sea level (levels by Idaho Power Co.). Prior to Aug. 31, 1938, at site 2,000 ft downstream at different datum.

Extremes.--Maximum discharge during year, 14,700 cfs May 16 (gage height, 17.00 ft); minimum, 24 cfs Apr. 24 (gage height, 1.59 ft); minimum daily, 569 cfs Apr. 22.
1923-51: Maximum discharge, 27,200 cfs July 4, 1927 (gage height, 14.76 ft, site and datum then in use), from rating curve extended above 20,000 cfs; minimum recorded, 10 cfs May 17, 1944 (gage height, 1.15 ft); minimum daily recorded, 139 cfs July 4, 1941.

Remarks.--Records good. Flow regulated by Twin Falls powerplant and several reservoirs above station. Practically entire flow is diverted at Milner during irrigation season; no diversion between Milner and Kimberly.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 11 to Mar. 3, May 1 to July 21)

4.9	550	9.0	1,520
5.5	740	11.0	4,500
6.0	925	13.0	7 170
7.0	1,350	15.0	10.700
8.0	1,840	16.6	14,100

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,570	3,540	3,050	4,550	10,600	9,740	10,000	8,980	8,260	1,630	1,260	817
2	4,250	3,650	3,470	3,630	10,700	9,910	8,800	9,570	8,390	1,520	1,150	819
3	*4,000	2,760	4,160	4,790	10,700	9,640	10,300	10,600	8,060	1,060	989	840
4	3,560	625	4,130	5,050	11,200	10,000	10,100	9,380	8,090	1,000	1,020	803
5	3,150	3,160	4,070	4,980	11,900	10,000	9,720	8,940	6,610	803	1,240	812
6	2,060	3,250	4,080	4,990	12,300	10,500	9,140	7,880	5,650	843	1,240	805
7	2,500	3,180	4,110	4,880	*11,700	10,100	8,960	7,590	5,280	655	1,300	782
8	2,670	3,130	4,100	4,140	11,500	10,200	8,890	5,760	3,960	687	1,380	1,020
9	2,420	3,270	4,110	4,390	11,800	10,000	8,010	5,760	2,270	973	913	961
10	2,560	3,280	4,200	6,760	11,700	9,990	8,850	4,610	1,610	708	837	841
11	2,710	3,400	4,240	7,740	10,800	10,100	8,460	4,450	1,540	*857	750	896
12	2,700	4,370	*4,010	8,430	10,500	*10,000	7,040	6,300	1,170	941	810	858
13	2,660	2,370	4,010	8,480	10,900	9,930	5,460	9,990	*1,030	905	814	1,250
14	2,970	3,100	4,050	8,530	10,700	10,200	4,910	11,200	664	616	789	1,180
15	3,640	*2,880	4,260	8,540	10,500	9,970	4,190	13,700	764	656	802	1,040
16	3,720	2,920	4,460	8,530	10,300	8,910	4,860	14,100	921	671	802	912
17	3,740	3,130	4,800	8,260	10,500	10,200	3,120	11,800	643	758	753	1,060
18	3,860	3,460	4,780	8,460	10,100	10,300	2,140	9,510	643	666	2,170	1,100
19	4,110	3,550	4,520	8,390	10,300	9,950	1,820	9,180	694	690	3,500	1,060
20	3,880	3,600	4,360	7,280	10,800	10,000	*1,520	8,650	921	713	2,340	1,040
21	3,570	3,960	4,630	8,020	10,500	10,100	885	8,780	873	689	1,220	1,330
22	3,340	4,970	5,020	8,200	9,660	9,510	569	11,500	1,620	700	953	1,060
23	2,960	4,960	5,130	9,590	9,590	10,100	722	*10,900	5,960	1,100	1,030	997
24	2,140	4,810	5,280	10,700	9,640	10,200	704	9,440	4,340	1,050	1,480	1,040
25	2,390	5,030	5,180	10,700	9,870	9,800	1,860	9,590	1,420	758	1,040	1,560
26	3,110	5,160	4,900	10,400	10,100	9,450	1,660	10,400	867	973	925	1,170
27	4,050	4,310	4,660	10,400	8,960	9,780	1,580	10,300	4,400	893	957	1,460
28	1,600	3,420	4,620	10,200	9,000	10,300	1,250	9,760	5,870	889	817	1,580
29	3,430	3,150	4,480	4,510	-	10,200	1,020	10,900	3,500	921	*806	1,700
30	3,430	3,050	4,570	10,300	-	10,100	1,660	10,100	2,200	1,190	799	3,530
31	3,410	-	4,610	10,600	-	10,100	-	9,740	-	1,140	818	-
Total	98,160	105,445	136,050	234,420	296,820	309,280	148,200	289,360	98,310	27,655	35,704	34,323
Mean	3,166	3,515	4,389	7,562	10,600	9,977	4,940	9,334	3,277	892	1,152	1,144
Ac-ft	194,700	209,100	269,900	465,000	588,700	613,400	294,000	573,900	195,000	54,850	70,820	68,080

Calendar year 1950: Max 18,500 Min 483 Mean 4,443 Ac-ft 3,217,000
Water year 1950-51: Max 14,100 Min 569 Mean 4,969 Ac-ft 3,597,700

* Discharge measurement made on this day.

Blue Lakes Spring near Twin Falls, Idaho

Location.--Lat 42°37', long. 114°28', in N½SE¼ sec. 28, T. 9 S., R. 17 E., at outlet of upper Blue Lake, 1.4 miles northwest of Perrine Memorial Bridge and 3½ miles north of Twin Falls.

Records available.--April 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,300 ft (from Snake River profile map).

Extremes.--1950-51: Maximum daily discharge, 248 cfs Oct. 15-17, 27, 1950, Sept. 19, 20, 1951; minimum daily, 208 cfs June 5, 7-28, 1950.

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

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.7	190
1.8	224
1.9	266

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	244	244	240	236	230	228	232	228	228	220	236	240
2	244	244	240	236	230	228	232	228	228	220	236	240
3	244	240	240	236	230	228	232	232	228	224	236	240
4	*244	240	240	236	230	228	232	228	224	220	232	240
5	244	240	240	236	230	232	232	228	224	220	232	240
6	244	240	244	236	230	232	232	228	224	220	232	240
7	244	240	244	236	230	228	232	228	224	220	232	240
8	244	240	244	236	225	228	232	228	224	220	232	240
9	244	244	244	236	225	228	232	228	224	220	232	240
10	244	244	244	236	225	228	232	228	224	220	232	240
11	244	244	244	236	225	228	232	228	224	220	236	240
12	244	244	240	236	225	228	232	228	224	220	236	240
13	244	240	*244	236	*224	*228	232	228	*228	220	236	240
14	244	*240	244	236	224	224	232	228	228	220	236	240
15	248	240	244	236	224	224	232	228	224	220	236	240
16	248	240	244	236	224	228	232	228	224	220	236	244
17	248	240	244	236	224	232	232	*224	224	220	236	244
18	244	240	244	236	224	232	232	224	224	*220	236	244
19	244	240	244	236	224	232	228	224	224	224	240	244
20	244	240	244	236	224	228	228	224	220	228	240	248
21	244	244	244	236	224	228	*228	224	224	228	240	244
22	244	244	244	236	224	228	228	224	224	228	236	244
23	244	244	244	236	224	228	228	224	224	228	236	244
24	244	244	244	232	224	228	228	224	224	228	236	244
25	244	244	244	232	224	228	228	224	224	228	240	244
26	244	240	244	232	224	228	228	224	224	228	240	244
27	248	240	244	232	228	228	228	228	220	228	240	244
28	244	244	244	230	228	228	228	228	220	228	240	244
29	244	244	244	230	-	232	228	228	220	228	236	244
30	244	240	240	230	-	232	228	228	220	228	*236	244
31	244	-	240	230	-	232	-	228	-	232	236	-
Total	7,580	7,252	7,532	7,276	6,327	7,092	6,912	7,032	6,720	6,928	7,316	7,264
Mean	245	242	243	235	226	229	230	227	224	223	236	242
Ac-ft	15,030	14,380	14,940	14,430	12,550	14,070	13,710	13,950	13,330	13,740	14,510	14,410

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 248 Min 220 Mean 234 Ac-ft 169,000

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 28 to Feb. 12; discharge computed on basis of records for other Snake River springs and flor during adjacent periods.

Rock Creek near Rock Creek, Idaho

Location.--Lat 42°22', long. 114°18', in sec. 25, T. 12 S., R. 18 E., on right bank 0.1 mile downstream from road bridge, three-quarters of a mile downstream from West Fork Rock Creek, 5 miles south of Rock Creek settlement, and 12 miles south of Hansen.

Drainage area.--80 sq mi, approximately.

Records available.--November 1909 to August 1913, November 1938 to July 1939, November 1943 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,340 ft (by barometer). November 1909 to August 1913 staff gage at site 2 miles downstream at different datum. Nov. 23, 1938, to July 21, 1939, staff gage at present site at datum 1.25 ft higher.

Average discharge.--7 years (1944-51), 37.1 cfs.

Extremes.--Maximum discharge during year, 265 cfs May 11 (gage height, 2.73 ft); minimum, 4.4 cfs Aug. 11 (gage height, 0.52 ft).
1909-13, 1938-39, 1943-51: Maximum discharge observed, 429 cfs May 21, 1912 (gage height, 10.4 ft, site and datum then in use); minimum observed, 3.6 cfs Aug. 7-12, 1910 (gage height, 0.3 ft, site and datum then in use).

Remarks.--Records good except those for periods of fragmentary or no gage-height record, which are fair. Small ranch diversions above station.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 22 to May 31)

0.6	5.0	1.6	80
.7	8.3	2.0	127
.8	13	2.4	183
1.0	24	2.9	260
1.3	49		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	12	12	15	22	25	43	158	107	29	13	10
2	10	14	12	16	25	26	43	*147	99	28	12	9.6
3	9.6	12	21	16	30	26	47	146	91	25	14	9.6
4	9.2	11	58	16	40	25	58	161	84	24	13	9.6
5	9.2	11	28	15	45	25	74	192	82	24	13	9.2
6	9.6	11	24	10	70	25	84	212	74	24	13	9.2
7	9.6	11	31	8.7	90	24	94	f238	71	23	13	8.7
8	10	13	31	12	82	24	107	f254	69	23	13	8.3
9	10	*12	29	14	90	25	112	f250	64	22	12	8.7
10	9.6	9.2	28	16	89	24	122	f252	60	21	12	8.7
11	9.2	10	28	17	90	23	118	257	57	21	10	8.7
12	9.2	10	*28	16	95	21	115	250	58	21	9.2	8.7
13	9.2	11	26	15	90	21	124	231	58	19	9.2	8.7
14	9.2	11	25	15	79	21	146	216	*52	18	9.2	8.7
15	9.6	11	24	15	65	23	154	213	49	17	9.6	9.2
16	10	10	23	15	55	24	*160	207	47	*17	9.6	8.3
17	9.6	11	21	15	45	23	161	207	44	17	9.6	8.3
18	9.6	12	20	16	36	23	171	216	44	17	9.2	8.0
19	9.6	13	20	13	32	23	171	219	43	16	8.7	8.0
20	9.6	15	19	11	29	24	182	212	40	16	9.6	7.6
21	9.6	24	18	14	33	26	176	206	39	16	11	8.3
22	9.6	18	18	18	35	30	168	196	38	16	*12	8.7
23	10	14	17	21	32	30	160	*189	38	14	13	8.7
24	9.6	13	17	21	30	31	154	182	36	14	12	8.3
25	10	13	17	26	28	34	141	171	35	14	11	8.3
26	9.6	12	16	30	27	38	141	161	34	13	10	8.3
27	10	12	16	29	27	40	141	154	32	14	10	8.7
28	11	12	16	*28	*28	41	154	148	30	14	10	8.3
29	11	12	16	26	-	42	174	139	30	15	10	8.3
30	10	12	16	20	-	44	168	127	29	14	10	8.3
31	14	-	16	20	-	43	-	115	-	13	10	-
Total	306.0	372.2	671	539.7	1,439	874	3,863	6,026	1,634	579	340.9	260.0
Mean	9.87	12.4	21.6	17.4	51.4	28.2	129	194	54.5	18.7	11.0	8.67
Ac-ft	607	738	1,330	1,070	2,850	1,730	7,660	11,950	3,240	1,150	676	516

Calendar year 1950: Max 252 Min 6.6 Mean 38.0 Ac-ft 27,480
Water year 1950-51: Max 257 Min 7.6 Mean 46.3 Ac-ft 33,520

Peak discharge (base, 130 cfs).--Apr. 21 (12:30 a.m.) 188 cfs (2.35 ft); May 11 (8 p.m.) 265 cfs (2.73 ft).

* Discharge measurement made on this day.

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

Note.--No gage-height record Jan. 8-27, Jan. 29 to Feb. 7, Feb. 15-27, Mar. 3-11; discharge estimated on basis of weather records, records for nearby streams, and flow during adjacent periods.

Snake River near Buhl, Idaho

Location.--Lat 42°40', long. 114°43', in NW¼ sec. 9, T. 9 S., R. 15 E., on left bank 2 miles downstream from Niagara Springs, 3¾ miles upstream from outlet of Clear Lakes, and 6 miles northeast of Buhl.

Records available.--December 1946 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 2,952.9 ft above mean sea level, by stadia levels. Prior to Jan. 17, 1947, staff gage at same site and datum.

Extremes.--Maximum discharge during year, 16,200 cfs May 16 (gage height, 8.13 ft); minimum, 2,350 cfs Apr. 23 July 7; minimum gage height, 1.00 ft July 7.
1946-51: Maximum discharge, 23,100 cfs June 13, 1947 (gage height, 10.34 ft); minimum observed, 1,900 cfs May 5, 1947 (gage height, 0.38 ft).

Remarks.--Records good. Flow regulated by Twin Falls and Shoshone Falls powerplants and several reservoirs above station. No diversion except by small ranch ditches between this station and station at Milner, where practically entire flow is diverted during irrigation season.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 17-27)

1.0	2,400	5.0	8,550
2.0	3,450	6.0	10,900
3.0	4,750	8.0	16,100
4.0	6,450		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,150	5,310	4,770	6,210	12,200	10,800	11,400	8,850	10,500	3,530	3,060	2,850
2	6,400	5,370	4,930	5,210	12,000	11,200	10,900	*11,000	10,200	3,340	3,080	2,860
3	6,240	5,180	5,720	6,390	11,900	10,700	10,700	12,200	9,950	3,020	2,950	2,850
4	5,810	3,350	6,120	6,410	12,200	11,200	11,400	11,500	10,000	2,770	2,960	2,960
5	*5,370	3,690	5,720	6,530	12,900	11,100	11,100	10,800	9,100	2,630	2,980	2,950
6	4,520	5,170	5,770	6,450	13,600	11,600	10,600	9,910	7,910	2,620	3,140	2,950
7	4,290	5,180	*5,850	6,410	13,100	11,500	10,400	9,560	7,230	2,510	3,260	2,940
8	4,700	5,070	5,760	5,940	*12,700	11,300	10,400	8,620	6,340	2,420	3,360	2,990
9	4,560	5,020	5,770	5,370	12,700	11,400	10,100	7,400	4,720	2,540	3,130	3,150
10	4,470	5,010	5,880	7,670	13,100	11,100	10,200	7,760	3,740	2,670	2,810	3,090
11	4,690	5,100	5,940	8,830	12,100	11,400	10,400	5,880	3,380	2,560	2,760	3,070
12	4,680	5,900	5,760	9,210	11,700	11,400	9,030	7,130	*3,260	*2,620	2,660	3,100
13	4,600	4,990	5,690	9,820	11,900	11,300	7,310	11,600	3,040	2,680	2,720	3,160
14	4,630	4,740	5,760	9,860	11,900	*11,500	6,450	12,900	2,860	2,570	2,660	3,360
15	5,470	4,740	5,900	9,950	11,80[illegible]	11,400	5,810	15,300	2,640	2,440	2,650	3,220
16	5,600	*4,720	6,120	9,930	11,500	10,400	6,450	15,900	2,710	2,420	2,660	3,110
17	5,650	4,770	6,390	9,720	11,700	11,200	5,330	14,000	2,750	2,410	2,700	3,080
18	5,810	5,290	6,540	9,770	11,500	11,700	3,880	11,500	2,610	2,420	3,100	3,290
19	5,990	5,420	6,320	9,750	11,300	11,300	3,680	11,000	2,850	2,440	5,760	3,200
20	5,940	5,420	6,100	8,870	11,900	11,300	3,440	10,700	2,780	2,450	4,430	3,200
21	5,690	5,530	6,130	9,010	11,800	11,500	3,030	10,500	2,840	2,460	3,530	3,180
22	5,230	6,580	6,600	9,260	11,000	11,000	2,740	12,500	2,780	2,460	2,990	3,460
23	5,150	6,770	6,740	10,200	10,700	11,100	2,500	13,000	6,440	2,610	2,850	3,210
24	4,170	6,660	6,870	11,900	10,800	11,500	2,510	*11,400	6,950	2,820	3,150	3,180
25	4,230	6,700	6,950	11,800	11,100	11,000	2,730	11,300	4,720	2,710	3,260	3,400
26	4,660	6,950	6,660	11,600	11,200	10,800	3,490	11,800	2,960	2,590	2,930	3,560
27	5,880	6,530	6,390	11,600	10,700	10,900	3,330	12,100	4,360	2,730	2,900	3,410
28	4,370	5,340	6,220	11,500	10,900	11,600	3,180	11,500	7,720	2,660	2,930	3,710
29	4,740	4,960	6,150	7,190	-	11,500	3,160	12,400	5,740	2,740	2,850	3,750
30	5,290	4,780	6,100	10,700	-	11,500	3,240	12,200	4,320	2,870	*2,840	4,800
31	5,200	-	6,120	12,000	-	11,400	-	11,700	-	3,070	2,820	-
Total	159,180	160,240	187,740	275,460	331,000	348,600	198,890	343,910	157,200	82,780	95,880	97,040
Mean	5,135	5,341	6,056	8,886	11,820	11,250	6,630	11,090	5,240	2,670	3,093	3,235
Ac-ft	315,700	317,800	372,400	546,400	656,500	691,400	394,500	682,100	311,800	164,200	190,200	192,500

Calendar year 1950: Max 19,700 Min 2,310 Mean 6,181 Ac-ft 4,475,000
Water year 1950-51: Max 15,900 Min 2,410 Mean 6,679 Ac-ft 4,836,000

* Discharge measurement made on this day.

Box Canyon Springs near Wendell, Idaho

Location.--Lat 42°42'30", long. 114°48'45", in NE¼ sec. 28, T. 8 S., R. 14 E., on left bank 150 ft below a waterfall, half a mile above mouth, three-quarters of a mile below source, and 7½ miles southwest of Wendell.

Records available.--April 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 2,950 ft (from topographic map).

Extremes.--1950-51: Maximum daily discharge, 480 cfs Sept. 19, 20, 28, 29, 1950; minimum daily, 372 cfs Apr. 12, 13, 1951.

Remarks.--Records excellent except those for periods of no gage-height record, which are good. No surface diversion or regulation above station. Discharge affected by variable surface waste from irrigation canals over rim rocks into springs above station. This waste measured or estimated on Oct. 4 (6.5 cfs), Dec. 13 (9.3 cfs), Feb. 15 (4 cfs), Mar. 14 (5.2 cfs), Apr. 21 (5 cfs), May 17 (1.5 cfs), June 12 (5.5 cfs), July 18 (0.2 cfs), Aug. 31 (0.5 cfs).

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.4	352
1.6	402
1.9	480

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	472	443	443	410	405	394	377	402	397	410	424	437
2	466	445	440	410	405	397	374	394	397	410	424	437
3	464	450	443	410	405	392	374	387	397	410	427	440
4	*458	456	448	410	405	397	374	387	402	410	427	440
5	464	450	435	410	405	397	374	382	404	412	427	443
6	464	445	435	410	405	397	374	380	404	410	427	443
7	458	448	437	410	405	394	380	382	407	*412	430	443
8	466	440	435	410	405	394	384	380	410	412	432	443
9	461	432	430	410	405	394	384	380	407	412	437	443
10	458	432	430	410	405	390	380	380	410	414	435	448
11	453	432	430	410	405	390	374	382	412	417	432	445
12	450	445	430	410	405	387	372	387	412	417	430	445
13	445	435	*430	410	400	392	374	390	414	417	430	448
14	450	435	427	410	400	*390	377	390	412	414	427	450
15	453	436	430	410	*400	392	384	387	412	414	427	450
16	445	437	424	410	400	390	382	382	410	414	427	445
17	440	*437	424	410	400	387	374	*384	*410	414	427	445
18	440	437	427	410	404	384	374	384	412	414	427	445
19	440	440	424	410	394	387	374	390	410	412	427	448
20	440	435	422	410	400	387	374	390	412	414	432	448
21	437	435	422	410	402	387	*377	387	412	414	432	445
22	435	432	422	410	400	384	380	387	410	414	432	445
23	435	430	424	410	402	382	382	387	412	414	435	445
24	432	432	424	410	400	382	377	390	412	414	435	445
25	435	432	425	410	402	382	377	392	412	417	435	448
26	437	432	425	410	397	382	377	392	412	417	437	450
27	443	430	425	410	402	382	380	392	412	417	440	450
28	453	432	420	410	397	382	380	392	410	420	443	453
29	458	432	415	410	-	382	390	394	412	420	443	453
30	453	443	415	410	-	382	397	397	412	422	440	450
31	448	-	415	410	-	382	-	397	-	422	*437	-
Total	13,953	13,140	13,276	12,710	11,260	12,041	11,351	12,027	12,267	12,850	13,385	13,370
Mean	450	438	428	410	402	388	378	388	409	415	432	446
Ac-ft	27,680	26,060	26,330	25,210	22,330	23,880	22,510	23,860	24,330	25,490	26,550	26,520

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 472 Min 372 Mean 415 Ac-ft 300,800

* Discharge measurement made on this day.

Note.--No gage-height record Nov. 14-16, Dec. 25 to Feb. 14; discharge estimated on basis of records for adjacent periods and records for other Snake River springs.

Salmon Falls Creek above upper Vineyard ditch, near Contact, Nev.

Location.--Lat 41°44'00", long. 114°52'30", near northwest corner, sec. 5, T. 44 N., R. 63 E., on left bank three-quarters of a mile above former diversion point for upper Vineyard ditch, 1¼ miles above present diversion dam, and 6 miles southwest of Contact.

Drainage area.--439 sq mi.

Records available.--May 1914 to July 1915, October 1948 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,570 ft (by barometer). May 17, 1914, to July 25, 1915, water-stage recorder at site three-quarters of a mile downstream at different datum.

Extremes.--Maximum discharge during year, 571 cfs May 12 (gage height, 3.83 ft); minimum, 19 cfs Sept. 9 (gage height, 1.27 ft).
1914-15, 1948-51: Maximum discharge, 750 cfs May 16, 1949 (gage height, 4.31 ft); minimum, 16 cfs Sept. 6, 1949 (gage height, 1.21 ft).

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.2	17	3.0	290
1.4	28	3.4	421
1.6	44	3.8	571
2.0	90		
2.5	170		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	34	36	33	b30	46	113	*305	330	66	26	23
2	27	33	33	35	b34	53	121	299	287	62	26	23
3	26	34	39	34	39	46	144	273	254	56	28	23
4	26	34	56	36	46	48	182	273	226	50	30	22
5	26	33	44	34	81	50	234	302	201	46	29	22
6	26	32	39	b27	106	47	265	379	188	45	28	22
7	26	32	45	b23	145	50	299	453	182	43	29	21
8	26	*32	*47	b26	197	51	333	472	182	43	28	21
9	26	31	46	b34	125	57	333	464	170	40	26	20
10	26	29	45	33	150	43	376	476	166	36	24	20
11	26	30	44	34	154	42	400	502	159	37	24	20
12	26	31	45	34	118	44	372	559	161	41	23	20
13	26	33	45	31	86	*63	372	490	161	40	23	21
14	26	33	43	34	*80	164	418	404	*156	36	22	20
15	26	33	43	34	87	154	450	346	154	33	22	21
16	26	31	42	35	77	135	439	308	152	30	21	22
17	27	33	41	36	69	82	*439	308	156	*29	22	22
18	27	38	40	b35	73	60	435	*352	152	28	22	22
19	27	33	40	b35	63	63	421	421	140	28	22	22
20	27	30	40	b24	57	101	425	483	133	28	24	21
21	28	39	39	b35	69	150	418	505	130	30	*26	22
22	28	38	37	42	66	161	393	453	118	31	25	23
23	28	36	35	40	63	100	372	446	113	28	25	23
24	29	34	35	44	55	96	349	472	107	27	26	24
25	29	34	36	46	54	104	326	472	98	26	26	24
26	29	34	35	45	55	125	352	490	94	26	25	24
27	30	34	35	46	49	127	317	521	85	28	24	24
28	30	33	34	43	44	113	311	536	77	34	24	24
29	30	31	37	34	-	121	414	524	72	32	23	24
30	29	34	40	b27	-	124	352	476	66	30	23	24
31	35	-	37	b28	-	121	-	396	-	28	24	-
Total	850	996	1,253	1,077	2,272	2,741	10,175	13,160	4,670	1,137	770	664
Mean	27.4	33.2	40.4	34.7	81.1	88.4	339	425	156	36.7	24.8	22.1
Ac-ft	1,690	1,980	2,490	2,140	4,510	5,440	20,180	26,100	9,260	2,260	1,530	1,320

Calendar year 1950: Max 716 Min 20 Mean 114 Ac-ft 82,460
Water year 1950-51: Max 559 Min 20 Mean 109 Ac-ft 78,900

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

Salmon Falls Creek near San Jacinto, Nev.

Location.--Lat 41°57', long. 114°42', in sec. 23, T. 47 N., R. 64 E., on right bank in canyon 600 ft downstream from highway bridge, 750 ft downstream from Shoshone Creek, and 5 miles north of San Jacinto.

Drainage area.--1,450 sq mi, approximately.

Records available.--September 1909 to September 1916, October 1918 to September 1951.

Gage.--Water-stage recorder. Prior to June 30, 1910, staff gage at nearby site at different datum.

Average discharge.--37 years (1910-16, 1919-20, 1921-51), 131 cfs.

Extremes.--Maximum discharge during year, 1,220 cfs Feb. 8 (gage height, 8.66 ft); minimum, 19 cfs Sept. 12, 14, 17-21.
1909-16, 1918-51: Maximum discharge, between 2,060 and 2,420 cfs Feb. 24, 1943 (gage height exceeded range of recorder, 10.20 ft, but was not more than 1.2 ft higher), from rating curve extended above 1,400 cfs; minimum, 2.8 cfs Nov. 13, 1947, during channel improvement work upstream.

Remarks.--Records good except those for June 18 to July 16 and those for periods of no gage-height record, which are fair. Many diversions above station for irrigation. Salmon Dam of Salmon River Canal Co., 15 miles below station, forms a reservoir having a capacity of 182,650 acre-ft.

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 7-10)

Oct. 1 to Feb. 8				Feb. 9 to Sept. 30			
3.9	31	5.5	259	3.9	16	5.5	283
4.0	40	6.0	373	4.0	20	6.0	428
4.3	71	7.0	637	4.3	43	7.0	760
4.6	106	8.0	939	4.6	85	7.6	965
5.0	164			5.0	163		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	54	66	57	58	99	230	*565	499	69	40	30
2	41	53	66	74	68	105	240	561	434	69	38	30
3	40	52	68	76	82	101	310	542	394	68	44	29
4	40	52	83	75	104	98	373	508	350	68	48	28
5	40	52	89	68	164	101	457	555	307	62	45	28
6	40	51	81	50	333	98	548	675	270	66	42	27
7	40	51	76	41	629	96	604	814	254	65	40	25
8	40	*52	*80	52	945	99	658	889	250	59	40	25
9	43	55	87	67	505	103	702	889	237	53	38	22
10	42	54	92	64	492	99	695	852	218	47	36	20
11	43	53	92	72	588	98	753	814	203	45	34	20
12	40	56	92	71	447	98	733	865	201	44	32	20
13	40	57	92	68	344	103	672	940	203	43	30	20
14	40	58	90	72	252	152	672	845	*213	40	30	20
15	41	58	88	74	a210	307	740	729	196	38	26	20
16	43	*58	87	74	a230	373	787	648	187	36	25	20
17	42	58	86	75	a190	218	*784	591	176	*35	25	20
18	41	60	83	76	a200	148	777	*584	165	34	26	20
19	42	67	81	66	a165	134	753	621	159	34	26	20
20	42	68	81	44	a140	260	719	685	148	37	30	19
21	45	71	81	59	a165	397	692	733	142	42	*31	20
22	44	75	79	94	a150	447	665	736	136	42	31	20
23	46	71	75	87	138	280	621	672	130	41	30	20
24	47	67	74	93	a120	225	578	648	126	38	33	20
25	48	67	74	96	a115	267	548	648	120	36	34	20
26	48	66	72	94	a120	332	558	638	111	36	32	20
27	48	66	72	*94	a125	318	591	641	101	36	31	20
28	48	64	72	90	*114	254	545	661	90	39	30	21
29	48	63	72	75	-	247	621	661	85	47	30	27
30	47	63	75	53	-	265	692	627	77	45	30	31
31	52	-	73	54	-	254	-	574	-	44	30	-
Total	1,340	1,792	2,479	2,205	7,193	6,176	18,318	21,411	6,182	1,458	1,037	682
Mean	43.2	59.7	80.0	71.1	257	199	611	691	206	47.0	33.5	22.7
Ac-ft	2,660	3,550	4,920	4,370	14,270	12,250	36,330	42,470	12,260	2,890	2,060	1,350

Calendar year 1950: Max 787 Min 9 Mean 162 Ac-ft 117,000
Water year 1950-51: Max 945 Min 19 Mean 193 Ac-ft 139,400

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for station near Contact and other nearby streams.

Salmon River Canal Co. reservoir near Rogerson, Idaho

Location.--Lat 42°13', long. 114°44', in sec. 18, T. 14 S., R. 15 E., at dam on Salmon Falls Creek, 10 miles west of Rogerson.

Drainage area.--1,610 sq mi, approximately.

Records available.--January 1922 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is 4,945.6 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Extremes.--Maximum contents observed during year, 90,750 acre-ft May 26-30 (gage height, 48.8 ft); minimum observed, 9,460 acre-ft Oct. 1-9 (gage height, 7.0 ft).
1922-51: Maximum contents observed, 123,700 acre-ft May 30, 31, 1922 (gage height, 61.1 ft); minimum observed, 125 acre-ft Sept. 21 to Oct. 5, 1934 (gage height, 0.1 ft).

Remarks.--Reservoir is formed by gravity-section concrete-arch dam completed in 1911; storage began in 1910. Capacity, 182,650 acre-ft between gage heights 0.0 ft, (bottom of outlet tunnel) and 80.0 ft (maximum operating level). Dead storage unknown. Water is used for irrigation of lands in Salmon River Canal Co. project. Figures given herein represent usable contents.

Cooperation.--Gage readings and capacity table furnished by Salmon River Canal Co.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,460	10,760	12,500	16,200	19,100	31,880	41,880	72,610	90,500	73,300	38,180	17,700
2	9,460	10,760	12,640	16,350	19,260	32,070	42,430	73,760	90,000	72,150	37,250	17,100
3	9,460	10,760	12,780	16,500	19,420	32,070	42,800	-	89,750	71,000	36,320	16,650
4	9,460	10,910	12,930	16,650	19,580	32,260	43,200	-	89,500	69,850	35,770	16,200
5	9,460	10,910	13,080	16,650	19,580	32,260	43,800	-	89,000	68,690	35,220	15,750
6	9,460	10,910	13,220	16,800	19,900	32,440	44,600	-	88,750	67,540	35,030	15,450
7	9,460	11,060	13,360	16,800	20,060	32,440	45,400	-	88,500	66,460	34,840	15,450
8	9,460	11,060	13,510	16,950	20,220	32,620	46,400	78,820	88,000	65,390	34,480	15,450
9	9,460	11,060	13,660	16,950	20,700	32,810	47,600	80,010	87,500	64,320	33,920	15,450
10	9,605	11,060	13,800	16,950	24,050	33,000	48,800	81,210	86,750	63,250	33,550	15,600
11	9,605	11,200	13,950	17,100	25,750	33,180	50,200	82,410	86,250	62,180	33,000	15,600
12	9,605	11,200	14,100	17,100	26,770	33,360	51,200	83,610	85,770	61,100	32,260	15,450
13	9,605	11,340	14,100	17,100	27,280	33,550	52,400	84,810	85,290	59,810	31,700	15,300
14	9,750	11,340	14,250	17,100	28,130	33,550	53,400	85,770	84,810	58,740	31,190	15,300
15	9,750	11,490	14,400	17,250	28,470	33,740	54,600	86,500	84,330	57,440	30,510	15,300
16	9,895	11,640	14,550	17,250	28,640	33,920	55,600	87,250	83,850	56,200	29,830	15,300
17	9,895	11,780	14,700	17,250	29,150	34,100	56,800	88,250	83,370	55,000	28,980	15,300
18	9,895	11,920	14,850	17,400	29,490	34,480	58,090	89,000	82,890	53,800	28,130	15,300
19	10,040	11,920	15,000	17,400	29,830	35,030	59,380	89,000	82,410	52,600	27,280	15,300
20	10,040	11,920	15,150	17,400	30,000	35,580	60,880	89,000	81,930	51,400	26,600	15,300
21	10,180	12,070	15,300	17,700	30,170	36,320	61,960	89,250	81,450	50,200	25,750	15,300
22	10,180	12,070	15,300	17,850	30,340	36,880	63,250	89,750	80,730	49,200	24,900	15,300
23	10,330	12,070	15,300	18,000	30,680	37,620	64,530	90,000	80,010	48,000	24,050	15,300
24	10,330	12,220	15,600	18,150	30,850	38,180	65,600	90,250	79,290	46,800	23,200	15,300
25	10,480	12,220	15,750	18,300	31,020	38,730	66,460	90,500	78,590	45,600	22,350	15,300
26	10,480	12,220	15,750	18,460	31,360	39,280	67,540	90,750	77,900	44,400	21,500	15,300
27	10,620	12,350	15,900	18,620	31,530	39,660	68,460	90,750	77,210	43,200	20,860	15,300
28	10,620	12,350	15,900	18,780	31,700	40,020	69,390	90,750	76,520	42,060	20,220	15,150
29	10,620	12,350	15,900	18,780	-	40,580	70,540	90,750	75,600	40,950	19,580	15,150
30	10,620	12,500	16,050	18,940	-	41,140	71,460	90,750	74,450	40,020	18,940	15,150
31	10,620	-	16,050	19,100	-	41,500	-	90,500	-	39,100	18,300	-

Monthly gage height and contents, water year October 1950 to September 1951

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	7.0	9,460	-
Oct. 31	7.8	10,620	+1,160
Nov. 30	9.1	12,500	+1,880
Dec. 31	11.5	16,050	+3,550
Calendar year 1950..	-	-	+2,830
Jan. 31	13.5	19,100	+3,050
Feb. 28	21.0	31,700	+12,600
Mar. 31	26.3	41,500	+9,800
Apr. 30	40.7	71,460	+29,960
May 31	48.7	90,500	+19,040
June 30	42.0	74,450	-16,050
July 31	25.0	39,100	-35,350
Aug. 31	13.0	18,300	-20,800
Sept.30	10.9	15,150	-3,150
Water year 1950-51..	-	-	+5,690

Salmon River Canal Co. canal near Rogerson, Idaho

Location.--Lat 42°15', long. 114°45', in sec. 7, T. 14 S., R. 15 E., on left bank half a mile downstream from Salmon River Canal Co. reservoir and 7 miles west of Rogerson.

Records available.--April 1937 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,940 ft (by barometer).

Extremes.--1937-51: Maximum daily discharge, 660 cfs July 21-24, 1944; no flow during long periods in each year.

Remarks.--Records good. Canal diverts from Salmon River Canal Co. reservoir for irrigation of lands in Salmon River Canal Co. project.

Cooperation.--Gage-height record furnished by Salmon River Canal Co.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0						0	555	452	381	295
2		0						0	531	464	376	278
3		0						0	507	474	372	263
4		0						0	476	495	363	236
5		0						0	458	522	341	186
6		0						0	442	539	337	0
7		0						0	426	548	325	0
8		0						0	400	566	310	0
9		0						0	394	582	274	0
10		0						205	374	603	271	0
11		0						244	391	599	278	0
12		0						233	417	598	304	0
13		0						217	402	598	327	0
14		0						226	*395	587	335	0
15		151						249	400	588	350	0
16		158						270	413	600	365	0
17		0						294	418	*604	366	0
18		0						*308	436	604	382	0
19		0						333	442	601	399	0
20		0						346	448	606	402	0
21		0						360	443	596	412	0
22		0						375	426	566	*412	0
23		0						392	404	559	411	0
24		0						414	377	557	402	0
25		0						442	385	545	379	0
26		0						457	395	516	361	0
27		0						477	408	501	345	0
28		0						510	423	488	340	0
29		0						559	432	458	334	0
30		0						562	445	396	324	0
31		-						568	-	398	311	-
Total	0	309	0	0	0	0	0	8,041	12,863	16,810	10,889	1,258
Mean	0	10.3	0	0	0	0	0	259	429	542	351	42.0
Ac-ft	0	613	0	0	0	0	0	15,950	25,510	33,340	21,600	2,500

Calendar year 1950: Max 523 Min 0 Mean 122 Ac-ft 88,400
Water year 1950-51: Max 606 Min 0 Mean 137 Ac-ft 99,500

* Discharge measurement made on this day.

Mud Lake near Terreton, Idaho

Location.--Lat 43°53', long. 112°24', in SW¼ sec. 1, T. 6 N., R. 34 E., 2 miles north of First Owsley pumphouse, 2½ miles northeast of Terreton, and 14 miles southwest of Hamer.

Drainage area.--7,780 sq mi, approximately.

Records available.--April 1921 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,774.99 ft above mean sea level (unadjusted). Prior to Oct. 31, 1931, staff gages at or near pumphouse at same datum.

Extremes.--Maximum contents during year, 37,200 acre-ft Apr. 18; maximum gage height, 7.73 ft Apr. 23 (affected by wind); minimum daily contents, 6,690 acre-ft Oct. 28; minimum gage height, 0.79 ft Oct. 27 (affected by wind).

1921-51: Maximum contents observed, 61,660 acre-ft May 5, 1923 (gage height, 9.20 ft); practically no contents Oct. 1 to Nov. 15, 1937 (on Nov. 15, 1937, water was released from Camas Creek into lake).

Remarks.--Mud Lake is a perched body of water confined by earth dikes and fed by ground water and surface tributaries augmented by well flows and surface inflow from North Lake. For complete description of Mud Lake region see Water-Supply Paper 818. Water for irrigation is diverted from lake by pumping. During low-lake stages inflow from Camas Creek may be bypassed through Camas Creek diversion canal directly to lake outlet channel leading to First Owsley pumping plant. Bypass was not used during 1951. Other irrigation diversions are made by various means from adjacent lakes and wells and Camas Creek above lake. Area of Mud Lake is varied from time to time by changes in dikes. Figures given herein represent contents above gage height -4.0 ft. Capacity table prepared from surveys made by Geological Survey and adjusted for changes in dikes. High winds occasionally disturb the recording of lake stages.

Cooperation.--Water-stage recorder inspected by Water District No. 66 and supplemental staff-gage readings furnished by Owsley Canal Co.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,880	6,960	c12,800	19,400	c25,300	30,600	34,700	35,600	21,500	10,900	6,750	7,860
2	c6,910	7,270	13,000	19,600	c25,600	30,700	34,800	35,200	21,000	10,600	-	8,050
3	7,020	7,440	13,200	19,800	c25,700	30,900	35,000	34,800	20,500	10,300	-	8,270
4	7,070	7,620	13,400	20,000	c26,100	30,900	35,100	34,200	20,200	c9,990	-	8,360
5	c7,100	7,800	13,600	20,200	26,400	30,900	35,300	33,700	19,900	c9,710	-	8,490
6	7,160	7,950	13,800	20,400	26,700	31,100	35,400	33,300	19,800	c9,460	-	8,560
7	7,300	8,170	14,100	20,500	26,900	31,500	35,500	32,700	19,700	c9,360	7,420	c8,560
8	7,420	c8,430	14,300	20,800	26,900	31,700	35,700	32,300	19,600	9,150	7,590	8,530
9	7,470	8,590	14,500	21,000	26,900	31,700	c35,800	31,700	19,400	9,050	7,740	8,560
10	7,530	8,690	14,700	21,200	27,000	c31,800	35,900	31,100	19,100	8,920	7,920	c8,560
11	7,530	c8,860	14,900	21,400	27,000	31,900	36,000	30,500	18,900	8,720	c8,080	c8,560
12	7,530	9,050	15,200	21,600	27,200	32,000	36,200	29,900	18,700	8,590	c8,170	8,530
13	7,500	9,260	15,400	21,800	27,400	32,100	36,400	29,900	18,500	8,430	c8,270	8,530
14	c7,440	9,460	15,600	22,100	27,400	32,200	36,600	29,000	18,200	c8,330	8,300	c8,530
15	7,300	9,640	15,800	22,200	27,500	32,400	36,700	28,700	17,900	8,200	8,270	c8,530
16	7,270	9,850	15,900	22,400	27,800	32,500	36,900	28,200	-	8,110	8,050	8,530
17	c7,130	10,000	16,100	22,600	27,800	32,700	37,000	28,000	-	8,020	7,950	8,430
18	c7,100	c10,100	16,300	22,700	28,000	32,800	37,100	27,600	-	7,890	7,710	8,330
19	7,070	10,400	16,500	23,000	28,100	32,900	37,000	27,200	-	c7,800	7,530	c8,200
20	c6,990	c10,600	16,700	23,200	28,500	33,100	37,000	26,800	-	7,590	7,530	c8,050
21	6,940	c10,800	17,000	23,500	28,700	33,300	37,000	26,500	14,600	7,470	-	7,800
22	6,880	c11,000	17,200	23,700	29,000	33,400	37,000	26,100	14,300	-	7,530	7,740
23	6,830	11,200	17,400	23,900	29,400	33,500	37,000	25,600	c13,900	-	-	7,740
24	6,770	11,400	17,600	24,100	29,500	33,600	37,000	24,900	c13,500	-	-	c7,650
25	c6,750	11,600	17,800	24,300	30,000	33,800	36,900	24,400	c13,000	-	-	c7,500
26	c6,720	11,800	18,000	24,500	30,200	33,900	36,800	23,900	12,700	-	7,500	c7,440
27	c6,720	12,000	18,200	24,700	30,200	34,000	36,500	23,500	12,300	-	7,500	7,440
28	c6,690	12,200	18,500	c24,800	30,500	34,100	36,100	c23,000	12,000	-	7,560	c7,330
29	c6,770	12,400	18,700	c24,900	-	34,200	36,100	22,500	11,600	-	7,590	c7,210
30	c6,770	c12,600	18,900	c25,100	-	34,300	35,900	22,200	11,200	6,770	7,650	c7,100
31	c6,860	-	19,100	c25,200	-	34,600	-	21,800	-	6,750	7,740	-

c Gage height affected by wind; contents computed from partial day gage height not affected by wind.

Monthly gage height and contents, water year October 1950 to September 1951

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	1.54	6,830	-
Oct. 31	1.57	6,910	+80
Nov. 30	3.23	12,700	+5,790
Dec. 31	4.64	19,200	+6,500
Calendar year 1950...	-	-	-1,000
Jan. 31	g5.81	25,300	+6,100
Feb. 28	g6.69	30,500	+5,200
Mar. 31	7.33	34,600	+4,100
Apr. 30	7.50	35,700	+1,100
May 31	5.13	21,600	-14,100
June 30	2.82	11,000	-10,600
July 31	1.52	6,770	-4,230
Aug. 31	1.88	7,800	+1,030
Sept.30	1.62	7,050	-750
Water year 1950-51...	-	-	+220

† Gage height at 12 p.m.
g Computed on basis of once-daily staff gage readings.

Camas Creek at Eighteenmile shearing corral, near Kilgore, Idaho

Location.--Lat 44°18', long. 111°52', in sec. 7, T. 11 N., R. 39 E., on right bank at highway bridge at Eighteenmile shearing corral, just downstream from West Camas Creek, 7 miles south of Kilgore, and 18½ miles northeast of Dubois.

Drainage area.--210 sq mi, approximately.

Records available.--May 1937 to September 1951 (no winter records prior to 1947).

Gage.--Water-stage recorder. Altitude of gage is 5,260 ft (by barometer). Prior to Sept. 23, 1938, at datum 1.21 ft higher.

Average discharge.--5 years (1946-51), 65.2 cfs.

Extremes.--Maximum discharge, 1,030 cfs Apr. 8 (gage height, 5.05 ft); minimum, not determined, occurred during period of ice effect.
1937-51: Maximum discharge, 1,340 cfs Apr. 21, 1946 (gage height, 6.08 ft), from rating curve extended above 500 cfs; no flow for short periods in February 1949.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above and below station for irrigation and stock water.

Cooperation.--Water-stage recorder inspected occasionally by Water District No. 66.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	6.5	2.5	212
1.5	12	3.0	365
1.6	20	3.5	521
1.8	42	4.0	681
2.0	76	4.8	940

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	33					30	156	128	31	26	20
2	24	32					50	117	120	30	24	18
3	24	30					70	97	104	30	24	18
4	24	28					150	83	94	28	28	16
5	26	30					250	74	90	26	28	16
6	26	34					500	83	104	22	28	14
7	26	34					700	104	115	20	28	14
8	26	31					910	142	102	20	26	15
9	24	26					940	173	92	19	26	15
10	24	22					600	153	81	20	26	14
11	24	24			(*)		580	128	74	22	24	12
12	24	24					600	136	74	28	20	13
13	22	24	(*)				598	206	133	26	19	13
14	22	24	23				540	263	142	24	16	12
15	22	24		18	14		439	215	97	20	14	13
16	24	24				12	362	168	78	19	14	13
17	26	26					365	142	68	18	14	14
18	24	26					421	133	61	17	13	14
19	24	26					356	133	54	17	11	13
20	24	26					239	139	*51	20	10	11
21	24	26					200	139	48	22	10	12
22	24	25					*159	*136	48	20	14	14
23	24	26					131	139	51	18	14	12
24	24	26					120	147	51	17	19	12
25	24	26					109	162	46	16	20	12
26	24	27					109	159	44	16	20	13
27	26	28					122	142	44	18	20	14
28	26	28				(*)	125	136	41	20	20	14
29	*26	26	20		-		159	136	36	*26	*20	14
30	26	27		14	-		200	133	33	28	20	14
31	28	-			-		-	125	-	26	24	-
Total	758	813	698	542	392	372	10,134	4,399	2,304	684	620	419
Mean	24.5	27.1	22.5	17.5	14.0	12.0	338	142	76.8	22.1	20.0	14.0
Ac-ft	1,500	1,610	1,380	1,080	778	738	20,100	8,730	4,570	1,360	1,230	831

Calendar year 1950: Max 700 Min - Mean 67.6 Ac-ft 48,930
Water year 1950-51: Max 940 Min - Mean 60.6 Ac-ft 43,910

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 10, 14-19, 22-24, Nov. 26 to Apr. 7. No gage-height record Jan. 23 to Mar. 27, Mar. 31 to Apr. 4, Apr. 10-12; discharge estimated on basis of weather records, 1 discharge measurement, and records for station at Camas, and other streams in Mud Lake basin.

Camas Creek at Camas, Idaho

Location.--Lat 44°00', long. 112°13', in E½SE¼ sec. 21, T. 8 N., R. 36 E., on left bank 150 ft (revised) upstream from Oregon Short Line Railroad bridge at Camas and half a mile upstream from Beaver Creek.

Drainage area.--320 sq mi, approximately.

Records available.--April 1925 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,780 ft (by barometer). Apr. 13 to Aug. 20, 1925, staff gage at site 0.1 mile downstream at different datum. Aug. 21, 1925, to Mar. 25, 1927, staff gage and Mar. 26, 1927, to Sept. 14, 1938, water-stage recorder at site 250 ft upstream at datum 2.01 ft higher.

Average discharge.--25 years (1926-51), 25.2 cfs.

Extremes.--Maximum daily discharge during year, 650 cfs Apr. 9; minimum discharge, 0.4 cfs Nov. 27 (gage height, 1.71 ft).
1925-51: Maximum discharge, 900 cfs probably May 3, 1938 (gage height, 3.98 ft, site and datum then in use, from floodmark), from rating curve extended above 400 cfs; no flow during periods in many years.

Remarks.--Records good except those below 10 cfs, which are fair, and those for periods of ice effect or no gage-height record, which are poor. Diversions above and below station for irrigation and stock water.

Cooperation.--Six field estimates of discharge furnished and water-stage recorder inspected by Water District No. 66.

Revisions (water years).--W 813: 1935. W 1123: 1947.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 23				May 24 to Sept. 30			
1.8	1.9	2.4	38	1.7	1.7	2.3	23
1.9	4.5	2.7	70	1.8	3.1	2.5	41
2.0	8.3	3.0	109	1.9	5.2	2.8	80
2.1	13	3.5	198	2.1	12		
2.2	20	4.1	337				

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	13	13	(**)			20	121	63	16	12	9.3
2	7.9	18	13				40	99	66	12	11	12
3	8.3	16	13				60	83	82	16	10	0
4	9.8	14	13				120	69	54	15	11	8.6
5	11	13	13				200	61	47	14	10	7.6
6	12	10	13				300	57	45	12	12	7.6
7	11	12	13				500	60	49	11	13	6.1
8	9.3	15	13				600	72	56	10	12	5.8
9	8.3	14	13				650	92	48	9.0	12	5.5
10	7.5	13	13			(*) 6	560	99	43	7.9	11	5.0
11	6.8	12	13				440	92	39	7.6	10	4.6
12	6.8	12	*13				430	85	35	7.9	9.3	4.6
13	6.4	12					440	91	33	11	8.2	4.2
14	6.0	12		8			420	116	65	14	7.3	3.5
15	4.2	12		(**)	(**) 7		360	135	69	12	7.6	3.1
16	4.5	12				(**)	325	112	52	9.3	6.7	3.5
17	4.5	13					263	96	43	9.0	6.1	3.7
18	6.4	13					279	81	38	8.2	5.5	3.3
19	10	13					296	78	33	7.6	4.8	2.8
20	8.8	13	13				240	81	*29	6.4	5.2	4.2
21	7.9	13					*158	81	26	6.7	4.4	3.0
22	7.9	13					142	82	25	7.9	5.5	2.4
23	7.9	11					120	*76	25	8.2	6.4	2.3
24	7.9	13					105	69	25	7.0	6.1	2.7
25	7.9	13					90	73	26	6.1	6.4	3.3
26	7.9	13				8	82	80	24	5.0	8.6	2.8
27	7.9	12					85	77	22	5.0	9.0	2.7
28	8.8	13			(**)		88	72	21	5.0	8.2	2.8
29	9.8	13	10	7	-		92	67	20	7.6	*7.3	3.3
30	*12	13		(*)	-		109	66	17	*8.6	7.3	3.9
31	13	-			-	(**)	-	66	-	10	7.3	-
Total	254.0	389	388	244	196	208	7,614	2,589	1,200	293.0	261.2	144.2
Mean	8.19	13.0	12.5	7.9	7.0	6.7	254	83.5	40.0	9.45	8.43	4.81
Ac-ft	504	772	770	484	389	413	15,100	5,140	2,380	581	518	286

Calendar year 1950: Max 431 Min 0.4 Mean 36.8 Ac-ft 26,660
Water year 1950-51: Max 650 Min 2.3 Mean 37.8 Ac-ft 27,340

* Discharge measurement made on this day.
** Field estimate made on this day.
Note.--Stage-discharge relation affected by ice Nov. 8-20, 24-26, 29, 30, Dec. 1-4, Dec. 6 to about Apr. 5. No gage-height record Dec. 13 to Apr. 15; discharge estimated on basis of weather records, 6 field estimates, 2 discharge measurements, and records for other stations in Mud Lake basin.

Beaver Creek at Spencer, Idaho

Location.--Lat 44°21', long. 112°11', in NE¼ sec. 23, T. 12 N., R. 36 E., on right bank at highway bridge, 0.4 mile southeast of Spencer and 2½ miles upstream from Rattlesnake Creek.

Drainage area.--120 sq mi, approximately.

Records available.--October 1940 to September 1951 (no winter records 1942-51).

Gage.--Staff gage read twice daily. Altitude of gage is 5,850 ft (by barometer).

Extremes.--Maximum discharge observed during year, 341 cfs Apr. 7 (gage height, 5.40 ft), from rating curve extended above 220 cfs; maximum gage height observed, 6.02 ft Apr. 1 (ice jam); minimum discharge observed, 2.5 cfs July 19, Aug. 19, 20, 21; minimum gage height observed, 1.30 ft Aug. 19, 20, 21.

1940-51: Maximum discharge observed, 408 cfs Apr. 13, 1942 (gage height, 5.10 ft), from rating curve extended above 140 cfs; maximum gage height observed, that of Apr. 1, 1951; minimum discharge observed, 0.5 cfs Jan. 26, 1942, Feb. 22, 1944.

Remarks.--Records fair except those for periods of ice effect, no gage-height record, or indefinite stage-discharge relation, which are poor. Several ranch diversions above station.

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Apr. 5)

Oct. 1 to Sept. 5				Sept. 6-30	
1.3	2.6	3.0	71	2.8	4.0
1.5	5.3	3.5	111	2.9	5.4
1.7	9.6	4.0	161		
2.0	19	4.9	271		
2.5	40				

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	22	14				30	55	27	11	8.2	5.9
2	9.9	18	16				40	50	25	10	7.3	5.2
3	13	17	20				70	42	22	9.6	7.8	5.3
4	18	18	18				190	40	21	8.7	26	5.2
5	11	16	18				230	40	24	8.4	17	5.2
6	13	18	18				264	40	30	7.5	14	4.7
7	12	20	16				264	42	38	5.5	13	4.7
8	9.9	19	16				220	44	32	4.4	11	4.7
9	11	15	16				154	45	26	4.1	11	4.7
10	12	13	16				103	40	26	5.2	9.6	a4.7
11	11	13	22				68	38	24	10	7.8	a4.7
12	10	13	20				87	41	24	10	7.1	a4.7
13	9.9	15	*18				88	42	37	7.1	6.7	a4.7
14	10	17	12				74	38	28	5.5	5.3	a4.7
15	12	15	11				67	36	25	4.7	5.2	4.7
16	15	16	16				59	44	20	3.8	4.4	4.7
17	13	18					60	40	19	3.6	3.7	a4.8
18	13	20					61	40	16	3.6	3.1	a4.9
19	12	19					56	37	13	2.6	2.5	a4.7
20	12	16	a15				45	36	*11	4.0	2.6	a4.5
21	12	15					40	34	12	4.6	2.6	a4.5
22	12	14					*40	*33	14	4.2	4.7	4.7
23	13	13					40	33	18	3.6	10	4.7
24	13	12					38	31	16	3.3	10	4.8
25	14	12					40	28	14	3.7	12	4.6
26	15	22					40	28	14	3.3	9.4	4.7
27	16	21					60	26	16	3.8	6.9	4.8
28	18	18	a10				60	26	15	4.4	6.1	5.0
29	*16	19					108	25	13	*19	*6.7	4.8
30	14	18					78	24	11	13	8.9	5.1
31	20	-					-	28	-	9.4	7.3	-
Total	402.7	502	457	-	-	-	2,774	1,146	631	201.6	257.9	145.1
Mean	13.0	16.7	14.7	-	-	-	92.5	37.0	21.0	6.50	8.32	4.84
Ac-ft	799	996	906	-	-	-	5,500	2,270	1,250	400	512	288

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

* Discharge measurement made on this day.

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

Note.--Stage-discharge relation affected by ice or stage-discharge relation indefinite because of bridge construction Oct. 18-28, Nov. 8-23, 26, 27, Apr. 1-5.

Beaver Creek at Dubois, Idaho

Location.--Lat 44°11', long. 112°14', in NW¼ sec. 21, T. 10 N., R. 36 E., on left bank half a mile north of Dubois.

Drainage area.--220 sq mi, approximately.

Records available.--April 1921 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,150 ft (by barometer). Prior to May 8, 1927, staff gage at site 175 ft downstream at datum 2.08 ft lower.

Average discharge.--24 years (1921-24, 1928-29, 1931-51), 16.5 cfs.

Extremes.--Maximum discharge during year, 257 cfs Apr. 7 (gage height, 2.33 ft); no flow for long periods.
1921-51: Maximum discharge, 858 cfs Apr. 7, 1930 (gage height, 4.77 ft), no flow for long periods.

Remarks.--Records good except those for periods of ice effect, no gage-height record and those below about 5 cfs, which are poor.

Cooperation.--Five field estimates of discharge furnished and water-stage recorder inspected by Water District No. 66.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.1	0	1.1	23
.2	.1	1.3	41
.3	.3	1.5	68
.5	1.5	1.9	151
.7	4.7	2.3	245
.9	11		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	8.0	3.9				15	44	a13	1.6	0	
2	4.1	6.2	.4				30	35	a13	1.5	0	
3	5.0	4.7	a2		1.2		60	27	11	1.3	0	
4	6.4	5.0	a5				167	22	a11	1.2	0	
5	5.9	6.4	a4				195	19	11	.2	9.1	
6	3.9	5.9	a4	1		5	235	17	a17	0	4.5	
7	2.2	5.0	a3				231	18	24	0	1.7	
8	1.9	6.9	a3				183	22	21	0	.8	
9	a.5	1.0	a3				160	23	16	0	.2	
10	a1.0	0	a5				110	21	13	0	0	
11	a1.5	0	a6		10	(*)	69	17	12	0	0	
12	a2.0	a1	*7.6				54	a19	10	.4	0	
13	a0	a3	5.3			5	66	a22	17	1.4	0	
14	.1	4.7	4.6	3			76	a20	19	.1	0	
15	0	3.1	5.6	(**)	(**)	(**)	48	a18	16	0	0	
16	0	3.5	5.9				36	a22	7.0	0	0	
17	1.1	a4	5.6				35	a27	5.0	0	0	
18	.6	a6	5.6				37	a26	3.5	0	0	
19	.7	a8	5.6			8	38	a25	2.6	0	0	
20	.6	a6	4.3				30	a24	*2.2	0	0	
21	.6	a5	4.5	3			*24	22	1.5	0	0	
22	.8	a4	4.5		4		23	*19	2.1	0	0	
23	.8	a3	4.5				23	a17	4.3	0	0	
24	.8	a1	3.0				23	a16	6.2	0	0	
25	1.2	a1	1.9				21	15	4.5	0	1.1	
26	1.4	a6	1.9			8	19	11	4.1	0	1.9	
27	1.5	a8	1.9				30	a11	5.6	0	.2	
28	3.7	a8	1		(**)		35	a12	4.7	0	0	
29	*4.7	a8	1	1.2	-		61	11	2.9	0	0	
30	2.7	5.9	1	(*)	-		79	a11	2.1	*1.1	0	
31	3.1	-	1		-	(**)	-	11	-	*.8	0	-
Total	62.8	138.3	115.6	64.0	164.0	203	2,213	624	282.3	9.5	19.5	0
Mean	2.03	4.61	3.73	2.1	5.9	6.5	73.8	20.1	9.41	0.31	0.63	0
Ac-ft	125	274	229	127	325	403	4,390	1,240	560	19	39	0

Calendar year 1950: Max 280 Min 0 Mean 18.9 Ac-ft 13,700
Water year 1950-51: Max 235 Min 0 Mean 10.7 Ac-ft 7,730

* Discharge measurement made on this day.
** Field estimate made on this day.
a No gage-height record; discharge computed on basis of weather records, discharge measurements and field estimates, and records for Beaver Creek at Spencer and nearby streams.
Note.--Stage-discharge relation affected by ice Dec. 21, 23, Dec. 28 to Apr. 3 (no gage-height record Jan. 17 to Mar. 10, Mar. 18, Mar. 22 to Apr. 1; discharge estimated on same basis as shown for footnote "a").

Beaver Creek at Camas, Idaho

Location.--Lat 44°01', long. 112°14', in NE¼ sec. 21, T. 8 N., R. 36 E., on right bank a quarter of a mile northwest of Oregon Short Line Railroad station at Camas and three-eighths of a mile upstream from mouth.

Drainage area.--510 sq mi, approximately.

Records available.--April 1921 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,790 ft (by barometer). Prior to Dec. 22, 1949, staff gages at nearby sites at present datum.

Extremes.--Maximum discharge during year, 135 cfs Apr. 8 (gage height, 2.97 ft); no flow for most of year.
1921-51: Maximum discharge observed, 163 cfs Apr. 7, 1930; no flow for long periods in each year; no flow for entire water years 1929, 1931-37, 1940.

Remarks.--Records good except those below 10 cfs, which are fair. Flow affected by irrigation or diversions above Dubois, about 14 miles above station, and by heavy channel losses below Dubois.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

0.7	0	1.4	12
.8	0.3	1.7	29
.9	1.0	2.0	51
1.0	2.1	2.4	83
1.2	5.6	2.9	128

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0					
2							0					
3							0					
4							13					
5							66					
6							101					
7							124					
8							127					
9						(*)	110					
10							83					
11							54					
12			(*)				28					
13							25					
14							31					
15							27					
16							11					
17							4.6					
18							0.5					
19							0					
20							0		(*)			
21							*0					
22							0					
23							0	(*)				
24							0					
25							0					
26							0					
27							0					
28							0					
29							0				(*)	
30	(*)			(*)			0			(*)		
31							-		-			
Total	0	0	0	0	0	0	805.1	0	0	0	0	0
Mean	0	0	0	0	0	0	26.8	0	0	0	0	0
Ac-ft	0	0	0	0	0	0	1,600	0	0	0	0	0

Calendar year 1950: Max 132 Min 0 Mean 4.88 Ac-ft 3,540
Water year 1950-51: Max 127 Min 0 Mean 2.21 Ac-ft 1,600

* Observation of no flow made on this day.

Medicine Lodge Creek at Ellis Ranch, near Argora, Idaho

Location.--Lat 44°17', long. 112°30', in sec. 7, T. 11 N., R. 34 E., on left bank 4 miles upstream from Middle Creek, 6½ miles southeast of Argora, and 17 miles northwest of Dubois.

Drainage area.--165 sq mi.

Records available.--October 1940 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,710 ft (from topographic map of dam sites). Prior to Nov. 16, 1940, staff gage at site 0.2 mile upstream at different datum.

Average discharge.--10 years (1941-51), 45.3 cfs.

Extremes.--Maximum discharge during year, 65 cfs Mar. 18; maximum gage height, 2.43 ft Feb. 14, Mar. 18; minimum discharge, 10 cfs Apr. 17, 21 (gage height, 1.35 ft).
1940-51: Maximum discharge, 229 cfs June 9, 1944 (gage height, 4.23 ft), from rating curve extended above 120 cfs by logarithmic plotting; minimum, 9 cfs Dec. 12, 1940, Dec. 11, 1949.

Remarks.--Records good. Several diversions above and below station for irrigation.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.3	8.5
1.5	17
1.9	37
2.4	64

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	14	36	23	14	38	40	34	57	44	39	32
2	38	15	34	20	16	35	42	38	56	44	38	32
3	38	15	39	22	18	27	45	38	54	44	38	32
4	38	16	38	22	22	38	45	42	51	42	41	33
5	37	17	33	19	28	38	44	41	51	42	40	32
6	36	17	30	17	30	38	42	42	51	42	40	32
7	36	17	39	14	36	40	38	55	54	42	42	31
8	36	18	42	14	40	39	33	54	52	42	42	30
9	36	19	39	15	42	39	30	52	52	42	40	30
10	36	22	40	16	46	33	28	50	51	44	40	30
11	36	25	39	17	47	*32	22	50	51	48	38	29
12	36	28	39	18	44	36	20	54	53	44	38	30
13	35	30	*38	21	40	40	19	54	55	42	37	30
14	32	29	36	24	36	39	17	51	49	41	36	29
15	28	28	37	31	40	38	16	49	49	40	36	28
16	28	33	36	36	42	36	15	48	50	40	36	28
17	28	34	36	38	40	36	12	48	49	40	34	28
18	29	36	36	40	40	34	11	48	49	40	34	27
19	28	35	37	36	37	38	11	47	49	40	34	28
20	29	34	36	23	40	38	11	48	49	41	34	28
21	28	34	36	30	40	40	*12	50	*48	40	34	30
22	22	34	36	32	40	39	13	*49	49	40	38	30
23	20	36	37	30	40	36	14	50	51	40	40	28
24	16	36	37	32	40	38	14	51	48	39	38	28
25	16	36	37	40	38	38	14	50	48	40	37	27
26	16	36	36	44	38	38	16	52	48	39	36	27
27	15	36	35	38	38	38	16	51	46	38	36	27
28	12	36	39	13	38	36	22	54	46	40	36	27
29	*12	36	36	12	-	38	44	55	44	44	*34	26
30	13	36	42	*12	-	38	35	56	44	42	34	26
31	14	-	31	13	-	40	-	59	-	*40	33	-
Total	862	838	1,142	762	1,010	1,151	741	1,520	1,504	1,286	1,153	875
Mean	27.8	27.9	36.8	24.6	36.1	37.1	24.7	49.0	50.1	41.5	37.2	29.2
Ac-ft	1,710	1,660	2,270	1,510	2,000	2,280	1,470	3,010	2,980	2,550	2,290	1,740

Calendar year 1950: Max 89 Min 12 Mean 41.4 Ac-ft 29,950
Water year 1950-51: Max 59 Min 11 Mean 35.2 Ac-ft 25,470

* Discharge measurement made on this day.

Birch Creek near Reno, Idaho

Location.--Lat 44°12', long. 112°57', in sec. 13, T. 10 N., R. 29 E., on left bank 200 ft west of State Highway 28, 2.6 miles south of the Lemhi-Clark county line, and 35 miles west of Dubois.

Drainage area.--320 sq mi, approximately.

Records available.--September 1910 to June 1912 (published as "near Kaufman"), April 1921 to January 1923, October 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,240 ft (by barometer). Prior to Oct. 1, 1950, staff gage at site half a mile downstream at different datum.

Extremes.--Maximum discharge recorded during year, 99 cfs Mar. 11 (gage height, 1.84 ft); maximum gage height, 2.70 ft Jan. 31 (backwater from ice); minimum discharge observed, 61 cfs Jan. 29, but may have been less during period of ice effect; minimum gage height, 1.50 ft Mar. 16.

1910-12, 1921-23, 1950-51: Maximum discharge observed, 160 cfs Mar. 2, 1912 (gage height, 2.20 ft, site and datum then in use); minimum observed, that of Jan. 29, 1951.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Small ranch diversions above stations.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-18)

1.5	66
1.6	75
1.7	85

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	76	77	79	68	80	78	81	75	74	78	78
2	76	75	76	79	70	80	79	81	75	74	77	78
3	75	75	77	79	74	80	78	81	75	74	78	78
4	74	76	77	79	78	80	77	80	75	74	78	77
5	74	76	b76	b78	80	80	77	80	75	74	79	77
6	73	75	76	b77	82	80	77	80	75	74	79	77
7	*73	75	77	b77	83	80	77	81	76	74	78	77
8	72	75	76	77	84	80	77	81	76	74	77	77
9	72	74	77	77	85	80	77	81	76	74	77	77
10	73	b75	77	77	85	*82	78	81	76	76	77	77
11	73	77	77	78	84	81	78	81	76	76	77	77
12	73	77	77	78	83	81	78	81	78	76	77	77
13	73	77	77	78	82	81	78	81	77	76	77	77
14	73	77	*79	78	81	80	79	81	76	75	76	77
15	75	75	79	78	80	80	79	80	75	74	76	77
16	74	75	79	77	80	80	79	80	75	74	76	77
17	74	75	79	77	80	b78	79	80	74	74	76	77
18	74	75	79	78	80	b77	79	79	74	74	77	78
19	75	75	79	77	80	78	80	79	74	74	77	78
20	75	75	79	77	80	78	80	79	74	74	76	78
21	75	75	79	78	80	80	80	79	*74	74	77	78
22	75	76	79	78	80	78	79	79	75	74	77	78
23	75	76	79	77	80	77	*79	*79	75	75	77	78
24	75	77	79	77	80	77	80	78	74	75	78	78
25	75	77	79	78	80	77	80	77	73	75	77	78
26	75	77	78	78	80	78	80	77	73	75	77	78
27	75	77	78	78	80	77	81	76	73	76	77	78
28	75	76	79	b72	80	77	82	76	73	78	77	78
29	75	77	78	*b65	-	77	84	75	73	78	77	78
30	75	77	78	b65	-	77	82	75	73	*77	*77	78
31	76	-	78	b65	-	78	-	75	-	77	78	-
Total	2,303	2,275	2,414	2,366	2,239	2,449	2,371	2,454	2,243	2,323	2,392	2,326
Mean	74.3	75.8	77.9	76.3	80.0	79.0	79.0	79.2	74.8	74.9	77.2	77.5
Ac-ft	4,570	4,510	4,790	4,690	4,440	4,860	4,700	4,870	4,450	4,610	4,740	4,610

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 85 Min 65 Mean 77.1 Ac-ft 55,840

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 1, Feb. 1 to Mar. 9, Apr. 6-16; discharge estimated on basis of weather records and records for stations on nearby streams.

Little Lost River near Howe, Idaho

Location.--Lat 43°53', long. 113°06', in sec. 3, T. 6 N., R. 28 E., on left bank a quarter of a mile upstream from diversion dam of Blaine County Investment Co., 6 miles northwest of Berenice, and 7 miles northwest of Howe.

Drainage area.--685 sq mi.

Records available.--April 1921 to September 1951 (no winter records prior to 1948).

Gage.--Water-stage recorder. Altitude of gage is 5,020 ft (by barometer). Prior to Sept. 2, 1938, staff gage at site 120 ft downstream at datum 1.39 ft higher.

Extremes.--Maximum discharge during year, 185 cfs July 29 (gage height, 3.73 ft); maximum gage height, 4.42 ft Feb. 7 (ice jam); minimum discharge not determined, occurred during period of ice effect.

1921-51: Maximum discharge, about 450 cfs Aug. 11, 1936 (gage height, 3.1 ft, datum then in use, from floodmark), from rating curve extended above 100 cfs; maximum gage height observed, 6.50 ft during period Feb. 7 to Mar. 17, 1946, from floodmark (ice jam); minimum observed, 4.1 cfs Dec. 12, 1940.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above and below station for irrigation of about 11,900 acres.

Cooperation.--Water-stage recorder inspected by Water District No. 9.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 10-30)

2.3	22
2.5	37
2.8	67
3.2	113
3.6	167

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	63	34	b25	b17	35	51	109	152	107	91	85
2	77	65	b33	b30	b19	30	72	100	153	108	90	82
3	70	65	33	b33	b23	30	72	95	156	106	87	84
4	*67	65	33	b32	b27	*44	78	91	153	102	94	82
5	68	65	b33	b30	b30	35	84	95	140	100	106	82
6	67	62	b33	b25	b37	b36	79	106	136	101	107	81
7	67	58	34	b20	b35	35	86	120	135	97	109	82
8	60	48	33	b21	b38	35	90	126	126	95	107	80
9	59	38	37	b22	42	35	89	127	116	97	105	79
10	58	35	35	b25	44	b35	88	123	108	99	97	80
11	56	40	34	b28	45	b35	78	125	103	117	91	78
12	55	42	33	b28	42	b36	*78	129	112	113	86	81
13	52	44	34	b28	38	36	80	135	122	101	85	84
14	51	*45	b33	29	35	36	89	134	123	94	84	77
15	50	41	34	30	38	36	96	126	129	91	80	71
16	52	29	33	31	39	35	95	*121	135	93	75	72
17	52	28	33	31	38	b35	95	123	142	85	*70	70
18	49	28	33	b30	37	b35	96	132	*142	*86	67	69
19	49	26	33	b28	35	b36	95	135	147	82	66	76
20	49	26	*33	*b17	37	36	96	136	145	88	68	76
21	49	26	34	b21	37	38	99	134	145	90	70	75
22	59	26	34	b29	37	38	99	134	143	88	80	75
23	60	27	33	b29	37	39	97	138	146	82	82	71
24	60	27	33	29	37	41	96	142	140	81	91	67
25	62	28	b32	35	35	42	97	145	129	81	89	67
26	64	28	b32	31	35	43	96	146	123	81	82	67
27	64	29	b33	30	35	45	100	146	121	80	80	70
28	65	30	34	b20	35	45	103	150	114	88	82	69
29	64	30	33	b15	-	45	120	152	109	109	82	68
30	59	33	b33	b15	-	49	117	152	107	99	86	66
31	60	-	b30	b15	-	50	-	149	-	94	86	-
Total	1,850	1,197	1,032	812	984	1,181	2,711	3,976	3,952	2,935	2,675	2,266
Mean	59.7	39.9	33.3	26.2	35.1	38.1	90.4	128	132	94.7	86.3	75.5
Ac-ft	3,670	2,370	2,050	1,610	1,950	2,340	5,380	7,890	7,840	5,820	5,310	4,490

Calendar year 1950: Max 160 Min - Mean 66.4 Ac-ft 48,110
Water year 1950-51: Max 156 Min 15 Mean 70.1 Ac-ft 50,720

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 5-13, Feb. 9 to Mar. 3; discharge estimated on basis of weather records, records for Medicine Lodge Creek near Argora, and records for stations on nearby streams.

Blaine County Investment Co.'s canal near Howe, Idaho

Location.--Lat 43°53', long. 113°05', in NW¼NW¼ sec. 11, T. 6 N., R. 28 E., on left end of weir, 900 ft downstream from headgates and 7 miles northwest of Howe.

Records available.--April 1924 to September 1951 (prior to 1939, irrigation seasons only).

Gage.--Staff gage and Cippoletti weir; gage read once daily. Prior to June 25, 1927, staff gage at site 700 ft upstream at different datum. June 26, 1927, to May 6, 1945, staff gage at site 180 ft upstream at present datum.

Extremes.--1924-51: Maximum daily discharge, 87 cfs May 24, 25, 1928; no flow during long periods each year.

Remarks.--Records good. Canal diverts water from Little Lost River in sec. 2, T. 6 N., R. 28 E., for irrigation of lands in project of Blaine County Investment Co.

Cooperation.--Gage readings furnished by Water District No. 9.

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 3				Apr. 4 to Sept. 30			
0.99	0	1.3	7.2	0.99	0	1.4	9.5
1.0	.1	1.4	11	1.0	.1	1.5	14
1.1	1.6	1.5	16	1.1	1.6	1.7	26
1.2	4.0			1.2	3.1	1.9	40
				1.3	5.9	2.2	67

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	5.6					0	14	66	26	24	8.4
2	11	6.2					0	8.9	66	26	23	8.8
3	*8.3	6.6					0	6.6	66	22	22	8.5
4	8.3	6.6				(*)	7.9	6.2	64	19	23	8.1
5	8.3	8.6					16	5.9	56	17	30	8.1
6	8.3	9.9					23	5.9	48	16	32	8.1
7	8.3	5.0					28	9.6	44	16	32	8.1
8	8.3	0					33	17	37	13	32	7.9
9	8.3	0					36	21	25	12	32	7.7
10	8.3	0					34	21	18	12	30	7.7
11	7.7	0					29	21	16	21	26	7.7
12	6.6	0					*27	23	16	26	21	7.7
13	6.6	0					26	29	20	23	17	7.7
14	6.6	*0					23	33	25	16	16	7.7
15	6.6	0					22	36	30	14	16	7.7
16	6.6	0					25	28	35	14	12	7.7
17	6.6	0					26	*24	41	14	*9.5	7.7
18	6.6	0					26	28	*44	*14	8.4	7.7
19	6.6	0					26	33	47	14	7.0	10
20	6.6	0	(*)	(*)			22	41	50	14	7.2	13
21	8.2	0					19	43	50	14	7.3	14
22	10	0					17	43	52	14	7.3	18
23	12	0					16	45	55	13	7.6	21
24	13	0					12	51	57	11	7.7	22
25	13	0					7.8	54	48	11	7.7	22
26	13	0					6.6	55	44	15	7.7	22
27	12	0					6.4	57	44	18	7.7	22
28	11	0					6.3	57	35	18	7.7	19
29	8.4	0					11	58	28	20	7.7	18
30	5.9	0					16	62	26	24	7.7	18
31	5.6	0					-	65	-	26	7.7	-
Total	272.6	48.5	0	0	0	0	548.0	1,002.1	1,253	535	503.9	362.0
Mean	8.79	1.62	0	0	0	0	18.3	32.3	41.8	17.3	16.3	12.1
Ac-ft	541	962	0	0	0	0	1,090	1,990	2,490	1,060	999	718

Calendar year 1950: Max 60 Min 0 Mean 10.2 Ac-ft 7,360
Water year 1950-51: Max 66 Min 0 Mean 12.4 Ac-ft 8,980

* Discharge measurement made on this day.

Big Lost River at Wild Horse, near Chilly, Idaho

Location.--Lat 43°56', long. 114°07', in sec. 17, T. 7 N., R. 20 E., on right bank a quarter of a mile upstream from East Fork Big Lost River, 2 miles downstream from Wild Horse dam site, and 16 miles southwest of Chilly.

Drainage area.--114 sq mi.

Records available.--March 1944 to September 1951.

Gage.--Water-stage recorder.

Average discharge.--7 years, 98.4 cfs.

Extremes.--Maximum discharge during year, 807 cfs May 28 (gage height, 4.74 ft); minimum, 8.0 cfs Mar. 23 (gage height, 1.11 ft).
1944-51: Maximum discharge, 876 cfs June 9, 1948 (gage height, 4.99 ft); minimum recorded, that of Mar. 23, 1951.

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

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.2	11	3.0	227
1.4	20	3.5	362
1.7	40	4.0	530
2.0	66	4.7	800
2.5	129		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	56	36	25	28	15	25	123	426	387	157	63
2	43	54	30	26	28	20	30	117	359	381	150	62
3	43	52	34	28	28	20	40	117	322	387	168	59
4	43	52	37	27	28	20	48	126	294	403	270	57
5	44	52	29	25	27	20	59	143	294	374	199	55
6	46	51	32	22	26	20	68	190	281	339	172	54
7	43	50	36	25	26	20	78	250	262	325	157	53
8	43	50	34	29	25	20	81	302	242	319	140	52
9	41	40	32	31	26	18	89	292	225	305	131	51
10	40	38	33	32	*27	18	87	313	225	325	122	50
11	40	42	*34	33	28	18	89	374	255	292	114	49
12	39	44	34	30	27	18	106	374	316	247	108	50
13	38	*41	25	29	23	18	137	330	387	234	101	49
14	38	43	26	30	23	18	*172	281	450	257	95	48
15	42	37	32	30	25	17	177	252	573	268	91	46
16	42	39	30	31	25	13	173	275	688	*262	87	44
17	43	42	30	31	22	13	188	353	*670	262	*84	44
18	43	44	30	29	28	13	203	*429	621	260	83	43
19	42	42	32	27	24	13	210	460	562	260	83	42
20	41	42	32	23	25	13	203	457	554	247	84	40
21	40	42	28	26	26	14	181	460	537	222	93	41
22	40	40	25	30	25	13	160	506	509	196	104	40
23	40	40	30	29	25	11	150	597	429	181	99	40
24	39	38	30	30	25	13	145	641	390	177	102	40
25	44	40	30	29	28	14	134	601	390	173	89	38
26	48	40	25	29	22	16	129	569	396	164	81	38
27	51	38	25	27	23	16	131	666	387	166	75	38
28	48	35	26	25	18	13	148	780	400	196	72	38
29	64	36	30	24	-	15	148	716	396	210	72	37
30	69	39	30	26	-	16	134	597	374	183	68	38
31	62	-	26	27	-	*24	-	509	-	168	65	-
Total	1,383	1,299	943	865	711	510	3,723	12,200	12,214	8,170	3,516	1,399
Mean	44.6	43.3	30.4	27.9	25.4	16.5	124	394	407	264	113	46.6
Cfsm	0.391	0.380	0.267	0.245	0.223	0.145	1.09	3.46	3.57	2.32	0.991	0.409
In.	0.45	0.42	0.31	0.28	0.23	0.17	1.21	3.98	3.98	2.67	1.15	0.46
Ac-ft	2,740	2,580	1,870	1,720	1,410	1,010	7,380	24,200	24,230	16,200	6,970	2,770

Calendar year 1950: Max 503 Min 11 Mean 94.9 Cfsm 0.832 In. 11.30 Ac-ft 68,680
Water year 1950-51: Max 780 Min 11 Mean 129 Cfsm 1.13 In. 15.31 Ac-ft 93,080

Peak discharge (base, 300 cfs).--May 11 (12 p.m.) 393 cfs (3.63 ft); May 28 (10 a.m.) 807 cfs (4.74 ft); June 17 (4 a.m.) 720 cfs (4.50 ft); Aug. 4 (2:30 a.m.) 353 cfs (3.49 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Jan. 6 to Feb. 9; discharge estimated on basis of weather records and records for nearby streams.

Big Lost River at Howell Ranch, near Chilly, Idaho

Location (revised).--Lat 44°00', long. 114°02', in sec. 30, T. 8 N., R. 21 E., on left bank at Howell Ranch, 1¼ miles downstream from Burnt Creek, 6 miles downstream from East Fork, 9 miles southwest of Chilly, and 21 miles northwest of Mackay.

Drainage area.--448 sq mi.

Records available.--April 1904 to November 1914, May 1920 to September 1951 (no winter records prior to 1949).

Gage.--Water-stage recorder. Altitude of gage is 6,610 ft (from topographic map). Prior to Apr. 20, 1906, staff gage at site 1¼ miles downstream at different datum. Apr. 20, 1906, to June 6, 1912, staff gage at site 100 ft downstream at different datum. June 7, 1912, to Nov. 14, 1914, staff gage at present site at datum 2.07 ft lower. May 11 to June 16, 1920, staff gage at present site and datum.

Extremes.--Maximum discharge during year, 2,210 cfs May 28 (gage height, 4.24 ft); minimum not determined, probably occurred during period of ice effect.
1904-14, 1920-51: Maximum discharge, 3,500 cfs June 12, 1921 (gage height, 5.94 ft); minimum observed, 19 cfs (discharge measurement) Dec. 12, 1939.

Remarks.--Records good except those for period of ice effect, which are poor. No regulation. Several small diversions above station. Hammerly ditch (capacity, about 20 cfs) diverts a quarter of a mile downstream.

Cooperation.--Water-stage recorder inspected by employees of Water District No. 27.

Rating table, water year 1950-51, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 9, Apr. 5-22)

1.0	121	2.5	768
1.3	197	3.0	1,120
1.6	302	3.5	1,550
2.0	478	4.1	2,140

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*119	137					105	326	1,170	989	430	189
2	117	130					125	310	982	982	416	186
3	115	126					175	298	856	982	435	180
4	113	123					200	318	768	1,040	968	175
5	110	123					243	368	736	961	635	169
6	115	123					257	459	703	849	545	166
7	108	121					287	618	660	822	468	166
8	108	121	120		100	75	275	755	666	808	412	162
9	106	102					294	722	567	768	376	156
10	102	100					272	762	551	815	355	154
11	100	110					240	884	600	781	330	149
12	100	110	(*)				275	947	762	672	306	149
13	100	*105					368	795	989	624	291	149
14	98	110					*488	755	1,190	678	275	144
15	113	95		100			478	672	1,510	703	257	139
16	119	100					421	722	1,910	*684	243	137
17	117	105					464	898	*1,860	684	240	135
18	115			(*)			509	*1,140	1,710	684	229	135
19	113						529	1,260	1,570	697	*226	132
20	110						519	1,270	1,500	660	236	128
21	108						464	1,290	1,420	600	260	130
22	106				90		398	1,400	1,330	524	294	130
23	104		110			65	381	1,600	1,090	498	287	130
24	102	110					368	1,720	940	483	359	128
25	113						342	1,620	968	483	302	126
26	119						330	1,570	1,000	454	254	126
27	128						338	1,810	982	449	232	123
28	123						390	2,120	1,020	551	216	126
29	149				-		394	2,000	1,010	556	207	123
30	175				-		351	1,660	926	504	203	121
31	162	-			-	*90	-	1,380	-	459	194	-
Total	3,587	3,371	3,560	3,100	2,670	2,190	10,280	32,449	31,946	21,444	10,481	4,363
Mean	116	112	115	100	95.4	70.6	343	1,047	1,065	692	338	145
Ac-ft	7,110	6,690	7,060	6,150	5,300	4,340	20,390	64,360	63,360	42,530	20,790	8,650

Calendar year 1950: Max 1,460 Min - Mean 269 Ac-ft 194,600
Water year 1950-51: Max 2,120 Min - Mean 355 Ac-ft 256,700

Peak discharge (base, 900 cfs).--May 12 (5 a.m.) 968 cfs (2.86 ft); May 28 (9 a.m.) 2,210 cfs (4.24 ft); June 16 (9:30 a.m.) 2,100 cfs (4.13 ft); Aug. 4 (6:30 a.m.) 1,260 cfs (3.24 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 10 to Apr. 4 (no gage-height record Nov. 15 to Mar. 30; discharge estimated on basis of 2 discharge measurements, staff-gage readings Nov. 18, and Dec. 12, records for station at Wild Horse and nearby streams, and weather records).

Big Lost River (east channel) above Mackay Reservoir, near Mackay, Idaho

Location.--Lat 43°59', long. 113°45', in sec. 32, T. 8 N., R. 23 E., on right bank above flow line of reservoir, 3 miles upstream from Mackay Dam and 7½ miles northwest of Mackay.

Records available.--May 1919 to September 1951.

Gage.--Water-stage recorder and concrete control. Datum of gage is 6,061.80 ft above mean sea level (unadjusted). Prior to Sept. 22, 1934, at site 550 ft upstream at different datum. Staff gage on Mackay Reservoir is used as an auxiliary gage during periods of backwater from reservoir.

Average discharge.--32 years, 66.5 cfs.

Extremes.--Maximum discharge during year, 730 cfs June 17 (gage height, 4.60 ft); maximum gage height, 4.90 ft May 29 (backwater from Mackay Reservoir); minimum discharge recorded, 3 cfs Oct. 18-20 (gage height, 1.21 ft).
1919-51: Maximum discharge, 1,320 cfs June 7, 1938; maximum gage height, 5.02 ft July 1, 1944; no flow during long periods in many years.

Remarks.--Records good except those for periods of backwater, which are fair, and those below 10 cfs, which are poor. Diversions above station for irrigation. The sum of the combined discharge of east and west channels of Big Lost River and of the combined discharge of east and west channels of Warm Spring Creek, near Mackay, represents practically entire surface flow of Big Lost River which enters Mackay Reservoir (see p. 95).

Cooperation.--Water-stage recorder graph and one discharge measurement furnished by Water District No. 27.

Rating table, water year 1950-51, except periods of backwater from Mackay Reservoir (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 14-26, June 11-17, July 1-5)

1.1	2	2.0	68
1.3	7	2.5	148
1.5	16	3.0	248
1.7	32	3.5	388

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	6	8	6			9	90	644	385	213	63
2	*11	6	7	5			9	83	544	391	203	62
3	10	6	7	6		5	9	79	471	391	207	59
4	10	5	7	6			9	69	403	408	323	55
5	10	5	7	6			9	65	365	408	332	54
6	10	6	7			*5	9	66	354	387	304	51
7	10	5	7			5	9	93	*345	368	295	50
8	10	5	7			5	9	133	320	356	272	45
9	10	5	7			5	10	155	296	346	272	42
10	10	4	7	6		5	16	164	277	371	272	40
11	10	4	7			5	18	184	255	402	255	39
12	6	4	7			5	17	209	250	377	221	38
13	5	*6	7			5	*21	226	290	349	209	37
14	5	10	6			5	43	227	335	307	189	35
15	5	9	6		5	5	53	208	426	300	162	34
16	6	9	6	5		6	55	198	593	301	150	32
17	5	9	6			6	68	*219	693	*294	134	31
18	4	10	6			6	96	*277	*678	284	*111	32
19	3	10	*6	*5		6	107	309	622	286	85	31
20	3	9	6			6	116	385	570	290	78	30
21	4	9	6			6	111	396	550	273	74	30
22	4	9	6			7	98	409	536	248	79	29
23	5	8	6			7	94	493	488	228	90	28
24	6	8	6			7	92	587	406	211	92	28
25	9	8	6	5		8	93	603	383	201	92	26
26	9	8	6			8	88	568	388	195	85	26
27	9	8	6			9	88	589	388	191	79	25
28	7	7	6			9	88	685	403	218	74	24
29	6	7	6		-	9	99	658	403	253	72	24
30	6	8	6		-	9	95	628	392	241	68	24
31	6	-	6		-	9	-	645	-	228	67	-
Total	225	213	200	166	140	193	1,638	9,700	13,068	9,488	5,159	1,124
Mean	7.3	7.1	6.4	5.4	5	6.2	54.6	313	436	306	166	37.5
Ac-ft	446	422	397	329	278	383	3,250	19,240	25,920	18,820	10,230	2,230

Calendar year 1950: Max 508 Min 0 Mean 57.7 Ac-ft 41,810
Water year 1950-51: Max 693 Min 3 Mean 113 Ac-ft 81,940

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 16-18, Jan. 20 to Mar. 5; discharge estimated on basis of weather records, records for nearby streams, and records for adjacent periods. Stage-discharge relation affected by backwater from Mackay Reservoir Apr. 19 to June 10, June 18-30, July 6-21, Aug. 11-15.

Big Lost River (west channel) above Mackay Reservoir, near Mackay, Idaho

Location.--Lat 43°58', long. 113°45', in sec. 5, T. 7 N., R. 23 E., on left bank above flow line of reservoir, 3 miles upstream from Mackay Dam and 7½ miles northwest of Mackay.

Records available.--May 1919 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 6,062.38 ft above mean sea level (unadjusted). Prior to May 26, 1919, staff gage and May 26, 1919, to May 13, 1938, water-stage recorder at site 200 ft upstream at different datums. Staff gage on Mackay Reservoir is used as an auxiliary gage during periods of backwater from reservoir.

Average discharge.--32 years, 59.3 cfs.

Extremes.--Maximum discharge during year, 389 cfs May 29 (gage height, 4.46 ft, backwater from Mackay Reservoir); minimum, 21 cfs Jan. 29 (gage height, 1.98 ft).
1919-51: Maximum discharge, 1,200 cfs (estimated) sometime during period June 5-16, 1921 (gage height, 4.45 ft, site and datum then in use); minimum, 9 cfs May 22, 26, 1935.

Remarks.--Records good except those for periods of backwater from Mackay Reservoir, which are fair. Diversions above station for irrigation. The sum of the combined discharge of east and west channels of Big Lost River and the combined discharge of east and west channels of Warm Spring Creek, near Mackay, represents practically the entire surface flow of Big Lost River which enters Mackay Reservoir (see p. 95).

Cooperation.--Water-stage recorder graph and one discharge measurement furnished by Water District No. 27.

Rating table, water year 1950-51, except periods of backwater from Mackay Reservoir (gage height, in feet, and discharge, in cubic feet per second)

2.0	20	3.0	189
2.2	44	3.5	307
2.5	92	3.9	409

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	40	36	35	29	30	30	59	280	178	99	52
2	*39	40	35	34	29	30	30	54	237	176	92	50
3	39	40	35	34	29	30	30	54	194	174	97	48
4	39	40	35	34	30	30	31	48	164	176	158	48
5	39	40	35	32	30	30	31	47	154	178	185	46
6	39	40	35	32	30	*30	31	48	136	164	158	44
7	39	40	35	32	30	30	32	58	131	152	133	44
8	39	40	35	32	30	30	32	72	120	140	114	43
9	39	40	35	32	30	30	32	87	*107	131	96	44
10	39	40	35	32	30	30	32	84	101	148	80	43
11	39	40	35	32	30	30	32	92	94	162	73	41
12	39	40	35	32	30	30	34	112	96	142	61	43
13	39	*40	35	32	30	30	*34	126	116	119	62	43
14	40	39	35	32	31	30	34	121	142	109	57	43
15	41	38	35	32	30	30	43	109	187	113	64	40
16	41	38	35	32	30	30	53	101	275	118	59	40
17	41	38	35	32	30	30	58	*107	347	*118	59	39
18	41	38	36	32	31	30	58	129	*340	115	*53	39
19	41	38	*36	*32	31	30	62	166	302	122	53	39
20	41	38	36	32	31	30	65	203	281	122	58	40
21	41	38	36	32	31	31	67	218	273	112	56	40
22	41	38	36	32	31	32	65	219	273	99	59	40
23	41	38	35	32	30	31	61	252	258	90	64	40
24	41	38	35	32	30	31	62	309	212	87	65	40
25	41	38	35	32	30	31	61	326	183	82	69	40
26	40	38	35	32	30	31	59	304	174	78	64	40
27	40	38	35	31	30	31	59	318	176	80	59	40
28	40	38	35	31	30	30	61	356	180	96	56	41
29	40	38	34	26	-	30	62	386	185	120	53	41
30	40	36	34	29	-	29	62	353	181	114	53	41
31	40	-	33	28	-	29	-	322	-	106	53	-
Total	1,238	1,165	1,089	986	843	936	1,403	5,240	5,899	3,921	2,460	1,272
Mean	39.9	38.8	35.1	31.8	30.1	30.2	46.8	169	197	126	79.4	42.4
Ac-ft	2,460	2,310	2,160	1,960	1,670	1,860	2,780	10,390	11,700	7,780	4,880	2,520

Calendar year 1950: Max 239 Min 23 Mean 54.4 Ac-ft 39,370
Water year 1950-51: Max 386 Min 26 Mean 72.5 Ac-ft 52,470

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by backwater from Mackay Reservoir May 12 to June 9, June 18-29, July 12-20, Aug. 12-14.

Combined discharge, in cubic feet per second, of Big Lost River (east and west channels) and Warm Spring Creek (east and west channels) above Mackay Reservoir, near Mackay, Idaho, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	184	179	173	166	157	151	159	265	1,250	781	490	253
2	182	177	170	165	156	151	159	245	1,060	785	466	248
3	177	177	170	165	152	149	159	237	915	777	482	239
4	177	178	170	165	151	149	161	216	789	800	718	232
5	180	179	169	163	150	152	160	209	724	802	770	226
6	180	177	169	164	149	151	159	215	690	756	703	216
7	183	179	172	163	150	152	159	264	675	714	645	216
8	183	179	170	165	147	153	155	329	620	682	593	207
9	182	178	170	163	147	152	156	376	564	657	562	207
10	181	176	171	162	150	150	160	383	529	720	529	203
11	179	179	176	162	151	152	161	419	495	782	498	202
12	172	179	174	160	151	153	163	476	500	716	446	205
13	173	181	176	158	149	150	166	527	578	648	430	205
14	177	181	173	157	150	150	189	519	672	590	398	208
15	178	177	175	157	151	148	213	480	844	596	369	200
16	180	177	175	157	151	149	234	453	1,160	603	347	200
17	180	176	173	157	151	149	252	482	1,380	595	325	198
18	176	176	174	159	150	149	275	584	1,360	581	292	197
19	176	175	174	159	149	149	293	683	1,260	590	267	190
20	177	173	174	159	150	150	307	831	1,180	592	265	185
21	178	174	173	159	150	159	304	872	1,150	554	262	182
22	178	173	173	158	152	160	288	899	1,130	505	270	183
23	178	173	172	157	151	153	274	1,060	1,060	470	292	180
24	179	174	170	156	151	159	273	1,280	887	449	305	180
25	184	174	169	158	151	168	270	1,330	803	433	305	178
26	181	173	168	157	151	168	262	1,260	792	420	288	176
27	183	175	168	155	149	160	260	1,310	791	426	275	174
28	178	172	167	154	149	155	264	1,480	809	491	266	174
29	177	172	165	146	-	157	280	1,500	815	571	258	174
30	179	171	167	156	-	158	274	1,410	792	544	257	173
31	181	-	169	156	-	157	-	1,340	-	516	257	-
Total	5,553	5,284	5,309	4,938	4,216	4,763	6,589	21,934	26,274	19,146	12,630	6,011
Mean	179	176	171	159	151	154	220	708	876	618	407	200
Ac-ft	11,010	10,480	10,530	9,790	8,360	9,450	13,070	43,510	52,110	37,980	25,050	11,920

Calendar year 1950: Max 1,010 Min 95 Mean 240 Ac-ft 173,700
Water year 1950-51: Max 1,500 Min 146 Mean 336 Ac-ft 243,300

Warm Spring Creek (east channel) near Mackay, Idaho

Location.--Lat 43°58', long. 113°45', in NE¼ sec. 5, T. 7 N., R. 23 E., on left bank 700 ft upstream from confluence with west channel and 7½ miles northwest of Mackay.

Records available.--May 1919 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,070 ft (from topographic map). Prior to May 3, 1920, staff gage 100 ft downstream at different datum. May 3, 1920, to Dec. 2, 1938, staff gage 200 ft downstream at datum 0.26 ft lower.

Average discharge.--32 years, 29.4 cfs.

Extremes.--Maximum discharge during year, 180 cfs May 28 (gage height, 3.68 ft); minimum, 24 cfs Jan. 29 (gage height, 1.86 ft).
1919-51: Maximum discharge observed, 225 cfs June 15, 1922 (gage height, 3.24 ft, site and datum then in use); minimum, 9 cfs May 8, 9, 13, 14, 1919, May 18-21, 1920.

Remarks.--Records good. Practically all natural flow above station diverted during irrigation season. Discharge during summer represents return water from irrigation. The sum of the combined discharge of east and west channels of Warm Spring Creek and the combined discharge of east and west channels of Big Lost River, near Mackay, represents practically the entire surface flow of Big Lost River which enters Mackay Reservoir (see p. 95).

Cooperation.--Water-stage recorder graph and one discharge measurement furnished by Water District No. 27.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 13 to Sept. 30)

1.8	24
2.0	36
2.1	43

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	41	35	32	29	30	32	36	113	70	56	38
2	*39	41	35	32	29	30	32	32	98	70	52	37
3	38	41	35	32	28	30	32	31	85	69	55	36
4	38	41	35	32	28	30	32	29	74	70	81	35
5	39	42	35	32	28	30	32	28	67	70	89	32
6	39	41	35	33	28	*30	32	30	64	65	82	32
7	40	42	36	32	28	30	32	36	64	60	71	32
8	40	42	36	32	28	31	31	41	56	56	66	30
9	39	41	36	32	28	31	31	44	*49	54	60	31
10	38	40	36	32	29	31	31	45	46	63	53	30
11	37	41	42	32	30	31	30	47	44	70	51	30
12	37	41	43	32	30	32	31	51	46	60	48	31
13	37	*40	42	31	30	31	*30	58	53	52	46	31
14	38	39	42	30	30	31	30	57	64	49	44	32
15	39	38	42	30	30	30	33	53	77	53	42	30
16	39	38	42	31	30	30	38	49	104	52	40	32
17	39	37	42	31	30	30	38	*50	130	*52	37	32
18	37	38	42	32	30	30	37	59	*128	52	*35	32
19	38	38	*42	*32	29	30	38	72	117	52	35	30
20	40	38	42	32	30	30	39	88	110	52	36	28
21	40	38	39	32	30	32	39	93	106	50	37	28
22	40	37	39	31	30	32	39	97	104	46	37	28
23	39	37	39	31	30	31	37	115	97	44	39	28
24	39	36	39	30	30	32	36	151	80	43	43	28
25	41	36	38	32	30	36	35	155	71	43	42	28
26	40	35	37	31	30	36	35	149	71	42	40	27
27	42	36	37	31	30	33	35	156	71	44	39	26
28	41	35	36	30	30	32	35	175	72	52	38	26
29	41	35	33	28	-	32	37	173	73	62	37	26
30	41	35	35	30	-	33	37	154	70	60	37	26
31	42	-	35	30	-	32	-	133	-	57	37	-
Total	1,217	1,160	1,182	970	822	969	1,026	2,487	2,404	1,734	1,505	912
Mean	39.3	38.7	38.1	31.3	29.4	31.3	34.2	80.2	80.1	55.9	48.5	30.4
Ac-ft	2,410	2,300	2,340	1,920	1,630	1,920	2,040	4,930	4,770	3,440	2,990	1,810

Calendar year 1950: Max 101 Min 20 Mean 38.6 Ac-ft 27,940
Water year 1950-51: Max 175 Min 26 Mean 44.9 Ac-ft 32,500

* Discharge measurement made on this day.

Warm Spring Creek (west channel) near Mackay, Idaho

Location.--Lat 43°58', long. 113°45', in NE¼ sec. 5, T. 7 N., R. 23 E., on right bank 500 ft upstream from confluence with east channel and 7½ miles northwest of Mackay.

Records available.--May 1919 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,070 ft (from topographic map). Prior to May 4, 1920, water-stage recorder at same site at datum 0.54 ft lower. May 4, 1920, to Dec. 2, 1938, water-stage recorder at same site at datum 0.46 ft higher than present datum.

Average discharge.--32 years, 92.6 cfs.

Extremes.--Maximum discharge during year, 287 cfs May 29 (gage height, 3.02 ft); minimum, 69 cfs May 4-6 (gage height, 1.25 ft).
1919-51: Maximum discharge, 600 cfs (estimated) Aug. 11, 1936 (gage height, 4.42 ft, datum then in use, from floodmark); minimum, 49 cfs Apr. 27, 1935 (gage height, 0.62 ft, datum then in use).

Remarks.--Records good. Flow during summer represents return flow from irrigation. The sum of the combined discharge of east and west channels of Warm Spring Creek and the combined discharge of east and west channels of Big Lost River, near Mackay, represents practically the entire surface flow of Big Lost River which enters Mackay Reservoir (see p. 95).

Cooperation.--Water-stage recorder graph and one discharge measurement furnished by Water District No. 27.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 10-27)

1.2	64
1.5	100
2.0	160
2.5	225
3.0	290

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94	92	94	93	94	86	88	80	209	148	122	100
2	*93	90	93	94	93	86	88	76	186	148	119	99
3	90	90	93	93	90	84	88	73	165	143	123	96
4	90	92	93	93	88	84	89	70	148	146	156	94
5	92	92	92	93	87	87	88	69	138	146	164	94
6	92	90	92	93	86	*86	87	71	136	140	159	89
7	94	92	94	93	87	87	86	77	135	134	146	90
8	94	92	92	95	84	87	83	83	124	130	141	89
9	94	92	92	93	84	86	83	90	*112	126	134	90
10	94	92	93	92	86	84	81	90	105	138	124	90
11	93	94	92	92	86	86	81	96	102	148	119	92
12	90	94	89	90	86	86	81	104	108	137	116	93
13	92	*95	92	90	84	84	*81	117	119	128	113	94
14	94	93	90	90	84	84	82	114	131	125	108	98
15	93	92	92	90	86	83	84	110	154	130	101	96
16	94	92	92	89	86	83	88	105	189	132	98	96
17	95	92	90	89	86	83	88	*106	213	*131	95	96
18	94	90	90	90	84	83	84	119	*217	130	*93	94
19	94	89	*90	*90	84	83	86	136	216	130	94	90
20	93	88	90	90	84	84	87	155	216	128	95	87
21	93	89	92	90	84	90	87	165	217	119	95	84
22	93	89	92	90	86	89	86	174	220	112	95	86
23	93	90	92	89	86	84	82	200	215	108	99	84
24	93	92	90	89	86	89	83	230	189	108	105	84
25	93	92	90	89	86	93	81	243	166	107	102	84
26	92	92	90	89	86	93	80	238	159	105	99	83
27	92	93	90	88	84	87	78	244	156	111	98	83
28	90	92	90	88	84	84	80	269	154	125	98	83
29	90	92	92	87	-	86	82	285	154	136	96	83
30	92	92	92	92	-	87	80	272	149	129	99	82
31	93	-	93	93	-	87	-	241	-	125	100	-
Total	2,873	2,746	2,838	2,816	2,411	2,665	2,522	4,502	4,902	4,003	3,506	2,703
Mean	92.7	91.5	91.5	90.8	86.1	86.0	84.1	145	163	129	113	90.1
Ac-ft	5,700	5,450	5,630	5,590	4,780	5,290	5,000	8,930	9,720	7,940	6,950	5,360

Calendar year 1950: Max 170 Min 52 Mean 89.2 Ac-ft 64,580
Water year 1950-51: Max 285 Min 69 Mean 105 Ac-ft 76,340

* Discharge measurement made on this day.

Mackay Reservoir near Mackay, Idaho

Location.--Lat 43°57', long. 113°40', in sec. 12, T. 7 N., R. 23 E., on headgate tower of dam on Big Lost River and 4 miles northwest of Mackay.

Records available.--January 1919 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is 6,000 ft above mean sea level, Utah Construction Co. datum, or about 6,000.5 ft above mean sea level, datum of 1929.

Extremes.--Maximum contents observed during year, 42,390 acre-ft May 30 (gage height, 65.04 ft); minimum observed, 5,510 acre-ft Oct. 1 (gage height, 24.00 ft).
1919-51: Maximum contents observed, that of May 30, 1951; no available contents during periods in 1919, 1920, 1924, 1926, 1929, 1931-35; minimum gage height observed, 6.3 ft Aug. 5, 1934.

Remarks.--Reservoir is formed by earth- and rock-fill dam, which was reconstructed in 1917-18; storage impounded by original dam not recorded. Capacity is 38,400 acre-ft between gage heights 7.0 ft (bottom of outlet tunnel) and 62.0 ft (crest of spillway). Dead storage reported to be about 125 acre-ft. Water is used for irrigation of about 33,000 acres in Big Lost River irrigation district. About 9,000 acres irrigated from Big Lost River and tributaries above reservoir. Considerable seepage around dam because of its porous foundation, but the greater part of this water returns to Big Lost River between reservoir and station below reservoir, near Mackay. Figures given herein represent usable contents, computed for 12 p.m. on basis of once-daily readings of staff gage.

Cooperation.--Gage readings and capacity table furnished by Water District No. 27.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,740	14,260	20,960	27,220	31,530	34,500	37,070	38,700	40,830	39,100	33,810	29,440
2	6,010	14,570	21,150	27,370	31,680	34,610	37,180	38,650	40,660	38,960	33,650	29,220
3	6,280	14,800	21,360	27,540	31,790	34,720	37,230	38,640	40,500	38,830	33,520	28,970
4	6,620	14,970	21,520	27,710	31,930	34,770	37,320	38,620	40,320	38,970	33,910	28,750
5	6,920	15,130	21,810	27,870	32,040	34,840	37,410	38,640	40,230	39,150	34,360	28,550
6	7,240	15,440	22,100	28,030	32,140	34,960	37,470	38,640	40,230	39,370	35,900	28,400
7	7,480	15,670	22,300	28,170	32,270	35,070	37,510	38,650	40,230	39,400	36,970	28,330
8	7,800	15,790	22,480	28,340	32,380	35,170	37,560	38,740	39,850	39,230	37,630	28,130
9	8,080	15,990	22,680	28,470	32,480	35,250	37,620	39,000	39,520	39,180	38,390	27,820
10	8,390	16,280	22,880	28,610	32,600	35,330	37,680	39,180	38,980	39,210	38,050	27,640
11	8,680	16,580	23,040	28,800	32,720	35,410	37,720	39,340	38,420	39,470	39,520	27,460
12	8,980	16,940	23,260	28,930	32,820	35,460	37,800	39,590	38,090	39,650	40,040	27,290
13	9,260	17,150	23,590	29,050	32,930	35,530	37,910	39,730	37,760	39,880	39,860	27,370
14	9,560	17,340	23,860	29,180	33,050	35,620	37,990	39,720	37,520	40,030	39,560	27,440
15	9,890	17,490	24,040	29,360	33,150	35,680	38,110	39,690	37,640	40,120	38,970	27,440
16	10,170	17,760	24,290	29,500	33,250	35,750	38,320	39,690	38,380	40,200	38,190	27,410
17	10,430	18,020	24,540	29,690	33,350	35,820	38,460	39,730	39,380	40,230	37,340	27,390
18	10,600	18,240	24,710	29,820	33,450	35,900	38,600	39,760	40,250	40,020	36,460	27,390
19	10,930	18,560	24,910	29,960	33,520	35,950	38,700	40,040	40,780	39,680	35,840	27,390
20	11,230	18,720	25,070	30,080	33,640	36,060	38,800	40,420	41,060	39,290	34,780	27,390
21	11,500	18,830	25,260	30,200	33,750	36,170	38,920	40,650	41,100	38,840	33,580	27,420
22	11,690	19,100	25,460	30,360	33,850	36,230	38,930	40,870	41,200	38,320	32,920	27,530
23	11,940	19,350	25,630	30,460	33,960	36,310	38,840	41,160	41,270	37,800	32,100	27,710
24	12,220	19,580	25,830	30,600	34,040	36,410	38,750	41,470	40,980	37,170	31,450	27,850
25	12,510	19,850	26,020	30,720	34,120	36,480	38,700	41,720	40,460	36,370	31,190	27,900
26	12,800	20,050	26,170	30,860	34,250	36,540	38,670	41,760	40,160	35,520	30,850	28,000
27	13,060	20,250	26,330	30,960	34,340	36,640	38,650	41,770	39,850	34,940	30,580	28,110
28	13,340	20,450	26,510	31,070	34,430	36,730	38,790	42,070	39,620	34,260	30,330	28,000
29	13,580	20,600	26,680	31,190	-	36,810	38,910	42,340	39,460	33,810	30,090	27,850
30	13,800	20,780	26,880	31,330	-	36,890	38,830	41,990	39,290	33,530	29,870	27,680
31	14,010	-	27,080	31,440	-	36,950	-	41,230	-	33,820	29,640	-

Monthly gage height and contents, water year October 1950 to September 1951

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	23.75	5,400	-
Oct. 31	37.72	14,010	+8,610
Nov. 30	45.93	20,780	+6,770
Dec. 31	52.31	27,080	+6,300
Calendar year 1950	-	-	+6,140
Jan. 31	56.25	31,440	+4,360
Feb. 28	58.79	34,430	+2,990
Mar. 31	60.85	36,950	+2,520
Apr. 30	62.33	38,830	+1,880
May 31	64.17	41,230	+2,400
June 30	62.69	39,290	-1,940
July 31	58.28	33,820	-5,470
Aug. 31	54.66	29,640	-4,180
Sept.30	52.87	27,680	-1,960
Water year 1950-51	-	-	+22,280

Sharp ditch near Mackay, Idaho

Location.--Lat 43°57', long. 113°39', in sec. 7, T. 7 N., T. 24 E., on left bank 1,600 ft downstream from head of ditch, three-quarters of a mile downstream from Mackay Reservoir, and 3½ miles northwest of Mackay.

Records available.--June 1912 to October 1914, March 1919 to September 1951.

Gage.--Water-stage recorder and artificial control. Altitude of gage is 5,980 ft (from topographic map). Prior to Apr. 3, 1937, and June 24, 1938, to Apr. 25, 1939, staff gage and Apr. 3, 1937, to June 23, 1938, recording gage, at site 1,400 ft upstream (upstream from Hintze ditch) at different datum.

Extremes.--Maximum discharge during year, 46 cfs May 30 (gage height, 1.61 ft); no flow for long periods during fall and winter.
1912-14, 1919-51: Maximum discharge, 50 cfs July 10, 1947 (gage height, 1.63 ft); no flow at times.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Sharp ditch diverts from east side of Big Lost River in SE¼ sec. 12, T. 7 N., R. 23 E., half a mile below Mackay Reservoir and 1 mile above station on Big Lost River below Mackay Reservoir, near Mackay. Water used for irrigation northwest of Mackay and above Streeter ditch. Hintze ditch, which diverts from Sharp ditch above station, was reported by watermaster to have carried 176 acre-ft during year (136 in June and 40 in August).

Cooperation.--Water-stage recorder inspected by Water District No. 27.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	2.8					0	7.4	33	g28	27	23
2	.4	4.0					0	7.4	15	32	26	17
3	*.5	4.7					0	10	16	38	24	8.2
4	.5	5.4					0	11	18	37	19	6.1
5	.7	4.2				(*)	0.9	11	18	36	15	9.0
6	.8	4.0					2.4	11	18	37	9.0	4.0
7	.7	a3.8					2.4	11	20	43	3.6	11
8	.5	a3.5					2.8	11	22	44	3.8	17
9	.5	a2.8					5.8	17	23	44	6.6	17
10	.5	a2.8					8.2	11	25	42	9.3	19
11	.5	a2.8					9.6	11	26	39	9.3	21
12	.6	g2.8					10	11	26	39	9.0	17
13	.6	*g2.6					*10	11	25	37	12	15
14	.6	a2.6					11	11	24	32	18	15
15	.6	a2.6					12	8.5	23	25	18	15
16	.7	a2.6					12	8.2	26	28	17	15
17	.8	a0					11	*8.5	*28	*33	24	15
18	.9	a0					11	8.2	g29	27	26	15
19	1.6	0		(*)			12	8.2	g34	22	*25	15
20	3.8	0	(*)				12	7.9	g37	16	8.3	15
21	3.8	0					9.6	11	g35	23	19	17
22	3.2	0					5.8	15	g33	28	39	19
23	2.1	0					6.1	23	g33	26	38	20
24	2.2	0					7.1	29	g33	26	38	20
25	2.2	0					7.1	32	g33	26	36	20
26	2.2	0					7.1	34	g32	26	34	20
27	2.1	0					7.4	37	g32	30	33	20
28	1.9	0					7.4	41	g32	34	32	8.0
29	1.9	0					7.4	45	g33	33	33	3.9
30	2.2	0					7.4	46	g30	30	34	6.9
31	2.8	-					-	41	-	26	34	-
Total	42.8	54.0	0	0	0	0	205.5	549.3	812	987	679.9	444.1
Mean	1.38	1.80	0	0	0	0	6.85	17.7	27.1	31.8	21.9	14.8
Ac-ft	85	107	0	0	0	0	408	1,090	1,610	1,960	1,350	881

Calendar year 1950: Max 37 Min 0 Mean 9.43 Ac-ft 6,820
Water year 1950-51: Max 46 Min 0 Mean 10.3 Ac-ft 7,490

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for adjacent periods and records for Big Lost River below Mackay Reservoir.
g Computed from once-daily staff-gage readings.

Big Lost River below Mackay Reservoir, near Mackay, Idaho

Location.--Lat 43°56', long. 113°38', in sec. 18, T. 7 N., R. 24 E., 450 ft downstream from Oleson Suspension Bridge, 1 mile downstream from head of Sharp ditch, 1½ miles downstream from Mackay Reservoir, and 2½ miles northwest of Mackay.

Drainage area.--813 sq mi.

Records available.--December 1903 to August 1906 and May 1912 to March 1915 (published as "near Mackay"), January 1919 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,960 ft (from topographic map). Prior to May 12, 1912, and June 5, 1912, to Apr. 28, 1913, staff gage at different datums at sites within 1 mile upstream. May 12 to June 4, 1912, staff gages at different datums at site 1½ miles upstream (above Sharp ditch). Apr. 29, 1913, to Mar. 15, 1915, staff gage at site 1 mile downstream (below Streeter ditch) at different datum.

Average discharge.--35 years (1904-5, 1912-14, 1919-51), 272 cfs.

Extremes.--Maximum discharge during year, 1,790 cfs May 30 (gage height, 4.62 ft); minimum, 49 cfs Oct. 4, 5 (gage height, 1.58 ft).
1903-6, 1912-15, 1919-51: Maximum discharge, 2,990 cfs June 10, 1921 (gage height, 5.79 ft); minimum, 18 cfs Nov. 1, 1934; minimum gage height, 1.23 ft Nov. 5-8, 1926.

Remarks.--Records good. Sharp ditch (see preceding page) is only diversion between station and reservoir; about 9,000 acres of land are irrigated by diversions from river and tributaries above reservoir. Flow regulated by Mackay Reservoir (see p. 95).

Cooperation.--Water-stage recorder inspected by Water District No. 27.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.5	35	3.0	677
1.7	73	4.0	1,310
2.0	162	4.6	1,740
2.5	395		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	71	88	104	116	122	128	292	1,390	917	533	384
2	52	71	88	104	116	122	128	273	1,160	923	624	390
3	*54	71	88	104	116	122	125	264	1,000	857	561	395
4	52	71	88	104	116	122	125	250	875	773	461	384
5	49	71	88	104	116	*122	125	241	761	749	368	384
6	50	71	88	104	116	125	125	236	725	642	287	384
7	50	73	90	104	116	125	125	245	719	671	227	379
8	52	73	90	104	119	125	125	268	761	713	232	368
9	52	78	90	107	119	125	122	297	731	719	232	363
10	54	78	90	107	119	125	119	322	833	707	232	322
11	56	78	90	110	119	125	119	358	851	648	241	254
12	56	80	93	110	119	125	119	395	833	612	250	250
13	56	*83	93	110	119	125	125	500	827	572	412	254
14	58	86	93	110	119	125	*135	533	839	533	618	254
15	60	96	93	110	119	125	145	539	863	544	749	254
16	60	86	93	110	119	125	166	516	869	555	731	250
17	60	88	93	110	119	125	197	*522	*881	*607	761	223
18	60	88	96	*110	119	125	219	544	911	677	779	174
19	62	88	96	110	119	125	245	601	965	719	*767	174
20	60	88	*96	110	119	125	259	677	1,050	761	809	170
21	60	88	96	110	119	125	297	731	1,060	791	809	170
22	65	88	96	113	119	125	317	785	1,080	773	737	166
23	65	88	96	113	119	125	317	839	1,080	779	707	166
24	65	90	96	113	119	125	312	977	1,070	803	653	166
25	65	90	96	113	119	125	307	1,180	1,050	809	572	166
26	67	90	96	113	119	125	302	1,260	990	809	516	166
27	69	88	98	113	119	125	297	1,310	929	893	456	162
28	71	88	98	113	122	125	278	1,370	923	929	400	210
29	71	90	98	113	-	128	268	1,540	917	767	400	254
30	71	90	104	113	-	128	307	1,720	905	659	400	254
31	71	-	104	113	-	128	-	1,600	-	483	390	-
Total	1,845	2,469	2,902	3,386	3,314	3,869	5,978	21,185	27,848	22,394	15,914	7,890
Mean	59.5	82.3	93.6	109	118	125	199	683	928	722	513	263
Ac-ft	3,660	4,900	5,760	6,720	6,570	7,670	11,860	42,020	55,240	44,420	31,560	15,650

Calendar year 1950: Max 893 Min 49 Mean 246 Ac-ft 178,300
Water year 1950-51: Max 1,720 Min 49 Mean 326 Ac-ft 236,000

* Discharge measurement made on this day.

Big Lost River near Arco, Idaho

Location.--Lat 43°35', long. 113°17', in SW¼ sec. 17, T. 3 N., R. 27 E., on right bank 600 ft downstream from head of box canyon, 2,000 ft southeast of Reed (formerly Mower) ranch house, and 3 miles southeast of Arco.

Drainage area.--1,410 sq mi, approximately.

Records available.--August 1946 to September 1951.

Gage.--Water-stage recorder.

Average discharge.--5 years, 43.5 cfs.

Extremes.--Maximum discharge during year, 272 cfs Aug. 6 (gage height, 2.60 ft); maximum gage height, 2.74 ft Mar. 17 (ice jam); minimum discharge not determined, occurred during period of ice effect.
1946-51: Maximum discharge, 285 cfs June 6, 1947 (gage height, 2.60 ft); maximum gage height, 3.83 ft Feb. 3, 4, 1947 (ice jam); minimum discharge, 3.0 cfs May 20, 21, 1948 (gage height, 1.01 ft).

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor. Station is below all large diversions for irrigation in Big Lost River Valley. Flow regulated by Mackay Reservoir (see p. 95). About 42,000 acres of land irrigated by diversions from river and tributaries above station.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	24	23	15	10		15	22	149	33	46	100
2	29	23	23	15	10		16	26	196	32	43	85
3	*28	23	25				17	31	214	34	56	82
4	27	22	25					31	208	35	221	80
5	27	22	24					32	158	34	256	78
6	27	22	24	15		12	18	33	82	34	259	76
7	25	22	24					34	51	33	250	76
8	25	22	23					35	40	28	211	78
9	24	20	22					39	39	27	196	92
10	22	18	22				19	37	35	28	186	102
11	22	18	21				21	34	32	27	155	113
12	22	18	21				23	33	30	28	105	105
13	21	19	21		13	*12	24	43	*29	29	80	102
14	21	*20	20				*25	53	26	31	62	*113
15	20	21	21	16			25	62	25	29	61	116
16	19	23	20			12	24	*65	25	27	*61	111
17	19	24	20				24	61	25	24	62	102
18	18	25	20				23	61	*25	*24	53	102
19	19	25	20			13	22	50	24	24	41	94
20	19	25	20	*16			24	56	24	24	43	80
21	20	25	*20				23	45	26	24	45	82
22	20	25	20				22	34	28	24	56	85
23	20	25	21				22	25	29	25	85	87
24	21	24	22	16			22	23	32	26	105	87
25	21	24	22			14	20	32	33	27	122	87
26	21	24	23				19	34	38	28	140	87
27	21	24	22	12	12		19	37	45	29	*146	82
28	21	24	22				19	54	41	32	149	78
29	21	24	22	10	-		21	97	40	47	137	76
30	22	24	21		-		21	105	37	53	125	71
31	24	-	20		-		-	122	-	54	111	-
Total	695	679	674	458	355	397	618	1,446	1,786	954	3,668	2,709
Mean	22.4	22.6	21.7	14.8	12.7	12.8	20.6	46.6	59.5	30.8	118	90.3
Ac-ft	1,380	1,350	1,340	908	704	787	1,230	2,870	3,540	1,890	7,280	5,370

Calendar year 1950: Max 94 Min 6 Mean 24.0 Ac-ft 17,350
Water year 1950-51: Max 259 Min - Mean 39.6 Ac-ft 28,650

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 9-16, Dec. 1, 2, 5-7, 14, 17, 20, Dec. 22 to about Mar. 31. No gage-height record Jan. 3-19, Jan. 28 to Mar. 12, Mar. 20 to Apr. 13; discharge estimated on basis of weather records, recorded range in stage, and records for station below Mackay Reservoir.

Riley Creek Springs near Hagerman, Idaho

Location.--Lat 42°45'40", long. 114°51'30", in SW¼NE¼ sec. 6, T. 8 S., R. 14 E., on right bank 50 ft upstream from junction with Lewis Spring, 300 ft downstream from U. S. Fish Hatchery, and 5 miles southeast of Hagerman.

Records available.--March 1950 to June 1951 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 2,960 ft (from topographic map).

Extremes.--1950-51: Maximum daily discharge, 42 cfs many days during January, February, March, May, June 1951; minimum daily, 29 cfs Mar. 1-15, 1950.

Remarks.--Records good except those for period of no gage-height record, which are fair. Small domestic diversion above station. Some intermingling with Lewis Spring water above station through fish hatchery. Amount of Lewis Spring water passing station increased beginning Nov. 21. Slight regulation from filling and emptying of fishponds above station.

Rating table, Oct. 1, 1950, to June 13, 1951 (gage height, in feet, and discharge, in cubic feet per second)

0.9	27
1.0	31
1.1	36
1.2	40
1.3	45

Discharge, in cubic feet per second, October 1950 to June 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	30	39	39	42	42	40	38	42			
2	31	30	39	39	42	42	40	38	41			
3	31	30	40	38	42	42	40	40	42			
4	31	30	40	38	42	42	40	42	42			
5	*31	30	39	38	42	42	40	42	42			
6	30	30	39	38	42	42	40	42	42			
7	30	30	39	38	41	42	40	42	*42			
8	30	30	39	38	41	42	40	42	38			
9	31	30	39	39	41	42	40	42	33			
10	31	30	39	39	41	42	40	42	34			
11	30	30	39	39	41	42	40	42	34			
12	30	30	39	39	41	42	40	42	34			
13	30	30	39	39	41	42	40	42	34			
14	30	30	*39	39	41	42	40	42	-			
15	30	30	39	39	41	*42	40	41	-			
16	30	30	39	39	*41	42	*38	*41	-			
17	30	*30	39	39	41	42	38	41	-			
18	30	30	39	39	41	42	38	41	-			
19	30	30	39	39	41	42	38	41	-			
20	30	30	39	39	41	42	38	41	-			
21	30	31	39	39	42	41	*38	41	-			
22	30	33	39	39	42	41	38	41	-			
23	30	33	39	39	42	41	37	40	-			
24	30	37	39	39	41	41	37	41	-			
25	30	40	39	39	41	41	37	41	-			
26	30	40	39	40	41	41	38	41	-			
27	30	39	39	42	42	41	38	41	-			
28	30	39	39	42	42	41	38	42	-			
29	30	39	39	42	-	41	38	42	-			
30	30	39	39	42	-	41	38	42	-			
31	30	-	39	42	-	41	-	41	-			
Total	937	970	1,211	1,219	1,159	1,291	1,167	1,277	500			
Mean	30.2	32.3	39.1	39.3	41.4	41.6	38.9	41.2	38.5			
Ac-ft	1,860	1,920	2,400	2,420	2,300	2,560	2,310	2,530	992			

Calendar year : Max Min Mean Ac-ft
The period : Max - Min - Mean - Ac-ft 19,290

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 29 to Feb. 15; discharge estimated on basis of records for adjacent periods and records for other Snake River Springs.

Brailsford ditch near Hagerman, Idaho

Location.--Lat 42°46'00", long. 114°51'50", in N½NW¼ sec. 6, T. 8 S., R. 14 E., on left bank 250 ft upstream from road bridge, 0.5 mile downstream from point of diversion at Lewis Spring, and 4.2 miles southeast of Hagerman.

Records available.--June to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,000 ft (from topographic map).

Extremes.--Maximum daily discharge, 16 cfs June 23-26, July 19-26, 30, Aug. 19, 20; minimum daily, 6.2 cfs July 28.

Remarks.--Records fair. Brailsford ditch diverts from Lewis Spring for irrigation.

Rating table, June 1 to Sept. 30, 1951 (gage height, in feet, and discharge, in cubic feet per second)

1.2	5.2
1.3	7.7
1.4	10
1.5	13

Discharge, in cubic feet per second, June to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										14	15	14
2										15	15	14
3										14	15	14
4										14	15	14
5										14	15	14
6										14	15	14
7										14	15	14
8										15	14	14
9										14	14	14
10										14	14	14
11									15	14	13	14
12										14	12	14
13										15	11	14
14										15	9.6	14
15										15	9.3	14
16										15	11	14
17										15	14	14
18										15	15	14
19										16	16	14
20									*15	16	16	14
21									15	*16	15	14
22									15	16	14	14
23									16	16	13	14
24									16	16	13	13
25									16	16	13	13
26									16	16	13	13
27									15	12	13	13
28									13	6.2	13	13
29									9.0	15	13	13
30									14	16	14	13
31									-	15	14	-
Total									445.0	452.2	421.9	413
Mean									14.8	14.6	13.6	13.8
Ac-ft									883	897	837	819

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

* Discharge measurement made on this day.

Note.--No gage-height record June 1-19, June 23 to July 15, July 17-20, Aug. 18, 19, 21-30; discharge estimated on basis of records for Riley Creek below Lewis Spring and other Snake River Springs.

Riley Creek below Lewis Spring, near Hagerman, Idaho

Location.--Lat 42°45'50", long. 114°51'40", in SE¼NW¼ sec. 6, T. 8 S., R. 14 E., on left bank 150 ft upstream from road bridge, 1,800 ft downstream from Lewis Spring, 2,200 ft downstream from U. S. Fish Hatchery, and 4½ miles southeast of Hagerman.

Records available.--June to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 2,950 ft (from topographic map).

Extremes.--Maximum daily discharge, 67 cfs July 28; minimum daily, 58 cfs July 14-22.

Remarks.--Records good. Flow at this station plus flow of Brailsford ditch (see preceding page) gives total flow from Riley and Lewis Springs plus small intervening inflow. Flow diverted from Lewis Spring to Brailsford ditch for irrigation. Slight regulation by ponds at fish hatchery.

Discharge, in cubic feet per second, June to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										60	59	60
2										59	59	60
3										60	59	61
4										60	59	62
5										60	59	62
6										60	59	62
7										60	59	62
8										59	60	62
9										60	59	62
10									a60	60	60	62
11										60	60	63
12										60	62	63
13										59	63	63
14										58	64	63
15										58	65	63
16										58	62	63
17										58	60	63
18									60	58	60	63
19									60	58	60	63
20									*60	58	60	63
21									60	*58	61	63
22									60	58	62	63
23									59	59	62	63
24									59	60	63	63
25									59	60	62	63
26									59	60	63	63
27									60	63	62	64
28									62	67	62	64
29									66	59	62	65
30									60	59	61	65
31										59	*61	-
Total									1,804	1,845	1,889	1,881
Mean									60.1	59.5	60.9	62.7
Ac-ft									3,580	3,660	3,750	3,730

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of subsequent records and records for other Snake River springs.

Snake River below Lower Salmon Falls, near Hagerman, Idaho

Location.--Lat 42°51'36", long. 114°54'42", in lot 3, sec. 2, T. 7 S., R. 13 E., on right bank half a mile downstream from lower Salmon Falls powerplant, 1 mile upstream from Big Wood (Malad) River, and 2¼ miles (revised) north of Hagerman.

Records available.--November 1937 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 2,727.7 ft above mean sea level, datum of 1929, supplementary adjustment of 1947, by stadia levels. Prior to Jan. 3, 1950, at site 340 ft upstream at same datum.

Extremes.--Maximum discharge during year, 23,400 cfs May 16 (gage height, 13.56 ft); minimum, 842 cfs Apr. 28 (gage height, 3.08 ft); minimum daily, 3,970 cfs July 8.
1937-51: Maximum discharge, 29,800 cfs June 27, 1950 (gage height, 15.60 ft); minimum, probably less than 100 cfs Jan. 10, 11, 1950, when river was below intake pipes; minimum daily, that of July 8, 1951.

Remarks.--Records excellent except those for periods of no gage-height record, which are good. Flow regulated by Lower Salmon Falls powerplant and many reservoirs above station. Practically entire flow at Milner diverted during irrigation season; only minor diversions below Milner.

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 19				May 28 to Sept. 30	
6.0	4,820	10.0	13,600	5.0	3,280
7.0	6,720	12.0	18,900	6.0	4,880
8.0	8,810	13.0	21,700	7.0	6,720

Note.--Same as preceding table above 7.0 ft.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,390	9,040	8,700	10,900	16,700	14,900	15,900	11,800	15,800	7,440	7,480	*7,370
2	a10,000	8,670	7,700	11,600	16,600	15,700	15,700	13,700	14,300	8,090	7,240	7,360
3	a11,200	9,950	10,500	9,110	16,200	14,900	a15,000	16,500	14,200	7,910	7,500	7,280
4	a11,000	10,400	12,400	12,100	16,900	15,200	16,000	16,300	14,400	5,330	7,370	7,520
5	9,820	5,500	10,600	10,900	17,300	15,600	15,500	15,700	14,600	7,600	6,410	7,600
6	9,610	11,000	10,400	10,400	18,200	15,800	15,100	13,800	12,500	8,060	8,500	7,510
7	8,020	9,760	*9,750	11,000	17,900	16,000	14,700	14,900	11,800	6,720	7,960	7,580
8	8,400	9,400	9,980	12,000	17,500	15,800	14,600	13,800	11,400	3,970	7,920	7,420
9	10,400	9,390	9,310	10,900	17,200	15,900	15,300	11,700	9,510	7,330	7,840	7,540
10	9,210	9,000	10,700	12,000	17,300	15,600	14,000	12,200	7,570	6,010	7,500	7,520
11	9,790	9,020	11,500	12,300	17,100	15,500	15,400	11,600	7,940	6,850	7,300	7,270
12	9,250	9,930	11,400	14,000	16,400	15,900	14,000	9,890	6,970	*6,940	6,960	7,930
13	9,470	10,800	9,970	14,500	16,200	16,700	12,500	13,600	7,090	*6,890	6,780	7,740
14	10,400	9,460	11,000	13,900	16,500	15,600	10,300	17,100	7,960	7,090	7,180	8,160
15	8,440	10,300	10,000	14,800	*15,600	*15,900	11,700	19,500	7,310	5,900	7,040	7,950
16	10,200	8,820	9,960	14,600	15,800	15,400	11,000	21,200	7,140	6,860	6,870	7,780
17	11,200	9,670	12,100	14,600	15,900	14,300	10,900	18,600	6,390	6,240	7,320	7,710
18	9,410	9,280	11,700	14,300	15,900	16,500	7,540	16,600	8,030	6,510	7,440	8,050
19	10,500	9,530	11,600	14,500	15,500	15,900	7,200	a15,500	7,070	6,360	9,470	7,830
20	10,300	10,500	10,500	13,800	16,000	15,700	7,500	a15,700	7,230	6,520	8,700	7,720
21	10,500	11,000	11,200	13,400	16,300	15,900	7,190	a15,500	6,820	6,460	7,660	7,910
22	9,800	10,400	11,100	14,700	15,900	15,800	6,470	a16,500	*7,950	6,600	7,030	8,320
23	11,900	10,300	10,400	14,100	15,000	15,300	6,780	a17,000	9,960	6,960	7,150	7,950
24	9,440	11,000	11,300	16,000	14,800	15,500	6,230	a16,000	9,750	6,760	7,330	7,930
25	8,420	11,300	11,800	16,800	15,500	15,400	6,380	a15,500	10,700	7,050	7,480	8,360
26	*9,460	11,500	11,700	16,100	15,600	15,600	*7,330	a16,000	7,610	6,820	7,040	8,350
27	9,020	11,900	11,300	16,200	15,700	15,300	7,060	a17,000	8,120	7,050	7,090	8,290
28	9,630	11,000	11,900	16,100	14,100	15,300	7,490	*a16,500	11,000	6,750	7,430	8,630
29	8,570	9,740	10,500	15,200	-	15,800	7,470	16,200	10,600	7,050	7,320	9,090
30	11,300	9,280	11,100	12,600	-	15,800	8,780	16,700	8,840	7,160	7,250	8,870
31	10,400	-	10,800	15,300	-	15,900	-	16,200	-	7,380	7,130	-
Total	303,450	296,840	332,870	418,710	455,600	483,400	331,020	478,790	290,560	210,660	230,690	236,540
Mean	9,789	9,895	10,740	13,510	16,270	15,590	11,030	15,440	9,685	6,795	7,442	7,885
Ac-ft	601,900	588,800	660,200	830,500	903,700	958,800	656,600	949,700	576,300	417,800	457,600	469,200

Calendar year 1950: Max 24,700 Min 5,080 Mean 10,530 Ac-ft 7,624,000
Water year 1950-51: Max 21,200 Min 3,970 Mean 11,150 Ac-ft 6,071,000

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for stations at King Hill and near Buhl.

Big Wood River near Ketchum, Idaho

Location.--Lat 43°48', long. 114°26', in sec. 4, T. 5 N., R. 17 E., on left bank half a miles upstream from North Fork and 8 miles northwest of Ketchum. Prior to Nov. 7, 1950, at site 560 ft upstream.

Drainage area.--137 sq mi.

Records available.--May 1948 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,240 ft (from topographic map). Prior to Nov. 7, 1950, staff gage at site 560 ft upstream at different datum, read once daily.

Extremes.--Maximum discharge during year, 946 cfs May 28 (gage height, 4.84 ft); minimum recorded, 14 cfs sometime during period Jan. 1-22 (from recorded range in stage).
1948-51: Maximum discharge observed, 1,200 cfs June 3, 1948 (gage height, 3.20 ft); minimum observed, 14 cfs sometime during period Jan. 1-22, 1951.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Minor diversions for nonconsumptive uses on Boulder Creek; water returned to stream above station. About 97 acre-ft of storage in ponds in Prairie Creek; diversion point below station for irrigation.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 7		Nov. 8 to Sept. 30					
0.5	66	1.8	34	2.6	175	4.0	625
.7	102	2.1	68	3.0	290	4.5	815
.9	144	2.3	103	3.5	450	5.0	1,010

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	89	100	64	42	b55	46	60	302	672	520	198	105
2	87	96	58	55	b55	51	59	284	594	527	190	103
3	85	92	62	62	b55	51	65	287	538	524	245	101
4	85	96	66	60	b56	51	79	326	499	524	287	99
5	87	98	58	50	b56	49	94	394	513	492	221	99
6	89	98	60	40	57	49	118	471	485	454	206	99
7	87	96	64	45	54	50	155	566	454	436	188	97
8	87	*86	62	56	53	50	178	576	426	422	172	95
9	85	76	60	58	60	51	198	583	401	401	168	94
10	83	65	60	60	60	46	230	611	398	404	155	94
11	81	74	60	62	60	46	227	672	418	365	148	94
12	81	78	60	54	57	50	260	639	488	341	145	94
13	80	73	*51	54	45	52	314	576	552	329	140	94
14	80	71	b57	56	45	51	387	506	625	332	135	*92
15	85	62	b64	56	52	52	408	471	732	326	130	92
16	83	66	b62	56	54	50	398	496	832	344	128	92
17	85	66	59	58	48	46	429	586	832	305	123	90
18	83	68	b54	54	54	46	457	660	811	290	121	90
19	81	66	b60	54	49	51	478	696	*771	290	118	90
20	80	64	b60	45	53	53	471	707	739	275	121	86
21	78	68	52	56	54	54	422	*739	724	257	138	88
22	78	66	b50	60	50	54	380	811	688	236	135	88
23	78	64	b54	*56	56	46	368	822	611	230	128	88
24	78	62	b56	61	54	52	*353	822	576	218	123	86
25	89	64	b54	59	54	57	326	799	566	*212	116	86
26	91	64	44	59	44	61	326	771	562	200	114	86
27	96	64	39	53	52	60	338	832	548	215	110	84
28	96	64	46	48	*45	56	404	922	552	275	114	84
29	124	66	b58	b50	-	61	380	898	544	299	110	84
30	120	68	59	b52	-	61	332	840	530	245	110	84
31	106	-	52	b54	-	59	-	759	-	218	110	-
Total	2,717	2,241	1,765	1,685	1,487	1,612	8,694	19,424	17,681	10,506	4,647	2,758
Mean	87.6	74.7	56.9	54.4	53.1	52.0	290	627	589	339	150	91.9
Cfsm	0.639	0.545	0.415	0.397	0.388	0.380	2.12	4.58	4.30	2.47	1.09	0.671
In.	0.74	0.61	0.48	0.46	0.40	0.44	2.36	5.27	4.80	2.85	1.26	0.75
Ac-ft	5,390	4,440	3,500	3,340	2,950	3,200	17,240	38,530	35,070	20,840	9,220	5,470

Calendar year 1950: Max 732 Min 32 Mean 157 Cfsm 1.15 In. 15.60 Ac-ft 114,000
Water year 1950-51: Max 922 Min 39 Mean 206 Cfsm 1.50 In. 20.42 Ac-ft 149,200

Peak discharge (base, 400 cfs).--Apr. 18 (9 p.m.) 510 cfs (3.67 ft); Apr. 28 (7 p.m.) 440 cfs (3.47 ft); May 11 (9:30 to 10:30 p.m.) 700 cfs (4.20 ft); May 28 (6 a.m.) 946 cfs (4.84 ft); June 17 (5 a.m.) 850 cfs (4.60 ft); July 28 (9:30 p.m.) 460 cfs (3.61 ft); Aug. 3 (10:30 p.m.) 426 cfs (3.51 ft).

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

Note.--No gage-height record Nov. 9-12, Nov. 15 to Dec. 12, Jan. 1-22; discharge computed on basis of weather records and records for combination of Big Wood River and Big Wood Slough at Hailey, and Warm Springs Creek at Guyer Hot Springs, near Ketchum.

Warm Springs Creek at Guyer Hot Springs, near Ketchum, Idaho

Location.--Lat 43°41', long. 114°25', in NE¼ sec. 15, T. 4 N., R. 17 E., on left bank at Guyer Hot Springs, 2 1/8 miles upstream from mouth and 2.2 miles west of Ketchum.

Drainage area.--96 sq mi, approximately.

Records available.--November 1940 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 5,901.7 ft above mean sea level (river-profile survey). Prior to Mar. 7, 1942, staff gage at same site and datum.

Average discharge.--10 years (1941-51), 84.6 cfs.

Extremes.--Maximum discharge during year, 634 cfs May 28 (gage height, 3.17 ft); minimum, 14 cfs Mar. 10 (gage height, 0.82 ft), ice jam upstream.
1940-51: Maximum discharge, 696 cfs May 30, 1943 (gage height, 3.36 ft); minimum, 6 cfs Feb. 29, 1944 (gage height, 0.55 ft), ice jam upstream; minimum daily, 17 cfs Dec. 17, 1946.

Remarks.--Records excellent except those for period of no gage-height record, which are fair. Diversions above station for irrigation of about 200 acres. Small diversion from Guyer Hot Springs for recreational purposes bypasses station.

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 10		Jan. 11 to June 30				July 1 to Sept. 30	
1.0	25	1.0	27	2.0	205	1.0	30
1.1	34	1.2	48	2.5	364	1.1	40
1.2	45	1.4	76	3.2	625	1.3	65
1.3	57	1.7	133			1.6	112
						1.9	173

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	49	40	26	a32	31	49	169	364	164	65	45
2	38	46	33	34	a33	37	51	157	309	162	62	45
3	38	45	39	39	34	34	58	162	273	158	69	45
4	38	45	41	38	37	35	79	182	248	158	87	44
5	38	45	34	31	39	34	104	230	245	149	71	42
6	39	45	37	25	37	35	120	282	230	139	68	42
7	38	43	41	28	37	35	153	343	213	129	65	42
8	38	44	40	36	39	35	169	374	200	125	61	41
9	37	36	38	36	39	34	177	368	187	120	58	41
10	37	32	38	37	39	28	192	386	182	122	57	41
11	36	40	38	39	41	36	179	416	187	116	55	41
12	36	40	38	36	39	34	200	382	227	107	55	41
13	34	*38	*33	36	31	35	251	332	251	102	53	41
14	34	39	34	37	32	35	298	295	279	100	52	*41
15	38	34	39	37	37	37	302	279	319	95	52	41
16	37	37	36	37	35	27	282	309	368	92	50	40
17	37	38	34	37	32	31	295	379	368	90	48	40
18	37	40	34	33	38	30	312	443	343	85	47	40
19	36	39	38	35	29	36	312	455	315	85	48	40
20	34	38	37	27	36	36	298	455	*292	82	48	39
21	34	42	33	37	36	37	263	*455	279	78	52	40
22	34	40	32	35	33	37	227	482	260	75	56	41
23	34	39	34	*32	36	34	*208	522	233	72	53	41
24	34	38	34	35	35	38	197	560	211	71	52	40
25	39	40	34	36	35	40	182	543	202	*71	48	40
26	42	40	32	36	28	44	177	526	195	71	47	41
27	45	40	32	33	35	48	179	560	189	69	46	40
28	44	39	36	27	*29	48	216	625	182	72	47	40
29	51	40	37	a28	-	51	211	569	177	71	48	39
30	57	42	37	a30	-	52	187	498	172	71	47	39
31	56	-	30	a31	-	49	-	420	-	68	46	-
Total	1,209	1,213	1,113	1,044	983	1,153	5,928	12,159	7,500	3,169	1,713	1,233
Mean	39.0	40.4	35.9	33.7	35.1	37.2	198	392	250	102	55.3	41.1
Ac-ft	2,400	2,410	2,210	2,070	1,950	2,290	11,760	24,120	14,880	6,290	3,400	2,450

Calendar year 1950: Max 376 Min 18 Mean 79.8 Ac-ft 57,750
Water year 1950-51: Max 625 Min 25 Mean 105 Ac-ft 76,230

Peak discharge (base, 300 cfs).--Apr. 18 (10 p.m.) 340 cfs (2.44 ft); May 11 (2:30 a.m.) 428 cfs (2.68 ft); May 28 (6 p.m.) 634 cfs (3.17 ft); June 17 (1 a.m.) 390 cfs (2.57 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Big Wood River near Ketchum.

Big Wood Slough at Hailey, Idaho

Location.--Lat 43°31'00", long. 114°19'30", in sec. 9, T. 2 N., R. 18 E., on left bank 25 ft upstream from bridge on State Highway 22, an eighth of a mile northeast of Big Wood River, and an eighth of a mile southwest of Hailey.

Drainage area.--See Big Wood River at Hailey, p.

Records available.--June 1915 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 5,301.17 ft above mean sea level, preliminary. Prior to Aug. 14, 1934, staff gages at or near highway bridge at different datums.

Average discharge.--36 years, 107 cfs.

Extremes.--Maximum discharge during year, 73 cfs June 25 (gage height, 3.71 ft); maximum gage height, 4.22 ft Dec. 31 (ice jam); no flow part of Jan. 29.
1915-51: Maximum discharge observed, 419 cfs June 6, 1921, from rating curve extended above 280 cfs; maximum gage height, 5.55 ft (top of ice in well) Jan. 20-23, 1937; no flow at times, in several years.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Flow controlled at inoperative powerplant half a mile upstream to meet the requirements of irrigation diversion and sewage dilution. Big Wood Slough is a natural channel of Big Wood River and its discharge plus the discharge of Big Wood River at Hailey (see p. 106) is total discharge of river at this point.

Cooperation.--Water-stage recorder inspected and 1 discharge measurement furnished by Water District No. 7 AB.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			61		b6	5	4.2	42	25	38	23	5.5
2	4.0		56		b6	*5.0	4.4	41	23	38	19	5.3
3			55		b7	b5.0	4.6	40	20	38	17	5.1
4			61		b7	b5.0	4.8	41	18	42	50	19
5	4.5		55		b7	b4.8	4.9	44	18	69	37	39
6		3.0	53	12	b7	b4.6	4.2	47	17	66	37	37
7			58		b7	4.6	3.7	49	*17	66	31	37
8			57		7	4.4	3.0	49	15	64	28	38
9			56		6	4.6	2.9	49	14	62	42	37
10			56	(b)	5	b4.5	2.9	50	12	62	39	39
11		15	55		5	4.2	2.8	51	12	59	19	39
12		32	57		5.7	b4.6	2.4	52	15	53	16	46
13		*32	*53		b6.0	4.6	2.3	50	17	51	16	*49
14		33	52		6	4.6	3.5	48	20	52	13	45
15		30	57		6	4.6	3.4	45	24	52	11	42
16	5.0	32	55		6	4.6	3.4	42	28	49	7.2	40
17		32	54	7	6	b4.4	3.4	37	30	45	6.6	39
18		33	52		5	b4.4	17	38	31	45	7.0	39
19		47	55		5	b4.6	56	39	*31	45	6.8	37
20		64	54		5	4.6	55	38	31	41	6.8	36
21		64	52		5.0	4.6	53	33	30	36	6.8	36
22		62	46		5	4.6	51	*34	31	32	7.6	37
23		61	51		5	b4.3	*47	35	29	28	8.1	36
24		60	52	*7.0	5	4.3	46	33	48	25	8.6	36
25		60	50	7.4	5	4.3	44	37	70	*23	7.9	35
26		60	48	7.0	5	4.3	44	30	70	21	6.6	37
27		60	44	b6	5.0	4.4	43	30	66	20	6.1	35
28		60	47	b5	5	b4.3	48	31	68	25	5.9	30
29	3.0	60	54	b3	-	4.4	46	31	61	35	6.1	31
30		63	b56	b5	-	4.4	44	29	39	27	5.7	31
31		-	b58	b6	-	4.4	-	26	-	26	5.7	-
Total	140.5	990.0	1,670	257.4	160.7	141.0	654.8	1,241	930	1,335	507.5	1,017.9
Mean	4.53	33.0	53.9	8.30	5.74	4.55	21.8	40.0	31.0	43.1	16.4	33.9
Ac-ft	279	1,960	3,310	511	319	280	1,300	2,460	1,840	2,650	1,010	2,020

Calendar year 1950: Max 101 Min - Mean 25.5 Ac-ft 18,450
Water year 1950-51: Max 70 Min - Mean 24.8 Ac-ft 17,940

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 1-4, Oct. 6 to Nov. 12, Jan. 1-9, 11-23, Feb. 8-11, 14-20, 22-26, 28, Mar. 1, July 22; discharge estimated on basis of weather records and records for Big Wood River at Hailey and nearby streams.

Big Wood River at Hailey, Idaho

Location.--Lat 43°31', long. 114°20', in SW¼ sec. 9, T. 2 N., R. 18 E., on left bank 35 ft downstream from bridge on State Highway 22, a quarter of a mile southwest of Hailey, and three-eighths of a mile upstream from Croy Creek.

Drainage area.--640 sq mi, approximately (total area above river and slough stations).

Records available.--July to December 1889, June 1915 to September 1951. Published as Wood River at Hailey in 1889.

Gage.--Water-stage recorder. Datum of gage is 5,298.00 ft above mean sea level, preliminary. Prior to Nov. 16, 1934, staff gages at bridge 35 ft downstream at different datums.

Average discharge.--36 years (1915-51), 306 cfs. Average combined discharge of Big Wood River and Big Wood Slough, 36 years, 413 cfs.

Extremes.--Maximum discharge during year, 2,970 cfs May 28 (gage height, 6.21 ft); minimum recorded, 98 cfs Dec. 28 (gage height, 1.81 ft), but may have been les during period of ice effect.

1915-51 (river only): Maximum discharge, 4,480 cfs June 7, 1938; maximum gage height, 8.66 ft June 12, 1921; practically no flow Sept. 15-23, Nov. 20, 22, 23, 1931, Oct. 25, 1937.

1915-51 (combined): Maximum daily discharge, 4,500 cfs June 6, 7, 1938; minimum daily, 15 cfs Dec. 27, 1921.

Remarks.--Records good. Water diverted around station through Big Wood Slough (see p. 105). Total flow of river at Hailey (combined flow of Big Wood River and Big Wood Slough) is given on following page. Diversions for irrigation of about 10,300 acres above station. Flow bypasses station for irrigation of about 1,800 acres. Storage above station is negligible.

Cooperation.--Water-stage recorder inspected by Water District No. 7 AB.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 28				May 29 to Sept. 30			
1.8	100	3.5	762	2.0	175	4.0	1,140
2.0	142	4.0	1,060	2.5	341	5.0	1,840
2.3	220	5.0	1,750	3.0	565	6.0	2,750
2.6	316	6.2	2,900	3.5	830		
3.0	486						

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	226	266	171	b110	b160	156	229	946	1,800	1,260	473	268
2	232	256	149	b120	b160	*164	238	886	1,570	1,290	441	261
3	220	250	149	156	b160	156	269	880	1,410	1,300	464	255
4	217	250	164	154	a160	166	338	916	1,300	1,330	736	226
5	214	253	147	b140	a170	156	438	1,040	1,260	1,190	585	198
6	223	250	140	b130	a170	152	522	1,210	1,210	1,070	555	195
7	217	250	161	b130	a160	152	676	1,430	1,140	1,030	501	192
8	214	253	159	133	a155	156	768	1,580	1,060	998	464	192
9	212	235	152	147	a180	161	809	1,580	992	956	432	192
10	206	200	154	152	203	149	886	1,640	962	968	410	195
11	203	214	152	166	198	147	845	1,830	992	902	385	195
12	200	203	156	b159	192	154	892	1,850	1,130	808	369	207
13	198	*195	*138	b156	a160	161	958	1,650	1,330	792	353	*213
14	198	200	127	166	a160	164	1,110	1,460	1,520	808	337	210
15	212	176	154	166	179	171	1,180	1,330	1,820	808	322	207
16	209	195	144	164	179	171	1,190	1,380	2,110	786	300	204
17	206	198	138	169	179	152	1,280	1,610	2,130	775	296	201
18	206	206	129	154	182	149	1,370	1,880	2,060	753	303	201
19	200	192	142	154	179	156	1,370	2,050	*1,930	736	296	198
20	192	171	140	b130	179	169	1,340	2,050	1,870	704	289	195
21	189	176	127	161	179	171	1,240	2,020	1,800	660	300	195
22	189	169	110	169	176	176	1,110	*2,100	1,720	610	330	195
23	189	169	129	154	176	161	*1,050	2,410	1,490	590	326	195
24	189	164	131	*171	174	171	1,040	2,550	1,350	555	333	192
25	200	169	124	171	171	184	970	2,470	1,320	*535	307	190
26	192	169	116	171	156	200	940	2,290	1,290	501	289	192
27	235	169	106	164	166	214	940	2,540	1,250	473	282	187
28	263	166	104	152	156	209	1,110	2,870	1,280	520	278	184
29	279	164	112	144	-	223	1,150	2,720	1,270	670	275	181
30	302	176	b110	b145	-	226	1,040	2,320	1,250	540	275	181
31	292	-	b100	b145	-	223	-	2,020	-	506	275	-
Total	6,724	6,104	4,235	4,703	4,819	5,320	27,298	55,508	43,616	25,424	11,581	6,097
Mean	217	203	137	152	172	172	910	1,791	1,454	820	374	203
Ac-ft	13,340	12,110	8,400	9,330	9,560	10,550	54,140	110,100	86,510	50,430	22,970	12,090

Calendar year 1950: Max 1,810 Min 93 Mean 410 Ac-ft 296,800
Water year 1950-51: Max 2,870 Min 100 Mean 552 Ac-ft 399,500

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for station near Ketchum and Warm Springs Creek near [illegible].
b Stage-discharge relation affected.

Combined discharge, in cubic feet per second of Big Wood River and Big Wood Slough at Hailey, Idaho, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	230	269	232	122	166	161	233	988	1,820	1,300	496	274
2	236	259	205	132	166	169	242	927	1,590	1,330	460	266
3	224	253	204	168	167	161	274	920	1,430	1,340	481	260
4	221	253	225	166	167	171	343	957	1,320	1,370	786	245
5	218	256	202	152	177	161	443	1,080	1,280	1,260	622	237
6	228	253	193	142	177	157	526	1,260	1,230	1,140	592	232
7	222	253	219	142	167	157	680	1,480	1,160	1,100	532	229
8	219	256	216	145	162	160	771	1,630	1,080	1,060	492	230
9	217	238	208	159	186	166	812	1,630	1,010	1,020	474	229
10	211	203	210	164	208	154	889	1,690	974	1,030	449	234
11	208	229	207	173	203	151	848	1,880	1,000	961	404	234
12	205	235	213	166	198	159	894	1,900	1,140	861	385	253
13	203	227	191	163	166	166	960	1,700	1,350	843	369	262
14	203	233	179	173	166	169	1,110	1,510	1,540	860	350	255
15	217	206	211	173	185	176	1,180	1,380	1,840	860	333	249
16	214	227	199	171	185	176	1,190	1,420	2,140	835	307	244
17	211	230	192	176	185	156	1,280	1,650	2,160	820	303	240
18	211	239	181	161	187	153	1,390	1,920	2,090	798	310	240
19	205	239	197	161	184	161	1,430	2,090	1,960	781	303	235
20	197	235	194	137	184	174	1,400	2,090	1,900	745	296	231
21	194	240	179	168	184	176	1,290	2,050	1,830	696	307	231
22	194	231	156	176	181	181	1,160	2,130	1,750	642	338	232
23	194	230	180	161	181	165	1,100	2,440	1,520	618	334	231
24	194	224	183	178	179	175	1,090	2,580	1,400	580	342	228
25	205	229	174	178	176	188	1,010	2,510	1,390	558	315	225
26	197	229	164	178	161	204	984	2,320	1,360	522	296	229
27	238	229	150	170	171	218	983	2,570	1,320	493	288	222
28	266	226	151	157	161	213	1,160	2,900	1,350	545	284	214
29	282	224	166	147	-	227	1,200	2,750	1,330	705	281	212
30	305	239	166	150	-	230	1,080	2,350	1,290	567	281	212
31	295	-	158	151	-	227	-	2,050	-	532	281	-
Total	6,864	7,094	5,905	4,960	4,980	5,462	27,952	56,752	44,554	26,772	12,091	7,115
Mean	221	236	190	160	178	176	932	1,831	1,485	864	390	237
Ac-ft	13,610	14,070	11,710	9,840	9,880	10,830	55,440	112,600	88,370	53,100	23,980	14,110

Calendar year 1950: Max 1,850 Min 99 Mean 435 Ac-ft 315,200
Water year 1950-51: Max 2,900 Min 122 Mean 577 Ac-ft 417,500

Big Wood River near Bellevue, Idaho

Location.--Lat 43°19', long. 114°21', in sec. 20, T. 1 S., R. 18 E., on right bank 1¾ miles upstream from flow line of Magic Reservoir, 3 miles upstream from Camas Creek, and 10 miles southwest of Bellevue.

Drainage area.--823 sq mi.

Records available.--July 1911 to September 1951 (no winter records prior to 1943 except 1916, 1922, 1940-41).

Gage.--Water-stage recorder. Altitude of gage is 4,800 ft (by barometer). Prior to July 8, 1921, water-stage recorder at site three-eighths of a mile downstream at different datum.

Average discharge.--13 years (1915-16, 1921-22, 1939-41, 1942-51), 281 cfs.

Extremes.--Maximum discharge during year, 2,150 cfs May 29 (gage height, 4.73 ft); minimum, 48 cfs sometime during period Jan. 30 to Feb. 28 (gage height, 1.67 ft).
1911-51: Maximum discharge recorded, 3,660 cfs June 16, 1921 (gage height, 6.07 ft, site and datum then in use), from rating curve extended above 2,800 cfs; minimum recorded, 7 cfs Apr. 14, 1932 (gage height, 1.10 ft).

Remarks.--Records good except those for periods of no gage-height record or ice effect, which are fair. Diversions for irrigation of about 36,400 acres above station. Storage above station is negligible.

Cooperation.--Water-stage recorder inspected and four discharge measurements furnished by Water District No. 7 AB.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 22-29)

Oct. 1 to May 14				May 15 to Sept. 30			
1.7	53	3.0	535	2.1	63	3.5	920
2.0	113	3.5	925	2.3	120	4.0	1,420
2.3	195	4.2	1,640	2.6	204	4.5	1,990
2.6	310			3.0	515		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	89	173	183	120	55	*87	183	943	1,430	911	190	128
2	98	170	176	125	55	85	212	824	1,150	938	*186	120
3	95	164	167	125	58	79	237	784	938	920	195	110
4	83	159	170	111	60	87	293	792	839	920	337	110
5	87	159	167	104		85	379	866	779	875	356	114
6	104	161	161	75		85	458	997	705	770	331	114
7	120	161	173	91		87	556	1,220	650	697	301	104
8	120	161	167	90		93	650	1,390	552	665	255	94
9	120	161	167	90		91	696	1,420	452	635	230	86
10	118	156	167	90	100	b85	792	1,420	417	642	210	91
11	115	156	167	90		b75	768	1,500	389	650	190	98
12	109	161	167	90		77	792	1,610	424	522	170	*101
13	104	148	164	90		89	882	1,520	598	473	155	101
14	104	*153	*150	90		87	1,030	*1,320	729	459	130	110
15	104	150	159	95		91	1,160	1,100	974	459	100	110
16	102	150	159	75		95	*1,180	1,030	1,380	445	98	104
17	93	164	156	70		100	1,190	1,120	1,570	417	101	101
18	89	195	150	67		93	1,270	1,290	1,550	382	104	98
19	87	195	150	66		91	1,330	1,420	1,450	*356	124	98
20	87	195	153	60		93	1,320	1,480	1,360	331	151	98
21	85	209	150	60		98	1,250	1,450	1,300	318	140	100
22	83	192	137	60	90	106	1,150	*1,420	1,250	306	136	105
23	83	183	135	60		106	1,060	1,570	1,150	278	140	114
24	83	176	137	*62		109	*1,020	1,730	938	272	155	107
25	81	173	137	62		113	934	1,770	893	272	159	107
26	104	170	135	62		125	857	1,730	857	245	155	101
27	120	170	125	60		142	824	1,770	*796	*195	143	91
28	148	170	132	60		148	988	1,990	804	186	128	91
29	167	167	132	b55	-	153	1,260	2,070	788	235	120	91
30	173	183	130	55	-	161	1,100	1,910	796	250	120	88
31	176	-	130	55	-	161	-	1,650	-	214	124	-
Total	3,331	5,085	4,753	2,465	2,498	3,177	25,821	43,106	27,908	15,238	5,434	3,085
Mean	107	170	153	79.5	89.2	102	861	1,391	930	492	175	103
Ac-ft	6,610	10,090	9,430	4,890	4,950	6,300	51,220	85,500	55,350	30,220	10,780	6,120

Calendar year 1950: Max 1,270 Min 37 Mean 258 Ac-ft 186,900
Water year 1950-51: Max 2,070 Min 55 Mean 389 Ac-ft 281,500

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 31 to Jan. 3, Jan. 8-14, 16, 17, 20-23, Jan. 30 to Feb. 28, Aug. 10-12, 14, 15, Sept. 21, 22; discharge estimated on basis of weather records and records for Magic Reservoir and stations at Hailey and near Ketchum.

Camas Creek near Blaine, Idaho

Location.--Lat 43°20', long. 114°33', in sec. 15, T. 1 S., R. 16 E., on left bank a quarter of a mile north of Macon siding on Hill City branch of Oregon Short Line Railroad, three-eighths of a mile downstream from Willow Creek, 2¼ miles upstream from backwater of Magic Reservoir, and 4 miles southeast of Blaine.

Drainage area.--648 sq mi (revised).

Records available.--May 1912 to September 1951 (no winter records prior to 1945). Discharge measurements only for 1922.

Gage.--Water-stage recorder.

Average discharge.--7 years (1944-51), 164 cfs.

Extremes.--Maximum discharge during year, 7,470 cfs Apr. 9 (gage height, 13.46 ft); minimum, 4.2 cfs Sept. 20, 21 (gage height, 1.02 ft).
1912-51: Maximum discharge recorded, 9,780 cfs Apr. 8, 1943; maximum gage height, 15.48 ft above Apr. 18, 1938, from floodmark; minimum discharge recorded, 1.5 cfs Aug. 29, 1940.

Remarks.--Records good except those below 10 cfs, which are fair, and those for periods of no gage-height record, which are poor. Water diverted for irrigation of about 9,300 acres above station. Flow regulated by Twin Lakes Reservoir on Lake Creek (capacity, 31,240 acre-ft) and three minor reservoirs (combined capacity, 580 acre-ft).

Cooperation.--Four discharge measurements and occasional inspections of recorded furnished by Water District No. 7 AB.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	20	44				370	1,580	360	61	8.7	7.8
2	12	20	37				439	1,170	323	55	8.4	7.5
3	11	19	42		25		622	880	288	53	14	7.2
4	9.8	18	39				947	726	262	53	59	6.9
5	11	18	35				1,740	612	246	55	49	6.6
6	11	17	38				3,850	622	239	53	32	6.3
7	11	17	42				5,260	733	228	47	28	5.8
8	11	17	42				5,640	820	207	45	25	5.4
9	10	*16	*38				6,150	856	189	46	20	5.0
10	10	14	38		70		5,740	778	172	41	15	4.8
11	10	15					3,660	772	152	36	15	4.6
12	10	17				35	2,620	782	146	*30	11	4.6
13	9.8	20					2,080	754	128	25	*9.4	*4.6
14	9.8	20					1,700	*705	146	23	8.1	4.8
15	9.8	21					1,440	641	146	26	7.8	4.6
16	11	20		25			1,300	580	141	28	8.7	4.6
17	11	22					*1,220	547	143	25	9.0	4.6
18	10	32					1,110	529	136	21	8.4	4.6
19	10	38					1,010	526	*133	21	7.5	4.6
20	10	42					926	517	126	18	7.2	4.4
21	10	53	35				856	497	120	16	6.3	4.4
22	10	50			35		789	*479	118	17	6.3	4.4
23	11	52					730	470	114	15	22	4.4
24	11	47				50	*688	465	108	15	14	4.6
25	11	43				80	670	453	100	14	11	4.8
26	14	40				*106	660	434	94	*11	9.4	4.8
27	15	39				148	612	417	82	10	8.4	4.8
28	19	38				197	814	422	72	11	7.8	4.6
29	25	38			-	283	1,420	428	65	10	7.8	4.8
30	24	42			-	328	1,880	414	62	11	7.8	4.8
31	21	-			-	349	-	384	-	9.8	7.8	-
Total	380.2	865	1,130	775	1,325	2,346	56,943	19,993	4,846	901.8	459.8	155.7
Mean	12.3	28.8	36.5	25.0	47.3	75.7	1,898	645	162	29.1	14.8	5.19
Ac-ft	754	1,720	2,240	1,540	2,630	4,650	112,900	39,660	9,610	1,790	912	309

Calendar year 1950: Max 5,230 Min 3.7 Mean 232 Ac-ft 167,800
Water year 1950-51: Max 6,150 Min 4.4 Mean 247 Ac-ft 178,700

Peak discharge (base, 500 cfs).--Apr. 9 (6:30 p.m.) 7,470 cfs (13.46 ft); Apr. 30 (5 a.m.) 2,140 cfs (7.67 ft); May 9 (3 a.m.) 870 cfs (5.19 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Dec. 11 to Mar. 25, discharge estimated on basis of inflow-outflow studies for Magic Reservoir, weather records, and records for nearby streams.

Magic Reservoir near Richfield, Idaho

Location.--Lat 43°15', long. 114°22', in NE¼SE¼ sec. 18, T. 2 S., R. 18 E., at dam on Big Wood River and 18 miles northwest of Richfield.

Drainage area.--1,600 sq mi, approximately (revised).

Records available.--February to April 1909 (gage heights only), April 1909 to September 1951.

Gage.--Staff gage read once or twice daily. Datum of gage is 4,800 ft above datum of Idaho Irrigation Co., which is reported to be about 137 ft below mean sea level. Prior to Apr. 1, 1937, tape gage or temporary staff gages at dam. Datum of gages prior to Oct. 1, 1942, was 4,800 ft lower.

Extremes.--Maximum contents observed during year, 194,200 acre-ft Apr. 30 (gage height, 135.7 ft); minimum observed, 108,500 acre-ft Oct. 1-3 (gage height, 108.7 ft).
1909-51: Maximum contents observed, that of Apr. 30, 1951; no storage for several days in 1909, 1919, 1920, 1924, 1928, 1935.

Remarks.--Reservoir is formed by earth- and rock-fill dam, completed in 1909, and raised 5 ft in 1917. Capacity, 191,500 acre-ft between gage heights 21.4 ft (2.9 ft above bottom of outlet pipe) and 135.0 ft (top of 5-foot flashboards). Dead storage unknown. Water is used for irrigation of lands in Carey Act project of Big Wood Canal Co. Figures given herein represent usable contents including bank storage. Gage read in morning except during irrigation season when it was read morning and evening; contents computed from morning reading.

Cooperation.--Gage readings and yield table furnished by Water District No. 7 AB.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	108,500	115,300	124,700		-	150,100	128,500	193,500	192,700	191,500	169,000	140,400
2	108,500	115,800	125,200		-	150,400	129,100	191,900	191,500	191,500	167,600	140,100
3	108,500	116,000	126,000		-	150,400	129,900	190,700	191,500	192,300	166,200	139,200
4	108,800	116,600	126,300		-	150,100	132,800	191,500	191,500	192,300	165,100	138,300
5	109,000	117,100	126,900		-	149,100	136,200	191,900	191,500	192,300	164,200	137,400
6	109,300	117,400	127,200		-	148,500	139,200	192,300	191,500	192,300	163,400	136,500
7	109,600	117,600	127,700		-	147,800	153,300	193,100	191,100	191,900	163,000	135,700
8	110,100	117,900	128,300		-	146,900	164,800	193,500	190,700	191,500	162,000	134,800
9	110,300	118,400	128,500		-	146,200	175,500	193,500	190,300	191,100	161,300	133,600
10	110,600	118,700	129,100		-	144,700	185,300	193,100	190,300	190,700	160,300	132,800
11	110,800	119,000	129,400		-	143,500	192,300	192,700	189,900	190,300	160,000	131,900
12	111,100	119,200	129,700		-	142,500	193,500	192,300	189,500	189,900	158,900	131,100
13	111,400	119,500	130,200		-	141,300	192,300	192,300	189,200	189,200	157,600	129,900
14	111,600	119,800	130,500		-	140,400	191,500	192,300	189,200	188,800	156,600	129,400
15	111,600	120,000	-		-	133,900	190,700	191,900	189,200	187,600	155,300	128,500
16	111,900	120,300	-		-	135,400	189,900	191,500	190,300	187,200	154,300	127,700
17	112,100	120,900	-		-	136,500	189,200	191,900	191,500	186,400	153,300	127,200
18	112,400	121,400	-		-	135,400	189,200	192,300	192,700	185,700	152,000	126,000
19	112,400	121,900	-		-	134,800	188,800	192,300	192,700	184,500	151,300	125,200
20	112,600	122,500	-		146,900	133,300	188,800	192,700	192,700	183,800	150,400	124,400
21	112,600	123,000	-		147,200	131,900	188,400	193,100	192,700	183,000	149,700	123,600
22	112,900	122,700	-		147,500	130,200	187,600	193,100	192,700	181,500	148,800	122,700
23	112,900	122,200	-		147,800	129,400	190,700	192,700	192,300	180,000	147,800	121,900
24	113,200	121,700	-		148,100	128,300	192,700	192,700	192,300	178,900	146,900	121,100
25	113,200	122,200	-		148,500	127,700	192,300	192,700	192,300	178,100	145,900	120,300
26	113,400	122,500	-		149,100	127,400	191,500	192,700	192,300	177,400	145,300	119,500
27	113,700	123,000	-		149,400	127,400	191,500	192,700	191,900	175,500	144,700	119,000
28	113,900	123,300	-		149,700	127,200	191,500	192,700	191,900	174,100	144,100	118,400
29	114,200	123,800	-		-	127,200	193,100	192,700	191,900	172,600	142,800	117,600
30	114,700	124,400	-		-	127,700	194,200	192,700	191,900	171,500	141,900	116,800
31	115,000	-	-		-	128,000	-	192,700	-	170,100	141,000	-

Monthly gage height and contents, water year October 1950 to September 1951

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	108.7	108,500	-
Oct. 31	111.2	115,000	+6,500
Nov. 30	114.7	124,400	+9,400
Dec. 31	-	-	-
Calendar year 1950	-	-	-
Jan. 31	-	-	-
Feb. 28	123.3	149,700	-
Mar. 31	116.0	128,000	-21,700
Apr. 30	135.7	194,200	+66,200
May 31	135.3	192,700	-1,500
June 30	135.1	191,900	-800
July 31	129.3	170,100	-21,800
Aug. 31	120.5	141,000	-29,100
Sept.30	111.9	116,800	-24,200
Water year 1950-51	-	-	+8,300

Big Wood River below Magic Dam, near Richfield, Idaho

Location.--Lat 43°14', long. 114°22', in sec. 18, T. 2 S., R. 18 E., on right bank half a mile downstream from Magic Dam and 18 miles northwest of Richfield.

Drainage area.--1,600 sq mi, approximately.

Records available.--April 1911 to September 1951.

Gage.--Water-stage recorder.

Average discharge.--39 years (1912-51), 408 cfs.

Extremes.--Maximum discharge during year, 4,230 cfs Apr. 12 (gage height, 9.33 ft); minimum, 11 cfs Nov. 25-27, Dec. 4 (gage height, 1.16 ft).
1911-51: Maximum discharge, 7,160 cfs Apr. 13, 1943 (gage height, 13.31 ft); no flow Feb. 3, 1915.

Remarks.--Records good. Water diverted for irrigation of about 47,100 acres above station. Flow regulated by Magic Reservoir (see preceding page), Twin Lakes Reservoir on tributary of Camas Creek (capacity, 31,240 acre-ft), and minor reservoirs having combined capacity of about 680 acre-ft.

Cooperation.--Water-stage recorder inspected and five discharge measurements furnished by Water District No. 7 AB.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.1	9	2.5	149	6.0	1,960
1.3	18	3.0	275	7.0	2,620
1.6	38	3.5	470	8.0	3,290
1.9	64	4.0	735	9.1	4,060
2.2	98	5.0	1,310		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	14	12	13		13	282	3,200	1,970	862	862	560
2	17	14	12	13		14	282	2,740	1,440	878	845	565
3	17	14	12	13		301	282	1,860	1,310	867	845	560
4	17	14	12	13		495	282	1,150	1,230	884	823	560
5	16	14	12	13		495	285	1,160	1,110	894	818	560
6	16	14	12	13		495	292	1,250	1,050	867	801	560
7	16	14	12	13		614	298	1,680	1,040	878	757	560
8	16	14	12	13		718	692	2,380	1,020	840	735	560
9	*16	14	12	13		718	1,320	2,480	856	828	730	560
10	16	14	12	13		718	2,320	2,390	801	806	696	560
11	16	*14	12	13		713	3,320	2,340	*784	779	669	560
12	16	14	12	13		713	*4,030	2,370	812	768	669	*555
13	16	14	12	13		746	3,590	2,340	828	779	658	550
14	16	14	*12	13		806	3,200	2,270	823	790	630	550
15	16	14	12	13	13	818	2,970	1,900	790	796	*614	550
16	15	14	12	13		818	2,800	1,370	790	818	614	545
17	15	14	12	13		818	2,650	1,580	1,080	823	614	545
18	15	14	12	13		812	2,560	1,750	1,430	*823	614	530
19	15	13	12	12		812	2,500	1,760	1,440	834	614	515
20	15	125	12	12		806	2,420	1,850	*1,440	845	614	515
21	15	355	12	12		806	2,350	2,060	1,430	845	614	515
22	15	408	12	12		801	1,080	2,080	1,390	850	598	530
23	15	408	12	12		801	447	2,070	1,170	850	581	535
24	14	191	12	12		600	1,740	2,140	1,100	850	581	505
25	14	11	13	12		470	*1,970	2,200	988	862	576	490
26	14	11	13	12		470	1,600	*2,300	922	889	555	490
27	14	11	13	12		*470	1,490	2,340	894	900	550	510
28	14	12	13	13		470	1,740	2,330	889	*900	550	510
29	14	12	13	13	-	470	2,450	2,360	845	900	555	505
30	14	12	13	13	-	357	3,200	2,380	840	900	550	243
31	14	-	13	13	-	292	-	2,300	-	900	550	-
Total	476	1,821	379	394	364	18,450	55,042	64,380	32,512	26,305	20,482	15,853
Mean	15.4	60.7	12.2	12.7	13.0	595	1,835	2,077	1,084	849	661	528
Ac-ft	944	3,610	752	781	722	36,600	109,200	127,700	64,490	52,180	40,630	31,440

Calendar year 1950: Max 2,030 Min 7 Mean 446 Ac-ft 322,700
Water year 1950-51: Max 4,030 Min - Mean 648 Ac-ft 469,000

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 29 to Mar. 1; discharge estimated on basis of record of operation of gates in dam.

Little Wood River at Campbell Ranch, near Carey, Idaho

Location.--Lat 43°28', long. 114°03', in SW¼NW¼ sec. 35, T. 2 N., R. 20 E., on left bank at Campbell Ranch, above flow line of Little Wood Reservoir, 1½ miles downstream from High Five Creek, 2½ miles downstream from Muldoon Creek, 11 miles east of Bellevue, and 12 miles northwest of Carey.

Drainage area.--267 sq mi.

Records available.--February 1920 to September 1926 (published as "near Carey"), March 1941 to December 1942, April 1944 to September 1951 (no winter records except 1921-24, 1926). Other records published as "near Carey" are at site 6 miles downstream and are not equivalent owing to diversion and inflow.

Gage.--Water-stage recorder. Altitude of gage is 5,250 ft (by barometer). Prior to April 1944, at site 650 ft downstream at datum 3.50 ft lower.

Average discharge.--5 years (1920-24, 1925-26), 152 cfs.

Extremes.--Maximum discharge during year, 1,000 cfs Apr. 29 (gage height, 3.48 ft); minimum recorded, 40 cfs Oct. 21 (gage height, 1.03 ft).
1920-26, 1941-42, 1944-51: Maximum discharge recorded, 1,570 cfs Apr. 21, 1950 (gage height, 4.37 ft); minimum recorded, 14 cfs Aug. 29, 30, 1926.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Flow slightly regulated by Campbell Reservoir (capacity, 125 acre-ft, revised, prior to 1938 when dam failed capacity was 2,700 acre-ft) on tributary. Diversions for irrigation of about 5,250 acres above station..

Cooperation.--Water-stage recorder inspected by Little Wood Reservoir Co. and Water District No. 11C.

Revisions.--W 633: Drainage area.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.0	37	2.0	240
1.2	59	2.5	428
1.5	109	3.2	810

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	73	73			66	151	433	410	234	100	59
2	55	70	55			68	200	388	359	231	96	58
3	55	67	62			*70	262	372	316	223	94	55
4	*55	67	72			68	339	372	288	234	164	54
5	55	70	62			68	393	397	278	220	122	53
6	57	70	62			67	490	437	268	197	107	52
7	54	67	69			67	636	550	256	194	101	51
8	54	66	69			67	614	597	240	191	98	49
9	53	57	63			66	608	592	228	183	92	47
10	53	53	69			62	545	570	223	189	88	48
11	53	60	67			55	*447	592	228	186	82	48
12	52	62	*69			56	452	592	*265	170	76	49
13	51	62	55			62	495	555	302	159	73	49
14	51	*62	59			68	555	495	316	164	69	48
15	53	55	65			72	540	456	364	161	66	47
16	53	62	65			73	495	*447	415	154	60	46
17	52	65	58			70	495	490	415	146	58	45
18	52	76	53			65	510	565	372	*144	55	45
19	52	75	58			63	500	602	355	146	55	45
20	51	78	62			70	475	592	343	138	55	44
21	53	83	55			77	437	580	324	129	57	46
22	54	73	48			80	388	592	313	118	62	49
23	52	70	55			78	364	624	271	109	65	51
24	51	67	60			80	359	636	243	109	73	49
25	52	69	50			87	332	597	246	107	69	49
26	57	72	45			113	328	555	249	107	65	53
27	63	72	40			129	339	602	243	105	*62	52
28	72	69	58			122	505	672	249	122	62	53
29	76	67	62			124	756	624	246	122	60	53
30	82	72	62			120	515	525	231	116	62	52
31	80	-	55			120	-	452	-	107	60	-
Total	1,755	2,031	1,857	-	-	2,453	13,525	16,553	8,856	4,915	2,408	1,499
Mean	56.6	67.7	59.9	-	-	79.1	451	534	295	159	77.7	50.0
Ac-ft	3,480	4,030	3,680	-	-	4,870	26,830	32,830	17,570	9,750	4,780	2,970

Calendar year	: Max		Min	Mean	Ac-ft
Water year	: Max		Min	Mean	Ac-ft

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 16-31, Mar. 1, 2, 4-24; discharge estimated on basis of weather records and records for station near Carey and South Fork Boise River near Featherville.

Little Wood River near Carey, Idaho

Location.--Lat 43°23', long. 114°00', in E½ sec. 30, T. 1 N., R. 21 E., on right bank a third of a mile upstream from West Canal, 1 1/3 miles upstream from East Canal, 2 miles downstream from Little Fish Creek, 3 miles downstream from Little Wood Reservoir, and 6 miles northwest of Carey.

Drainage area.--312 sq mi.

Records available.--April 1904 to May 1905, September 1926 to September 1951. February 1920 to September 1926 at site 6 miles upstream; records not equivalent owing to diversion and inflow.

Gage.--Water-stage recorder. Altitude of gage is 5,010 ft (by barometer). Apr. 28, 1904, to May 31, 1905, staff gage, Sept. 20, 1926, to Apr. 19, 1938, water-stage recorder and Apr. 23 to Aug. 17, 1938, staff gage, all at about same site at datum 0.74 ft higher.

Average discharge.--22 years (1926-27, 1929-42, 1943-51), 130 cfs.

Extremes.--Maximum discharge during year, 1,090 cfs Apr. 29 (gage height, 5.82 ft); minimum, 3 cfs Dec. 29 to Feb. 7, Feb. 19; minimum gage height, 1.90 ft Jan. 16, 17, 28, 29.
1904-5, 1926-51: Maximum discharge, 6,000 cfs (due to failure of reservoirs on Little Fish Creek) Apr. 20, 1938 (gage height, 12.07 ft, datum then in use, from floodmark), from rating curve extended above 1,800 cfs; minimum, 1 cfs Jan. 26, 1945, Jan. 20, 1948.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair, and those below 10 cfs, which are poor. Diversions for irrigation of about 6,450 acres above station. Storage in Little Wood Reservoir (capacity, 11,700 acre-ft) began Feb. 12, 1941. Flow is also affected by Campbell, Cameron, and Howard Reservoirs (combined capacity, 690 acre-ft) on South Fork Muldoon and Little Fish Creeks.

Cooperation.--Water-stage recorder inspected by Little Wood Reservoir Co. and Water District No. 11C.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 4 to Feb. 26)

2.2	21	3.6	261
2.3	28	4.0	379
2.6	56	4.5	557
2.9	101	5.0	758
3.2	163	5.5	969

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a150	81	74	b3	b3	b42	114	515	450	232	165	62
2	a190	76	b60	3	b3	70	130	450	396	232	148	65
3	a190	70	60	3	b3	*81	141	415	347	225	139	87
4	*188	68	70	3	b3	81	150	402	311	228	135	101
5	179	70	61	3	b3	80	152	415	294	222	130	96
6	165	81	57	3	b3	78	152	439	285	205	118	91
7	148	76	b65	b3	b3	78	515	530	272	198	116	89
8	105	69	68	b3	4	74	705	632	256	188	112	89
9	75	61	61	b3	4	66	729	628	243	181	101	89
10	61	48	62	b3	4	b57	729	604	232	181	107	82
11	56	59	48	b3	5	b47	569	604	232	188	118	82
12	55	64	*32	b3	6	b47	*534	628	*253	174	122	82
13	54	64	b32	b3	b6	47	573	596	302	161	135	98
14	54	*64	b32	3	b6	b54	644	542	317	156	143	103
15	55	56	b32	3	b5	62	620	523	353	172	161	105
16	56	62	b25	3	b5	b70	561	*464	405	215	172	103
17	56	66	b11	3	b5	b78	534	493	419	235	168	103
18	55	78	b10	3	4	b78	542	557	396	*266	165	101
19	54	81	10	b3	b4	b78	538	604	366	274	161	101
20	54	78	b8	3	b4	78	527	612	347	272	161	98
21	54	87	b5	3	4	81	493	608	326	258	156	94
22	55	80	b5	b3	b4	82	439	608	317	272	148	92
23	55	75	b5	3	4	b81	402	636	285	269	133	89
24	55	70	b5	3	4	84	392	652	253	258	130	84
25	55	70	b5	3	4	86	379	628	243	258	122	81
26	57	70	b5	*3	14	92	357	584	243	272	118	69
27	62	72	b4	b3	27	98	369	604	240	258	*118	59
28	69	70	4	b3	b27	96	519	668	243	251	109	56
29	78	69	4	b3	-	96	948	660	243	232	96	56
30	81	72	3	b3	-	96	652	573	235	205	84	55
31	81	-	b3	b3	-	96	-	489	-	186	69	-
Total	2,702	2,107	926	93	171	2,334	14,109	17,363	9,104	6,924	4,060	2,562
Mean	87.2	70.2	29.9	3.0	6.1	75.3	470	560	303	223	131	85.4
Ac-ft	5,360	4,180	1,840	184	339	4,630	27,980	34,440	18,060	13,730	8,050	5,080

Calendar year 1950: Max 1,400 Min - Mean 168 Ac-ft 121,400
Water year 1950-51: Max 948 Min 3 Mean 171 Ac-ft 123,900

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of reported gate changes for Little Wood Reservoir and recorded range in stage.
b Stage-discharge relation affected by ice.

Silver Creek near Picabo, Idaho

Location.--Lat 43°17', long. 114°01', in sec. 1, T. 2 S., R. 20 E., on left bank 1½ miles downstream from drain ditch of Blaine County Drainage District No. 1 and 3 miles southeast of Picabo.

Drainage area.--88 sq mi, approximately.

Records available.--May 1920 to September 1951 (1922-35, irrigation seasons only).

Gage.--Water-stage recorder. Altitude of gage is 4,790 ft (by barometer).

Average discharge.--18 years (1920-22, 1935-51), 150 cfs.

Extremes.--Maximum discharge during year, 278 cfs Apr. 6 (gage height, 3.14 ft); maximum gage height, 3.95 ft Feb. 1 (ice jam); minimum discharge, 76 cfs Mar. 10; minimum gage height, 1.07 ft May 31.
1920-51: Maximum discharge, 312 cfs Apr. 3, 1923 (gage height, 3.29 ft); maximum gage height, 4.57 ft Jan. 22, 1950 (ice jam); minimum discharge, 26 cfs June 2, 1920 (gage height, 0.48 ft).

Remarks.--Records good except those for periods of ice effect, which are poor. Diversions for irrigation of about 9,000 acres above station. Two small canals bypass station. Records of discharge do not include water bypassed around station at times by slough on right bank from which there is some diversion for irrigation. Silver Creek receives considerable return flow resulting from Big Wood River irrigation.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	200	210	203	164	130	158	228	211	97	164	188	222
2	201	206	207	170	150	*161	242	183	98	169	184	225
3	200	203	201	170	180	159	256	170	102	175	190	223
4	196	203	198	170	180	158	264	164	102	189	201	217
5	200	204	196	170	180	162	269	161	102	195	208	215
6	202	202	194	160	180	158	273	158	104	192	220	213
7	203	201	199	165	180	159	264	163	113	187	225	212
8	201	199	200	170	180	159	251	172	120	179	224	211
9	201	197	194	170	184	159	236	178	124	180	229	208
10	201	194	194	170	183	137	220	178	128	177	223	207
11	199	189	194	170	184	180	*205	170	134	180	222	213
12	197	190	*194	160	184	167	192	167	134	194	224	210
13	197	193	193	165	180	159	185	166	138	203	220	209
14	197	*195	191	171	174	159	178	164	145	197	216	*206
15	198	191	188	169	173	161	171	162	156	195	206	203
16	198	190	187	167	173	163	167	*160	147	187	209	204
17	199	193	185	173	171	166	164	155	137	186	209	200
18	199	206	184	173	170	161	161	147	133	175	206	195
19	198	219	183	169	167	160	156	134	134	176	201	198
20	197	235	182	140	166	160	151	128	*140	172	204	201
21	193	232	181	160	166	163	150	124	142	167	212	201
22	195	234	179	170	165	171	149	111	147	170	215	200
23	198	227	178	170	167	169	150	101	160	181	214	204
24	198	213	176	170	167	173	151	94	164	181	216	208
25	200	206	175	*170	165	185	153	91	166	166	225	203
26	204	203	173	168	163	201	153	85	162	*170	226	202
27	205	201	171	167	162	219	154	84	159	167	223	203
28	209	200	171	151	159	230	162	108	161	166	216	206
29	212	196	171	128	-	231	197	104	172	182	215	207
30	215	197	172	120	-	229	223	95	170	202	218	209
31	210	-	170	120	-	227	-	88	-	202	221	-
Total	6,223	6,129	5,784	5,030	4,783	5,404	5,875	4,376	4,091	5,626	6,610	6,235
Mean	201	204	187	162	171	174	196	141	136	181	213	208
Ac-ft	12,340	12,160	11,470	9,980	9,490	10,720	11,650	8,680	8,110	11,160	13,110	12,370

Calendar year 1950: Max 258 Min 86 Mean 169 Ac-ft 122,700
Water year 1950-51: Max 273 Min 84 Mean 181 Ac-ft 131,200

* Discharge measurement made on this day.

Note.--Flow in bypass channel, which carries water around gage, measured as 3.51 cfs Nov. 14; 3.73 cfs Dec. 12; 2.74 cfs Jan. 25; 3.91 cfs Mar. 2; 19.8 cfs Apr. 11; 3.7 cfs (estimated) May 16; 1.34 cfs June 20; 9.66 cfs Sept. 14. Stage-discharge relation affected by ice Jan. 2-13, Jan. 21-24, Jan. 30 to Feb. 8.

Little Wood River near Richfield, Idaho

Location.--Lat 43°03', long. 114°08', in sec. 30, T. 4 S., R. 20 E., on right bank half a mile upstream from Byrns Slough and heading of Dietrich Canal, 1 mile east of railroad station at Richfield, and 14 miles downstream from Silver Creek.

Drainage area.--570 sq mi, approximately.

Records available.--January 1911 to September 1951 (irrigation seasons only).

Gage.--Water-stage recorder. Altitude of gage is 4,270 ft (by barometer). Prior to Sept. 5, 1918, staff gage at present site at datum 1.80 ft lower. Sept. 5, 1918, to Apr. 13, 1920, staff gage at present site and datum.

Extremes.--Maximum discharge during year, 374 cfs Apr. 30, May 1 (gage height, 2.49 ft); minimum recorded, 72 cfs June 7, 8 (gage height, 1.37 ft).
1911-51: Maximum discharge recorded, 868 cfs May 3, 1938 (gage height, 3.97 ft); minimum recorded, 7.6 cfs June 24, 25, 1920 (gage height, 0.52 ft).

Remarks.--Records good. Diversions for irrigation of about 38,300 acres above station. Flow partly regulated by Little Wood Reservoir (capacity, 11,700 acre-ft), Fish Creek Reservoir (capacity, 13,700 acre-ft), and three small reservoirs on tributaries (combined capacity, 690 acre-ft). River above Silver Creek is dry a large part of the time because of channel losses and irrigation diversions above Carey.

Cooperation.--Water-stage recorder graph and four discharge measurements furnished by Water District No. 11 AB.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-14)

Oct. 1 to Dec. 5		Mar. 25 to Sept. 30	
1.8	158	1.3	62
1.9	180	1.7	136
2.1	232	2.0	214
		2.5	377

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	162	188	188			-	214	367	116	121	136	163
2	162	188	190			-	217	316	123	118	125	160
3	165	188	195			-	223	270	116	132	123	168
4	167	185	192			-	229	247	118	136	127	168
5	167	188	188			-	241	238	96	146	136	165
6	167	188	-			-	257	235	80	143	141	163
7	167	190	-			-	254	232	72	146	153	168
8	169	190	-			-	266	254	72	141	158	168
9	169	190	-			-	299	*283	89	141	165	168
10	169	188	-			-	316	289	91	143	173	168
11	167	190	-			-	323	286	91	146	173	*168
12	165	188	-			-	302	279	*98	148	176	173
13	165	188	-			-	286	276	98	155	173	170
14	165	190	-			-	*279	273	100	158	170	170
15	169	*188	-			-	276	270	106	150	163	165
16	169	188	-			-	266	250	102	146	148	163
17	169	185	-			-	257	244	94	132	150	163
18	171	195	-			-	244	244	92	129	150	160
19	171	195	-			-	235	235	91	123	150	158
20	171	208	-			-	232	232	91	123	146	160
21	169	216	-			-	229	229	*100	*125	150	165
22	171	213	-			-	226	214	102	123	150	163
23	169	213	-			-	220	168	110	125	150	163
24	169	208	-			-	214	148	114	*129	150	165
25	171	200	-			176	*217	121	116	127	155	173
26	176	195	-			189	214	110	125	114	146	170
27	180	190	-			200	203	*96	121	116	155	170
28	182	190	-			214	208	87	121	123	155	170
29	188	190	-			220	235	114	121	116	153	170
30	190	190	-			220	343	123	123	129	150	168
31	190	-	-			217	-	114	-	136	155	-
Total	5,301	5,803	-	-	-	-	7,525	6,844	3,089	4,140	4,705	4,986
Mean	171	193	-	-	-	-	251	221	103	134	152	166
Ac-ft	10,510	11,510	-	-	-	-	14,930	13,570	6,130	8,210	9,330	9,890

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

* Discharge measurement made on this day.

Little Wood River at Shoshone, Idaho

Location.--Lat 42°56', long. 114°24', in sec. 2, T. 6 S., R. 17 E., on left bank just upstream from diversion dam for town water supply and 400 ft upstream from highway bridge in Shoshone.

Drainage area.--620 sq mi, approximately.

Records available.--April 1922 to September 1951 (irrigation seasons only).

Gage.--Water-stage recorder. Datum of gage is 3,958.97 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Extremes.--Maximum discharge during year, 549 cfs Aug. 14, 15 (gage height, 3.47 ft); minimum recorded, 43 cfs Oct. 12 (gage height, 0.66 ft).
1922-51: Maximum discharge recorded, 664 cfs June 18, 1922 (gage height, 2.26 ft); maximum gage height recorded, 4.49 ft June 11, 1944; practically no flow July 29, 1931, Oct. 3, 1938.

Remarks.--Records good. Diversions for irrigation of about 52,200 acres above station. Flow affected by operation of Milner-Gooding Canal, which diverts from Snake River and crosses Little Wood River above station, by operation of five reservoirs above Carey (see remarks for station "near Richfield"), and by Big Wood River water deliveries through Byrns Slough for Dietrich Canal via Little Wood River at Richfield.

Cooperation.--Water-stage recorder graph and five discharge measurements furnished by Water District No. 11 AB.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

0.7	35	2.1	413
.9	75	2.5	461
1.2	159	3.0	511
1.5	272	3.5	551
1.8	362		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	122	67	73			-	183	433	511	529	496	427
2	62	69				-	176	449	523	531	490	425
3	52	69				-	183	416	520	529	482	427
4	46	64				-	190	436	519	528	486	431
5	46	64				-	190	442	517	534	512	438
6	44	67				-	201	422	511	533	520	449
7	46	64				-	201	472	515	532	533	438
8	48	62				-	197	508	525	525	537	428
9	48	60				-	220	496	518	517	537	417
10	48	60				-	243	482	521	514	544	436
11	46	69				-	256	473	520	517	*546	*457
12	48	69				-	256	478	517	518	538	453
13	50	73				-	239	494	519	514	535	472
14	*54	71				-	*223	490	515	503	545	482
15	58	*71				-	220	474	519	489	532	476
16	60	75				131	216	457	519	486	510	459
17	62	73				128	208	452	512	481	493	443
18	64	82				125	216	449	*514	487	478	460
19	64	85				131	260	449	515	486	474	454
20	62	88				125	260	434	515	479	475	451
21	64	98				144	284	462	*516	480	478	440
22	62	98				284	320	465	521	482	487	468
23	58	144				239	347	442	529	*480	495	480
24	58	162				176	347	440	526	*492	491	491
25	58	159				212	*337	443	525	498	489	478
26	60	92				260	398	456	528	497	488	436
27	67	78				292	473	*465	529	492	461	427
28	69	75				239	475	482	525	495	433	448
29	64	75				208	491	500	523	505	427	460
30	67	75				193	484	507	528	494	425	344
31	69	-				186	-	503	-	498	427	-
Total	1,826	2,458	-	-	-	-	8,294	14,371	15,595	15,645	15,364	13,395
Mean	58.9	81.9	-	-	-	-	276	464	520	505	496	446
Ac-ft	3,620	4,880	-	-	-	-	16,450	28,500	30,930	31,030	30,470	26,570

Calendar year	: Max	Min	Mean	Ac-ft	
Water year	: Max	Min	Mean	Ac-ft	

* Discharge measurement made on this day.

Malad River near Gooding, Idaho
(Formerly published as Big Wood River near Gooding)

Location.--Lat 42°54', long. 114°48', in sec. 21, T. 6 S., R. 14 E., on right bank at Hudson Ranch, 2 miles downstream from bridge on Bliss-Gooding highway, 3½ miles downstream from confluence of Big Wood and Little Wood Rivers, 5 miles upstream from diversion dam for King Hill project, and 6 miles southwest of Gooding.

Drainage area.--2,990 sq mi, approximately.

Records available.--March 1916 to September 1951 (fragmentary 1922-37, 1941, 1942). Prior to October 1950, published as Big Wood River near Gooding.

Gage.--Water-stage recorder. Altitude of gage is 3,345 ft (from topographic map). Prior to Apr. 13, 1921, staff gage at same site and datum.

Average discharge.--19 years (1916-22, 1937-41, 1942-51), 211 cfs.

Extremes.--Maximum discharge during year, 3,410 cfs Apr. 13 (gage height, 8.66 ft); minimum, 11 cfs Oct. 19, 23-26; minimum gage height, 0.88 ft Oct. 24; minimum daily discharge, 11 cfs Oct. 25.
1916-51: Maximum discharge, 5,220 cfs Apr. 14, 1943 (gage height, 9.80 ft); no flow at times in many years.

Remarks.--Records good except those for periods of ice effect, which are poor. Diversions for irrigation of about 155,000 acres above station. Flow regulated by Magic Reservoir (see p. 110) and by several smaller reservoirs on tributaries, and affected by deliveries from canals diverting from Snake River at Milner.

Cooperation.--One discharge measurement furnished by Water District No. 7 AB.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	10	2.0	109	6.0	1,160
1.0	15	2.5	180	7.0	1,780
1.2	26	3.0	258	8.0	2,650
1.4	41	4.0	450	8.6	3,340
1.7	71	5.0	752		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	192	129	150	136	100	*129	328	2,480	g1,080	152	83	58
2	148	138	144	150	130	162	334	2,400	g823	155	83	75
3	130	124	148	157	160	137	394	2,000	g542	155	72	81
4	145	117	188	137	230	192	402	1,320	404	145	69	62
5	152	116	220	137	290	182	376	762	355	138	88	58
6	141	113	190	90	280	152	360	728	270	141	102	61
7	136	116	180	70	542	164	423	766	218	g141	108	59
8	157	113	255	80	g1,340	272	508	1,140	247	g119	122	50
9	162	*108	208	95	g1,280	423	596	1,820	237	g110	157	50
10	186	104	192	120	1,040	364	*1,740	1,800	196	g105	158	56
11	190	106	*192	115	1,580	402	2,130	1,660	162	96	164	*60
12	184	119	184	115	1,140	406	3,000	1,660	147	99	143	63
13	144	136	178	115	654	450	3,290	1,770	186	95	123	73
14	123	150	177	115	326	458	2,870	1,730	200	77	116	133
15	104	145	152	115	268	510	2,490	1,690	207	59	112	192
16	44	144	129	120	213	776	2,420	1,360	208	38	108	196
17	15	152	171	120	155	614	2,260	879	192	29	73	196
18	13	157	158	130	166	595	2,200	871	190	20	61	186
19	12	161	123	110	131	574	2,190	977	545	23	64	188
20	12	168	130	90	134	620	2,130	914	652	*22	56	157
21	12	165	176	110	140	718	1,990	933	*639	28	56	155
22	13	168	166	120	123	945	1,970	1,040	636	39	48	157
23	13	166	164	110	143	823	899	973	604	46	52	194
24	12	224	168	113	177	801	455	929	483	*43	60	188
25	11	258	171	147	190	759	1,550	941	382	48	63	210
26	82	245	170	*150	170	702	*1,390	*918	351	40	52	208
27	90	176	155	152	189	784	1,110	990	240	36	54	195
28	113	151	177	110	126	626	1,100	1,000	208	39	66	212
29	131	148	174	85	-	550	1,610	1,010	166	66	58	236
30	134	152	194	75	-	513	2,000	g1,120	161	72	52	252
31	133	-	138	80	-	455	-	g1,160	-	76	50	-
Total	3,134	4,469	5,322	3,569	11,417	15,258	44,515	39,741	10,931	2,452	2,673	4,061
Mean	101	149	172	115	408	492	1,484	1,282	364	79.1	86.2	135
Ac-ft	6,220	8,860	10,560	7,080	22,650	30,260	88,290	78,830	21,680	4,860	5,300	8,050

Calendar year 1950: Max 1,300 Min 11 Mean 221 Ac-ft 160,000
Water year 1950-51: Max 3,290 Min 11 Mean 404 Ac-ft 292,600

* Discharge measurement made on this day.
g Computed from once-daily staff-gage reading.
Note.--Stage-discharge relation affected by ice Jan. 6-23, Jan. 28 to Feb. 6.

King Hill Canal near Hagerman, Idaho

Location.--Lat 42°52', long. 114°55', in SW¼ sec. 27, T. 6 S., R. 13 E., on left bank above entrance to inverted siphon crossing Snake River, half a mile west of highway bridge over Big Wood River and 3½ miles north of Hagerman.

Records available.--March 1930 to September 1951 (irrigation seasons only 1930-37, 1940-45).

Gage.--Water-stage recorder. Altitude of gage is 2,850 ft (by barometer). Prior to Apr. 1, 1948, staff gage at site 400 ft upstream at datum 1.95 ft higher. Apr. 1, 1948, to May 22, 1951, staff gages at present site at different datum prior to Apr. 12, 1949, and at present datum thereafter. Supplementary gage 500 ft downstream from siphon efflux used June 1, 1949, to May 22, 1951.

Extremes.--1930-51: Maximum daily discharge, 340 cfs June 2, 1948; no flow or small flow from leakage at headgate during nonirrigation seasons and other periods when gates were closed.

Remarks.--Records excellent except those below about 200 cfs, which are fair. This canal, which is operated by King Hill Irrigation District to provide water for irrigation of about 10,000 acres, diverts from Idaho Power Co.'s canal, which in turn diverts from Big Wood River (Malad Springs water).

Cooperation.--Gage readings furnished by King Hill Irrigation District. Thirteen discharge measurements furnished by Idaho Power Co.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	243						0	288	*311	319	310	*301
2	256						0	288	311	317	310	301
3	251						0	286	311	*308	311	304
4	102						0	286	310	306	316	304
5	107						0	285	310	306	313	306
6	50						0	285	310	308	*298	303
7	50						0	283	311	308	298	*301
8	55						0	283	310	310	298	299
9	50						0	282	310	*311	298	299
10	39						0	282	310	311	298	299
11	0						140	286	311	311	298	292
12	0						199	281	311	311	237	291
13	0						230	279	311	*311	1	*286
14	0						230	273	311	311	19	280
15	0						230	272	*311	315	*243	280
16	0						230	272	266	*319	313	280
17	0						*226	270	310	317	306	280
18	0						250	325	310	315	310	280
19	0						250	324	311	313	311	280
20	0						250	317	310	311	311	280
21	0						250	316	79	*310	311	*280
22	0						250	316	8	306	311	280
23	0						260	*319	271	*306	311	280
24	0						262	320	303	306	313	282
25	0						295	322	*306	306	310	284
26	0						*288	322	313	304	301	284
27	0						289	320	313	304	301	286
28	0						289	317	313	306	301	*287
29	0						289	315	*315	304	*301	287
30	0						295	315	317	306	301	260
31	0						-	313	-	306	301	-
Total	1,203	0	0	0	0	0	5,002	9,242	8,704	9,602	8,761	8,656
Mean	38.8	0	0	0	0	0	167	298	290	310	283	289
Ac-ft	2,390	0	0	0	0	0	9,920	18,330	17,260	19,050	17,380	17,170

Calendar year 1950: Max 338 Min 0 Mean 137 Ac-ft 99,220
Water year 1950-51: Max 325 Min 0 Mean 140 Ac-ft 101,500

* Discharge measurement made on this day.

Note.--Discharge Oct. 1-10, Apr. 11 to May 22 computed on basis of gage-height record at supplementary gage.

Snake River at King Hill, Idaho

Location.--Lat 43°00', long. 115°11', in SW¼ sec. 7, T. 5 S., R. 11 E., on right bank 300 ft east of railroad station at King Hill and 20 miles downstream from Big Wood (Malad) River.

Drainage area.--35,800 sq mi, approximately.

Records available.--May 1909 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 2,492.3 ft above mean sea level, by stadia levels. May 13, 1909, to Mar. 1, 1910, staff gage on left bank at datum 2.20 ft higher. Mar. 7 to Aug. 16, 1910, staff gage three-quarters of a mile upstream at different datum. Aug. 17, 1910, to Oct. 7, 1928, staff gage at present site and datum.

Extremes.--Maximum discharge during year, 25,600 cfs Apr. 16 (gage height, 11.50 ft); minimum observed, 2,030 cfs Oct. 1 (gage height, 2.64 ft); minimum daily, 5,270 cfs July 8.

1909-51: Maximum discharge observed, 47,200 cfs June 22, 1918 (gage height, 16.3 ft), from rating curve extended above 30,000 cfs; minimum observed, 1,250 cfs Jan. 10, 1950 (gage height, 1.75 ft); minimum daily, 4,760 cfs July 7-9, Aug. 15, 16, 1910.

Remarks.--Records excellent. Flow regulated by powerplants at Lower Salmon Falls and near Bliss and many reservoirs above station. Practically entire flow at Milner diverted during irrigation season; flow at King Hill is then derived largely from springs and seepage entering below Milner. About 1,590,000 acres of land irrigated by diversions from river and its tributaries above station. Records of chemical analyses and water temperatures for the water year 1950 are given in Water-Supply Paper 1200.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

4.7	5,150
6.0	7,840
8.0	13,200
10.0	20,100
11.1	24,100

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*8,920	11,300	11,200	12,200	18,700	17,300	17,900	14,500	18,600	9,260	9,050	*8,870
2	12,700	9,930	9,180	14,000	18,600	18,000	18,400	17,400	16,800	9,360	8,890	8,920
3	12,900	11,600	12,300	10,400	18,300	17,200	17,800	19,800	16,500	9,230	8,880	9,160
4	12,700	10,800	13,000	14,000	18,800	17,400	18,600	19,300	16,400	6,810	8,600	8,600
5	11,800	8,350	12,400	12,500	19,700	18,000	18,100	17,500	16,500	8,860	8,250	8,990
6	11,700	12,300	12,300	11,600	21,000	17,800	17,800	16,200	14,700	9,390	9,130	9,060
7	10,500	11,500	12,300	12,700	21,500	18,300	17,600	16,900	13,800	8,930	9,370	8,820
8	9,350	*11,900	*12,500	13,600	21,800	17,900	17,300	16,100	13,200	5,270	9,190	8,830
9	12,900	11,300	11,200	11,800	21,900	18,600	18,300	14,800	11,400	7,990	9,870	9,270
10	10,600	10,900	12,200	12,400	21,800	17,800	17,200	15,300	10,200	6,990	8,820	9,350
11	10,800	10,000	13,600	13,400	21,800	17,800	19,500	14,200	9,090	8,550	8,890	8,970
12	11,000	11,500	12,300	15,200	20,600	18,300	18,600	13,100	8,050	8,350	8,700	9,110
13	11,100	13,500	12,200	15,700	19,300	18,300	17,700	16,100	8,270	*8,190	8,980	9,110
14	11,400	11,200	12,200	15,700	19,200	18,000	15,100	20,100	9,590	8,720	9,060	9,760
15	10,400	11,100	12,100	16,700	18,900	*18,600	14,700	22,300	8,510	6,760	8,650	9,740
16	12,500	11,300	11,500	15,800	*18,600	18,900	16,300	23,900	8,560	8,880	8,770	9,580
17	12,800	10,400	13,900	16,300	17,800	17,200	14,800	21,700	7,470	7,430	8,400	9,500
18	11,100	10,800	12,600	16,800	18,600	18,800	12,600	19,300	9,600	7,770	9,080	9,710
19	11,600	11,300	13,300	15,400	17,900	18,700	11,000	17,400	8,760	7,750	11,300	9,700
20	11,400	12,400	12,200	15,400	17,900	18,600	10,400	17,700	9,040	7,990	10,200	9,570
21	11,700	12,300	12,900	15,100	18,600	19,100	11,000	17,300	8,850	7,640	8,810	9,400
22	11,200	11,700	13,100	16,400	18,100	19,400	10,000	18,000	*9,430	7,960	9,010	9,680
23	13,000	11,600	12,300	15,900	17,800	18,600	9,340	20,200	11,100	8,320	8,550	9,940
24	11,100	13,200	13,000	17,700	16,900	18,600	8,390	18,500	11,900	8,090	9,040	9,400
25	10,100	12,700	12,900	19,100	17,800	19,000	8,810	17,700	13,300	7,930	8,930	10,000
26	10,500	13,300	14,600	18,000	17,900	19,100	9,600	18,200	9,740	8,740	8,740	10,100
27	11,000	14,600	11,900	18,000	18,000	18,700	*9,770	19,100	9,950	8,300	8,990	9,870
28	11,700	12,500	14,500	18,300	16,500	17,800	9,400	*18,700	10,400	7,920	9,030	10,200
29	10,700	11,900	12,600	18,100	-	16,700	11,900	18,600	13,100	8,520	8,860	10,600
30	12,400	11,200	12,100	14,500	-	18,700	12,200	19,400	10,300	8,460	8,850	10,800
31	11,800	-	12,400	15,900	-	18,600	-	19,200	-	8,530	8,830	-
Total	353,370	348,380	386,780	468,600	534,300	567,800	430,110	558,500	343,110	252,890	279,720	284,610
Mean	11,400	11,610	12,480	15,120	19,080	18,320	14,340	18,020	11,440	8,158	9,023	9,487
Ac-ft	700,900	691,000	767,200	929,500	‡1,060	‡1,126	853,100	‡1,108	680,500	501,600	554,800	564,500

Calendar year 1950: Max 25,600 Min 5,660 Mean 12,150 Ac-ft 8,796,000
Water year 1950-51: Max 23,900 Min 5,270 Mean 13,170 Ac-ft 9,537,000

* Discharge measurement made on this day.
‡ Expressed in thousands.

Mountain Home feeder canal near Mountain Home, Idaho

Location.--Lat 43°13', long. 115°42', in sec. 36, T. 2 S., R. 6 E., on right bank 40 ft downstream from point of diversion from Canyon Creek and 5 miles north of Mountain Home.

Records available.--April 1924 to September 1929, April 1931 to September 1951.

Gage.--Water-stage recorder and concrete control. Prior to May 4, 1924, staff gage and May 4, 1924 to Sept. 30, 1929, water-stage recorder at site 30 ft downstream at datum 0.07 ft lower.

Extremes.--1924-29, 1931-51: Maximum daily discharge, 182 cfs Jan. 1, 1943; no flow at times during most years.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Canal diverts from Canyon Creek in sec. 36, T. 2 S., R. 6 E., and delivers water to Mountain Home cooperative canal, which heads in Mountain Home feeder canal half a mile below station, for irrigation of about 5,000 acres in Mountain Home Irrigation District. During nonirrigation season and at times when there is a surplus of water for irrigation, canal feeds directly into Mountain Home Reservoir. No diversion from canal above station. Flow regulated by headgates in Canyon Creek and by Long Tom and Little Camas Reservoirs.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0	0	0.5	24
.1	2.4	1.0	62
.2	6.0	1.5	104
.3	11		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	3.5	5.0	17	45	12	54	90	89	78	37	50
2	4.6	4.2	5.0	16	45	12	48	87	87	78	37	46
3	4.2	4.2	5.0	16	50	11	49	83	85	78	37	40
4	4.2	3.8	6.5	15	55	11	49	80	84	78	38	34
5	4.2	3.8	10	b15	*57	11	46	78	84	77	38	30
6	4.2	3.2	13	b13	54	11	40	76	84	60	38	34
7	3.8	*3.0	47	10	74	11	37	76	83	56	46	39
8	3.5	2.8	48	12	73	10	37	73	81	56	48	40
9	3.1	1.8	47	12	59	*10	36	71	58	56	48	43
10	2.9	0	48	14	40	8.0	36	72	36	60	47	49
11	2.7	0	47	17	40	8.5	35	77	31	65	51	53
12	2.5	0	44	16	40	10	33	87	*49	67	40	64
13	2.3	0	40	15	40	10	32	92	52	66	39	77
14	2.1	0	38	15	35	10	31	91	52	60	38	73
15	1.9	0	*35	16	30	10	36	89	52	60	38	69
16	1.7	0	33	16	25	10	60	87	52	51	47	68
17	1.5	0	30	20	20	30	64	85	57	50	48	64
18	1.3	0	29	23	17	44	84	85	57	52	54	60
19	1.1	0	27	23	17	44	93	89	57	*53	56	58
20	.9	0	26	b22	17	47	97	84	74	53	*56	43
21	.7	0	25	22	16	44	96	82	77	53	56	11
22	.5	0	24	23	16	29	91	80	78	53	57	10
23	.3	0	22	23	16	29	86	*100	77	53	48	6.0
24	0	0	21	42	15	29	83	97	77	54	47	4.9
25	1.5	2.5	20	62	14	29	81	102	76	53	45	3.8
26	2.0	4.6	20	70	13	29	*78	98	75	52	40	2.2
27	2.5	4.6	18	60	13	29	78	94	74	52	39	1.9
28	3.0	4.6	18	55	13	30	68	93	73	53	39	1.7
29	3.5	4.9	18	b45	-	31	98	93	72	53	46	1.4
30	3.5	4.9	18	35	-	31	94	93	72	50	52	1.4
31	3.5	-	18	40	-	32	-	90	-	42	53	-
Total	78.3	56.4	805.5	800	949	672.5	1,870	2,674	2,055	1,822	1,403	1,078.3
Mean	2.53	1.88	26.0	25.8	33.9	21.7	62.3	86.3	68.5	58.8	45.3	35.9
Ac-ft	155	112	1,600	1,590	1,880	1,330	3,710	5,300	4,080	3,610	2,780	2,140

Calendar year 1950: Max 97 Min 0 Mean 39.0 Ac-ft 28,240
Water year 1950-51: Max 102 Min 0 Mean 39.1 Ac-ft 28,290

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 10 to Nov. 1, Nov. 6, 7, 26-28, Dec. 1-3, Jan. 30 to Feb. 4, Feb. 10 to Mar. 8; discharge estimated on basis of weather records, recorded range in stage, and records for Moore Creek near Arrowrock and other nearby streams of similar runoff characteristics.

East Fork Bruneau River near Hot Spring, Idaho

Location.--Lat. 42°34', long. 115°31', in SE¼NE¼ sec. 16, T. 10 S., R. 8 E., on right bank at Winter Camp Ranch, 7 miles upstream from mouth and 20 miles southeast of Hot Spring.

Drainage area.--620 sq mi, approximately.

Records available.--August 1910 to April 1915, December 1948 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,880 ft (by barometer). Prior to Dec. 10, 1948, at approximately present site at different datum.

Average discharge.--6 years (1910-14, 1949-51), 42.3 cfs.

Extremes.--Maximum discharge during year, 160 cfs May 14 (gage height, 5.06 ft); minimum not determined, probably occurred during period of backwater in September.
1910-15, 1948-51: Maximum daily discharge, 450 cfs Mar. 7, 8, 1911, during period of ice effect; maximum gage height observed, 10.65 ft Mar. 8, 1911, former site and datum; minimum observed, 0.4 cfs Aug. 28, 29, Sept. 13, 1910.
Maximum stage known, 16.9 ft, from floodmark, former site and datum, during spring of 1910.

Remarks.--Records good except those below 10 cfs, which are fair, and those for periods of ice effect or backwater from beaver dams, which are poor. Diversions for irrigation from main stem and tributaries above station. Water diverted from Deadwood Creek, tributary of East Fork, to Cedar Creek Reservoir in Salmon Falls Creek basin for irrigation.

Rating table, water year 1950-51, except periods of ice effect or backwater from beaver dams (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 20, July 23-26, Aug. 19-21)

1.6	0.5	2.5	20
1.7	1.0	3.0	42
1.8	2.0	4.0	96
2.0	5.0	5.0	156
2.2	10		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.2	16	16	10	8	21	36	94	81	10	1.9	
2	8.2	19	16	9	8	21	36	98	75	8.5	1.8	
3	8.5	19	16	10	10	20	48	99	69	6.0	1.7	5
4	9.4	21	27	11	15	19	72	100	66	6.0	2.5	
5	9.7	18	42	10	20	21	61	97	59	5.8	4.0	
6	11	16	32	9	35	20	66	105	50	5.0	4.0	
7	11	15	24	8	*52	21	72	108	46	4.0	4.0	
8	11	16	23	8	80	20	75	118	54	4.0	3.8	4
9	10	16	23	10	108	19	78	132	52	4.2	3.8	
10	10	15	20	12	59	16	80	129	47	4.0	3.8	
11	10	13	18	13	47	25	82	124	42	3.9	3.6	
12	10	12	17	14	43	*24	88	123	38	3.9	3.6	
13	9.7	13	17	14	41	28	85	138	38	3.4	3.6	3
14	10	13	17	13	38	26	82	156	36	3.3	3.4	
15	11	13	17	13	33	27	84	138	32	3.9	3.4	
16	10	13	17	13	32	34	92	125	30	3.3	3.4	
17	12	13	16	13	30	34	96	115	26	2.7	3.2	
18	12	13	16	14	29	28	95	107	24	2.4	3.2	2
19	*12	14	*15	12	29	25	93	104	23	1.8	3.1	
20	12	15	16	11	28	26	91	108	21	1.1	3.0	
21	12	*17	15	9	27	26	88	116	19	1.0	*4.5	
22	12	23	14	11	28	42	87	120	20	1.4	7.0	
23	12	20	14	13	28	46	84	117	19	1.8	7.5	1
24	13	17	13	16	27	36	80	110	18	1.8	9.0	
25	13	16	13	17	27	32	*73	*108	16	*1.0	8.5	
26	13	16	11	18	26	32	71	105	*15	.9	8.0	
27	14	15	11	19	22	34	72	103	13	1.0	7.5	
28	14	15	11	17	21	34	70	96	13	1.5	7.0	.8
29	14	15	12	15	-	33	66	91	13	1.8	6.5	
30	14	15	11	11	-	33	80	90	10	2.0	6.0	
31	14	-	10	9	-	36	-	83	-	2.0	6.0	-
Total	350.7	472	540	382	951	859	2,283	3,457	1,065	103.4	142.3	79.0
Mean	11.3	15.7	17.4	12.3	34.0	27.7	76.1	112	35.5	3.34	4.59	2.63
Ac-ft	696	936	1,070	758	1,890	1,700	4,530	6,860	2,110	205	282	157

Calendar year 1950: Max 226 Min 0.6 Mean 37.2 Ac-ft 26,940
Water year 1950-51: Max 156 Min - Mean 29.3 Ac-ft 21,190

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 12-17, Dec. 3, Dec. 21 to Feb. 8, Feb. 17-22, Mar. 1-9, and by backwater from beaver dams July 27 to Aug. 18, Aug. 22 to Sept. 30.

Bruneau River near Winter Camp Ranch, Idaho

Location.--Lat 42°38', long. 115°42', in sec. 13, T. 9 S., R. 6 E., on right bank at Roberson Trail crossing, 6 miles downstream from East Fork, 11 miles northwest of Winter Camp Ranch, and 11 miles south of Hot Spring.

Drainage area.--1,890 sq mi, approximately.

Records available.--November 1946 to September 1951 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 3,015.68 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, about 1,800 cfs May 28, estimated on basis of records for station at Hot Spring; minimum recorded, 38 cfs probably Sept. 19-21 (gage height, 0.58 ft), but may have been less during period of ice effect.
1946-51: Maximum discharge, 3,290 cfs May 17, 1949 (gage height, 5.23 ft); minimum daily, 24 cfs Jan. 28, 1948; minimum gage height, 0.48 ft Sept. 16, 1948.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	31	2.0	518
.7	57	2.5	845
1.0	114	3.0	1,230
1.3	192	3.6	1,750
1.6	308		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	80	124	110	b65	180	620	1,280	1,130	352	95	57
2	58	89	124	99	b100	220	610	1,170	1,000	332	91	59
3	60	99	128	143	b210	220	730	1,110	890	308	87	57
4	60	116	192	143	b215	180	860	1,140	820	290	87	56
5	62	108	660	124	b260	240	1,030	1,160	750	268	97	54
6	62	101	458	b82	b900	210	1,160	1,220	710	248	95	54
7	60	95	318	b40	*740	205	1,250	1,320	700	236	91	51
8	60	93	415	b45	950	190	1,330	1,370	680	222	89	50
9	60	91	458	b70	1,000	200	1,360	1,330	640	212	84	49
10	60	87	399	b150	740	180	1,390	1,300	610	202	82	47
11	60	78	352	b160	800	130	1,450	1,350	600	195	76	46
12	60	93	312	b150	920	*145	1,340	1,440	630	186	71	45
13	58	91	286	b140	700	230	1,290	1,400	660	172	69	44
14	58	91	263	b135	540	240	1,330	1,350	690	161	64	43
15	60	89	240	b135	470	220	1,420	1,220	730	154	62	43
16	62	91	225	133	450	270	1,440	1,110	770	148	60	43
17	64	91	215	128	385	380	1,390	1,060	820	143	59	41
18	*66	91	202	138	340	340	1,380	1,140	800	138	56	39
19	66	97	*184	128	340	320	1,420	1,280	720	128	59	38
20	66	116	175	101	260	340	1,500	1,380	660	124	54	38
21	66	*131	167	114	290	420	1,430	1,390	610	121	*57	38
22	66	215	156	146	320	605	1,340	1,360	570	116	72	39
23	66	222	148	164	290	800	1,240	1,380	530	112	84	39
24	66	181	143	161	275	660	1,160	*1,480	480	108	89	41
25	67	156	141	178	240	600	*1,080	1,520	460	*106	82	41
26	67	141	143	233	240	670	1,110	1,560	*442	99	78	41
27	71	136	128	263	200	780	1,110	1,650	431	97	67	41
28	74	128	126	244	170	750	1,100	1,740	410	101	62	40
29	78	124	151	b170	-	640	1,220	1,710	394	101	59	41
30	76	119	148	b90	-	660	1,400	1,500	373	99	59	41
31	78	-	141	b70	-	670	-	1,300	-	101	59	-
Total	1,993	3,440	7,322	4,187	12,410	11,895	36,490	41,720	19,710	5,380	2,296	1,356
Mean	64.3	115	236	135	443	384	1,216	1,346	657	174	74.1	45.2
Ac-ft	3,950	6,820	14,520	8,300	24,610	23,590	72,380	82,750	39,090	10,670	4,550	2,690

Calendar year 1950: Max 2,190 Min 56 Mean 452 Ac-ft 327,000
Water year 1950-51: Max 1,740 Min 38 Mean 406 Ac-ft 293,900

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 1-17, Feb. 8 to June 25, Sept. 10-12, 19-30; discharge estimated on basis of 6 discharge measurements, weather records, and records for station near Hot Spring.

Bruneau River near Hot Spring, Idaho

Location.--Lat 42°46'00", long. 115°43'30", in SE¼ sec. 34, T. 7 S., R. 6 E., on right bank at Dunham Ranch, 1 mile downstream from Hot Creek, 1½ miles south of Hot Spring Post Office, 9 miles southeast of Bruneau, and about 16 miles downstream from East Fork.

Drainage area.--2,010 sq mi, approximately.

Records available.--July 1909 to March 1915, October 1943 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 2,598.5 ft above mean sea level, datum of 1929 (from stadia level circuit by Topographic Branch in 1945). Prior to Mar. 12, 1910, staff gage at site a quarter of a mile upstream at different datum. Mar. 12, 1910, to Mar. 15, 1915, staff gage at present site and datum.

Average discharge.--13 years (1909-14, 1943-51), 430 cfs.

Extremes.--Maximum discharge during year, 1,820 cfs May 28 (gage height, 7.26 ft); minimum, 48 cfs Jan. 7 (gage height, 3.77 ft).
1909-15, 1943-51: Maximum discharge observed, 5,660 cfs Mar. 1, 1910 (gage height, 10.6 ft, site and datum then in use), from rating curve extended above 1,200 cfs; minimum observed, 40 cfs Jan. 23, Nov. 29, 1911.

Remarks.--Records excellent. Several small reservoirs on tributaries above station. Diversions above station for irrigation of about 8,500 acres.

Revisions (water years).--W 1063: 1913.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

3.8	48	5.0	435
4.0	79	5.5	691
4.3	153	6.0	974
4.6	253	7.2	1,750

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94	131	162	150	83	210	654	1,320	1,190	405	139	92
2	96	136	165	118	122	249	643	1,220	1,050	390	133	92
3	96	142	165	162	246	253	767	1,160	939	375	125	90
4	100	172	207	175	253	221	899	1,190	852	356	197	90
5	100	156	638	159	289	277	1,070	1,210	800	337	142	87
6	100	145	535	112	928	246	1,200	1,270	767	311	145	85
7	98	139	375	55	745	242	1,300	1,370	756	285	136	83
8	100	133	435	77	*980	231	1,380	1,420	729	277	133	79
9	100	133	525	100	1,030	242	1,400	1,390	686	265	125	79
10	98	133	445	178	778	217	1,430	1,350	649	253	120	77
11	98	122	395	194	829	168	1,510	1,390	638	242	118	76
12	98	131	361	187	945	*181	1,390	1,480	664	235	112	76
13	96	136	337	175	740	261	1,340	1,450	696	221	105	74
14	92	136	315	165	576	277	1,380	1,400	723	210	102	76
15	92	133	281	168	510	257	1,470	1,270	762	200	100	76
16	96	133	265	165	485	302	1,490	1,160	800	194	98	76
17	98	133	253	159	425	420	1,440	1,110	852	187	96	74
18	102	131	242	172	375	380	1,430	1,190	835	181	94	72
19	*102	142	*228	162	380	356	1,460	1,320	767	175	92	72
20	105	159	214	131	297	380	1,540	1,420	707	172	92	70
21	108	178	207	112	315	455	1,490	1,440	659	168	*92	70
22	108	*257	194	168	351	643	1,400	1,400	617	162	105	70
23	110	289	184	204	324	829	1,300	1,420	576	159	108	70
24	112	246	175	200	306	696	1,230	1,520	525	150	128	72
25	115	210	172	214	273	638	1,190	*1,560	510	*147	120	72
26	115	191	175	265	273	707	*1,170	1,600	495	142	115	72
27	115	184	162	302	239	823	1,180	1,680	*470	136	108	72
28	118	172	153	293	210	789	1,170	1,750	455	142	100	70
29	125	168	175	197	-	670	1,280	1,720	440	142	96	72
30	125	162	178	115	-	691	1,450	1,540	425	139	94	72
31	125	-	175	90	-	702	-	1,360	-	139	94	-
Total	3,237	4,833	8,493	5,124	13,307	13,013	38,053	43,080	21,034	6,897	3,564	2,308
Mean	104	161	274	165	475	420	1,268	1,390	701	222	115	76.9
Ac-ft	6,420	9,590	16,850	10,160	26,390	25,810	75,480	85,450	41,720	13,680	7,070	4,580

Calendar year 1950: Max 2,190 Min 58 Mean 462 Ac-ft 334,500
Water year 1950-51: Max 1,750 Min 55 Mean 446 Ac-ft 323,200

* Discharge measurement made on this day.

Snake River near Murphy, Idaho

Location.--Lat 43°18', long. 116°26', in NE¼ sec. 35, T. 1 S., R. 1 W., on right bank 4¼ miles downstream from Swan Falls powerplant and 7½ miles northeast of Murphy.

Drainage area.--41,900 sq mi, approximately.

Records available.--August to October 1912, August 1913 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 2,271.17 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Sept. 7, 1914, staff gage and Sept. 7, 1914, to Sept. 30, 1935, water-stage recorder at site 3½ miles upstream at datum 9.79 ft higher.

Extremes.--Maximum discharge during year, 26,100 cfs May 17 (gage height, 9.60 ft); minimum, 5,800 cfs July 10, 22; minimum gage height, 3.40 ft July 22; minimum daily discharge, 6,330 cfs July 9.

1912-51: Maximum discharge, 47,300 cfs June 22, 1918 (gage height, 13.95 ft, site and datum then in use); minimum recorded, 3,900 cfs July 9, 1949 (gage height, 2.53 ft); minimum daily, 5,440 cfs Aug. 4, 1914.

Remarks.--Records excellent. Flow regulated by many reservoirs above station. Diurnal fluctuations caused by Swan Falls powerplant. Several diversions by pumping between this station and station at King Hill. About 1,630,000 acres of land irrigated by diversion from river and its tributaries above station.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 1 to Dec. 9, Aug. 18 to Sept. 30)

3.5	6,100
4.0	7,450
6.0	13,500
8.0	20,400
9.2	25,000

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10,500	12,700	12,000	12,700	15,600	16,600	19,500	13,600	19,800	10,300	8,500	8,830
2	9,430	11,800	12,000	12,700	17,700	17,400	19,000	15,900	19,100	9,340	8,950	9,040
3	12,900	11,000	10,200	14,200	17,600	18,200	19,200	18,900	17,200	9,160	8,890	8,890
4	13,100	*12,400	13,300	11,100	18,000	17,300	18,800	20,400	16,600	9,100	8,770	9,250
5	12,800	12,100	14,300	14,300	19,000	17,800	20,200	20,400	16,700	8,210	8,980	8,890
6	12,200	9,070	*12,400	13,100	21,700	18,300	19,600	18,800	16,600	7,560	8,440	9,070
7	11,900	13,100	13,800	11,800	23,000	18,100	19,200	17,400	14,800	9,400	9,220	9,010
8	10,700	12,300	13,300	13,000	24,500	18,700	19,100	18,200	13,900	8,920	9,460	8,860
9	9,940	12,600	13,700	13,900	24,900	18,100	19,000	17,900	13,500	6,330	9,220	8,980
10	12,800	12,200	12,200	12,300	24,100	18,700	19,800	16,500	12,100	7,370	9,310	9,100
11	11,000	11,800	13,300	13,200	24,200	18,000	19,500	16,600	10,500	7,510	8,830	9,340
12	11,500	10,800	14,700	14,000	23,900	18,000	21,300	16,000	9,730	7,760	8,530	9,040
13	11,300	12,200	13,600	15,900	22,500	18,400	20,400	14,800	8,800	8,160	8,710	9,250
14	11,300	14,200	13,000	16,300	20,800	18,400	19,200	18,400	9,040	7,930	8,830	9,460
15	11,600	11,900	13,300	16,200	20,200	18,300	16,800	21,700	*10,000	8,440	8,860	10,100
16	10,500	12,100	12,700	17,200	19,700	19,000	*17,600	*23,700	9,100	7,930	8,620	10,100
17	12,400	11,900	12,200	16,500	19,200	19,100	17,000	24,800	9,340	7,590	8,560	9,970
18	12,900	11,600	14,600	17,000	18,700	17,600	16,300	22,500	8,500	*7,200	8,500	9,910
19	11,400	11,800	13,400	16,800	18,900	19,300	14,000	20,000	9,760	7,450	9,010	9,700
20	12,000	11,800	13,700	16,700	18,400	19,000	12,400	18,700	9,160	7,590	10,900	8,710
21	12,200	13,300	12,800	15,500	18,600	19,100	12,200	18,700	9,400	7,450	*10,300	9,670
22	12,100	13,300	13,500	15,100	19,000	19,700	12,300	18,200	9,400	7,560	9,040	9,430
23	11,500	12,700	13,500	16,600	18,600	20,300	11,500	19,200	9,880	7,950	8,950	9,850
24	13,300	12,600	12,800	16,500	17,800	19,400	10,500	21,000	11,500	7,730	8,800	10,200
25	11,400	13,800	13,600	*18,400	17,100	19,300	9,430	19,500	11,800	7,950	9,040	9,940
26	10,700	13,500	13,600	19,300	18,100	19,700	9,940	18,800	13,200	8,070	9,340	*10,400
27	10,900	14,000	14,500	18,800	*18,000	19,700	10,500	19,500	9,700	8,100	8,620	10,500
28	11,400	14,900	12,600	18,700	18,200	19,700	10,900	20,200	10,000	8,010	9,130	10,500
29	12,100	13,400	14,800	18,600	-	19,100	10,900	19,700	10,900	8,130	8,980	10,500
30	11,100	12,600	12,700	17,700	-	19,700	13,000	19,800	13,000	8,100	8,800	10,800
31	13,200	-	12,700	14,600	-	19,800	-	20,200	-	8,500	9,040	-
Total	362,070	373,470	408,800	478,700	558,000	579,800	479,070	590,000	363,010	250,800	279,130	287,290
Mean	11,680	12,450	13,190	15,440	19,930	18,700	15,970	19,030	12,100	8,090	9,004	9,576
Ac-ft	718,200	740,800	810,800	949,500	‡1,107	‡1,150	950,200	‡1,107	720,000	497,500	553,600	569,800

Calendar year 1950: Max 27,400 Min 6,330 Mean 12,840 Ac-ft 9,293,000
Water year 1950-51: Max 24,900 Min 6,330 Mean 13,730 Ac-ft 9,937,000

* Discharge measurement made on this day.
‡ Expressed in thousands.

Wild Horse Reservoir near Gold Creek, Nev.

Location.--Lat 41°41'10", long. 115°51'20", in NE¼NW¼ sec. 25, T. 44 N., R. 54 E., at Wild Horse Dam on Owyhee River, 8 miles west of Gold Creek and 12 miles southwest of Mountain City.

Drainage area.--209 sq mi.

Records available.--March 1938 to September 1951.

Gage.--Gage readings obtained about twice monthly from reference point on dam. Datum of gage is 6,109.18 ft above mean sea level (levels by Office of Indian Affairs).

Extremes.--Maximum contents observed during year, 34,140 acre-ft Apr. 17 (gage height, 80.78 ft); minimum observed, 9,480 acre-ft Sept. 30.
1938-51: Maximum contents observed, 34,460 acre-ft Apr. 18, 1942 (gage height, 80.95 ft); no contents at times during each year 1938-41.

Remarks.--Reservoir is formed by concrete-arch dam; storage began Mar. 18, 1938. Capacity, 32,690 acre-ft between gage heights 20.0 ft (sill of outlet gate) and 80.0 ft (spillway crest). No dead storage. Water is used for irrigation on Duck Valley project.

Cooperation.--Part of gage-height record and base data for capacity table furnished by Office of Indian Affairs.

Contents, in acre-feet, water year October 1950 to September 1951

Date	Contents	Date	Contents	Date	Contents
Oct. 31	10,920	Mar. 31	b25,500	June 30	26,170
Nov. 20	10,830	Apr. 8	32,150	July 12	21,640
30	11,200	17	34,140	Aug. 1	17,940
Dec. 31	13,440	30	33,940	17	15,290
Jan. 31	b14,500	May 31	33,010	31	12,970
Feb. 28	18,450	June 13	31,740	Sept.30	9,480

b Contents computed from gage readings corrected for ice cover.

Owyhee River near Gold Creek, Nev.

Location.--Lat 41°41'10", long. 115°51'30", in NW¼NW¼ sec. 25, T. 44 N., R. 54 E., on right bank 500 ft downstream from Wild Horse Dam and 8 miles west of Gold Creek and 12 miles southwest of Mountain City.

Drainage area.--209 sq mi.

Records available.--March 1916 to September 1925, October 1936 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,130 ft (from topographic map). Prior to Oct. 1, 1936, at site a quarter of a mile upstream at different datum.

Average discharge.--22 years (1917-21, 1922-25, 1936-51), 42.7 cfs.

Extremes.--Maximum discharge during year, 353 cfs Apr. 19 (gage height, 4.12 ft); no flow Nov. 21 to Apr. 8.

1916-25, 1936-51: Maximum discharge, 1,810 cfs May 5, 1922 (gage height, 10.11 ft, site and datum then in use), from rating curve extended above 400 cfs; no flow at times when reservoir gates are closed.

Remarks.--Records good. Small diversions above station for irrigation. Flow regulated by Wild Horse Reservoir beginning Mar. 18, 1938 (see preceding page).

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.2	4.0	2.6	81
1.4	8.0	3.0	138
1.7	18	3.5	224
1.9	27	4.2	372
2.1	39		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	12					0	232	49	210	67	64
2	28	12					0	230	46	210	68	63
3	28	12					0	220	46	210	68	63
4	28	12					0	190	45	210	68	64
5	28	12					0	176	39	208	68	64
6	28	12					0	169	52	208	69	64
7	28	12					0	174	79	206	69	64
8	28	*12					0	178	85	204	70	64
9	28	12					49	174	77	185	76	64
10	28	12					185	*164	99	156	88	63
11	28	12					262	152	120	141	89	63
12	28	12					297	157	119	*107	89	63
13	28	12					312	166	*130	107	89	62
14	28	12					321	161	148	106	89	61
15	28	12					321	144	156	106	97	61
16	28	12					305	130	164	107	101	61
17	28	12					*301	119	164	107	*101	61
18	23	12					*325	118	176	107	100	61
19	13	12					346	119	188	107	100	61
20	13	5.1					327	114	186	107	100	*61
21	13	0					295	112	186	107	100	60
22	13	0					268	107	186	107	100	60
23	13	0					243	99	186	106	100	60
24	13	0					222	89	186	82	94	60
25	13	0					213	82	185	66	85	60
26	13	0					213	79	185	66	85	60
27	13	0					210	75	185	67	77	60
28	13	0					206	70	185	67	63	60
29	13	0					234	65	185	67	63	60
30	13	0					235	59	199	67	64	60
31	12	-					-	54	-	67	64	-
Total	667	233.1	0	0	0	0	5,690	4,178	4,036	3,978	2,561	1,852
Mean	21.5	7.77	0	0	0	0	190	135	135	128	82.6	61.7
Ac-ft	1,320	462	0	0	0	0	11,290	8,290	8,010	7,890	5,080	3,670

Calendar year 1950: Max 241 Min 0 Mean 48.4 Ac-ft 35,070
Water year 1950-51: Max 346 Min 0 Mean 63.5 Ac-ft 46,010

* Discharge measurement made on this day.

Owyhee River above China diversion dam, near Owyhee, Nev.

Location.--Lat 41°55'20", long. 116°04'10", in NW¼ sec. 6, T. 46 N., R. 53 E., on right bank 1,000 ft downstream from Skull Creek, 1 mile upstream from China diversion dam, and 2 miles southeast of Owyhee.

Drainage area.--458 sq mi.

Records available.--March 1939 to September 1951.

Gage.--Water-stage recorder.

Average discharge.--12 years, 148 cfs.

Extremes.--Maximum discharge during year, 1,040 cfs Apr. 19 (gage height, 8.15 ft); minimum, 24 cfs Nov. 16.
1939-51: Maximum discharge, 1,850 cfs May 6, 1945 (gage height, 9.18 ft); minimum daily, 2 cfs Sept. 15-18, 1940.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Numerous diversions above station for irrigation of hay meadows. Flow partly regulated by Wild Horse Reservoir (see p. 125).

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 31		Feb. 1 to Sept. 30	
1.5	25	1.8	52
2.0	61	3.0	172
3.0	160	4.0	304
4.3	306	6.0	633
		8.0	1,010

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	35	29	37	60	74	248	766	279	227	74	68
2	39	38	28	39	62	70	300	752	249	225	74	66
3	40	39	79	41	64	70	320	734	235	225	74	65
4	40	37	299	43	80	70	385	711	217	222	73	65
5	40	35	176	42	250	75	457	682	202	222	74	65
6	42	34	116	40	300	80	510	692	190	218	74	65
7	43	34	156	37	350	86	551	722	194	216	74	65
8	42	*34	175	38	400	82	575	709	214	214	73	65
9	42	33	155	40	441	80	593	691	204	213	69	65
10	42	30	130	41	466	75	720	*671	184	174	82	63
11	42	29	115	42	566	80	787	676	208	161	88	63
12	42	30	105	42	430	90	823	685	225	*135	86	64
13	42	30	94	43	320	100	855	685	*221	121	81	64
14	42	30	89	44	262	110	897	637	234	113	82	64
15	43	30	*87	45	239	132	932	584	227	111	84	64
16	43	31	77	45	199	130	924	529	242	110	88	63
17	42	32	71	46	170	115	*912	513	239	112	*93	64
18	42	37	65	45	150	115	*952	520	235	112	93	64
19	40	47	62	42	130	118	1,010	527	254	110	94	61
20	34	51	58	42	120	*156	1,010	532	261	110	97	*59
21	32	96	53	46	115	242	958	513	256	113	98	60
22	32	76	50	50	110	231	887	483	251	111	99	62
23	32	50	48	58	105	173	832	461	238	111	100	63
24	32	39	45	64	100	200	775	446	234	111	103	64
25	32	34	43	70	90	255	737	421	230	83	94	63
26	33	32	41	80	86	287	730	413	228	76	89	62
27	35	30	38	84	80	273	701	403	221	75	90	63
28	34	29	39	78	74	231	734	385	221	79	80	63
29	33	27	41	70	-	261	836	364	214	81	70	64
30	33	29	39	*60	-	282	783	334	218	77	69	64
31	36	-	38	58	-	255	-	306	-	75	69	-
Total	1,185	1,138	2,641	1,552	5,819	4,598	21,734	17,547	6,825	4,343	2,588	1,910
Mean	38.2	37.9	85.2	50.1	208	148	724	566	228	140	83.5	63.7
Ac-ft	2,350	2,260	5,240	3,080	11,540	9,120	43,110	34,800	13,540	8,610	5,130	3,790

Calendar year 1950: Max 786 Min 22 Mean 167 Ac-ft 120,900
Water year 1950-51: Max 1,010 Min 27 Mean 197 Ac-ft 142,600

Peak discharge (base, 380 cfs).--Feb. 11 (8 a.m.) 667 cfs (6.19 ft); Apr. 19 (10 p.m.) 1,040 cfs (8.15 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 10-12, Dec. 23 to Feb. 8. No gage-height record Feb. 17 to Mar. 14, Mar. 16-18; discharge estimated on basis of weather records and records for Humboldt River near Carlin.

Jordan Creek above Lone Tree Creek, near Jordan Valley, Oreg.

Location.--Lat 42°53', long. 116°59', in NW¼ sec. 19, T. 6 S., R. 5 W., on left bank 2 miles upstream from Lone Tree Creek and 7 miles southeast of Jordan Valley.

Drainage area.--450 sq mi, approximately.

Records available.--October 1945 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,495 ft (by barometer).

Average discharge.--6 years, 174 cfs.

Extremes.--Maximum discharge during year, 2,930 cfs Feb. 8 (gage height, 5.54 ft); minimum, 2.8 cfs Sept. 26 (gage height, 0.55 ft).
1945-51: Maximum discharge, that of Feb. 8, 1951; no flow part of day Oct. 4, 5, 1948.

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

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 7-9)

Oct. 1 to Feb. 6

0.8	3.8	1.7	79
.9	6.4	2.0	143
1.0	9.5	2.5	291
1.1	14	3.0	520
1.2	20	3.5	825
1.4	37		

Feb. 7 to Sept. 30

0.6	3.7	2.0	147
.7	6.0	2.5	280
.8	9.0	3.0	500
.9	14	3.5	790
1.1	29	4.0	1,140
1.4	60	4.7	1,910
1.7	96		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.9	15	47	74	b300	178	658	772	250	43	6.0	5.3
2	6.1	*41	40	94	b350	214	760	754	223	41	6.0	5.1
3	5.9	74	56	76	b400	160	997	712	206	38	6.0	4.8
4	7.6	41	132	76	b500	190	1,300	706	185	41	5.8	4.6
5	9.5	32	*156	58	b600	164	1,560	694	229	44	6.0	4.8
6	14	29	141	55	780	180	*1,660	730	214	41	6.3	5.5
7	14	27	314	52	1,600	173	1,780	754	*220	37	6.9	5.3
8	11	26	318	b55	1,880	170	1,810	742	200	33	6.6	4.8
9	10	31	260	b60	1,200	170	1,720	700	178	31	6.6	4.8
10	10	22	253	b70	1,310	128	1,760	670	162	29	6.6	4.6
11	10	25	240	b70	1,550	138	1,530	*724	145	28	5.8	4.6
12	10	26	274	69	1,160	173	*1,380	670	147	26	5.8	4.8
13	10	25	250	64	*838	168	1,280	616	149	26	5.5	5.1
14	9.5	26	224	70	682	192	1,390	592	143	17	5.5	5.1
15	9.5	23	227	69	598	*324	1,490	556	136	15	5.3	4.6
16	10	24	201	59	510	580	1,380	525	132	15	5.3	4.2
17	10	25	176	65	435	396	1,320	520	123	15	5.1	3.9
18	10	26	160	59	425	312	1,250	545	100	*12	5.3	4.2
19	11	44	148	69	344	360	1,230	562	72	9.0	5.1	3.9
20	11	51	138	51	360	580	1,120	545	81	6.3	5.1	3.7
21	11	96	127	87	324	706	1,050	520	75	6.0	5.1	3.7
22	11	94	116	125	288	640	899	490	67	6.0	5.1	3.7
23	11	67	111	118	284	500	864	485	64	6.3	4.6	3.7
24	11	55	105	520	268	530	850	480	62	6.6	4.4	3.5
25	12	47	100	526	256	646	850	450	59	6.6	4.4	3.2
26	13	45	b77	*470	198	688	892	415	56	6.3	4.4	*3.4
27	15	42	b61	393	238	700	934	410	54	5.8	*4.4	3.5
28	16	40	b77	288	198	640	1,020	415	52	5.8	4.6	3.5
29	16	39	92	179	-	670	962	376	*46	5.8	4.8	3.4
30	15	45	96	b200	-	736	796	328	43	6.0	5.1	3.4
31	15	-	79	b240	-	670	-	288	-	6.0	5.3	-
Total	341.0	1,203	4,796	4,461	17,876	12,076	36,492	17,746	3,873	614.5	168.8	128.7
Mean	11.0	40.1	155	144	638	390	1,216	572	129	19.8	5.45	4.29
Ac-ft	676	2,390	9,510	8,850	35,460	23,950	72,380	35,200	7,680	1,220	335	255

Calendar year 1950: Max 1,350 Min 2.3 Mean 183 Ac-ft 132,800
Water year 1950-51: Max 1,880 Min 3.2 Mean 273 Ac-ft 197,900

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

Owyhee River near Rome, Oreg.

Location.--Lat 42°52', long. 117°38', in NE¼ sec. 14 (revised), T. 31 S., R. 41 E., on right bank 800 ft downstream from Jordan Creek and 2½ miles north of Rome.

Drainage area.--About 8,000 sq mi.

Records available.--October 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,344.0 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Extremes.--Maximum discharge during year, 13,000 cfs Feb. 11 (gage height, 10.77 ft); minimum, 75 cfs Aug. 18 (gage height, 0.72 ft).
1949-51: Maximum discharge, that of Feb. 11, 1951; minimum, that of Aug. 18, 1951.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above station for irrigation. Flow slightly regulated by 11 small reservoirs which have a total capacity of 52,000 acre-ft.

Cooperation.--One discharge measurement furnished by Bureau of Reclamation.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	71	3.0	1,190
1.0	145	5.0	3,010
1.5	315	7.0	5,450
2.0	550	10.0	11,200

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	140	148	236	327	560	861	3,660	3,080	810	208	150	129
2	137	157	236	323	b500	780	3,820	2,810	726	200	150	126
3	134	202	240	327	b450	714	4,820	2,610	672	190	150	126
4	134	233	*412	275	b700	696	*5,730	2,380	624	180	155	123
5	137	187	903	b250	1,150	696	5,900	2,210	630	185	155	118
6	142	184	1,610	233	2,320	648	5,810	2,050	648	190	*160	118
7	142	196	1,940	202	5,220	666	5,740	1,900	648	180	151	110
8	142	196	2,790	184	9,630	624	5,480	1,820	600	175	140	110
9	*145	190	2,320	222	9,960	630	5,230	1,820	590	170	132	110
10	145	181	2,260	287	8,460	624	4,930	1,820	540	170	116	108
11	145	175	1,790	343	10,100	618	4,690	1,820	*490	170	113	113
12	148	169	1,450	368	9,160	606	4,330	1,900	450	165	108	113
13	145	169	1,390	*347	7,410	606	4,040	2,070	430	165	113	110
14	145	169	1,320	360	5,280	750	3,940	2,220	391	160	108	113
15	142	166	1,060	355	4,150	1,300	3,920	2,230	360	160	103	113
16	142	181	966	339	3,340	3,020	3,970	2,160	347	165	100	110
17	145	184	1,050	343	2,840	3,240	3,880	1,950	331	170	100	103
18	*145	184	889	331	2,350	2,700	3,720	1,750	311	170	89	96
19	145	181	690	319	2,030	2,080	3,690	1,610	*311	165	93	91
20	142	178	570	311	1,840	2,450	3,560	1,490	287	165	100	86
21	142	193	515	279	1,650	5,330	3,500	1,490	272	160	100	89
22	145	205	485	307	1,520	*5,480	3,340	1,420	261	160	96	91
23	145	230	485	373	1,410	4,460	3,160	1,330	254	155	91	93
24	145	254	455	445	1,370	3,580	2,920	1,250	247	155	113	93
25	148	287	405	847	1,300	4,090	2,700	1,180	247	150	113	93
26	148	315	368	931	1,180	4,660	2,560	1,090	254	150	116	*93
27	148	299	327	b1,300	1,060	4,780	2,430	1,030	244	155	121	91
28	148	275	315	1,550	952	4,380	2,380	980	230	155	123	91
29	148	254	323	1,350	-	3,720	2,480	952	226	150	121	91
30	151	247	335	1,010	-	3,940	2,870	896	216	150	121	96
31	145	-	351	702	-	4,350	-	868	-	150	126	-
Total	4,455	6,189	28,486	15,140	97,892	73,079	119,200	54,186	12,647	5,193	3,727	3,147
Mean	144	206	919	488	3,496	2,357	3,973	1,748	422	168	120	105
Ac-ft	8,840	12,280	56,500	30,030	194,200	145,000	236,400	107,500	25,080	10,300	7,390	6,240

Calendar year 1950: Max 4,610 Min 86 Mean 764 Ac-ft 552,900
Water year 1950-51: Max 10,100 Min 86 Mean 1,160 Ac-ft 839,800

Peak discharge (base, 3,000 cfs).--Dec. 8 (11:30 a.m.) 3,810 cfs (5.71 ft); Feb. 11 (6:30 p.m.) 13,000 cfs (10.77 ft); Mar. 21 (9 p.m.) 7,410 cfs (8.14 ft); Apr. 4 (12 p.m.) 6,840 cfs (7.83 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record July 2 to Aug. 5; discharge estimated on basis of records for station above Owyhee Reservoir.

Crooked Creek near Rome, Oreg.

Location.--Lat 42°48', long. 117°44', in sec. 6, T. 32 S., R. 41 E., on right bank 25 ft downstream from highway bridge, 6 miles southwest of Rome, and 9 miles upstream from mouth.

Drainage area.--About 1,700 sq mi, much of which is probably non-contributing.

Records available.--October 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,540 ft (from road profile by Oregon State Highway Department).

Extremes.--Maximum discharge during year, 70 cfs Mar. 22 (gage height, 1.75 ft); minimum, 22 cfs at times during period January to March.
1949-51: Maximum discharge, that of Mar. 22, 1951; minimum, 22 cfs Sept. 9, 10, 1950, and at times during period January to March 1951.

Remarks.--Records good. Several small diversions above and below station for irrigation.

Cooperation.--One discharge measurement furnished by Bureau of Reclamation.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	25	26	24	22	22	24	26	25	26	26	25
2	24	25	26	24	22	22	24	26	25	26	26	25
3	24	25	26	24	22	22	24	26	25	26	26	25
4	24	25	*26	24	22	22	*24	26	25	26	26	25
5	24	25	26	24	22	22	24	26	25	26	26	25
6	24	25	26	24	22	22	24	26	25	26	*26	25
7	24	25	26	23	22	22	24	26	25	26	26	25
8	24	25	26	23	22	22	24	26	25	26	26	25
9	*24	25	26	23	22	22	24	26	25	26	26	25
10	24	25	26	22	22	22	24	26	25	26	26	24
11	24	25	26	22	22	22	24	26	*25	26	26	24
12	24	25	26	22	22	22	24	26	25	26	26	24
13	24	25	26	*22	22	22	24	26	25	26	26	24
14	24	25	26	22	22	22	24	26	25	26	26	24
15	24	25	26	22	22	22	24	26	24	26	26	24
16	24	25	26	22	22	22	24	26	24	26	26	24
17	24	25	26	23	22	22	24	26	24	26	26	24
18	24	26	26	22	22	47	24	26	*24	26	26	24
19	24	26	25	22	22	45	25	26	24	26	26	24
20	24	26	25	22	22	35	25	26	25	26	26	24
21	24	26	25	22	23	44	24	25	25	26	26	24
22	24	26	25	23	23	*66	24	25	25	26	26	24
23	24	26	25	23	22	55	24	25	26	26	26	24
24	24	26	25	23	22	36	24	25	26	26	26	24
25	24	26	25	22	22	32	25	25	26	26	25	24
26	24	26	24	22	22	29	26	25	26	26	25	*24
27	24	26	24	22	22	28	25	25	26	26	25	24
28	24	26	25	22	22	26	26	25	26	26	25	24
29	24	26	25	22	-	26	26	25	26	26	25	24
30	24	26	24	22	-	25	26	25	26	26	25	24
31	24	-	24	22	-	25	-	25	-	26	25	-
Total	744	763	789	701	618	893	732	795	753	806	799	729
Mean	24.0	25.4	25.5	22.6	22.1	28.8	24.4	25.6	25.1	26.0	25.8	24.3
Ac-ft	1,480	1,510	1,560	1,390	1,230	1,770	1,450	1,580	1,490	1,600	1,580	1,450

Calendar year 1950: Max 26 Min 22 Mean 24.6 Ac-ft 17,790
Water year 1950-51: Max 66 Min 22 Mean 25.0 Ac-ft 18,090

* Discharge measurement made on this day.
Note.--No gage-height record Mar. 28 to Apr. 3, Apr. 30 to June 10, June 12-17, June 24 to Aug. 5, Aug. 9 to Sept. 25; discharge interpolated.

Owyhee River above Owyhee Reservoir, Oreg.

Location.--Lat 43°13', long. 117°30', in SE¼ sec. 18, T. 27 S., R. 43 E., on left bank 3 miles upstream from flow line of Owyhee Reservoir and 8 miles southwest of Watson.

Drainage area.--10,400 sq mi, approximately.

Records available.--October 1930 to September 1951 in reports of Geological Survey (discontinued). April 1929 to September 1941 in reports of Oregon State engineer.

Gage.--Water-stage recorder. Altitude of gage is 2,690 ft above mean sea level (levels by Bureau of Reclamation).

Average discharge.--22 years, 849 cfs.

Extremes.--Maximum discharge during year, 11,400 cfs Feb. 9 (gage height, 11.38 ft); minimum, 168 cfs Aug. 20 (gage height, 3.77 ft).
1929-51: Maximum discharge, 16,000 cfs Mar. 20, 1932, Apr. 19, 1936; maximum gage height, 12.95 ft Mar. 20, 1932; minimum discharge, 99 cfs Dec. 18, 1948 (gage height, 3.45 ft).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above station for irrigation. Flow slightly regulated by 11 small reservoirs which have a total capacity of 52,000 acre-ft.

Cooperation.--Water-stage recorder graph and three discharge measurements furnished by Bureau of Reclamation.

Revisions (water years).--W 793: 1932(M).

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.7	151	5.0	660	8.0	3,480
4.0	235	6.0	1,320	9.0	5,200
4.5	425	7.0	2,230	11.1	10,500

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	235	242	333	443	b850	981	3,880	3,100	900	310	226	204
2	235	242	321	434	744	894	4,020	2,900	850	300	223	207
3	232	246	337	425	640	840	4,390	2,700	800	290	226	207
4	229	284	365	430	822	792	5,500	2,500	750	280	226	204
5	223	325	610	381	1,160	786	5,830	2,270	700	*277	223	204
6	220	280	1,220	393	1,950	750	5,920	2,130	700	263	232	201
7	226	277	1,460	302	4,760	894	5,830	1,970	700	263	238	198
8	226	291	1,870	b250	7,580	1,340	5,560	1,850	680	256	232	196
9	226	288	2,730	277	10,400	858	5,300	1,820	660	246	216	198
10	229	280	2,330	302	8,670	678	5,000	1,810	620	256	213	201
11	235	274	1,960	369	8,820	650	4,600	1,820	600	252	198	196
12	238	266	1,660	421	9,250	660	*4,440	1,840	570	246	193	204
13	238	263	1,440	438	8,060	640	4,130	1,960	550	249	190	204
14	235	266	1,460	434	6,210	702	3,960	2,160	520	249	190	207
15	235	263	1,260	456	4,600	1,060	3,890	2,230	500	242	187	207
16	235	260	1,040	*452	3,680	2,340	3,910	2,200	480	252	187	204
17	*235	277	1,100	443	3,070	2,970	3,920	2,030	460	256	184	204
18	238	280	1,070	b420	2,620	2,970	3,750	1,830	440	256	182	201
19	238	280	876	b410	2,210	2,360	3,640	1,710	420	256	179	193
20	238	277	744	b400	2,000	2,180	3,540	1,600	400	252	174	184
21	238	270	640	b390	1,780	3,780	3,500	1,500	390	246	176	182
22	235	277	590	b410	1,640	5,920	3,370	1,500	380	238	182	179
23	235	291	570	443	1,520	5,000	3,200	1,400	370	232	182	182
24	238	317	565	484	1,460	3,880	2,990	1,300	360	235	176	184
25	238	337	533	620	1,390	4,000	2,760	1,250	350	235	187	187
26	242	377	497	967	1,330	4,620	2,610	1,200	350	238	187	182
27	242	397	456	1,180	1,190	4,750	2,470	1,150	350	235	190	182
28	235	381	425	1,620	1,110	4,660	2,400	1,100	340	235	193	179
29	238	357	417	1,490	-	3,880	2,410	1,050	330	229	193	179
30	242	349	421	1,220	-	3,970	2,610	1,000	320	229	193	182
31	238	-	438	974	-	4,370	-	950	-	235	193	-
Total	7,267	8,814	29,738	17,678	99,516	74,175	119,330	55,830	15,840	7,838	6,171	5,842
Mean	234	294	959	570	3,554	2,393	3,978	1,801	528	253	199	195
Ac-ft	14,410	17,480	58,980	35,060	197,400	147,100	236,700	110,700	31,420	15,550	12,240	11,590

Calendar year 1950: Max 4,550 Min 175 Mean 824 Ac-ft 596,800
Water year 1950-51: Max 10,400 Min 174 Mean 1,228 Ac-ft 888,600

Peak discharge (base, 3,100 cfs).--Dec. 8 (11 p.m.) 3,720 cfs (8.16 ft); Feb. 9 (4 a.m.) 11,400 cfs (11.38 ft); Mar. 22 (6 a.m.) 7,020 cfs (9.85 ft); Apr. 5 (8 a.m.) 6,690 cfs (9.71 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record May 20 to July 4; discharge estimated on basis of records for station near Rome.

Owyhee Reservoir at Owyhee Dam, near Nyssa, Oreg.

Location.--Lat 43°38', long. 117°15', in sec. 20, T. 22 S., R. 45 E., near left abutment on Owyhee dam and 21 miles southwest of Nyssa.

Drainage area.--11,160 sq mi, approximately.

Records available.--October 1932 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Extremes.--Maximum contents observed during year, 1,122,000 acre-ft Apr. 1 to May 23 (elevation, 2,670.00 ft); minimum observed, 743,700 acre-ft Oct. 9 (elevation, 2,635.35 ft).

1932-51: Maximum contents observed, 1,125,000 acre-ft June 11, 1936 (elevation, 2,670.27 ft); minimum observed since full capacity was attained May 7, 1936, 630,500 acre-ft Sept. 30, 1948 (elevation, 2,622.29 ft).

Remarks.--Reservoir is formed by concrete arch-gravity dam, completed in September 1932; storage began Oct. 16, 1932. Capacity, 1,122,000 acre-ft between elevations 2,367.5 ft (bottom of sluice gates) and 2,670 ft (top of spillway gate), 715,000 acre-ft between elevations 2,590.2 ft (diversion tunnel) and 2,670 ft. Dead storage below elevation 2,367.5 ft negligible. Figures given herein are of contents above elevation 2,367.5 ft. The reservoir will generally not be drawn below elevation 2,590.2 ft. Water is released through diversion tunnel to South canal for irrigation of lands west of Snake River in vicinity of Homedale, Idaho, and to North canal for irrigation of lands north and west of Owyhee River, and through sluice gates to river for Owyhee Canal, which diverts about 18 miles downstream.

Cooperation.--Gage-height record furnished by Bureau of Reclamation.

Monthly elevation and contents, water year October 1950 to September 1951

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	2,636.78	756,900	-
Oct. 31	2,636.25	752,000	-4,900
Nov. 30	2,637.94	767,800	+15,800
Dec. 31	2,644.17	828,200	+60,400
Calendar year 1950	-	-	+66,600
Jan. 31	2,647.10	858,000	+29,800
Feb. 28	2,664.90	1,058,000	+200,000
Mar. 31	2,669.83	1,120,000	+62,000
Apr. 30	2,670.00	1,122,000	+2,000
May 31	2,669.28	1,113,000	-9,000
June 30	2,664.21	1,050,000	-63,000
July 31	2,656.22	956,400	-93,600
Aug. 31	2,647.70	864,200	-92,200
Sept.30	2,641.06	797,600	-66,600
Water year 1950-51	-	-	+40,700

Owyhee River below Owyhee Dam, Oreg.

Location.--Lat 43°39', long. 117°15', in sec. 17, T. 22 S., R. 45 E., on left bank three-quarters of a mile downstream from Owyhee Dam.

Drainage area.--11,160 sq mi, approximately.

Records available.--February 1929 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 2,343.67 ft above mean sea level (levels by Bureau of Reclamation).

Average discharge.--22 years, 380 cfs.

Extremes.--Maximum discharge during year, 7,170 cfs Apr. 5 (gage height, 9.04 ft); minimum observed, 8 cfs Oct. 17 to Feb. 19 (gage height, -0.20 ft), gates closed at Owyhee Dam.
1929-51: Maximum discharge, 14,600 cfs Mar. 21, 1932 (gage height, 12.79 ft); no flow for a few hours Aug. 8, 9, 1932, when temporary diversion tunnel at Owyhee Dam was closed.

Remarks.--Records good. Diversions above station for irrigation. Flow regulated by Wild Horse and Owyhee Reservoirs (see pp. 125, 132).

Cooperation.--Gage-height record and one discharge measurement furnished by Bureau of Reclamation.

Revisions (water years).--W 983: 1941-42.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from moss Oct. 1-9)

-0.2	8	1.0	106	4.0	1,290
.0	15	1.5	195	5.0	2,060
.2	24	2.0	320	7.0	4,140
.5	46	3.0	710	9.0	7,100

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	127	8	8	8	8	440	3,910	1,230	155	182	123	127
2	127	8	8	8	8	477	3,970	1,840	155	153	123	129
3	120	8	8	8	8	406	3,970	1,910	155	155	129	129
4	114	8	8	8	8	349	5,120	1,840	155	161	164	109
5	116	8	8	8	8	371	6,700	1,240	135	161	151	108
6	115	8	8	8	8	446	6,360	888	123	161	142	115
7	100	8	8	8	8	246	*5,740	854	124	161	142	115
8	92	8	8	8	8	36	5,210	709	124	161	*139	115
9	81	8	8	8	8	360	5,280	329	126	151	135	115
10	27	8	8	8	8	942	5,520	213	*129	148	135	115
11	15	8	8	8	8	978	5,080	170	129	148	135	115
12	11	8	8	8	8	966	4,520	288	131	148	135	115
13	11	8	8	8	8	960	3,880	524	131	139	135	115
14	11	8	8	**8	8	948	3,550	957	131	134	135	115
15	11	8	8	8	8	1,010	3,350	1,780	148	134	135	115
16	11	8	8	8	8	1,360	3,420	1,870	155	134	135	115
17	8	8	8	8	8	1,810	3,360	1,250	172	120	129	115
18	8	8	8	8	8	1,980	3,290	679	182	121	126	115
19	8	8	8	8	8	1,670	2,640	454	184	129	126	115
20	8	8	8	8	360	1,310	1,850	461	187	129	129	114
21	8	8	8	8	788	*1,100	2,060	300	187	131	134	112
22	8	8	8	8	695	2,590	2,380	137	187	131	135	106
23	8	8	8	8	750	3,300	2,360	141	187	131	137	102
24	8	8	8	8	690	2,930	2,250	155	187	131	137	102
25	8	8	8	8	532	2,270	1,750	151	184	131	137	92
26	8	8	8	8	415	2,370	990	153	184	131	137	89
27	8	8	8	8	374	2,960	870	155	191	131	139	89
28	8	8	8	8	477	3,130	660	155	197	131	131	91
29	8	8	8	8	-	3,020	685	155	199	131	126	79
30	8	8	8	8	-	2,490	854	155	197	131	126	79
31	8	-	8	8	-	2,640	-	155	-	126	126	-
Total	1,209	240	248	248	5,233	45,865	101,399	21,298	4,831	4,366	4,168	3,267
Mean	39.0	8.0	8.0	8.0	187	1,480	3,380	687	161	141	134	109
Ac-ft	2,400	476	492	492	10,380	90,970	201,100	42,240	9,580	8,660	8,270	6,480

Calendar year 1950: Max 178 Min 4 Mean 63.8 Ac-ft 46,210
Water year 1950-51: Max 6,700 Min 8 Mean 527 Ac-ft 381,500

* Discharge measurement made on this day.
** Field estimate made on this day.

Boise River near Twin Springs, Idaho

Location.--Lat 43°40', long. 115°44', in sec. 27, T. 4 N., R. 6 E., a quarter of a mile upstream from Birch Creek, 1½ miles upstream from flow line of Arrowrock Reservoir, 4 miles downstream from Twin Springs, and 13 miles upstream from Arrowrock.

Drainage area.--830 sq mi, approximately.

Records available.--March 1911 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 3,251.08 ft above mean sea level (unadjusted). Prior to Apr. 4, 1915, staff gage at same site and datum.

Average discharge.--40 years, 1,141 cfs.

Extremes.--Maximum discharge during year, 7,290 cfs May 28 (gage height, 6.98 ft); minimum, 281 cfs Jan. 30 (gage height, 2.09 ft).
1911-51: Maximum discharge, 10,300 cfs May 17, 1927 (gage height, 8.30 ft), from rating curve extended above 8,000 cfs; minimum, 109 cfs Dec. 10, 1944; minimum gage height, 1.56 ft Dec. 15, 16, 1935.

Remarks.--Records excellent except those below 500 cfs, which are good.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

2.1	292	4.0	2,020
2.5	505	5.0	3,520
3.0	880	6.0	5,300
3.5	1,380	7.0	7,330

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	463	696	648	418	380	544	1,070	3,260	3,870	2,880	848	469
2	451	800	591	518	487	584	1,230	2,840	3,520	2,900	808	457
3	451	760	598	538	577	557	1,650	2,590	3,220	2,820	776	457
4	451	712	664	512	626	557	2,220	2,680	3,040	2,890	824	440
5	463	688	619	481	612	564	2,660	2,940	3,140	2,600	808	434
6	538	672	570	401	*577	*538	3,110	3,570	3,070	2,300	808	423
7	505	648	704	329	712	538	3,490	4,900	2,860	2,220	784	418
8	505	784	712	401	916	524	3,680	5,300	2,650	2,150	704	412
9	499	672	672	570	961	524	3,550	5,240	2,500	2,050	572	412
10	481	538	656	550	961	457	3,650	5,320	2,470	2,010	656	406
11	469	626	664	557	1,050	440	3,330	5,730	2,680	1,830	626	406
12	457	598	688	493	1,090	499	3,340	5,360	3,200	1,670	605	401
13	*451	557	688	457	1,020	531	3,700	4,690	3,710	1,630	591	401
14	451	564	656	475	925	550	4,320	4,140	4,140	1,650	*577	401
15	475	524	672	481	889	570	4,480	3,820	4,860	1,630	564	385
16	475	538	640	475	856	712	4,240	3,880	5,630	1,540	544	374
17	463	570	598	487	800	648	4,230	4,320	5,300	*1,460	531	369
18	481	736	577	418	800	598	4,420	4,920	*4,900	1,390	518	369
19	475	816	*577	440	720	619	4,440	*5,240	4,570	1,340	512	369
20	457	696	577	445	712	696	*4,210	5,150	4,300	1,290	512	369
21	445	*760	550	512	704	808	3,750	5,150	4,170	1,200	512	364
22	440	704	487	518	664	856	3,340	5,410	3,880	1,100	531	369
23	434	664	544	481	664	800	3,070	6,150	3,360	1,020	557	369
24	428	619	550	499	672	808	3,020	6,290	3,200	997	612	369
25	451	612	512	512	672	943	2,840	5,990	3,150	979	550	369
26	584	626	469	505	598	1,070	2,840	5,730	3,140	943	512	423
27	633	640	423	487	626	1,180	2,950	6,270	3,060	916	493	401
28	648	633	487	428	619	1,130	3,820	6,970	3,100	943	481	390
29	768	612	577	354	-	1,120	4,510	6,230	3,060	1,060	481	385
30	832	648	591	306	-	1,110	3,820	5,190	2,900	943	487	380
31	760	-	518	338	-	1,040	-	4,410	-	898	481	-
Total	15,884	19,713	18,479	14,386	20,890	22,115	100,980	149,680	106,650	51,249	18,965	11,991
Mean	512	657	596	464	746	713	3,366	4,828	3,555	1,653	612	400
Cfsm	0.617	0.792	0.718	0.559	0.899	0.859	4.06	5.82	4.28	1.99	0.737	0.482
In.	0.71	0.88	0.83	0.64	0.94	0.99	4.52	6.71	4.78	2.30	0.85	0.54
Ac-ft	31,510	39,100	36,650	28,530	41,430	43,860	200,300	296,900	211,500	101,700	37,620	23,780

Calendar year 1950: Max 6,150 Min 254 Mean 1,466 Cfsm 1.77 In. 23.98 Ac-ft 1,061,000
Water year 1950-51: Max 6,970 Min 306 Mean 1,510 Cfsm 1.82 In. 24.69 Ac-ft 1,093,000

Peak discharge (base, 3,700 cfs).--Apr. 15 (3 a.m.) 4,710 cfs (5.74 ft); Apr. 29 (3 a.m.) 4,810 cfs (5.79 ft); May 11 (8:30 p.m.) 5,790 cfs (6.30 ft); May 28 (9 a.m.) 7,290 cfs (6.98 ft); June 16 (7 a.m.) 5,950 cfs (6.29 ft).
* Discharge measurement made on this day.

South Fork Boise River near Featherville, Idaho

Location.--Lat 43°29'40", long. 115°18'20", in lot 6, NE¼ sec. 19, T. 2 N., R. 10 E., on right bank 2½ miles upstream from Deer Creek and 8 miles southwest of Featherville.

Drainage area.--635 sq mi.

Records available.--April 1945 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,220 ft (from topographic map of Bureau of Reclamation).

Average discharge.--6 years, 795 cfs.

Extremes.--Maximum discharge during year, 5,340 cfs May 28 (gage height, 7.11 ft); minimum, 165 cfs Jan. 7, 30 (gage height, 1.70 ft).
1945-51: Maximum discharge, that of May 28, 1951; minimum, 30 cfs Feb. 10, 1949 (gage height, 0.60 ft), result of snowslide upstream.

Remarks.--Records excellent except those above about 3,000 cfs, which are good. Small ranch diversions above station. No regulation.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 14-21, 29, May 6 to June 2)

Oct. 1 to Dec. 4		Dec. 5 to Sept. 30					
1.9	241	1.7	157	3.0	755	5.0	2,560
2.1	319	2.0	252	3.5	1,080	6.0	3,700
2.5	510	2.5	472	4.0	1,500	7.3	5,310

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	303	425	377	224	214	267	569	2,320	3,200	1,880	558	302
2	294	490	328	279	294	294	624	2,060	2,820	1,880	530	294
3	294	455	323	310	319	306	785	1,940	2,430	1,830	564	286
4	290	435	372	310	335	298	1,080	2,050	2,270	1,820	602	282
5	298	420	319	279	323	294	1,370	2,330	2,310	1,640	547	275
6	323	410	294	231	310	290	1,690	2,820	2,190	1,490	542	267
7	311	405	362	191	344	298	2,020	3,630	2,030	1,400	509	263
8	303	500	357	b250	403	294	2,240	3,810	1,870	1,360	467	256
9	282	420	335	298	*413	298	2,320	3,820	1,770	1,290	452	252
10	271	341	323	310	413	260	2,500	4,000	1,760	1,260	432	248
11	274	401	319	323	380	238	2,310	4,470	1,910	1,210	417	245
12	*267	391	335	294	403	260	2,360	4,190	2,270	1,090	398	248
13	260	363	315	267	371	306	2,660	3,690	2,620	1,040	389	256
14	260	363	282	294	335	*315	3,090	3,260	2,980	1,020	380	260
15	278	328	327	306	340	323	3,240	2,940	3,510	1,000	366	245
16	274	350	340	302	357	335	3,080	2,990	4,020	959	353	248
17	274	368	298	282	335	294	3,100	3,410	3,810	926	340	245
18	286	455	267	238	331	275	3,270	3,930	3,510	880	327	245
19	274	445	*306	245	327	298	3,350	4,260	3,230	854	323	238
20	267	410	323	248	310	331	3,230	4,190	3,060	822	323	234
21	263	*475	279	271	335	357	2,930	4,200	2,910	791	335	234
22	260	430	224	286	315	371	2,590	*4,360	2,710	737	362	242
23	256	405	302	271	327	349	*2,400	4,760	2,360	695	*375	242
24	256	382	315	275	327	389	2,380	4,920	2,200	677	375	238
25	278	377	271	302	323	447	2,250	4,750	*2,150	653	344	242
26	368	368	238	294	298	498	2,230	4,470	2,130	*602	323	256
27	391	363	204	260	306	580	2,320	4,830	2,090	574	319	245
28	410	363	302	220	302	569	2,880	5,190	2,080	608	319	245
29	490	354	331	b190	-	580	3,030	4,840	2,020	677	319	238
30	500	382	323	b180	-	574	2,630	4,250	1,920	613	315	238
31	455	-	286	195	-	552	-	3,650	-	613	310	-
Total	9,610	12,074	9,577	8,225	9,390	11,140	70,528	116,330	76,140	32,891	12,515	7,609
Mean	310	402	309	265	335	359	2,351	3,753	2,538	1,064	404	254
Cfsm	0.488	0.633	0.487	0.417	0.528	0.565	3.70	5.91	4.00	1.67	0.636	0.400
In.	0.56	0.71	0.56	0.48	0.55	0.65	4.13	6.81	4.46	1.93	0.73	0.45
Ac-ft	19,060	23,950	19,000	16,310	18,620	22,100	139,900	230,700	151,000	65,240	24,820	15,090

Calendar year 1950: Max 4,300 Min 145 Mean 925 Cfsm 1.46 In. 19.77 Ac-ft 669,400
Water year 1950-51: Max 5,190 Min 180 Mean 1,030 Cfsm 1.62 In. 22.02 Ac-ft 745,800

Peak discharge (base, 2,000 cfs).--Apr. 20 (12:30 a.m.) 3,480 cfs (5.69 ft); Apr. 28 (10 p.m.) 3,320 cfs (5.59 ft); May 11 (8 a.m.) 4,610 cfs (6.56 ft); May 28 (6:30 a.m.) 5,340 cfs (7.11 ft); June 16 (7 a.m.) 4,180 cfs (6.32 ft).

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

Lime Creek near Bennett, Idaho

Location.--Lat 43°25', long. 115°16', in SW¼NE¼ sec. 16, T. 1N., R. 10 E., on right bank 0.4 mile upstream from flow line of Anderson Ranch Reservoir, 2 miles upstream from mouth, and 12 miles northeast of Bennett.

Drainage area.--131 sq mi.

Records available.--June 1945 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,250 ft (from topographic map of Bureau of Reclamation).

Average discharge.--6 years, 84.8 cfs.

Extremes.--Maximum discharge during year, 917 cfs Apr. 14 (gage height, 5.53 ft); minimum, 15 cfs Nov. 10 (gage height, 2.22 ft).
1945-51: Maximum discharge, 1,180 cfs Apr. 19, 1946; maximum gage height, 8.02 ft Feb. 15, 1949 (snowslide downstream); minimum, 2.5 cfs Feb. 11, 1949 (gage height, 1.67 ft), result of snowslide upstream.

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

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 14				Apr. 15 to Sept. 30			
2.3	19	4.0	334	2.5	22	4.0	334
2.6	43	4.5	495	2.7	41	4.5	495
3.0	97	5.2	760	3.0	93	5.1	720
3.5	204			3.5	204		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a23	37	43	b33	b34	51	a110	436	236	74	33	28
2	a23	53	32	b37	b45	59	a120	393	218	a72	32	27
3	a23	42	41	41	b52	48	150	378	202	a70	32	26
4	a24	38	44	40	b55	50	a220	393	199	a68	50	26
5	a25	37	32	b35	a54	46	284	425	202	a66	50	26
6	a26	36	37	b31	a52	48	357	464	187	a65	67	25
7	a25	35	44	b28	a56	47	439	565	180	a63	39	24
8	a25	45	45	b32	a70	46	495	548	166	a62	36	23
9	a25	30	41	b38	*102	45	565	544	157	a61	33	24
10	a26	25	39	b40	125	37	593	534	148	a60	33	24
11	a26	37	45	b40	104	48	558	548	144	a59	32	24
12	*28	36	42	41	94	58	568	526	150	58	31	25
13	27	33	35	b38	77	48	652	470	157	56	29	27
14	28	35	33	43	68	*47	740	409	144	53	30	26
15	30	29	48	42	75	a50	716	372	144	50	30	26
16	28	33	39	39	67	a53	676	357	146	48	28	26
17	28	36	35	33	60	a50	652	360	142	a46	28	26
18	29	52	*35	b33	66	a48	664	375	135	a44	26	26
19	28	46	43	b34	52	a52	640	381	129	a43	26	26
20	28	43	38	36	64	a60	593	378	124	a42	27	25
21	28	*60	31	40	60	a65	548	369	116	a41	28	26
22	28	47	29	42	57	a70	488	*360	114	a40	29	27
23	28	43	43	38	59	a70	453	363	110	a38	*30	27
24	28	40	37	41	55	a78	*456	360	104	a38	30	27
25	32	40	33	41	55	a90	419	348	*97	a37	29	27
26	38	41	31	41	46	a100	412	331	93	a36	27	29
27	38	41	32	38	59	a117	419	328	89	*36	26	28
28	39	40	39	33	48	a112	586	334	84	36	27	27
29	43	38	46	32	-	a115	593	306	80	42	29	28
30	40	44	44	a30	-	a115	495	282	78	37	29	28
31	37	-	34	a30	-	a110	-	256	-	34	29	-
Total	904	1,192	1,190	1,140	1,811	2,033	14,661	12,493	4,275	1,575	1,005	784
Mean	29.2	39.7	38.4	36.8	64.7	65.6	489	403	142	50.8	32.4	26.1
Cfsm	0.223	0.303	0.293	0.281	0.494	0.501	3.73	3.08	1.08	0.388	0.247	0.199
In.	0.26	0.34	0.34	0.32	0.51	0.58	4.16	3.55	1.21	0.45	0.29	0.22
Ac-ft	1,790	2,360	2,360	2,260	3,590	4,030	29,080	24,780	8,480	3,120	1,990	1,560

Calendar year 1950: Max 618 Min 16 Mean 106 Cfsm 0.809 In. 11.03 Ac-ft 76,950
Water year 1950-51: Max 740 Min 23 Mean 118 Cfsm 0.901 In. 12.23 Ac-ft 85,400

Peak discharge (base, 230 cfs).--Apr. 14 (9 p.m.) 917 cfs (5.53 ft); Apr. 28 (9 p.m.) 827 cfs (5.33 ft); May 7 (5 p.m.) 576 cfs (4.70 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for South Fork Boise River near Featherville, Fall Creek near Anderson Ranch Dam, and other nearby streams.
b Stage-discharge relation affected by ice.

Fall Creek near Anderson Ranch Dam, Idaho

Location.--Lat 43°26'00", long. 115°23'10", in SE¼ sec. 9, T. 1 N., R. 9 E., on right bank 1½ miles downstream from Mill Creek and 6 miles northeast of Anderson Ranch Dam.

Drainage area.--55.3 sq mi.

Records available.--April 1945 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,350 ft (from topographic map of Bureau of Reclamation).

Average discharge.--6 years, 68.6 cfs.

Extremes.--Maximum discharge during year, 516 cfs Apr. 14 (gage height, 5.22 ft); minimum, 14 cfs Sept. 15-21, 23-25, 29; minimum gage height, 2.54 ft Sept. 20.
1945-51: Maximum discharge, 793 cfs Apr. 17, 1946; maximum gage height recorded, 6.07 ft Jan. 5, 1947 (ice jam); minimum discharge, 1.6 cfs Feb. 9, 1949 (gage height, 1.94 ft), result of snowslide upstream.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.5	14	3.6	113
2.7	23	4.0	185
3.0	42	4.5	303
3.3	72	5.0	458

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	29	36	b26	a28	b30	64	284	183	68	25	17
2	18	52	32	b27	a31	b31	82	246	171	65	24	17
3	18	40	32	29	a37	31	123	237	157	63	23	17
4	18	34	34	28	a42	32	173	258	150	62	22	17
5	19	32	33	b27	a41	29	221	284	152	60	24	16
6	20	30	32	b25	b40	29	279	326	143	56	24	16
7	18	29	32	b23	40	28	329	362	131	52	22	16
8	19	48	32	b27	*49	*28	335	359	121	50	21	15
9	18	33	32	b28	58	28	338	368	115	48	21	15
10	18	b28	32	b29	56	b27	350	371	113	47	20	15
11	*18	28	33	b30	54	b26	323	378	113	46	19	15
12	18	28	36	b29	54	b27	335	341	123	43	19	15
13	18	28	35	b28	b52	28	387	303	124	42	18	16
14	18	27	34	30	b50	29	445	258	129	40	18	15
15	19	24	36	30	b48	30	455	246	139	38	18	15
16	19	25	34	30	47	30	425	251	144	36	18	15
17	19	26	33	28	b45	b28	415	268	139	35	17	15
18	20	35	33	b27	44	b27	438	287	132	34	16	15
19	20	33	*32	b27	42	29	425	287	124	32	16	14
20	20	32	32	b27	40	31	396	276	118	32	17	14
21	20	*39	30	b28	39	35	353	*271	112	30	17	14
22	20	37	b28	b29	b37	36	315	274	106	30	17	15
23	20	36	31	b30	36	36	*295	287	98	28	*22	15
24	20	35	32	30	35	39	284	284	93	28	20	15
25	21	35	b27	32	34	47	268	268	*87	27	18	15
26	27	36	b26	a31	b32	54	281	256	84	*26	18	15
27	29	36	b24	a30	b33	63	298	266	81	26	17	15
28	29	36	30	a29	b32	62	390	258	76	26	18	15
29	31	35	32	a28	-	64	387	242	74	27	18	15
30	30	37	32	a27	-	63	323	219	71	26	18	15
31	27	-	30	a27	-	60	-	200	-	26	18	-
Total	647	1,003	987	876	1,176	1,137	9,532	8,815	3,603	1,249	603	459
Mean	20.9	33.4	31.8	28.3	42.0	36.7	318	284	120	40.3	19.5	15.3
Cfsm	0,378	0,604	0,575	0,512	0,759	0.664	5.75	5.14	2.17	0.729	0.353	0.277
In.	0.44	0.67	0.66	0.59	0.79	0.76	6.41	5.93	2.42	0.84	0.41	0.31
Ac-ft	1,280	1,990	1,960	1,740	2,330	2,260	18,910	17,480	7,150	2,480	1,200	910

Calendar year 1950: Max 461 Min 14 Mean 79.1 Cfsm 1.43 In. 19.41 Ac-ft 57,290
Water year 1950-51: Max 455 Min 14 Mean 82.4 Cfsm 1.49 In. 20.23 Ac-ft 59,690

Peak discharge (base, 300 cfs.).--Apr. 14 (9 to 10 p. m.) 516 cfs (5.22 ft); Apr. 28 (7:30 p.m.) 451 cfs (5.03 ft); May 10 (9 p.m.) 406 cfs (4.88 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge computed on basis of weather records and records for South Fork Boise River near Featherville and Lime Creek near Bennett.

b Stage-discharge relation affected by ice.

Little Camas Canal at heading, near Bennett, Idaho

Location.--Lat 43°21'30", long. 115°23'00", in sec. 9, T. 1 S., R. 9 E., on right bank 400 ft downstream from Little Camas Reservoir, 4 miles northeast of Bennett, and 22 miles northeast of Mountain Home.

Records available.--June to November 1917, April 1924 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is 4,926 ft above mean sea level (datum of Mountain Home Irrigation District). June 1 to Nov. 29, 1917, water-stage recorder and Apr. 16 to May 11, 1924, staff gage at datum 6.00 ft lower. May 12, 1924, to Sept. 30, 1929, water-stage recorder at present datum.

Extremes.--1917, 1924-51: Maximum daily discharge, 77 cfs Apr. 27-30, May 1, 3, 9, 1924; no flow during nonirrigation seasons.

Remarks.--Records fair. Canal diverts from Little Camas Reservoir (South Fork Boise River drainage) in sec. 9, T. 1 S., R. 9 E., and discharges into Long Tom Creek basin, where water is stored in Long Tom Reservoir for irrigation of 5,000 acres of land near Mountain Home. No diversion above station. Flow regulated by Little Camas Reservoir.

Cooperation.--Gage readings furnished by Mountain Home Irrigation District.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	0	52	50	50
2								0	0	52	50	17
3								0	0	52	50	0
4								0	0	52	50	0
5								0	6	52	50	0
6								0	15	52	50	0
7								0	17	52	50	0
8								11	21	52	50	0
9								22	23	52	50	0
10								32	24	51	50	0
11								36	27	50	50	0
12								36	35	50	50	0
13								36	*19	50	50	16
14								36	0	50	50	42
15								35	0	50	50	54
16								37	15	50	50	54
17								39	29	50	50	54
18								39	32	50	50	54
19								39	34	50	50	41
20								42	41	50	50	0
21								46	44	50	50	0
22								46	44	50	*50	0
23								*46	45	50	50	0
24								46	46	50	50	0
25								46	47	50	50	0
26								19	49	*50	50	0
27								0	*48	50	50	0
28								0	49	50	50	0
29								0	51	50	50	0
30								0	52	50	50	0
31								0	-	50	50	-
Total	0	0	0	0	0	0	0	689	813	1,569	1,550	382
Mean	0	0	0	0	0	0	0	22.2	27.1	50.6	50.0	12.7
Ac-ft	0	0	0	0	0	0	0	1,370	1,610	3,110	3,070	758

Calendar year 1950: Max 54 Min 0 Mean 15.3 Ac-ft 11,070
Water year 1950-51: Max 54 Min 0 Mean 13.7 Ac-ft 9,920

* Discharge measurement made on this day.

Anderson Ranch Reservoir at Anderson Ranch Dam, Idaho

Location.--Lat 43°21'30", long. 115°27'10", in SE¼ sec. 1, T. 1 S., R. 8 E., on inlet structure of outlet works of dam on South Fork Boise River, 1½ miles downstream from Camas Creek and 3 miles northwest of Bennett (Dixie Store).

Drainage area.--980 sq mi, approximately.

Records available.--December 1945 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is at mean sea level (surveys by Bureau of Reclamation).

Extremes.--Maximum contents observed during year, 467,500 acre-ft July 8 (elevation, 4,196.7 ft); minimum observed, 242,600 acre-ft Oct. 9 (elevation, 4,138.9 ft).
1945-51: Maximum contents observed, that of July 8, 1951; no usable contents prior to Jan. 27, 1946.

Remarks.--Reservoir is formed by earth-fill dam. Storage began Dec. 15, 1945. Usable contents, 464,200 acre-ft between elevations 3,992 and 4,196 ft (top of spillway gates). Elevation of spillway crest, 4,174 ft, and of top of dam, 4,206 ft. Dead storage below 3,992 ft is 28,980 acre-ft. Figures given herein represent usable contents. Water is used for irrigation of lands in Boise Valley.

Cooperation.--Gage readings and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, at about 8 a.m., water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	263,600	259,300	288,400	299,300	301,800	312,900	331,300	425,000	436,300	466,200	448,100	410,900
2	260,300	261,000	289,400	298,900	302,100	312,900	333,200	422,700	436,800	466,400	446,700	409,100
3	256,700	262,300	290,500	298,900	302,500	312,900	335,100	420,100	437,600	466,400	445,600	407,900
4	253,400	262,900	291,500	298,900	302,800	312,900	337,700	417,400	437,900	466,400	444,700	406,300
5	250,500	263,600	292,400	298,900	303,200	314,000	341,200	416,100	438,800	466,600	444,100	404,700
6	246,700	264,300	293,300	298,600	303,200	314,000	345,800	415,600	435,500	466,000	445,200	402,800
7	245,100	265,300	294,300	298,600	303,600	314,400	351,600	416,500	438,000	466,500	444,500	400,900
8	243,900	266,600	295,400	298,200	304,300	315,400	358,200	421,400	439,800	467,500	443,500	398,800
9	242,600	267,600	296,100	297,900	305,000	315,400	365,400	423,200	441,300	467,300	442,500	397,100
10	243,200	268,300	297,200	297,900	305,300	315,400	372,600	423,900	442,400	467,000	441,500	395,400
11	243,900	268,900	298,200	297,900	306,100	315,800	380,000	425,000	443,600	466,900	440,400	393,300
12	244,500	269,900	299,300	297,900	307,800	316,500	387,000	425,800	445,400	466,600	439,900	391,600
13	244,800	270,600	300,300	298,200	307,800	316,900	393,700	425,300	448,100	466,000	439,300	389,500
14	245,400	271,600	301,400	298,600	308,200	317,300	402,600	424,100	451,000	465,400	438,000	387,900
15	246,100	272,600	301,800	298,900	308,600	317,600	410,000	421,400	454,800	464,400	436,500	385,800
16	246,700	273,600	301,800	299,300	308,600	318,400	421,400	417,800	458,800	463,800	434,800	384,100
17	247,300	274,500	302 100	300,000	308,900	318,700	427,600	419,200	460,200	462,800	433,000	382,400
18	248,000	275,300	301,800	300,000	309,300	319,100	429,900	420,100	460,600	462,000	431,500	380,800
19	248,600	276,300	301,400	300,000	310,400	319,500	432,200	422,700	461,900	460,800	429,900	379,200
20	249,300	277,400	301,100	300,300	310,700	320,200	435,800	425,400	462,900	459,800	428,600	377,100
21	249,900	278,700	301,400	300,300	310,700	320,600	435,800	428,300	464,700	458,700	427,600	375,500
22	250,500	280,100	301,400	301,100	311,100	321,300	435,800	427,900	466,500	457,500	426,100	372,200
23	251,200	281,000	301,100	301,400	311,100	321,700	435,300	429,700	466,600	456,200	425,000	368,800
24	251,800	281,800	301,100	301,400	311,100	322,000	434,400	431,300	466,300	454,500	423,400	365,200
25	252,500	282,900	301,100	301,800	311,100	322,400	433,300	432,800	466,600	452,800	422,100	361,700
26	253,100	283,900	301,100	301,800	312,500	323,900	430,600	432,300	464,500	452,000	420,700	358,200
27	254,100	284,600	300,700	302,100	312,500	325,000	428,400	431,500	465,900	451,000	419,700	354,900
28	255,100	285,600	300,000	302,500	312,900	326,100	426,100	433,300	466,000	450,600	418,200	351,700
29	256,000	286,300	299,600	302,500	-	327,600	427,000	434,000	466,100	450,100	416,300	348,100
30	257,300	287,400	299,600	302,500	-	328,700	427,000	435,900	466,100	450,600	414,500	344,600
31	258,300	-	299,600	302,100	-	329,800	-	436,700	-	449,200	412,800	-

Monthly elevation and contents, water year October 1950 to September 1951

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,146.4	266,900	-
Oct. 31	4,143.8	258,300	-8,600
Nov. 30	4,152.4	287,400	+29,100
Dec. 31	4,155.9	299,600	+12,200
Calendar year 1950	-	-	+233,250
Jan. 31	4,156.6	302,100	+2,500
Feb. 28	4,159.6	312,900	+10,800
Mar. 31	4,164.2	329,800	+16,900
Apr. 30	4,187.95	427,000	+97,200
May 31	4,190.10	436,700	+9,700
June 30	4,196.4	466,100	+29,400
July 31	4,192.82	449,200	-16,900
Aug. 31	4,184.76	412,800	-36,400
Sept.30	4,168.10	344,600	-68,200
Water year 1950-51	-	-	+77,700

† Elevation about 8 a.m.

South Fork Boise River at Anderson Ranch Dam, Idaho

Location.--Lat 43°20', long. 115°29', in SW¼ sec. 11, T. 1 S., R. 8 E., on right bank 600 ft upstream from Dixie Creek, 1½ miles downstream from Anderson Ranch Reservoir, and 2¼ miles northwest of Bennett (Dixie store).

Drainage area.--982 sq mi.

Records available.--April 1943 to September 1951 (includes flow of Dixie Creek prior to October 1946 and excludes Dixie Creek thereafter).

Gage.--Water-stage recorder. Altitude of gage is 3,850 ft (from topographic map of Bureau of Reclamation).

Average discharge.--8 years (1943-51), 895 cfs.

Extremes.--Maximum discharge during year, 6,500 cfs May 24 (gage height, 8.50 ft); minimum, 0.9 cfs Oct. 22-24 (gage height, 1.09 ft).
1943-51: Maximum discharge, 9,100 cfs Apr. 17, 1943 (gage height, 10.06 ft); minimum, 0.3 cfs Feb. 16, 1950 (gage height, 0.99 ft), but may have been less during period of ice effect.

Remarks.--Records excellent except those below about 20 cfs, which are poor. Some water stored in Little Camas Reservoir and diverted for irrigation of about 5,000 acres of land in vicinity of Mountain Home. Flow regulated by Anderson Ranch Reservoir (see preceding page) beginning Dec. 15, 1945.

Cooperation.--Water-stage recorder inspected by Bureau of Reclamation.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.1	1.0	1.9	66	4.0	1,020
1.2	3.5	2.2	132	5.0	1,860
1.3	8.0	2.5	226	6.0	2,910
1.5	21	3.0	422	7.0	4,160
1.7	39	3.5	685	8.3	6,050

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,140	2.5	3.0	466	299	388	91	4,460	3,720	2,010	1,230	1,270
2	2,140	6.6	2.5	470	313	411	138	4,290	3,040	2,020	1,260	1,270
3	2,100	20	3.5	467	246	274	132	4,330	2,860	2,010	1,170	956
4	2,040	15	5.8	208	95	82	206	3,680	2,010	2,010	1,060	1,100
5	2,070	47	3.5	464	*401	303	119	3,610	5,280	2,010	198	1,150
6	1,450	52	3.2	465	436	266	116	3,600	1,550	1,700	811	1,270
7	999	56	5.3	466	350	214	129	2,690	1,630	936	917	1,290
8	999	56	3.5	462	426	120	95	3,860	1,630	1,390	1,010	1,310
9	421	47	3.5	439	424	*113	304	4,820	1,630	1,580	967	1,220
10	66	41	4.4	350	212	203	263	4,840	1,620	1,480	945	1,150
11	*66	6.2	4.4	301	97	72	205	5,200	1,630	1,480	868	1,230
12	66	5.3	4.8	*322	429	341	247	5,490	1,630	1,470	566	1,290
13	64	4.8	8.4	*269	429	262	222	5,260	1,630	1,470	1,060	1,290
14	57	5.3	43	86	428	166	156	5,560	1,650	1,460	1,030	1,270
15	31	3.5	204	272	426	191	86	5,520	1,790	1,460	1,190	1,270
16	18	4.0	410	266	436	268	650	3,330	3,370	1,460	1,190	1,110
17	2.8	4.8	491	281	198	180	3,120	3,690	3,950	1,460	1,300	1,310
18	2.0	5.3	504	275	99	82	3,690	3,780	3,420	1,450	1,200	1,130
19	1.5	4.4	*306	260	439	242	3,120	4,060	3,040	1,450	834	1,270
20	1.2	9.8	476	165	436	274	4,070	3,700	2,530	1,460	961	1,270
21	1.0	*4.0	478	91	426	319	4,300	*4,810	2,430	1,460	1,230	1,480
22	.9	2.5	470	426	354	406	3,740	4,700	2,700	1,460	*1,190	2,060
23	.9	7.9	466	343	434	390	3,760	5,030	2,860	1,510	954	2,080
24	.9	2.8	476	353	257	224	*4,000	5,220	2,280	1,460	1,160	2,080
25	.9	2.8	472	336	86	82	4,280	5,610	*3,050	1,320	1,110	2,090
26	1.2	2.8	468	372	418	306	4,460	5,920	2,110	1,090	915	1,920
27	1.5	2.8	463	186	343	256	4,710	5,340	2,100	*1,240	976	2,090
28	1.2	2.8	449	95	382	230	4,600	5,620	2,280	699	1,190	2,100
29	1.2	2.5	473	448	-	303	4,260	5,060	2,200	551	1,170	2,110
30	1.0	3.5	472	468	-	246	4,470	4,350	2,010	1,040	1,270	2,040
31	1.2	-	467	397	-	171	-	4,460	-	1,220	1,270	-
Total	14,746.4	430.9	7,643.8	10,269	9,319	7,385	59,739	142,110	73,630	44,816	32,202	44,476
Mean	476	14.4	247	331	333	238	1,991	4,584	2,454	1,446	1,039	1,483
Ac-ft	29,250	855	15,160	20,370	18,480	14,650	118,500	281,900	146,000	88,890	63,870	88,220

Calendar year 1950: Max 5,140 Min - Mean 880 Ac-ft 637,400
Water year 1950-51: Max 5,920 Min 0.9 Mean 1,224 Ac-ft 886,100

* Discharge measurement made on this day.

Arrowrock Reservoir at Arrowrock, Idaho

Location.--Lat 43°36', long. 115°55', in E½ sec. 13, T. 3 N., R. 4 E., at Arrowrock, 22 miles by road east of Boise.

Drainage area.--2,210 sq mi, approximately.

Records available.--October 1917 to September 1951.

Gage.--Staff graduated on face of dam read once daily. Datum of gage is at mean sea level (surveys of Bureau of Reclamation).

Extremes.--Maximum contents observed during year, 293,800 acre-ft June 29 (elevation, 3,216.7 ft); no usable contents Oct. 15-27 when sluice gates were open.
1917-51: Maximum contents observed, 301,200 acre-ft May 29, 1948 (elevation, 3,219.1 ft); no usable contents during period in each of several years when sluice gates were open and natural flow was passing through reservoir.

Remarks.--Reservoir is formed by gravity-section concrete-arch dam completed in 1915 and raised 5 ft in 1937; storage began in 1915. Capacity, 291,600 acre-ft between elevations 2,956 ft (11 ft below center line of sluice gates, 8.5 ft below sill) and 3,216 ft (crest of movable spillway at highest position). Dead storage negligible. Figures given herein represent original total contents (including bank storage), which, according to survey by Bureau of Reclamation completed in December 1947, had been reduced 7,700 acre-ft at high stages by deposition of silt. Water is used for irrigation of lands in Boise Valley. Gage read about 8 a.m.

Cooperation.--Gage readings and yield table furnished by Bureau of Reclamation.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16,710	13,320	38,840	105,000	163,000	222,600	172,000	188,100	277,700	293,500	221,300	100,900
2	18,400	15,420	40,260	107,100	164,400	222,600	171,000	188,100	274,400	293,500	218,000	98,560
3	19,380	17,640	41,880	109,300	166,100	222,400	171,800	186,700	273,500	293,500	214,200	96,350
4	19,870	19,180	43,320	111,500	168,200	222,400	171,800	185,300	271,800	293,200	210,800	93,580
5	20,580	20,940	45,100	113,200	170,500	222,100	171,800	182,800	271,800	293,200	207,000	91,180
6	21,310	22,540	46,700	115,400	173,100	221,100	172,900	182,800	279,500	292,500	201,700	88,620
7	21,200	24,240	48,300	117,200	176,000	220,600	174,600	184,400	277,400	291,600	197,400	86,300
8	20,170	25,940	50,480	118,800	180,100	217,500	177,100	188,300	274,700	288,800	193,400	83,900
9	19,420	27,960	52,570	120,800	184,600	214,800	179,700	196,200	271,500	287,000	189,200	81,600
10	17,950	29,750	54,360	122,800	189,000	212,800	180,800	203,900	268,900	285,800	183,000	79,580
11	15,380	30,750	56,400	125,100	193,400	210,000	181,500	211,200	266,500	284,300	181,200	77,200
12	12,610	32,210	58,200	127,200	197,900	207,500	181,200	217,000	265,700	282,500	176,600	74,400
13	8,402	33,560	60,000	129,300	202,700	205,100	181,200	221,600	266,200	280,400	171,200	72,220
14	6,695	34,180	62,730	131,000	207,500	202,700	182,100	223,700	267,400	278,300	166,800	70,010
15	0	33,560	64,550	132,600	212,200	200,500	183,700	225,500	269,700	276,200	162,300	67,800
16	0	32,800	66,500	134,400	215,800	198,800	185,100	226,300	272,600	274,100	158,100	65,330
17	0	32,280	69,100	136,200	218,500	197,400	185,800	225,000	275,300	271,800	153,900	62,990
18	0	31,980	71,700	138,200	220,000	194,300	190,100	228,100	275,900	269,400	150,200	60,000
19	0	32,060	74,120	140,000	221,100	190,800	194,500	233,000	278,300	266,800	146,400	56,760
20	0	32,280	76,500	141,600	221,600	187,400	196,900	238,200	279,500	263,900	141,800	53,340
21	0	31,980	78,880	143,400	222,100	185,200	199,300	243,400	281,600	261,000	136,800	50,480
22	0	32,280	81,050	145,000	222,400	181,900	199,300	249,500	282,500	257,900	133,000	48,300
23	0	31,910	83,750	147,000	222,600	179,500	197,100	253,400	286,400	254,800	128,700	47,100
24	0	31,540	86,000	149,000	222,900	176,600	194,500	257,000	288,500	251,700	124,500	45,900
25	0	31,180	88,300	150,800	222,900	173,800	190,800	261,300	289,700	248,400	121,100	44,900
26	0	30,890	91,020	152,900	222,900	171,000	187,600	265,700	293,200	244,700	117,500	44,000
27	0	32,650	93,570	155,000	222,600	172,400	184,800	270,000	293,200	240,800	113,800	42,870
28	3,145	34,260	95,340	156,700	222,600	173,800	183,000	274,100	293,500	237,500	110,500	42,150
29	6,104	35,770	97,200	157,900	-	174,000	184,400	279,500	293,800	233,000	108,100	41,430
30	8,315	37,380	100,100	159,600	-	172,900	186,900	281,300	293,500	228,400	105,500	41,070
31	11,200	-	102,600	161,300	-	172,700	-	280,100	-	225,000	103,300	-

Monthly elevation and contents, water year October 1950 to September 1951

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	3,045.4	14,990	-
Oct. 31	3,034.8	11,200	-3,790
Nov. 30	3,083.0	37,380	+26,180
Dec. 31	3,134.2	102,600	+65,220
Calendar year 1950	-	-	+48,000
Jan. 31	3,164.9	161,300	+58,700
Feb. 28	3,191.4	222,600	+61,300
Mar. 31	3,170.3	172,700	-49,900
Apr. 30	3,176.7	186,900	+14,200
May 31	3,212.2	280,100	+93,200
June 30	3,216.6	293,500	+13,400
July 31	3,192.3	225,000	-68,500
Aug. 31	3,134.6	103,300	-121,700
Sept.30	3,087.3	41,070	-62,230
Water year 1950-51	-	-	+26,080

† Elevation at about 8 a.m.

Boise River at Dowling Ranch, near Arrowrock, Idaho

Location.--Lat 43°35', long. 115°58', in sec. 15, T. 3 N., R. 4 E., at Dowling Ranch, three-quarters of a mile upstream from Moore Creek and 4 miles downstream from Arrowrock.

Drainage area.--2,220 sq mi, approximately.

Records available.--March 1911 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 2,890 ft (from Corps of Engineers topography of Lucky Peak reservoir). Prior to Mar. 18, 1915, staff gages at same site and datum.

Average discharge.--40 years, 2,267 cfs.

Extremes.--Maximum discharge during year, 10,200 cfs May 29-31; maximum gage height, 7.68 ft May 30; minimum discharge, 7 cfs Jan. 1, 5, 6 (gage height, 1.05 ft); minimum daily, 10 cfs Oct. 28 to Nov. 9, Nov. 11, 12.
1911-51: Maximum discharge, 18,800 cfs Apr. 20, 1943 (gage height, 9.93 ft); minimum, 1 cfs Jan. 3, 1945, Jan. 13, 1948; minimum gage height, 0.62 ft Nov. 21, 22, 1935; minimum daily discharge, 2 cfs for many days in 1935, 1936, 1942.

Remarks.--Records excellent except those below 1,000 cfs, which are good, and those below 20 cfs, which are fair. Flow regulated by Arrowrock Reservoir (see p. 141) and Anderson Ranch Reservoir (see preceding page). No diversion above station.

Revisions.--W 883: Drainage area.

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Feb. 16)
(Stage-discharge relation indefinite Oct. 28 to Nov. 14)

Oct. 1 to May 31				June 1 to Sept. 30	
0.9	7	3.0	820	4.5	2,550
1.1	18	4.0	1,910	5.0	3,430
1.3	42	5.0	3,540	6.0	5,600
1.6	109	6.0	5,690	7.5	9,860
2.0	230	7.7	10,500		
2.5	460				

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,840	10	13	13	b12	1,300	2,360	8,240	9,530	5,170	3,860	2,860
2	1,860	10	12	13	b14	1,300	2,360	8,260	7,840	5,050	3,840	2,850
3	2,160	10	14	14	b15	1,300	2,800	8,240	7,060	5,000	3,800	2,800
4	2,250	10	16	12	b22	1,300	3,560	8,210	5,700	5,000	3,800	2,740
5	2,200	10	14	b12	b35	1,300	3,830	7,670	4,910	5,000	3,780	2,780
6	2,110	10	14	b12	27	1,300	3,830	7,360	5,530	4,780	3,760	2,810
7	1,950	10	15	b12	*34	*1,720	3,890	6,930	*6,140	4,590	3,760	2,810
8	1,910	10	14	b12	33	2,060	3,950	6,160	6,110	4,620	3,720	2,740
9	1,860	10	13	b12	34	2,060	4,380	6,530	5,800	4,550	3,700	2,710
10	1,750	226	13	b14	33	2,050	4,750	7,010	5,550	4,360	3,760	2,800
11	1,750	10	12	16	38	2,060	4,750	8,090	5,240	4,290	3,800	2,830
12	1,790	10	12	15	38	2,060	4,750	8,990	5,000	4,270	3,880	2,810
13	960	314	12	14	36	2,060	4,750	9,050	5,000	4,250	3,940	2,800
14	2,190	687	12	14	36	2,060	4,790	9,110	5,000	4,250	3,860	2,760
15	960	780	12	13	28	2,050	4,790	9,140	5,480	4,230	3,820	2,740
16	*684	829	11	13	231	2,050	5,340	8,610	7,290	4,210	3,780	2,730
17	692	847	11	14	693	2,310	6,020	7,730	8,810	4,190	3,720	2,850
18	569	838	11	14	910	2,800	6,500	6,870	8,010	4,230	3,660	2,920
19	618	892	12	b13	1,110	2,770	6,980	*6,580	7,140	4,270	3,660	3,020
20	555	874	12	b12	1,270	2,750	*7,500	6,660	6,420	4,250	*3,800	3,060
21	597	*901	*11	14	1,280	2,740	8,180	7,170	6,160	4,230	3,720	3,010
22	583	874	11	14	1,260	2,920	8,380	8,350	5,140	4,190	3,740	3,020
23	569	829	11	b13	1,260	3,100	8,520	9,380	4,980	4,170	3,680	3,040
24	548	820	11	b13	1,260	3,060	9,260	9,860	5,190	*4,150	3,560	2,970
25	611	865	11	13	1,280	3,030	9,380	9,920	4,890	4,100	3,430	2,930
26	676	370	12	14	1,300	2,310	9,290	9,950	5,290	4,080	3,340	2,920
27	474	15	11	14	1,300	1,250	9,200	10,000	5,240	4,040	3,200	2,880
28	10	14	12	b13	1,300	2,320	9,110	10,100	*5,410	4,020	3,010	2,830
29	10	13	12	b12	-	2,340	8,470	10,100	5,530	3,980	2,900	2,740
30	10	14	12	b11	-	2,360	8,210	10,200	5,340	3,820	2,880	2,610
31	10	-	12	b11	-	2,360	-	10,100	-	3,820	2,880	-
Total	34,756	11,112	381	406	14,889	66,450	179,880	260,570	180,730	135,180	112,040	85,370
Mean	1,121	370	12.3	13.1	532	2,144	5,996	8,405	6,024	4,360	3,614	2,846
Ac-ft	68,940	22,040	756	805	29,530	131,800	356,800	516,800	358,500	268,100	222,200	169,300

Calendar year 1950: Max 9,380 Min 6 Mean 2,514 Ac-ft 1,820,000
Water year 1950-51: Max 10,200 Min 10 Mean 2,964 Ac-ft 2,146,000

* Discharge measurement made on this day.
b Stage discharge relation affected by ice.
Note.--Stage-discharge relation indefinite Oct. 28 to Nov. 14; discharge estimated on basis of reported gate openings.

Bannock Creek near Idaho City, Idaho

Location.--Lat 43°48'30", long. 115°46'30", in SE¼SW¼ sec. 32, T. 6 N., R. 6 E., on right bank three-quarters of a mile upstream from South Fork, 2¼ miles upstream from mouth, and 3 miles southeast of Idaho City.

Drainage area.--4.5 sq mi, approximately.

Records available.--January 1939 to November 1941, December 1950 to September 1951.

Gage.--Water-stage recorder and broad-crested wooden control with V-notch for low stages. Altitude of gage is 4,090 ft (from topographic map).

Extremes.--Maximum daily discharge during period December 1950 to September 1951, 14 cfs Apr. 29; minimum, 0.4 cfs Jan. 8 (gage height, 0.35 ft).
1939-41, 1950-51: Maximum discharge, 23 cfs Mar. 26, 1940 (gage height, 1.68 ft), from rating curve extended above 10 cfs; minimum, 0.07 cfs Aug. 23, 1940 (gage height, 0.21 ft).

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

Rating table, Dec. 1, 1950 to Sept. 30, 1951, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.3	0.3	0.9	3.8
.4	.5	1.1	6.3
.5	.9	1.3	10
.6	1.4	1.5	17
.7	2.1		

Discharge, in cubic feet per second, water year December 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			a1.1	1.0	b0.6	b1.5	3.1	a12	*5.5	1.8	1.3	0.7
2			a1.1	1.0	b.8	1.6	3.4	11	a5.4	*1.8	1.3	.7
3			a1.1	1.1	b1.1	1.3	4.2	10	a5.0	1.8	1.3	.7
4			a1.1	.9	1.3	1.3	5.4	10	a4.8	2.0	1.3	.7
5			1.1	b.8	1.6	1.4	6.6	9.6	a6.0	1.8	1.3	.6
6			1.1	.7	1.4	1.6	8.1	9.9	a6.0	1.6	1.3	.6
7			*1.4	.5	b2.4	1.6	8.5	a11	a5.1	1.6	*1.2	.6
8			1.3	.4	*b2.5	1.6	11	a11	a4.6	1.6	1.2	.6
9			1.3	.5	2.1	1.6	11	*11	a4.3	1.6	1.2	.6
10			1.2	.8	2.2	b1.0	*11	12	a4.2	1.6	1.2	.6
11			1.3	.8	2.6	b1.0	10	12	a4.0	1.6	1.1	.6
12			1.3	.8	2.6	1.1	10	a11	*4.2	1.6	1.1	.6
13			1.3	.8	b2.5	1.1	11	a11	3.9	1.6	1.0	.6
14			1.3	.9	b2.3	1.0	12	a10	3.8	1.5	1.0	*.6
15			1.3	*.9	2.2	1.2	a13	9.0	3.6	1.5	.9	.6
16			1.2	.9	b2.1	*1.4	a13	a8.5	3.6	1.5	.9	.6
17			1.2	1.0	b2.1	b1.3	a13	a8.5	3.6	1.5	.9	.5
18			1.2	.9	2.0	b1.2	a12	a8.5	3.4	1.4	.8	.6
19			1.1	.9	b2.0	b1.4	a11	a9.0	3.4	1.4	.9	.6
20			1.1	b.9	1.9	1.8	a10	a9.0	3.4	1.5	.9	.6
21			1.1	.9	1.9	1.8	a9.5	a9.5	3.4	1.4	1.0	.6
22			b1.1	.9	b1.9	1.8	a9.0	a9.2	3.4	1.4	.9	.6
23			1.1	.9	1.9	b1.7	a8.5	a9.0	3.2	1.4	1.1	.6
24			1.0	1.0	1.9	b1.8	a8.0	a8.5	2.9	1.4	1.1	.6
25			b.9	.9	1.8	2.0	a8.0	a8.5	2.8	1.5	,8	.7
26			b.9	.9	b1.6	2.2	a8.0	a8.2	2.5	1.4	.8	.7
27			.8	b.9	b1.6	2.3	a9.0	a8.0	2.2	1.3	.8	.6
28			.9	b.8	b1.6	b2.2	a11	a8.0	2.2	1.3	.8	.6
29			1.0	b.6	-	2.3	a14	a7.5	2.0	1.3	.8	.6
30			1.0	b.5	-	2.9	a13	a7.0	2.0	1.3	.8	.6
31			1.0	b.5	-	2.9	-	a6.2	-	1.3	.8	-
Total			34.9	25.3	52.5	50.9	285.3	293.6	114.4	47.3	31.8	18.5
Mean			1.13	0.82	1.88	1.64	9.51	9.47	3.81	1.53	1.03	0.62
Cfsm			0.251	0.182	0.418	0.364	2.11	2.10	0.847	0.340	0.229	0.138
In.			0.29	0.21	0.43	0.42	2.36	2.43	0.95	0.39	0.26	0.15
Ac-ft			69	50	104	101	566	582	227	94	63	37

Calendar year	: Max	Min	Mean	Cfsm	In.	Ac-ft
Water year	: Max	Min	Mean	Cfsm	In.	Ac-ft

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for nearby streams.
b Stage-discharge relation affected by ice.

Moore Creek above Robie Creek, near Arrowrock, Idaho

Location.--Lat 43°38'45", long. 115°58'45", in SE¼ sec. 28, T. 4 N., R. 4 E., on left bank at State roadside park, 1.7 miles upstream from Robie Creek, 5 miles northwest of Arrowrock, and 5.8 miles upstream from mouth.

Drainage area.--399 sq mi.

Records available.--October 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,120 ft (from topographic map).

Extremes.--Maximum discharge during year, 2,270 cfs Apr. 8 (gage height, 6.63 ft); minimum, 40 cfs Sept. 8-12, 18-22; minimum gage height, 2.32 ft Sept. 8, 9, 20, 21.

Remarks.--Records good. Diversions above station and from Robie Creek for irrigation of about 900 acres.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

2.3	38	3.6	339
2.5	56	4.0	520
2.7	84	4.5	770
3.0	148	5.0	1,080
3.3	232	6.5	2,170

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a54	109	138	91	100	194	759	1,110	556	208	61	53
2	a54	208	117	117	136	229	964	978	529	*199	61	50
3	a54	153	126	115	153	191	1,260	897	493	196	61	49
4	a54	122	171	124	156	205	1,540	879	480	217	62	46
5	a52	109	174	98	251	217	1,800	867	556	217	64	45
6	a62	98	156	76	292	202	2,100	909	570	191	64	45
7	a62	95	208	64	480	*199	2,130	1,040	529	171	*61	43
8	a56	124	220	78	635	191	2,110	1,080	462	164	59	41
9	a56	111	191	124	*640	188	1,960	1,070	439	151	54	41
10	a54	93	180	134	605	148	*1,920	*1,050	416	146	53	41
11	*57	89	177	131	645	153	1,720	1,120	407	146	51	40
12	56	91	185	124	670	180	1,650	1,070	*434	138	50	41
13	56	88	182	117	620	191	1,680	984	448	124	48	41
14	56	91	174	115	542	199	1,770	885	430	120	46	*41
15	61	88	169	117	506	238	1,750	820	448	113	45	42
16	62	89	174	126	452	331	1,600	808	462	106	44	42
17	60	106	161	115	389	292	1,520	820	457	98	44	42
18	a56	143	153	129	393	261	1,500	837	430	93	44	41
19	a56	158	146	117	311	282	1,420	843	412	91	43	40
20	a56	129	143	104	339	335	1,300	820	380	88	42	40
21	60	124	*141	120	315	421	1,170	798	362	84	43	40
22	60	117	131	131	285	457	1,040	798	344	82	44	41
23	60	111	131	115	282	434	964	820	323	76	52	42
24	60	106	134	129	274	475	927	814	303	72	76	43
25	60	104	124	141	268	575	873	798	288	74	69	44
26	80	104	117	148	220	655	867	759	274	70	56	44
27	97	104	120	138	245	726	879	776	258	69	51	47
28	109	102	120	109	232	705	1,280	786	248	65	51	46
29	115	*100	129	82	-	732	1,550	715	235	66	53	46
30	104	124	134	69	-	737	1,280	675	223	65	53	46
31	100	-	126	80	-	690	-	615	-	64	53	-
Total	2,039	3,390	4,752	3,478	10,436	11,033	43,283	27,241	12,196	3,764	1,658	1,303
Mean	65.8	113	153	112	373	356	1,443	879	407	121	53.5	43.4
Cfsm	0.165	0.283	0.383	0.281	0.935	0.892	3.62	2.20	1.02	0.303	0.134	0.109
In.	0.19	0.32	0.44	0.32	0.97	1.03	4.03	2.54	1.14	0.35	0.15	0.12
Ac-ft	4,040	6,720	9,430	6,900	20,700	21,880	85,850	54,030	24,190	7,470	3,290	2,580

Calendar year 1950: Max - Min - Mean - Cfsm - In. - Ac-ft -
Water year 1950-51: Max 2,130 Min 40 Mean 341 Cfsm 0.855 In. 11.60 Ac-ft 247,100

Peak discharge (base, 800 cfs).--Apr. 8 (2 a.m.) 2,270 cfs (6.63 ft); Apr. 29 (12:30 a.m.) 1,720 cfs (5.91 ft); May 11 (8:30 a.m.) 1,170 cfs (5.11 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for station at mouth and Robie Creek.

Robie Creek near Arrowrock, Idaho

Location.--Lat 43°37'30", long. 115°59'45", in N½ sec. 5, T. 3 N., R. 4 E., on left bank 0.5 mile upstream from mouth and 5 miles northwest of Arrowrock.

Drainage area.--15.8 sq mi.

Records available.--October 1950 to September 1951.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 3,080 ft (from topographic map).

Extremes.--Maximum discharge during year, 72 cfs during period Apr. 6-8 (gage height, 2.18 ft); minimum, 0.3 cfs Aug. 19 (gage height, 0.81 ft).

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	0.2	1.4	11
.9	1.0	1.6	18
1.0	2.0	1.8	30
1.1	3.5	2.0	48
1.2	5.5	2.2	73

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a1.8	4.6	4.1	b4.0	b5.5	b12	a34	32	9.5	2.6	0.5	0.8
2	a1.8	11	3.5	4.3	b7.0	13	a40	29	8.6	*2.2	.5	.7
3	a1.8	4.3	4.1	5.3	b8.0	14	a44	28	8.3	2.6	.5	.7
4	a1.8	3.5	13	4.9	b8.5	12	a50	28	8.3	4.1	.4	.6
5	a2.0	3.0	10	4.3	28	12	a56	26	12	3.0	.5	.6
6	a1.9	3.0	8.6	b3.5	26	11	a62	26	11	2.8	.5	.6
7	a1.9	2.9	13	b3.2	*47	*11	a64	26	10	2.6	*.6	.5
8	a1.9	3.5	12	b3.6	42	11	a62	25	8.9	2.4	1.2	.5
9	a1.9	2.9	11	b4.2	37	11	a58	*22	8.3	2.0	1.2	.5
10	a1.9	2.6	10	4.3	34	b9.0	a54	20	7.5	2.2	1.1	.5
11	*1.8	2.8	9.2	4.5	36	b9.5	*50	22	7.2	2.0	1.0	.5
12	1.7	2.8	9.2	4.3	38	10	48	22	*7.8	1.8	1.0	.6
13	1.5	2.8	8.6	4.1	32	11	48	21	7.2	1.7	1.0	.6
14	a1.5	2.9	8.0	4.3	33	12	49	20	6.8	1.7	.7	*.6
15	a1.6	2.8	7.8	4.5	31	13	49	19	6.0	1.6	.5	.6
16	a1.8	3.2	7.5	4.7	26	14	44	18	5.5	1.4	.4	.6
17	a1.8	3.9	7.0	5.3	24	14	41	18	4.9	1.1	.4	.8
18	a1.8	4.9	6.5	5.5	22	13	40	17	4.3	.9	.4	1.2
19	a1.8	4.9	6.2	5.1	20	14	37	17	4.1	1.0	.4	1.2
20	a1.8	3.7	5.8	b4.5	19	17	36	16	4.1	.9	.4	1.2
21	1.8	4.1	*5.3	b5.0	18	20	32	15	3.9	.8	.4	1.2
22	1.8	3.5	5.1	5.5	17	21	29	13	4.1	.9	.5	1.4
23	a1.8	3.4	4.9	5.5	16	20	27	13	4.3	.7	.6	1.4
24	1.8	3.2	4.9	6.8	16	22	25	12	4.1	.7	1.0	1.4
25	1.9	3.2	4.7	6.5	16	25	24	12	3.9	.8	.7	1.5
26	2.4	3.2	4.3	7.0	16	29	24	11	3.7	.7	.7	1.6
27	2.8	3.2	4.1	7.2	14	31	24	12	3.4	.7	.7	1.6
28	2.4	3.2	4.5	6.2	14	a30	38	11	3.2	.7	.7	1.7
29	2.6	*3.0	4.9	b5.5	-	a30	40	10	3.0	.7	.8	1.7
30	2.3	4.3	5.3	b4.5	-	a33	35	10	3.0	.8	.8	1.7
31	2.0	-	4.9	b5.0	-	a30	-	9.8	-	.6	.9	-
Total	59.4	110.3	218.0	153.1	651.0	534.5	1,264	580.8	186.9	48.7	21.0	29.1
Mean	1.92	3.68	7.03	4.94	23.2	17.2	42.1	18.7	6.23	1.57	0.68	0.97
Cfsm	0.122	0.233	0.445	0.313	1.47	1.09	2.66	1.18	0.394	0.099	0.043	0.061
In.	0.14	0.26	0.51	0.36	1.53	1.26	2.98	1.37	0.44	0.11	0.05	0.07
Ac-ft	118	219	432	304	1,290	1,060	2,510	1,150	371	97	42	58

Calendar year 1950: Max - Min - Mean - Cfsm - In. - Ac-ft -
Water year 1950-51: Max 64 Min 0.4 Mean 10.6 Cfsm 0.671 In. 9.08 Ac-ft 7,650

Peak discharge (base, 35 cfs).--Feb. 7 (2 p.m.) 53 cfs (2.04 ft); Apr. 6, 7 or 8 (time unknown) 72 cfs (2.18 ft); Apr. 28 (4:30 p.m.) 56 cfs (2.07 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge computed on basis of records for Moore and Bannock Creeks and weather records.

b Stage-discharge relation affected by ice.

Moore Creek near Arrowrock, Idaho

Location.--Lat 43°35', long. 115°59', in sec. 21, T. 3 N., R. 4 E., on right bank 150 ft downstream from bridge on Boise-Arrowrock highway, a quarter of a mile upstream from mouth, and 3 miles southwest of Arrowrock.

Drainage area.--426 sq mi.

Records available.--October 1914 to November 1915 (discharge measurements only), December 1915 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is 2,896.11 ft above mean sea level, unadjusted. Prior to July 15, 1921, staff gage at site 1,100 ft upstream at different datum. July 15 to Oct. 24, 1921, staff gage at site 400 ft upstream at datum 0.87 ft higher. Oct. 25, 1921, to Sept. 30, 1948, staff gages at site 200 ft upstream at datum 0.50 ft higher prior to Aug. 3, 1935, and at datum 0.23 ft higher thereafter.

Average discharge.--35 years (1916-51), 296 cfs.

Extremes.--Maximum discharge during year, 2,480 cfs Apr. 8 (gage height, 4.52 ft, from graph based on gage readings); minimum observed, 40 cfs Sept. 21, 22 (gage height, 0.62 ft).
1915-51: Maximum discharge, 6,610 cfs Apr. 8, 1943 (gage height, 7.1 ft, from floodmark); minimum observed, 7.9 cfs Aug. 13-15, 17, 18, 1924.

Remarks.--Records good. Diversions for irrigation o about 900 acres above station.

Cooperation.--Gage readings and one discharge measurement furnished by Water District No. 12-A.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31				Apr. 1 to Sept. 30					
0.7	52	1.5	206	0.6	38	1.6	232	3.5	1,430
.8	66	2.0	378	.8	59	2.0	383	4.0	1,900
1.0	100	2.8	850	1.0	90	2.5	675	4.4	2,340
				1.3	153	3.0	1,030		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	115	152	96	b120	222	831	1,200	604	218	63	57
2	58	233	135	125	b160	248	1,080	1,040	568	207	63	54
3	58	175	135	127	b180	220	1,340	970	526	199	62	53
4	58	143	192	139	206	230	1,560	948	502	224	65	49
5	55	131	199	108	b300	236	1,810	948	604	218	67	47
6	66	119	178	86	339	*225	2,110	978	604	191	67	48
7	66	104	236	76	*576	228	2,230	1,110	574	181	65	45
8	60	133	242	b84	804	206	2,190	1,120	*479	168	60	43
9	60	125	214	b120	811	211	2,070	1,120	451	158	59	42
10	58	106	206	b140	720	164	1,980	*1,100	434	153	57	42
11	59	104	201	139	746	173	*1,790	1,170	424	153	53	42
12	58	100	206	133	798	196	1,710	1,140	456	148	51	42
13	58	100	201	123	720	211	1,750	1,060	479	137	48	43
14	59	100	196	123	618	233	1,890	955	445	126	47	44
15	60	100	189	127	570	263	1,840	873	468	117	47	43
16	*62	96	192	139	486	356	1,690	866	479	109	45	43
17	60	115	178	131	402	324	1,630	859	473	105	45	43
18	62	143	169	152	412	270	1,600	873	445	94	42	42
19	60	164	*162	137	335	294	1,520	888	419	94	42	42
20	60	143	160	117	361	344	1,400	880	393	90	*42	42
21	60	135	156	135	339	426	1,270	852	374	87	42	40
22	59	*133	141	152	308	480	1,140	845	356	85	43	40
23	59	131	139	131	312	448	1,040	873	334	76	47	43
24	60	129	143	147	305	496	1,030	873	314	*73	78	43
25	59	117	139	160	297	624	970	845	298	76	76	45
26	71	119	129	160	257	696	948	817	284	73	59	46
27	89	115	131	164	277	818	970	824	270	70	54	47
28	108	115	131	129	263	766	1,360	859	*254	67	52	47
29	127	115	139	96	-	772	1,630	775	244	67	54	47
30	117	141	147	82	-	811	1,360	727	232	67	54	48
31	108	-	145	b90	-	733	-	662	-	65	57	-
Total	2,112	3,799	5,283	3,868	12,022	11,924	45,739	29,050	12,787	3,896	1,706	1,352
Mean	68.1	127	170	125	429	385	1,525	937	426	126	55.0	45.1
Cfsm	0.160	0.298	0.399	0.293	1.01	0.904	3.58	2.20	1.00	0.296	0.129	0.106
In.	0.18	0.33	0.46	0.34	1.05	1.04	3.99	2.54	1.12	0.34	0.15	0.12
Ac-ft	4,190	7,540	10,480	7,670	23,850	23,650	90,720	57,620	25,360	7,730	3,380	2,680

Calendar year 1950: Max 1,850 Min 36 Mean 359 Cfsm 0.843 In. 11.43 Ac-ft 259,600
Water year 1950-51: Max 2,230 Min 40 Mean 366 Cfsm 0.859 In. 11.66 Ac-ft 264,900

Peak discharge (base, 850 cfs).--Feb. 8 (11 p.m.) 856 cfs (2.81 ft); Apr. 8 (2 a.m.) 2,480 cfs (4.52 ft); Apr. 29 (1 a.m.) 1,850 cfs (3.95 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Diversions from Boise River between Dowling Ranch and Boise gaging stations, Idaho

Between Dowling Ranch and Boise gaging stations, six principal canals and several small farm laterals divert water from Boise River for irrigation.

Records of total diversion, during period April to September for each canal for years 1919-46, combined daily diversion covering period April to September for years 1947-51, and daily flow of New York Canal February 1939 to October 1948 in reports of Geological Survey. Records of daily diversion for each canal from 1916 to 1951 on file in office of Idaho State Reclamation Engineer.

Records show summation of discharge for these diversions. Staff gages on canals read daily or several times weekly and discharge measurements made frequently. Field data obtained and records summarized under direction of E. B. Karn, watermaster for Boise River.

Discharge, in cubic feet per second, April to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							1,000	3,200	3,280	3,460	3,060	2,310
2							1,020	3,070	3,290	3,470	2,960	2,280
3							1,030	3,060	3,310	3,450	2,930	2,260
4							1,020	3,050	3,300	3,460	2,930	2,170
5							1,010	3,060	3,290	3,450	2,970	2,170
6							1,020	3,140	3,370	3,470	2,930	2,240
7							1,330	3,230	3,330	3,350	2,960	2,240
8							1,490	3,380	3,240	3,360	2,970	2,390
9							1,590	3,440	3,160	3,370	3,020	2,300
10							1,610	3,520	3,010	3,270	3,040	2,260
11							866	3,540	3,000	3,280	3,090	2,260
12							1,060	3,360	3,000	3,320	3,100	2,220
13							1,200	2,980	3,170	3,320	3,160	2,250
14							1,290	2,430	3,250	3,300	3,120	2,250
15							2,050	2,300	3,230	3,290	3,240	2,220
16							2,130	2,630	3,410	3,260	3,090	2,270
17							2,640	2,650	3,400	3,210	3,020	2,260
18							2,920	2,770	3,350	3,220	3,000	2,500
19							3,140	2,890	3,390	3,320	2,940	2,510
20							3,300	2,880	3,420	3,280	3,120	2,620
21							3,500	2,880	3,430	3,310	3,060	2,600
22							3,420	3,140	3,430	3,300	3,120	2,560
23							3,410	3,290	3,430	3,280	3,080	2,620
24							3,470	3,310	3,430	3,260	3,040	2,580
25							3,380	3,360	3,430	3,190	2,860	2,510
26							3,420	3,320	3,420	3,260	2,740	2,500
27							3,430	3,330	3,420	3,260	2,700	2,500
28							3,430	3,330	3,440	3,290	2,570	2,490
29							3,290	3,280	3,430	3,260	2,390	2,400
30							3,230	3,290	3,430	3,240	2,330	2,280
31							-	3,290	-	3,100	2,340	-
Total							66,696	96,380	99,490	102,660	90,860	71,020
Mean							2,223	3,109	3,316	3,312	2,931	2,367
Ac-ft							132,300	191,200	197,300	203,600	180,200	140,900

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

Lake Lowell near Caldwell, Idaho

Location.--Lat 43°35', long. 116°45', in SE¼ sec. 19, T. 3 N., R. 3 W., on outlet structure at lower embankment 2 miles west and 5 miles south of Caldwell and lat 43°34', long. 116°39', in NW¼ sec. 36, T. 3 N., R. 3 W., on outlet structure at upper embankment 1 mile south and 4 miles west of Nampa.

Records available.--October 1917 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is 2,500.5 ft above mean sea level (surveys of Bureau of Reclamation).

Extremes.--Maximum contents observed during year, 174,800 acre-ft Apr. 13, 14 (gage height, 29.76 ft); minimum observed, 38,970 acre-ft Oct. 1.
1917-51: Maximum contents observed, 178,900 acre-ft Apr. 27, 28, 1922, Apr. 24, 1932 (gage height, 30.18 ft); minimum observed, 5,390 acre-ft Oct. 22, 1924.

Remarks.--Reservoir is formed by two earth embankments; dams were completed and storage began in 1908. Capacity, 177,150 acre-ft, between gage heights 0.0 ft (sill of outlet gates) and 30.0 ft (maximum operating level). Dead storage, about 13,000 acre-ft. Below gage height 12.0 ft reservoir divides into two pools. In addition to water received from local drainage, reservoir receives water from Boise River through New York Canal of Boise project. Water is used for irrigation of lower project lands. Figures given herein represent usable contents.

Cooperation.--Gage readings and capacity table furnished by Board of Control for Boise project.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38,970	64,180	92,170	94,770	96,520	119,800	157,600	163,300	158,600	145,900	93,400	51,330
2	39,640	64,300	92,170	94,770	96,520	121,700	159,400	163,900	158,200	143,900	92,170	50,600
3	40,650	64,430	92,240	94,840	96,590	123,600	160,900	164,800	158,200	142,100	90,530	49,820
4	42,200	64,550	92,320	94,990	96,660	125,600	162,400	165,200	158,200	140,200	88,970	49,100
5	44,020	64,670	92,460	95,060	97,030	127,700	163,700	166,300	158,600	138,800	87,420	48,320
6	46,580	64,860	92,600	95,130	97,100	130,000	165,300	167,100	158,800	137,100	86,090	47,230
7	48,430	65,300	92,960	95,130	97,320	131,900	167,000	167,500	160,200	135,400	84,640	46,200
8	50,370	65,670	93,040	95,200	97,540	133,700	169,000	168,000	161,500	134,100	82,840	45,290
9	52,920	65,860	93,110	95,200	97,760	135,800	171,300	168,500	163,200	132,800	81,000	43,810
10	55,220	65,980	93,250	95,200	97,840	137,700	173,300	168,800	164,500	131,200	78,570	42,990
11	57,450	66,110	93,320	95,200	97,910	139,600	174,600	169,000	166,200	129,500	77,500	42,070
12	58,640	66,230	93,400	95,350	98,060	141,600	174,600	169,400	167,400	127,600	75,770	41,040
13	60,560	66,360	93,540	95,350	98,060	143,700	174,800	170,600	168,500	125,500	74,120	40,030
14	62,580	66,550	93,680	95,350	98,200	145,400	174,800	171,400	169,500	123,700	72,300	39,750
15	61,780	66,800	93,760	95,420	98,200	147,600	174,300	171,400	170,300	121,900	70,420	39,780
16	61,780	68,570	93,760	95,500	98,350	149,300	174,600	171,900	170,300	120,100	68,890	39,690
17	62,090	70,490	93,830	95,500	98,500	151,300	174,600	172,500	170,000	117,800	67,370	39,520
18	62,150	72,820	93,830	95,500	99,160	152,300	174,300	173,100	169,600	115,800	65,730	39,630
19	62,210	75,040	93,900	95,570	100,600	153,200	173,400	173,700	168,700	113,600	64,240	40,540
20	61,960	77,300	93,900	95,570	102,400	153,100	172,400	174,000	167,500	111,400	62,760	41,200
21	62,020	79,440	93,970	95,790	104,100	152,900	171,200	174,100	165,800	109,600	61,350	41,840
22	63,070	81,480	94,050	96,080	106,400	152,800	170,200	173,600	164,100	107,600	59,960	43,120
23	63,130	83,530	94,050	96,080	108,200	152,400	169,000	172,500	162,200	105,700	58,820	44,340
24	63,250	85,330	94,120	96,080	110,200	152,200	168,100	171,700	160,100	104,200	57,810	45,610
25	63,440	87,350	94,120	96,220	112,200	152,000	167,000	169,500	158,200	102,400	57,100	47,020
26	63,560	88,900	94,190	96,300	114,100	151,700	165,800	167,100	156,200	100,900	56,450	48,430
27	63,740	90,670	94,330	96,300	115,900	151,500	164,600	165,200	154,200	99,380	55,800	49,430
28	63,810	91,030	94,480	96,370	117,800	151,400	163,600	163,700	152,200	97,980	55,340	50,760
29	63,930	91,310	94,620	96,440	-	152,100	163,100	161,900	149,700	96,810	54,240	52,230
30	63,990	91,600	94,620	96,440	-	154,000	167,400	160,800	147,900	95,710	53,260	53,200
31	64,120	-	94,620	96,440	-	155,800	-	159,000	-	94,770	52,230	-

Monthly gage height and contents, water year October 1950 to September 1951

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30 (upper)	11.20	38,520	-
(lower)	11.00	-	-
Oct. 31	15.68	64,120	+25,600
Nov. 30	19.80	91,600	+27,480
Dec. 31	20.22	94,620	+3,020
Calendar year 1950	-	-	+2,880
Jan. 31	20.47	96,440	+1,820
Feb. 28	23.27	117,800	+21,360
Mar. 31	27.73	155,800	+38,000
Apr. 30	28.99	167,400	+11,600
May 31	28.09	159,000	-8,400
June 30	26.85	147,900	-11,100
July 31	20.24	94,770	-53,130
Aug. 31	13.68	52,230	-42,540
Sept.30	13.85	53,200	+970
Water year 1950-51	-	-	+14,680

Boise River at Boise, Idaho

Location.--Lat 43°37', long. 116°13', in SW¼ sec. 10, T. 3 N., R. 2 E., on right bank at Capital Boulevard Bridge at Boise.

Drainage area.--2,760 sq mi, approximately.

Records available.--March 1938 to September 1939 (gage heights only), February 1940 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 2,675.46 ft above mean sea level (datum of Corps of Engineers, Boise River Surveys). Prior to Apr. 30, 1943, water-stage recorder at site 1 mile upstream at datum 13.69 ft higher. Apr. 30 to July 10, 1943, water-stage recorder at site 400 ft downstream at present datum.

Extremes.--Maximum discharge during year, 7,560 cfs May 14 (gage height, 7.39 ft); minimum, 34 cfs Nov. 25, 26 (gage height, 2.46 ft); minimum daily, 35 cfs Nov. 21, 23, 25. 1940-51: Maximum discharge, 21,000 cfs Apr. 20, 1943 (gage height, 10.00 ft, site and datum then in use); minimum, 4 cfs Dec. 11, 1949 (gage height, 2.23 ft); minimum daily, 8 cfs Mar. 8-15, Dec. 6, 1941.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Arrowrock Reservoir (see p. 141) and Anderson Ranch Reservoir (see p. 139). New York, Ridenbaugh, and four smaller canals divert between Moore Creek and this station (see p. 147).

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 14-27, Feb. 9 to Mar. 29)

Oct. 1 to Dec. 29				Feb. 9 to Sept. 30			
2.7	29	3.5	306	3.5	308	5.0	2,370
2.8	41	3.8	519	3.8	527	6.0	4,440
2.9	58	4.1	786	4.1	818	7.5	7,810
3.1	111	4.4	1,120	4.5	1,440		
3.3	193	4.8	1,700				

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	400	*102	144	130	120	503	2,390	6,360	6,960	2,030	1,070	689
2	429	184	148	160	170	487	2,520	6,260	5,550	1,910	1,130	699
3	400	214	141	150	190	487	3,020	6,190	4,400	1,910	1,100	689
4	346	162	188	160	210	487	4,000	6,080	3,540	1,910	1,070	670
5	282	137	225	140	370	487	4,700	5,660	2,480	1,910	1,050	652
6	319	122	208	120	380	487	4,920	5,230	2,760	1,660	1,050	652
7	276	108	225	110	560	714	4,750	4,990	3,560	1,490	1,020	661
8	270	115	276	120	850	1,550	4,770	4,260	*3,520	1,440	963	597
9	282	130	246	140	922	1,440	4,750	4,130	3,370	1,420	896	544
10	276	126	225	170	844	1,370	5,480	4,680	3,120	1,290	896	597
11	313	296	214	160	831	1,340	5,620	*5,460	2,900	1,300	922	661
12	294	110	214	150	883	1,350	5,390	6,850	2,520	1,250	978	670
13	612	77	220	150	*818	1,350	5,480	7,290	2,450	1,220	1,010	*670
14	1,520	53	220	150	708	1,370	5,210	7,510	2,370	1,200	1,010	661
15	1,570	51	*209	150	566	1,410	4,900	7,400	2,560	1,220	935	633
16	796	44	209	160	326	1,490	4,620	6,960	3,870	1,200	935	623
17	*728	40	204	160	511	1,690	4,840	6,080	5,440	1,200	883	614
18	672	39	184	160	511	3,240	5,060	5,100	5,280	1,180	857	588
19	654	39	180	170	519	*3,290	5,300	4,620	4,180	1,170	857	553
20	646	36	170	140	680	3,330	5,530	4,680	3,750	1,150	857	544
21	619	35	166	160	699	3,370	*6,170	4,840	3,240	1,120	818	544
22	601	*36	157	170	670	3,540	6,330	5,690	2,660	1,120	807	553
23	585	35	152	150	633	3,710	6,190	6,560	1,930	1,120	807	562
24	585	36	157	160	623	3,710	6,770	7,070	2,200	*1,100	785	579
25	585	35	157	180	623	3,770	7,010	7,140	1,990	1,100	774	579
26	646	78	157	180	597	3,770	6,880	7,210	2,080	1,050	774	570
27	500	174	137	180	536	1,650	6,790	7,250	*2,140	1,020	741	544
28	110	122	148	160	527	2,500	7,070	7,360	2,200	978	689	536
29	130	118	*170	130	-	2,330	6,960	7,400	2,350	948	670	527
30	125	126	170	120	-	2,430	6,470	7,380	2,240	909	689	519
31	115	-	180	110	-	2,390	-	7,340	-	993	689	-
Total	15,686	2,980	5,802	4,650	15,877	61,042	159,890	191,030	97,610	40,518	27,732	18,180
Mean	506	99.3	187	150	567	1,969	5,330	6,162	3,254	1,307	895	606
Ac-ft	31,110	5,910	11,510	9,220	31,490	121,100	317,100	378,900	193,600	80,370	55,010	36,060

Calendar year 1950: Max 6,720 Min 28 Mean 1,376 Ac-ft 996,300
Water year 1950-51: Max 7,510 Min 35 Mean 1,756 Ac-ft 1,271,000

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 27-31, Dec. 30 to Feb. 8; discharge estimated on basis of weather records, records for Moore Creek near Arrowrock, and other Boise River stations.

Diversions from Boise River between Boise and Notus gaging stations, Idaho

Between Boise and Notus gaging stations, 21 prinicipal canals and several small farm laterals divert water from Boise River for irrigation.

Records of total diversions during period April to September for each canal for years 1919-46 and combined daily diversion covering period April to September for years 1947-51 in reports of Geological Survey. Records of daily diversion for each canal from 1916 to to 1951 on file in office of Idaho State Reclamation Engineer.

Records show summation of discharge for these diversions. Staff gages on diversions read daily or several times weekly, and discharge measurements made frequently. Field data obtained and records summarized under direction of E. B. Karn, watermaster for Boise River. Records fair.

Discharge, in cubic feet per second, April to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	1,640	2,340	2,260	2,090	1,620
2							0	1,620	2,290	2,260	2,110	1,630
3							0	1,620	2,210	2,320	2,110	1,610
4							0	1,620	2,000	2,270	2,100	1,650
5							0	1,660	2,040	2,300	2,060	1,660
6							0	1,750	1,930	2,250	2,050	1,640
7							0	1,820	1,790	2,240	2,030	1,660
8							24	1,860	1,820	2,240	2,020	1,540
9							297	1,930	1,808	2,280	1,970	1,540
10							348	2,010	1,810	2,290	1,990	1,630
11							380	1,940	1,850	2,240	1,960	1,660
12							524	1,720	1,870	2,210	1,950	1,640
13							817	1,620	1,880	2,270	1,960	1,620
14							933	1,660	1,940	2,250	1,910	1,600
15							1,120	1,710	2,080	2,210	1,910	1,570
16							1,240	1,750	2,110	2,240	1,900	1,550
17							1,490	1,820	2,120	2,250	1,900	1,490
18							1,680	1,920	2,160	2,200	1,880	1,450
19							1,860	1,980	2,180	2,210	1,870	1,450
20							1,890	2,060	2,190	2,210	1,900	1,460
21							1,960	2,090	2,210	2,250	1,900	1,460
22							2,000	2,160	2,230	2,240	1,860	1,480
23							2,040	2,210	2,140	2,220	1,860	1,470
24							1,900	2,290	2,230	2,210	1,840	1,440
25							2,110	2,300	2,220	2,190	1,810	1,430
26							2,180	2,350	2,290	2,150	1,790	1,380
27							2,180	2,340	2,300	2,120	1,770	1,350
28							2,090	2,380	2,310	2,020	1,740	1,320
29							1,910	2,400	2,310	2,030	1,720	1,320
30							1,800	2,370	2,290	2,050	1,710	1,330
31							-	2,360	-	2,100	1,620	-
Total							32,773	60,980	62,940	68,580	59,290	45,650
Mean							1,092	1,966	2,098	2,212	1,913	1,522
Ac-ft							65,000	120,900	124,800	136,000	117,600	90,550

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

Boise River at Notus, Idaho

Location.--Lat 43°43', long. 116°48', in SE¼ sec. 34, T. 5 N., R. 4 W., on right bank 1,100 ft upstream from steel highway bridge, a quarter of a mile southeast of Notus, and 7 miles northwest of Caldwell.

Drainage area.--3,820 sq mi, approximately.

Records available.--April 1920 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 2,288.55 ft above mean sea level (datum of Corps of Engineers, Boise River Surveys). Prior to Aug. 26, 1936, staff gage at site 1,100 ft downstream at same datum.

Average discharge.--29 years (1920-22, 1924-51), 1,110 cfs.

Extremes.--Maximum discharge during year, 7,840 cfs May 14 (gage height, 7.60 ft); minimum, 52 cfs July 19 (gage height, 0.99 ft); minimum daily, 80 cfs July 19, 20.
1920-51: Maximum discharge, 20,500 cfs Apr. 20, 1943 (gage height, 10.43 ft); minimum observed, 10 cfs Aug. 18, 21, 1920.

Remarks.--Records good. Diversions above station for irrigation of about 309,300 acres. Diversions between station and mouth for irrigation of about 5,300 acres. Flow regulated by Arrowrock Reservoir (see p. 141) and Anderson Ranch Reservoir (see p. 139). Records of chemical analyses and water temperatures for the water year 1951 are given in Water-Supply Paper 1200.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 30 to June 27)

1.2	69	2.5	450	6.0	4,700
1.4	96	3.0	800	7.0	6,600
1.6	134	3.5	1,240	7.6	7,840
1.9	207	4.0	1,770		
2.2	307	5.0	3,060		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	562	840	736	705	5 9	1,110	3,080	6,400	6,880	956	188	307
2	575	*880	744	690	603	1,100	3,150	6,260	5,960	872	219	303
3	568	922	776	728	645	1,060	3,400	5,980	5,790	816	254	300
4	542	906	840	712	784	1,100	4,410	5,770	5,470	897	260	257
5	492	864	*832	705	1,580	1,120	5,510	5,520	2,550	*1,090	285	250
6	444	824	848	660	1,320	1,090	5,810	4,700	2,200	956	*292	240
7	516	808	888	596	1,920	1,120	5,620	4,480	3,290	712	288	202
8	492	792	888	589	2,170	1,820	5,470	3,870	3,480	603	260	183
9	462	768	888	603	2,000	2,240	5,200	3,030	3,350	549	207	188
10	450	768	848	617	1,890	2,100	5,680	3,500	2,920	504	166	292
11	428	864	824	660	1,790	1,960	6,420	3,820	2,690	406	112	277
12	492	832	808	668	1,770	1,960	5,920	6,080	2,140	232	109	254
13	638	760	800	652	1,690	1,990	5,490	7,270	1,770	250	110	*257
14	1,200	728	800	645	1,540	2,020	5,410	7,710	1,550	185	130	288
15	2,920	682	808	652	1,410	2,060	4,770	*7,760	*1,340	161	158	300
16	1,570	668	800	652	1,070	2,200	*4,170	7,380	1,800	170	156	288
17	1,400	652	776	668	1,120	2,160	3,990	6,400	3,720	136	149	307
18	1,590	652	760	690	1,160	3,450	3,970	5,010	4,880	109	122	319
19	1,540	638	744	690	1,160	4,190	3,990	3,820	3,470	80	112	315
20	1,510	624	736	638	1,200	4,220	4,040	3,720	3,140	80	103	292
21	1,470	617	728	631	1,410	4,280	4,530	3,630	2,[illegible]0	98	114	285
22	1,430	610	712	668	1,390	4,290	5,110	3,900	2,080	141	109	307
23	1,400	617	698	682	1,330	4,580	5,130	4,630	1,010	210	145	319
24	1,390	617	690	728	1,290	4,630	5,260	5,600	914	191	260	315
25	1,380	610	690	*816	1,290	4,680	5,870	5,850	956	196	300	319
26	1,400	610	682	808	1,280	4,810	5,870	6,020	728	234	328	328
27	1,540	668	675	808	*1,230	3,140	5,720	6,180	897	204	340	340
28	1,350	728	682	736	1,150	3,030	6,180	6,600	848	183	340	348
29	940	728	698	617	-	3,030	7,440	6,780	1,010	196	336	357
30	940	744	705	562	-	3,210	6,820	6,900	1,120	210	323	362
31	880	-	712	536	-	3,160	-	6,980	-	185	328	-
Total	32,511	22,021	23,816	20,812	37,741	82,910	153,430	171,550	80,193	11,812	6,603	8,699
Mean	1,049	734	768	671	1,348	2,675	5,114	5,534	2,673	381	213	290
Ac-ft	64,480	43,680	47,240	41,280	74,860	164,400	304,300	340,300	159,100	23,430	13,100	17,250

Calendar year 1950: Max 5,940 Min 20 Mean 1,304 Ac-ft 944,300
Water year 1950-51: Max 7,760 Min 80 Mean 1,787 Ac-ft 1,293,000

* Discharge measurement made on this day.

Malheur River near Drewsey, Oreg.

Location.--Lat 43°47', long. 118°20', in SE¼ sec. 31, T. 20 S., R. 36 E., on left bank 300 ft downstream from crossing of Burns-Ontario highway, half a mile downstream from Cottonwood Creek, and 3 miles southeast of Drewsey.

Drainage area.--982 sq mi.

Records available.--June 1920 to September 1921, April to September 1923, June 1926 to September 1951. March to September 1914 at site 13 miles upstream; records not equivalent owing to inflow from several creeks.

Gage.--Water-stage recorder. Datum of gage is 3,479.03 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. June 1, 1920, to Sept. 4, 1921, water-stage recorder or staff gage at site half a mile downstream at different datum. Apr. 26, 1923, to June 6, 1939, water-stage recorder at site 7 miles downstream at different datum.

Average discharge.--25 years (1926-51), 158 cfs.

Extremes.--Maximum discharge during year, 2,260 cfs Feb. 8 (gage height, 8.84 ft); maximum gage height, 9.18 ft Feb. 5 (ice jam); minimum discharge, 0.9 cfs Aug. 20-24. 1920-21, 1923, 1926-51: Maximum discharge, 4,290 cfs Feb. 27, 1940 (gage height, 11.35 ft), from rating curve extended above 2,500 cfs; no flow at times.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 16,000 acres above station.

Revisions (water years).--W 1093: 1927.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second) (Backwater from diversion dam Sept. 28-30)

2.5	0.4	3.0	40	5.0	520
2.6	3.0	3.2	68	6.0	855
2.7	9.0	3.5	121	8.0	1,770
2.8	17	4.0	235		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	60	73	73	b65	b120	592	409	155	7.8	2.0	a2.5
2	12	68	*65	86	b60	*b130	687	370	134	8.4	2.0	a2.5
3	13	108	64	93	89	b110	799	328	112	8.4	2.0	a2.5
4	15	84	76	88	110	129	*910	302	98	6.6	2.2	a2.5
5	22	70	81	79	b800	b120	1,050	305	112	7.2	2.2	a2.5
6	22	66	91	b60	708	b120	1,220	292	112	7.8	2.0	a2.5
7	29	65	192	b66	1,700	b120	1,300	280	112	7.8	*1.7	a2.5
8	27	64	185	b52	1,690	b130	1,310	302	102	7.8	1.7	a2.5
9	27	66	171	b46	1,340	b130	1,320	298	98	7.2	1.4	a2.5
10	27	58	205	71	1,470	b94	1,280	280	88	7.2	1.4	a2.5
11	29	46	169	b76	1,360	b86	1,190	292	a80	7.8	1.4	a2.5
12	*27	65	142	b76	974	b125	1,110	400	*68	6.6	1.4	a2.5
13	*24	71	136	b72	662	140	1,110	424	64	4.2	1.4	a2.5
14	21	66	123	*84	486	173	1,160	376	*65	2.7	1.4	a2.5
15	25	68	192	93	400	288	1,170	319	62	2.5	1.4	a2.5
16	32	64	282	b80	337	648	1,060	272	58	2.5	1.2	a2.5
17	35	70	171	91	288	379	966	248	60	2.5	1.4	a2.5
18	40	70	153	95	268	292	894	245	59	2.2	1.4	a2.5
19	44	74	136	b80	212	325	841	235	49	2.2	1.2	a2.5
20	49	73	123	b74	215	628	778	235	46	2.2	.9	a2.5
21	45	70	119	81	212	1,060	698	232	43	2.2	.9	a2.5
22	43	70	110	88	201	934	601	215	57	2.7	.9	a2.5
23	43	62	102	98	187	654	544	208	35	2.7	.9	a2.5
24	43	62	106	121	169	648	493	215	29	2.7	.9	a2.5
25	43	66	97	240	182	841	454	212	27	2.7	1.2	a2.5
26	46	66	91	215	149	838	415	201	26	2.5	1.4	a2.5
27	58	66	81	b190	138	824	373	194	16	2.2	2.2	a2.5
28	60	65	79	b160	b110	726	367	192	6.6	2.2	2.7	*2.5
29	62	64	91	b80	-	*670	565	194	9.0	2.2	2.7	3.6
30	66	71	102	b85	-	687	496	187	5.4	2.0	a2.7	5.4
31	64	-	102	b85	-	586	-	169	-	2.0	a2.7	-
Total	1,104	2,038	3,910	2,978	14,562	12,735	25,753	8,431	1,988.0	137.7	50.9	79.0
Mean	35.6	67.9	126	96.1	520	411	858	272	66.2	4.44	1.64	2.63
Ac-ft	2,190	4,040	7,760	5,910	28,880	25,260	51,080	16,720	3,940	273	101	157

Calendar year 1950: Max 994 Min 3.6 Mean 152 Ac-ft 110,100
Water year 1950-51: Max 1,700 Min 0.9 Mean 202 Ac-ft 146,300

Peak discharge (base, 800 cfs).--Feb. 5 (8 p.m.) 1,380 cfs (7.22 ft); Feb. 8 (2 a.m.) 2,260 cfs (8.84 ft); Mar. 21 (10 a.m.) 1,120 cfs (6.66 ft); Mar. 25 (3 to 7 p.m.) 890 cfs (6.10 ft); Apr. 8 (8 p.m.) 1,460 cfs (7.38 ft).

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

Malheur River below Warmsprings Reservoir, near Riverside, Oreg.

Location.--Lat 43°34', long. 118°12', in SW¼ sec. 17, T. 23 S., R. 37 E., on left bank 1 mile downstream from Warmsprings Dam, 3 miles upstream from South Fork, and 4 miles northwest of Riverside.

Drainage area.--1,100 sq mi, approximately.

Records available.--January 1906 to September 1910, December 1914 to July 1917, March 1919 to September 1951 in reports of Geological Survey. October 1910 to November 1914 in reports of State engineer.

Gage.--Water-stage recorder and concrete control. Prior to Dec. 9, 1914, staff or chain gages at several sites 3 miles downstream, 200 ft upstream from South Fork, at various datum. Dec. 9, 1914, to July 24, 1917, water-stage recorder at site 1 mile upstream and 500 ft upstream from dam site at different datum. Mar. 18, 1919, to Apr. 27, 1920, staff gage at site 1 mile upstream and 250 ft downstream from dam at different datum. Apr. 28, 1920, to Sept. 28, 1949, staff or hook gage and concrete control at present site and datum.

Average discharge.--39 years (1909-16, 1919-51), 172 cfs.

Extremes.--Maximum discharge during year, 515 cfs Apr. 26, 27 (gage height, 4.91 ft); minimum daily, 0.5 cfs Oct. 15 to Apr. 12.
1906-17, 1919-51: Maximum discharge observed, 5,490 cfs Mar. 2, 1910 (gage height, 10.7 ft, site and datum then in use), from rating curve extended above 820 cfs; no flow at times.

Remarks.--Records good except those affected by backwater from beaver dam, which are poor. Flow completely regulated since November 1919 by Warmsprings Reservoir (see p. 158). Diversions for irrigation of about 16,000 acres above station.

Revisions (water years).--W 833: 1936. W 1063: 1942-45.

Rating table, water year 1950-51, except period of backwater from beaver dam (gage height, in feet, and discharge, in cubic feet per second)

2.7	0.6	3.6	53
2.8	2.0	3.8	88
3.0	7.0	4.1	165
3.2	16	4.5	315
3.4	30	5.0	560

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32							440	420	440	400	356
2	35							415	410	435	395	351
3	39							415	410	435	420	351
4	43							410	385	435	435	356
5	46							410	315	435	435	360
6	50							410	238	430	430	390
7	56						0.5	410	165	430	*425	390
8	60							405	153	430	435	390
9	62							405	*165	480	435	385
10	64							405	165	490	430	385
11	36							405	165	445	435	385
12	6							356	165	425	435	380
13	3						84	266	165	425	435	365
14	**1						158	230	220	460	430	356
15		0.5	0.5	0.5	0.5	0.5	209	230	315	475	435	356
16							234	230	360	485	430	360
17							302	230	360	485	435	360
18							370	234	*360	485	435	365
19							400	*234	370	490	440	356
20							455	230	415	490	440	338
21							480	270	420	490	435	338
22							485	365	420	485	450	324
23	.5						485	450	420	485	460	315
24							490	480	420	465	460	297
25							490	500	420	450	460	292
26							505	510	420	455	460	274
27							510	510	420	440	425	*270
28							510	510	420	425	405	258
29					-		510	495	435	410	400	238
30					-		485	490	440	395	375	230
31		-			-		-	460	-	395	356	-
Total	541.5	15.0	15.5	15.5	14.0	15.5	7,168.0	11,810	9,956	14,000	13,276	10,171
Mean	17.5	0.5	0.5	0.5	0.5	0.5	239	381	332	452	428	339
Ac-ft	1,070	30	31	31	28	31	14,220	23,420	19,750	27,770	26,330	20,170

Calendar year 1950: Max 556 Min - Mean 142 Ac-ft 102,600
Water year 1950-51: Max 510 Min - Mean 184 Ac-ft 132,900

* Discharge measurement made on this day.
** Field estimate made on this day.
Note.--Backwater from beaver dam Oct. 12 to Apr. 12.

North Fork Malheur River above Agency Valley Reservoir, near Beulah, Oreg.

Location.--Lat 43°58', long. 118°11', in sec. 33, T. 18 S., R. 37 E., on left bank at M. W. Scott's ranch, 3 miles upstream from Warm Springs Creek, and 4 miles northwest of Agency Valley Dam and Beulah.

Drainage area.--355 sq mi.

Records available.--January to September 1914, June 1936 to September 1951. Published as "at Scott's Ranch, near Beulah" in 1914.

Gage.--Water-stage recorder. Jan. 1 to Sept. 30, 1914, staff gage at same site at different datum.

Average discharge.--15 years, 122 cfs.

Extremes.--Maximum discharge during year, 662 cfs Apr. 14 (gage height, 2.98 ft); minimum, 27 cfs Jan. 29, but may have been less during periods of ice effect or no gage-height record.

1914, 1936-51: Maximum discharge recorded, 1,010 cfs Feb. 12, 1947; maximum gage height, 4.60 ft Mar. 26, 1940; minimum discharge recorded, 12 cfs Jan. 27, 1948, but may have been less at times during periods of ice effect.

Remarks.--Records good October and April to September, poor November to March. Diversions for irrigation of about 900 acres above station.

Revisions (water years).--W 883: 1938(M). W 1093: 1944(m).

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31		Apr. 1 to Sept. 30	
0.3	25	0.4	31
.6	46	.7	63
1.0	99	1.0	111
1.5	193	1.5	213
2.0	310	2.0	343
		3.0	670

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	56	54	a50	b50	53	252	270	142	59	42	41
2	68	77	*47	a60	b70	55	312	252	131	59	41	40
3	73	68	a45	a50	b95	*41	357	232	127	59	40	40
4	73	61	a50	a55	109	54	409	232	129	59	40	40
5	80	56	a60	a40	138	54	466	225	133	60	40	40
6	83	54	a70	a30	121	53	*518	223	129	59	40	40
7	70	52	a65	a35	242	54	542	247	124	58	*41	39
8	59	50	a60	a40	167	53	564	265	118	55	42	39
9	55	b45	a70	b50	a220	a45	564	262	*111	54	42	39
10	53	b40	a65	b60	a300	a40	539	254	a110	53	42	39
11	52	b45	a60	b75	a280	a48	504	302	a105	51	38	39
12	*50	b55	a55	b65	a260	55	508	329	a100	49	36	39
13	50	54	a55	b60	a230	57	550	302	a94	48	36	40
14	*53	57	a70	b65	a180	59	616	275	a92	47	37	41
15	52	49	a100	*b72	a140	120	602	250	a90	45	37	41
16	52	55	a90	57	a110	104	556	232	*88	45	36	41
17	53	55	a85	57	a90	a90	525	225	86	44	*37	40
18	63	55	a80	58	70	a150	508	227	84	44	36	40
19	57	54	a75	59	53	a230	487	*223	84	45	36	40
20	54	49	a70	47	67	a300	454	218	80	44	36	40
21	53	50	a68	65	62	a280	394	208	76	45	37	41
22	53	52	a65	70	61	a230	354	202	75	45	40	41
23	52	53	a60	67	61	a200	332	202	72	45	40	42
24	50	54	a65	64	56	a230	310	202	70	44	38	42
25	53	54	a60	70	64	a250	291	195	70	43	36	45
26	59	54	a55	67	40	a250	275	183	69	42	36	46
27	64	54	a50	62	59	a250	267	181	68	42	36	*44
28	67	55	a45	61	45	a240	346	177	64	42	39	43
29	76	54	a55	42	-	a230	340	170	63	42	43	44
30	69	54	a60	b40	-	a210	296	164	62	42	45	46
31	59	-	a55	b35	-	a230	-	154	-	42	42	-
Total	1,870	1,621	1,964	1,728	3,440	4,315	13,038	7,083	2,846	1,511	1,207	1,232
Mean	60.3	54.0	63.4	55.7	123	139	435	228	94.9	48.7	38.9	41.1
Ac-ft	3,710	3,220	3,900	3,430	6,820	8,560	25,860	14,050	5,640	3,000	2,390	2,440

Calendar year 1950: Max 495 Min 32 Mean 121 Ac-ft 87,490
Water year 1950-51: Max 616 Min 30 Mean 115 Ac-ft 83,020

Peak discharge (base, 400 cfs).--Apr. 14 (4:30 a.m.) 662 cfs (2.98 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, computed inflow to Agency Valley Reservoir, and records for Malheur River near Drewsey.

b Stage-discharge relation affected by ice.

North Fork Malheur River at Beulah, Oreg.

Location.--Lat 43°54', long. 118°09', in NE¼ sec. 22, T. 19 S., R. 37 E., on left bank at Beulah, a quarter of a mile downstream from Agency Valley Dam and 12 miles northwest of Juntura.

Drainage area.--420 sq mi, approximately.

Records available.--March 1909 to June 1912, November 1913 to July 1914, June 1926 to September 1951. Published as "at Foley's Ranch, near Beulah" 1909-14 and as "near Beulah" June 1926 to September 1935.

Gage.--Water-stage recorder. Datum of gage is 3,262.47 ft above mean sea level, datum of 1929. Mar. 21, 1909, to May 25, 1910, chain gage and May 26, 1910, to June 30, 1912, and Nov. 13, 1913, to July 25, 1914, staff gage, at site 6 miles downstream at different datum. June 26, 1926, to Dec. 21, 1935, water-stage recorder at site three-quarters of a mile downstream at different datum (below intake of two canals with combined capacity of about 10 cfs). Dec. 22, 1935, to Sept. 28, 1949, staff gage at present site and datum.

Average discharge.--16 years (1935-51), 127 cfs.

Extremes.--Maximum discharge during year, 422 cfs June 20 (gage height, 2.59 ft); no flow Mar. 8-22.

1909-12, 1913-14, 1926-51: Maximum discharge, 7,000 cfs (regulated by sudden storage release) May 7, 1942 (gage height, 8.4 ft, from floodmark); maximum unregulated, 5,910 cfs Mar. 20, 1910; no flow at times; minimum prior to construction of dam, 5 cfs Dec. 28, 1910, Jan. 26, 27, 1911.

Remarks.--Records good except those below 40 cfs, which are poor. Flow regulated by Agency Valley Reservoir (see p. 158). Diversions for irrigation of about 2,400 acres above station; practically entire summer flow is diverted below station and above Juntura.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

0.0	0	0.6	30
.1	.2	1.0	78
.2	1.0	1.5	165
.3	4.0	2.0	275
.4	11	3.0	540

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	0.2	0.2	0.1	0.1	0.2	0.2	245	332	410	201	145
2	58	.1	**.2	.1	.1	.1	.4	209	332	408	219	147
3	60	.1	.2	.1	.1	.1	.5	171	332	402	235	147
4	64	.1	.2	.1	.2	.1	.5	139	332	400	235	151
5	67	.1	.2	.1	.2	.1	.7	121	332	398	235	177
6	75	.1	.2	.1	.2	.1	.7	121	332	395	235	177
7	70	.1	.2	.1	.2	.1	.7	123	332	390	*232	175
8	67	.1	.2	.1	.2	0	.8	123	330	372	211	173
9	63	.1	.2	.1	.2	0	.8	169	*330	308	181	173
10	61	.1	.2	.1	.2	0	64	228	330	278	167	169
11	60	.1	.2	.1	.2	0	109	235	308	275	167	169
12	*59	.1	.2	.1	.2	0	179	171	270	275	167	169
13	27	.2	.2	.1	.2	0	185	*169	255	272	165	169
14	**.1	.2	.2	.1	.2	0	185	126	255	272	165	169
15	.1	.1	.2	**.1	.3	0	185	103	255	270	207	169
16	.1	.1	.1	.1	.2	0	187	128	*308	270	232	171
17	.1	.1	.1	.1	.2	0	187	173	350	270	*228	171
18	.1	.1	.1	.1	.2	0	187	217	358	270	225	157
19	.1	.1	.1	.1	.2	0	185	270	355	288	225	151
20	.1	.1	.1	.1	.2	0	187	318	398	305	225	153
21	.1	.1	.1	.1	.2	0	228	335	420	295	225	153
22	.1	.1	.1	.1	.2	0	265	338	418	278	223	151
23	.1	.1	.1	.1	.2	.1	265	338	415	265	223	149
24	.1	.1	.1	.1	.2	.1	265	338	415	262	207	149
25	.1	.1	.1	.1	.2	.1	290	338	412	248	197	147
26	.2	.2	.1	.1	.2	.1	318	338	412	235	197	145
27	.2	.2	.1	.1	.2	.1	318	338	408	230	195	*143
28	.2	.2	.1	.1	.2	.1	320	338	408	228	177	141
29	.2	.2	.1	.1	-	.1	290	338	405	228	165	139
30	.1	.2	.1	.1	-	.1	275	335	408	228	167	137
31	1.6	-	.1	.1	-	.1	-	335	-	211	155	-
Total	792.7	3.8	4.6	3.1	5.4	1.7	4,679.3	7,268	10,547	9,236	6,288	4,736
Mean	25.6	0.13	0.15	0.10	0.19	0.05	156	234	352	298	203	158
Ac-ft	1,570	7.5	9.1	6.1	11	3.4	9,280	14,420	20,920	18,320	12,470	9,390

Calendar year 1950: Max 446 Min 0.1 Mean 137 Ac-ft 99,170
Water year 1950-51: Max 420 Min 0 Mean 119 Ac-ft 86,410

* Discharge measurement made on this day.
** Field estimate made on this day.

Malheur River at Little Valley, near Hope, Oreg.

Location.--Lat 43°54', long. 117°30', in SE¼ sec. 24, T. 19 S., R. 42 E., on right bank 500 ft downstream from bridge at Little Valley, 8 miles southwest of Hope, and 13 miles southwest of Vale.
Drainage area.--3,010 sq mi, approximately.
Records available.--April 1949 to September 1951.
Gage.--Water-stage recorder. Datum of gage is 2,424.12 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.
Extremes.--Maximum discharge during year, 6,070 cfs Feb. 8 (gage height, 7.80 ft); minimum, 20 cfs Oct. 27 to Nov. 1, Nov. 4-12.
1949-51: Maximum discharge, that of Feb. 8, 1951; minimum, 20 cfs Oct. 27 to Nov. 1, Nov. 4-12, 1950.
The two greatest floods known occurred in March 1894 and March 1910.
Revisions.--The figures of maximum discharge for water years 1949 and 1950 have been revised to 1,470 cfs May 19, 1949 (gage height, 4.66 ft) and 2,750 cfs Feb. 24, 1950 (gage height, 5.79 ft), superseding those published in Water-Supply Papers 1153 and 1183, respectively.
Remarks.--Records good except those for periods of ice effect, which are poor. Vale-Oregon Canal diverts at Namorf; no other large diversions above station, but many small ones. Flow regulated by Warmsprings and Agency Valley Reservoirs (see p. 158).
Revisions.--Revised figures of discharge for high-water period in water year 1950 are given herewith. They supersede those published in Water-Supply Paper 1183.

Day (water year)	Discharge (cfs)
1949-50	
Feb. 24	1,050
25	1,530
26	844
27	652
28	450

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
February 1950	6,112	1,530	45	218	12,120
Water year 1949-50	45,796	1,530	24	125	90,840

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 5				Feb. 6 to Sept. 30			
1.7	20	3.0	340	1.9	45	3.5	580
1.8	28	3.5	570	2.1	80	4.0	900
2.0	56	4.3	1,030	2.5	179	5.0	1,810
2.5	170			3.0	350	6.5	3,760

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	21	42	46	b110	97	185	278	261	261	111	80
2	33	22	42	53	b120	95	118	248	241	265	95	80
3	34	21	*45	51	b130	*84	125	191	248	255	90	74
4	35	20	48	53	144	80	159	157	248	278	113	72
5	35	20	50	51	b1,000	82	168	143	235	282	157	70
6	36	20	58	45	2,700	82	*154	125	209	275	*191	70
7	40	20	67	b42	3,730	90	151	115	154	268	159	80
8	40	21	67	b40	3,610	97	138	101	118	265	154	97
9	45	20	69	b42	1,600	128	108	97	*93	265	148	106
10	*46	20	92	b44	1,210	120	84	111	93	258	141	108
11	43	20	75	b48	1,030	113	76	151	95	238	125	108
12	43	23	66	50	781	101	76	228	95	200	118	108
13	40	30	60	43	628	99	84	171	90	179	118	111
14	34	35	58	*46	460	80	108	108	86	173	118	111
15	*32	38	62	53	350	179	222	74	78	194	118	108
16	28	39	66	48	286	1,180	278	61	80	206	120	106
17	26	39	66	48	244	821	241	51	*127	219	135	101
18	24	39	66	56	212	418	251	47	212	209	143	101
19	22	40	67	60	191	326	268	46	219	212	148	97
20	22	38	66	46	171	435	238	58	219	222	151	90
21	22	39	60	58	154	688	235	97	238	244	154	80
22	22	39	56	62	148	724	231	128	258	241	151	80
23	22	40	54	67	141	495	244	222	255	228	154	78
24	22	40	53	67	133	354	238	268	265	212	159	76
25	22	39	51	201	128	314	241	278	272	209	162	74
26	22	39	50	336	120	314	268	289	289	182	157	*72
27	22	39	50	265	113	296	289	300	268	162	154	70
28	21	39	48	b200	106	282	289	296	251	157	146	70
29	21	40	50	b150	-	265	300	300	231	143	125	69
30	20	42	51	b120	-	258	303	286	244	133	115	63
31	20	-	50	b100	-	171	-	278	-	125	103	-
Total	928	942	1,805	2,591	19,750	8,868	5,870	5,305	5,772	6,760	4,233	2,610
Mean	29.9	31.4	58.2	83.6	705	286	196	171	192	218	137	87.0
Ac-ft	1,840	1,870	3,580	5,140	39,170	17,590	11,640	10,520	11,450	13,410	8,400	5,180

Calendar year 1950: Max 1,530 Min 20 Mean 126 Ac-ft 91,480
Water year 1950-51: Max 3,730 Min 20 Mean 179 Ac-ft 129,800

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

Bully Creek near Vale, Oreg.

Location.--Lat 43°58', long. 117°21', in SW¼ sec. 33, T. 18 S., R. 44 E., on right bank 5 miles southwest of Vale.

Drainage area.--602 sq mi.

Records available.--October 1945 to September 1951 in reports of Geological Survey. April 1933 to May 1936 (fragmentary), March 1937 to September 1941 in reports of State engineer, and October 1941 to September 1945 in files of State engineer.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 2,317.7 ft (by levels to reference point furnished by Union Pacific R. R.). Prior to March 1937 water-stage recorder or staff gage at site 3 miles upstream at different datum. Mar. 15, 1937, to Jan. 1, 1940, water-stage recorder at present site at datum 0.38 ft higher.

Average discharge.--15 years (1933-34, 1937-51), 38.2 cfs.

Extremes.--Maximum discharge during year, 2,550 cfs Feb. 8 (gage height, 6.55 ft, from floodmark), from rating curve extended above 340 cfs on basis of slope-area determination of peak flow; minimum, 5 cfs Jan. 28.
1933-51: Maximum discharge, 3,400 cfs Feb. 27, 1940 (gage height, 6.60 ft), from rating curve extended above 1,000 cfs; no flow at times.

Remarks.--Records good except those for periods of ice effect, or backwater from moss and those for June, which are fair. Occasional fluctuations caused by releases from Vale-Oregon Canal, which diverts water for irrigation of lands west of Vale; considerable return flow at times enters Bully Creek above station. Diversions above station for irrigation of about 7,000 acres.

Revisions (water years).--W 1183: 1946, 1947.

Rating table, water year 1950-51, except periods of ice effect or backwater from moss (gage height, in feet, and discharge, in cubic feet per second)

0.2	6	1.3	84
.4	13	2.0	235
.7	26	2.9	510
1.0	46	4.2	1,090

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	9	10	11	14	20	65	11	15	14	15	21
2	28	9	9	13	16	20	62	12	14	13	14	21
3	19	9	*10	12	b15	b16	66	13	15	13	14	19
4	12	9	11	12	15	b17	81	13	15	13	14	19
5	12	9	10	11	b75	b17	70	14	a20	13	*13	18
6	11	8	12	9	417	b16	94	14	a40	13	13	17
7	11	8	14	b8	874	14	*111	14	a50	13	13	17
8	10	9	13	b8	*1,080	12	103	17	a35	14	12	17
9	10	8	12	10	478	12	90	13	a25	14	12	17
10	10	8	11	10	*361	b10	69	12	a20	14	12	17
11	10	7	11	b9	364	b11	52	16	a19	14	12	17
12	10	7	11	11	302	15	31	44	a18	14	12	17
13	9	7	10	10	230	15	18	59	a17	15	12	17
14	9	7	11	*12	179	15	15	33	a16	14	12	17
15	*8	7	12	12	144	16	15	16	a16	14	12	16
16	21	7	12	b11	111	210	15	19	15	15	12	16
17	16	7	12	b12	*88	138	15	15	*14	15	11	17
18	13	8	12	13	75	74	14	17	14	16	10	17
19	12	8	12	b10	61	52	13	16	14	15	8	17
20	12	8	10	b8	54	59	13	18	14	15	8	15
21	13	8	11	b10	53	117	14	17	14	14	8	17
22	13	8	11	15	46	148	12	14	15	15	24	18
23	12	8	12	14	44	109	13	13	14	15	31	18
24	14	9	12	13	40	81	13	13	14	17	17	18
25	17	9	11	12	37	74	11	15	15	17	16	19
26	16	9	12	13	32	78	8	13	15	15	16	*18
27	16	9	12	12	*30	76	9	13	15	15	16	17
28	19	9	12	b10	24	69	14	14	12	17	16	15
29	21	9	12	b8	-	65	38	13	13	17	17	15
30	20	10	12	b7	-	74	13	14	14	16	29	16
31	12	-	12	b8	-	74	-	15	-	16	24	-
Total	426	247	354	334	5,259	1,724	1,157	540	547	455	455	520
Mean	13.7	8.2	11.4	10.8	188	55.6	38.6	17.4	18.2	14.7	14.7	17.3
Ac-ft	845	490	702	662	10,430	3,420	2,290	1,070	1,080	902	902	1,030

Calendar year 1950: Max 213 Min 5 Mean 25.3 Ac-ft 17,100
Water year 1950-51: Max 1,080 Min 7 Mean 32.9 Ac-ft 23,820

Peak discharge (base, 130 cfs).--Feb. 8 (about 2 a.m.) 2,550 cfs (6.55 ft); Mar. 16 (1 p.m.) 755 cfs (3.50 ft); May 16 (10:30 a.m.) 153 cfs (1.64 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and weather records.
b Stage-discharge relation affected by ice.
Note.--Backwater from moss Oct. 1-17, July 5 to Sept. 30.

Reservoirs in Malheur River basin, Oreg.

Warmsprings Reservoir.--Lat 43°35', long. 118°12', in SE¼ sec. 8, T. 23 S., R. 37 E., near right end of dam on Malheur River, 4 miles upstream from South Fork and 4 miles northwest of Riverside. Drainage area, 1,100 sq mi, approximately. Records available, January 1920 to September 1951. Tape gage read once daily April to September and once weekly October to April. Datum of gage is 3,327 ft above mean sea level (surveys of Bureau of Reclamation); gage readings have been reduced to elevations above mean sea level. Maximum contents observed during year, 121,400 acre-ft Apr. 26 (elevation, 3,389.18 ft); no contents Oct. 1-11. Maximum contents observed during period 1920-51, 196,000 acre-ft Apr. 7, 1942 (elevation, 3,407.08 ft); no contents Sept. 18 to Nov. 1, 1929, Aug. 26 to sometime in November 1935, Sept. 18 to Oct. 11, 1950.

Reservoir is formed by concrete-arch dam; capacity, 191,000 acre-ft between elevations 3,327 ft (bottom of outlet tunnel) and 3,406 ft (top of 5-foot flashboards). Dead storage, 1,400 acre-ft below elevation 3,327 ft. Records given herein represent contents above elevation 3,327 ft. Storage began in 1919. In 1926 a half interest in reservoir was purchased by the Federal Government for Vale project of Bureau of Reclamation. Water used to irrigate lands on both sides of river between Namorf and Ontario. Data for computing capacity table furnished by Bureau of Reclamation.

Agency Valley Reservoir.--Lat 43°55', long. 118°09', in SW¼ sec. 15, T. 19 S., R. 37 E., in control house at dam on North Fork Malheur River, a quarter of a mile northwest of Beulah. Drainage area, 420 sq mi, approximately. Records available December 1935 to September 1951. Pressure gage with mercury column read once daily. Datum of gage is at mean sea level (surveys by Bureau of Reclamation); to obtain mean sea level datum of 1929, add 7.72 ft. Maximum contents observed during year, 54,240 acre-ft May 18 (elevation, 3,336.93 ft); no contents Oct. 1-13. Maximum contents observed during period 1935-51, 62,770 acre-ft May 3, 1941 (elevation, 3,341.50 ft); no contents Sept. 17 to Oct. 13, 1950.

Reservoir is formed by earth-fill rock-faced dam; storage began in December 1935. Capacity, 59,920 acre-ft between elevations 3,263.21 ft (bottom of outlet tunnel) and 3,340 ft (top of 17-foot spillway gates); with gates lowered the capacity is 32,220 acre-ft. No dead storage. Water is used for irrigation of lands below Juntura, on Vale project of Bureau of Reclamation. Capacity table furnished by Bureau of Reclamation.

Other reservoirs.--There are several other reservoirs in the Malheur River basin, all with less than 3,500 acre-ft capacity except Willow Creek No. 3 Reservoir near Malheur, which has a capacity of 49,000 acre-ft.

Monthly elevation and contents, water year October 1950 to September 1951

Date	Warmsprings Reservoir			Agency Valley Reservoir		
	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	0	-	-	0	-
Oct. 31	-	a2,370	+2,370	3,285.50	2,160	+2,160
Nov. 30	-	a6,900	+4,530	3,294.85	6,010	+3,850
Dec. 31	-	a15,230	+8,330	3,301.87	10,210	+4,200
Calendar year 1950	-	-	+5,890	-	-	-5,550
Jan. 31	-	a21,650	+6,420	3,306.50	13,750	+3,540
Feb. 28	-	a54,840	+33,190	3,314.92	22,130	+8,380
Mar. 31	3,377.5	82,550	+27,710	3,323.45	32,850	+10,720
Apr. 30	3,389.0	120,800	+38,250	3,334.65	50,210	+17,360
May 31	3,386.30	111,400	-9,400	3,335.00	50,820	+610
June 30	3,380.51	92,130	-19,270	3,325.38	35,570	-15,250
July 31	3,369.45	58,660	-33,470	3,311.93	18,910	-16,660
Aug. 31	3,356.42	27,840	-30,820	3,300.12	9,050	-9,860
Sept.30	-	a5,200	-22,640	3,286.50	2,460	-6,590
Water year 1950-51	-	-	+5,200	-	-	+2,460

a No gage-height record; contents interpolated.

South Fork Payette River at Lowman, Idaho

Location.--Lat 44°05'00", long. 115°37'30", in SW¼ sec. 27, T. 9 N., R. 7 E., 1,200 ft upstream from Rock Creek, half a mile northwest of Lowman and 4,100 ft downstream from Clear Creek.

Drainage area.--456 sq mi.

Records available.--May 1941 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,790 ft (from river-profile map). Prior to Dec. 18, 1941, staff gage st site 900 ft upstream at different datum.

Average discharge.--10 years, 873 cfs.

Extremes.--Maximum discharge during year, 4,570 cfs May 28 (gage height, 6.44 ft); minimum, 163 cfs Jan. 29 (gage height, 2.46 ft).
1941-51: Maximum discharge, 5,250 cfs May 28, 1948 (gage height, 6.73 ft); minimum, 148 cfs Dec. 9, 1944 (gage height, 2.40 ft).

Remarks.--Records excellent. No regulation. Several small diversions for irrigation and placer mining, the return flow from which enters river above station.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

2.6	203	4.5	1,710
2.9	323	5.0	2,340
3.2	488	5.5	3,050
3.5	705	6.0	3,880
4.0	1,160	6.4	4,610

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	440	618	470	305	254	338	534	1,550	2,650	2,420	961	560
2	434	618	446	368	323	368	596	1,400	2,400	2,430	907	540
3	428	589	452	368	373	343	790	1,330	2,220	2,350	898	520
4	428	575	476	373	417	363	989	1,370	2,170	2,420	925	494
5	440	560	440	363	440	358	1,160	1,490	2,280	2,260	925	476
6	501	546	434	287	417	353	1,330	1,810	2,200	2,050	880	452
7	470	534	488	258	482	343	1,480	2,460	2,050	1,960	826	440
8	482	575	464	333	546	353	1,540	2,550	1,910	1,910	782	434
9	476	488	446	378	476	348	1,510	2,570	1,840	1,840	756	434
10	464	458	440	378	476	318	1,510	2,670	1,880	1,820	722	422
11	452	494	428	373	514	310	1,440	2,880	2,110	1,690	705	422
12	*446	476	440	338	520	353	*1,480	2,750	*2,480	*1,580	673	422
13	440	458	434	358	476	348	1,700	2,480	2,820	1,560	657	417
14	440	458	422	358	452	348	1,910	2,220	3,080	1,580	641	417
15	470	446	440	358	458	363	1,980	2,090	3,660	1,600	625	412
16	452	446	428	*353	440	390	1,900	*2,190	4,200	1,510	*603	406
17	452	470	417	333	412	348	1,940	2,470	4,130	1,470	589	400
18	482	560	412	328	446	328	2,020	2,820	3,860	1,420	575	395
19	470	534	406	358	384	343	2,040	3,000	3,620	1,400	567	390
20	446	514	406	353	422	358	1,960	3,050	3,460	1,380	567	384
21	434	546	395	378	406	390	1,770	3,110	3,350	1,300	582	384
22	422	501	384	373	390	400	1,640	3,350	3,130	1,200	611	384
23	417	476	400	353	390	384	1,570	3,740	2,800	1,120	689	384
24	412	464	390	373	390	395	1,540	3,950	2,690	1,080	697	378
25	428	464	390	358	390	440	1,450	3,860	2,650	1,080	618	*412
26	520	476	363	353	358	488	1,420	3,810	2,610	1,040	575	434
27	546	476	368	338	*378	546	1,470	4,130	2,530	998	553	400
28	575	*470	390	314	373	514	1,770	4,500	2,530	1,010	567	395
29	705	458	395	210	-	527	1,930	4,060	2,530	1,160	575	390
30	748	470	390	231	-	520	1,720	3,510	2,460	1,040	582	390
31	665	-	373	242	-	501	-	2,990	-	980	575	-
Total	14,985	15,218	13,027	10,444	11,803	12,079	46,089	86,160	82,300	48,658	21,408	12,788
Mean	483	507	420	337	422	390	1,536	2,779	2,743	1,570	691	426
Cfsm	1.06	1.11	0.921	0.739	0.925	0.855	3.37	6.09	6.02	3.44	1.52	0.934
In.	1.22	1.24	1.06	0.85	0.96	0.99	3.76	7.03	6.71	3.97	1.75	1.04
Ac-ft	29,720	30,180	25,840	20,720	23,410	23,960	91,420	170,900	163,200	96,510	42,460	25,360

Calendar year 1950: Max 4,290 Min 234 Mean 993 Cfsm 2.18 In. 29.55 Ac-ft 718,900
Water year 1950-11: Max 4,500 Min 210 Mean 1,027 Cfsm 2.25 In. 30.58 Ac-ft 743,700

* Discharge measurement made on this day.

Deadwood Reservoir near Lowman, Idaho

Location.--Lat 44°18', long. 115°39', in SE¼ sec. 8, T. 11 N., R. 7 E., at dam on Deadwood River, 15 miles north of Lowman.

Drainage area.--108 sq mi.

Records available.--October 1935 to September 1951.

Gage.--Staff gage on face of dam read once daily. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Datum of Geological Survey levels (1952, preliminary) is 22.8 ft higher.

Extremes.--Maximum elevation observed during year, 5,334.7 ft June 29, 30; minimum observed, about 5,205.0 ft Sept. 18-30, reservoir drained for repairs.
1935-51: Maximum elevation observed, 5,337.1 ft June 1, 2, 1943; minimum observed, that of Sept. 18-30, 1951.

Remarks.--Reservoir is formed by concrete arch dam completed in 1930; storage began Nov. 2, 1930. Reported capacity, 160,400 acre-ft between elevations 5,230.0 ft (minimum operating level because of fish protection, 27 ft above sill of emergency gate in front of needle valve) and 5,334.0 ft (crest of spillway). Storage below elevation 5,230.0 ft, about 1,500 acre-ft. Water is used to augment flow of Payette River at Black Canyon powerplant near Emmett. During late fall of 1936, Bureau of Reclamation cut a transmountain canal to divert a small flow of water from a tributary of Johnson Creek in Salmon River basin to Deadwood River basin for supplemental storage in Deadwood Reservoir. Discharges of 29.0 cfs and 14.4 cfs were measured in this canal June 13 and July 11, respectively. Gage usually read 7 to 9 a.m.

Cooperation.--Gage readings furnished by Bureau of Reclamation.

Elevation, in feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	322.0	308.85	311.9	313.6	311.15	313.0	315.55	317.4	333.3	334.45	320.85	280.6
2	320.8	309.0	312.0	313.5	311.2	313.05	315.7	317.05	333.2	334.25	319.9	278.9
3	319.65	309.15	312.1	313.35	311.25	313.1	315.8	316.65	333.0	334.2	318.95	277.5
4	318.5	309.3	312.2	313.1	311.3	313.15	315.95	316.65	332.8	334.2	318.0	275.7
5	317.4	309.45	312.3	312.85	311.4	313.2	316.15	316.9	332.65	334.3	316.9	274.0
6	316.4	309.5	312.4	312.5	311.45	313.25	316.35	317.4	332.7	334.35	316.0	272.2
7	315.45	309.6	312.5	312.1	311.6	313.3	316.55	318.0	332.7	334.3	315.0	269.7
8	314.6	309.75	312.6	311.6	311.7	313.35	316.7	318.7	332.6	334.3	314.0	267.6
9	313.5	309.85	312.7	311.0	311.8	313.4	316.95	319.4	332.6	334.3	313.0	264.9
10	312.5	309.9	312.8	310.5	311.9	313.45	317.25	320.2	332.6	334.35	311.95	262.8
11	311.5	309.95	312.85	310.45	312.0	313.5	317.4	321.0	332.8	334.4	310.8	259.9
12	310.5	310.0	312.9	310.4	312.1	313.55	317.75	321.9	333.0	334.4	309.7	256.1
13	309.45	310.05	313.0	310.35	312.15	313.6	318.1	322.7	333.25	334.45	308.5	252.3
14	308.5	310.1	313.1	310.3	312.2	313.65	318.5	323.3	333.4	334.45	307.2	247.6
15	307.8	310.2	313.15	310.25	312.25	313.7	318.85	323.9	333.6	334.3	305.8	242.1
16	307.0	310.3	313.2	310.3	312.35	313.8	319.15	324.45	333.75	334.2	304.3	235.7
17	306.85	310.4	313.3	310.35	312.4	313.9	319.8	325.1	333.85	334.3	302.9	226.5
18	306.9	310.55	313.4	310.4	312.45	314.0	320.05	325.8	333.9	334.35	301.5	-
19	307.0	310.7	313.5	310.45	312.5	314.1	319.95	326.6	333.9	334.1	300.0	-
20	307.05	310.85	313.6	310.5	312.55	314.2	319.95	327.4	333.95	333.15	298.5	-
21	307.1	311.0	313.65	310.6	312.6	314.3	319.9	328.2	334.3	332.05	297.0	-
22	307.15	311.15	313.7	310.65	312.65	314.4	319.85	329.1	334.3	332.0	295.5	-
23	307.25	311.25	313.75	310.7	312.7	314.5	319.75	330.0	334.3	331.0	293.9	-
24	307.35	311.35	313.8	310.75	312.75	314.6	319.45	331.0	334.3	329.9	292.7	-
25	307.5	311.4	313.85	310.8	312.8	314.7	319.1	331.9	334.3	328.7	291.3	-
26	307.7	311.45	313.9	310.85	312.85	314.85	318.7	332.3	334.45	327.6	289.8	-
27	307.85	311.55	313.95	310.9	312.9	315.0	318.35	332.6	334.55	326.45	288.1	-
28	308.0	311.6	314.0	310.95	312.95	315.1	318.0	332.9	334.65	325.3	286.4	-
29	308.25	311.7	313.9	311.0	-	315.2	318.0	333.2	334.7	324.2	285.0	-
30	308.4	311.8	313.8	311.05	-	315.3	317.7	333.3	334.7	323.0	283.6	-
31	308.7	-	313.7	311.1	-	315.4	-	333.4	-	321.8	282.1	-

Note.--Add 5,000 ft to obtain elevation above mean sea level.

Deadwood River below Deadwood Reservoir, near Lowman, Idaho

Location.--Lat 44°18', long. 115°39', in NE¼ sec. 17, T. 11 N., R. 7 E., on right bank 300 ft upstream from Wilson Creek, a quarter of a mile downstream from Deadwood Dam at lower end of Deadwood Basin, 15 miles north of Lowman, and 18 miles upstream from mouth.

Drainage area.--108 sq mi.

Records available.--October 1926 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 5,181.52 ft above mean sea level (levels by Bureau of Reclamation). Prior to June 22, 1935, water-stage recorder at site 600 ft upstream at datum 4.85 ft higher. June 22 to Sept. 30, 1935, staff gage at site 20 ft upstream at datum 1.00 ft higher.

Average discharge.--24 years (1927-51), 209 cfs.

Extremes.--Maximum discharge during year, 1,890 cfs July 22 (gage height, 5.37 ft); minimum daily, 5 cfs many days during period of no gage-height record when gates in dam were closed.

1926-51: Maximum discharge, 2,150 cfs May 26, 1928 (gage height, 5.67 ft, site and datum then in use); no flow or small amount of leakage from reservoir for long periods during 1934-37 when gates in dam were closed.

Remarks.--Records good except those below 10 cfs, which are poor. Flow regulated since Nov. 2, 1930, by Deadwood Reservoir (see preceding page).

Revisions (water years).--W 1123: 1943.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

0.3	3	2.0	242
.4	6	2.5	377
.5	11	3.0	540
.7	24	4.0	970
1.0	50	5.4	1,890
1.5	132		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,720	6	6	218	5	5	7	936	1,000	879	1,470	1,140
2	1,630	6	6	356	5	5	7	936	1,000	614	1,380	1,130
3	1,580	6	6	454	5	5	7	646	1,000	515	1,390	1,120
4	1,570	6	5	454	5	5	7	325	1,000	392	1,520	1,120
5	1,450	6	5	508	5	5	7	6	869	360	1,420	1,180
6	1,310	6	5	548	5	5	7	6	819	444	1,330	1,200
7	1,260	6	5	661	5	5	6	6	762	404	1,330	1,180
8	1,310	6	5	740	5	5	6	6	621	360	*1,380	1,210
9	1,280	6	5	682	5	5	6	6	574	272	1,400	1,210
10	1,250	6	6	322	6	5	6	6	484	252	1,420	1,190
11	1,240	6	6	102	6	5	6	6	438	*262	1,450	1,150
12	1,240	5	6	102	6	5	6	6	*441	264	1,500	1,150
13	1,240	5	6	102	6	5	6	6	605	270	1,610	1,140
14	941	5	6	102	6	5	6	6	682	419	1,610	1,120
15	757	5	6	42	6	5	6	5	806	451	1,590	1,070
16	501	5	6	6	6	5	6	5	980	164	1,580	916
17	138	5	6	6	5	5	6	5	1,030	81	1,570	487
18	6	6	6	6	5	6	378	5	1,030	389	1,560	88
19	6	6	6	6	5	6	629	5	916	1,410	1,550	81
20	6	6	6	6	5	6	625	5	548	1,780	1,540	75
21	6	6	6	6	5	6	629	5	533	825	*1,520	78
22	7	6	6	6	5	6	629	5	922	1,160	1,510	80
23	7	6	6	6	5	6	814	*5	727	1,870	1,340	80
24	7	6	6	6	5	6	946	5	723	1,850	1,210	76
25	7	6	6	6	5	6	946	479	487	1,830	1,350	106
26	7	6	6	6	5	6	946	1,010	426	1,830	1,460	*109
27	7	6	6	5	5	6	941	1,010	457	1,830	1,450	88
28	7	6	120	5	5	*5	936	1,010	480	1,820	1,260	85
29	7	6	216	5	-	6	936	1,000	497	1,800	1,150	83
30	7	6	216	5	-	6	936	1,000	822	1,800	1,140	83
31	7	-	218	5	-	7	-	1,000	-	1,540	1,140	-
Total	20,511	174	926	5,484	147	169	10,399	9,462	21,679	28,137	44,130	19,825
Mean	662	5.8	29.9	177	5.2	5.5	347	305	723	908	1,424	661
Ac-ft	40,680	345	1,840	10,880	292	335	20,630	18,770	43,000	55,810	87,530	39,320

Calendar year 1950: Max 1,750 Min - Mean 254 Ac-ft 184,200
Water year 1950-51: Max 1,870 Min 5 Mean 441 Ac-ft 319,400

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 18 to Dec. 27, Jan. 16 to Apr. 17, May 5-24 except for staff-gage readings made about once weekly when gates were closed; discharge interpolated.

Deadwood River near Lowman, Idaho

Location.--Lat 44°05', long. 115°40', in sec. 29, T. 9 N., R. 7 E., on left bank 700 ft upstream from mouth and 2½ miles west of Lowman.

Drainage area.--230 sq mi, approximately.

Records available.--August 1921 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,680 ft (from topographic map).

Average discharge.--30 years, 388 cfs.

Extremes.--Maximum discharge during year, 2,110 cfs May 27 (gage height, 3.96 ft); minimum, 40 cfs Jan. 29 (gage height, 0.93 ft); minimum daily, 65 cfs Jan. 29.
1921-51: Maximum discharge, 4,230 cfs May 9, 1928 (gage height, 5.17 ft), from rating curve extended above 3,200 cfs; minimum recorded, 28 cfs Nov. 4, 1935 (gage height, 0.83 ft); minimum daily, 34 cfs Nov. 4, 1935.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated since Nov. 2, 1930, by Deadwood Reservoir (see p. 160). Small amount of water diverted from tributary of Johnson Creek in Salmon River basin to Deadwood River basin during year.

Revisions.--W 633: Drainage area.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	58	2.5	606
1.3	91	3.0	995
1.6	164	3.5	1,530
2.0	319	3.9	2,090

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,760	131	108	329	b75	84	156	1,480	1,630	1,150	1,490	1,220
2	1,690	136	95	418	b80	102	186	1,430	1,570	942	1,430	1,220
3	1,610	129	95	587	b90	87	252	1,210	1,530	777	1,450	1,210
4	1,610	119	114	593	b100	95	324	942	1,510	703	1,520	1,200
5	1,540	114	104	620	106	97	396	606	1,490	626	1,510	1,230
6	1,430	110	89	667	108	97	464	732	1,410	654	1,400	1,280
7	1,360	108	117	696	117	82	512	950	1,320	660	1,390	1,260
8	1,380	119	110	848	b125	87	542	1,040	1,180	593	1,420	1,290
9	1,380	106	102	815	129	87	536	1,070	1,080	530	1,450	1,310
10	1,330	87	99	561	134	89	530	1,140	995	475	1,460	1,280
11	1,330	106	99	196	147	89	524	1,170	942	475	1,480	1,240
12	*1,340	102	99	190	150	104	*555	1,060	995	*475	1,520	1,230
13	1,330	93	95	186	139	86	626	924	*1,080	469	1,610	1,230
14	1,140	93	89	196	136	89	710	815	1,280	548	1,610	1,210
15	889	91	99	*183	131	93	739	769	1,400	626	1,610	1,160
16	724	89	102	91	114	112	724	*823	1,570	467	*1,580	1,030
17	426	99	95	78	112	93	739	933	1,620	261	1,580	754
18	124	131	91	80	112	82	1,010	1,020	1,600	409	1,570	203
19	106	129	89	84	95	93	1,410	1,060	1,470	1,330	1,560	177
20	95	110	91	86	104	97	1,380	1,040	1,150	1,860	1,540	174
21	89	119	91	86	99	108	1,290	1,040	950	1,330	1,560	177
22	86	110	87	91	95	112	1,240	1,090	1,380	884	1,540	177
23	84	106	89	82	95	108	1,330	1,180	1,170	1,880	1,460	174
24	84	102	91	93	99	110	1,480	1,170	1,130	1,880	1,330	174
25	84	102	87	95	99	126	1,470	1,420	942	1,880	1,380	*190
26	110	99	80	84	86	139	1,470	2,020	784	1,880	1,490	232
27	126	99	84	87	*99	150	1,490	2,030	808	1,870	1,490	183
28	136	*99	b130	77	99	144	1,700	2,020	815	1,860	1,390	170
29	180	97	b350	b65	-	153	1,730	1,910	815	1,860	1,260	167
30	183	102	b340	b70	-	147	1,570	1,830	1,010	1,840	1,240	167
31	156	-	339	b72	-	139	-	1,700	-	1,650	1,230	-
Total	23,912	3,237	3,750	8,406	3,075	3,281	27,085	37,624	36,626	32,844	45,550	22,719
Mean	771	108	121	271	110	106	903	1,214	1,221	1,059	1,469	757
Ac-ft	47,430	6,420	7,440	16,670	6,100	6,510	53,720	74,630	72,650	65,150	90,350	45,060

Calendar year 1950: Max 2,390 Min 60 Mean 502 Ac-ft 363,500
Water year 1950-51: Max 2,030 Min 65 Mean 680 Ac-ft 492,100

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

South Fork Payette River near Garden Valley, Idaho

Location.--Lat 44°04', long. 115°56', in sec. 1, T. 8 N., R. 4 E., at Garden Valley ranger station, 300 ft upstream from Station Creek, 2.7 miles southeast of Garden Valley, and 5.9 miles upstream from Middle Fork.

Drainage area.--779 sq mi.

Records available.--May 1921 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,090 ft (from river-profile map). Prior to Aug. 3, 1926, staff gage at same site at datum 0.98 ft higher. Aug. 3, 1926, to Dec. 5, 1933, staff gage at present site and datum.

Average discharge.--27 years (1924-51), 1,263 cfs.

Extremes.--Maximum discharge during year, 7,350 cfs May 28 (gage height, 6.31 ft); minimum, 348 cfs Jan. 29 (gage height, 1.55 ft).
1921-51: Maximum discharge observed, 10,600 cfs May 26, 1928 (gage height, 8.0 ft); minimum, 75 cfs Dec. 15, 1935, Jan. 26, 1936 (gage height, 0.70 ft), from rating curve extended below 280 cfs; minimum daily, 196 cfs Dec. 10, 1944.

Remarks.--Records good. Practically no diversion above station. Since Nov. 2, 1930, flow has been regulated by Deadwood Reservoir (see p.160).

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.6	376	3.5	2,220
2.0	644	4.0	2,980
2.5	1,070	5.0	4,710
3.0	1,580	6.3	7,330

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,300	805	644	668	b520	487	848	3,450	4,860	3,950	2,660	1,820
2	2,230	814	599	764	548	521	944	3,200	4,500	3,780	2,540	1,810
3	2,120	781	592	998	555	494	1,170	2,920	4,250	3,490	2,520	1,780
4	2,110	748	660	998	534	521	1,460	2,600	4,160	3,450	2,680	1,760
5	2,080	732	622	998	548	521	1,740	2,290	4,270	3,190	2,710	1,780
6	2,000	716	576	1,010	487	507	2,030	2,740	4,120	3,000	2,460	1,830
7	1,860	700	676	b980	676	500	2,280	3,690	3,860	2,920	2,420	1,800
8	1,880	756	652	b1,160	839	494	2,390	3,980	3,560	2,740	2,390	1,800
9	1,910	668	629	1,240	773	507	2,320	4,000	3,330	2,600	2,380	1,830
10	1,830	576	614	1,090	764	468	2,360	4,160	3,270	2,460	2,330	1,800
11	1,820	652	614	629	814	430	2,210	4,470	3,320	2,380	2,360	1,760
12	1,810	644	606	592	864	507	2,290	4,270	3,740	2,210	2,350	1,740
13	*1,800	614	606	584	797	514	*2,540	3,830	*4,250	*2,140	2,460	1,740
14	1,650	606	592	592	732	521	2,930	3,400	4,730	2,220	2,450	1,700
15	1,390	599	599	*614	724	534	3,080	3,120	5,450	2,360	2,400	1,660
16	1,230	592	606	541	692	622	2,980	*3,250	6,290	2,160	2,390	1,540
17	917	614	584	514	629	548	3,010	3,670	6,410	1,830	*2,360	1,300
18	622	732	576	487	652	507	3,330	4,140	6,170	1,850	2,330	684
19	606	748	569	514	576	541	3,830	4,410	5,810	2,820	2,320	592
20	576	676	569	521	599	562	3,720	4,470	5,270	3,520	2,300	584
21	569	740	562	528	592	592	3,420	4,480	4,820	3,050	2,300	569
22	555	684	541	534	562	644	3,190	4,790	5,050	2,010	2,320	576
23	548	644	562	514	555	622	3,200	5,370	4,470	3,270	2,330	576
24	541	622	555	528	555	629	3,370	5,610	4,270	3,220	2,190	569
25	548	614	548	534	555	692	3,220	5,670	4,050	3,200	2,110	592
26	660	622	507	521	514	756	3,200	6,390	3,780	3,170	2,250	*700
27	708	*629	487	500	528	848	3,280	6,720	3,710	3,110	2,220	606
28	764	622	534	449	*534	822	3,810	7,250	3,740	3,120	2,110	584
29	873	614	781	394	-	830	4,120	6,830	3,710	3,270	1,900	562
30	971	622	773	b440	-	848	3,760	6,070	3,810	3,140	1,880	562
31	873	-	748	b480	-	805	-	5,390	-	2,930	1,850	-
Total	40,351	20,186	18,783	20,916	17,718	18,394	82,032	136,630	133,030	88,560	72,270	37,206
Mean	1,302	673	606	675	633	593	2,734	4,407	4,434	2,857	2,331	1,240
Ac-ft	80,040	40,040	37,260	41,490	35,140	36,480	162,700	271,000	263,900	175,700	143,300	73,800

Calendar year 1950: Max 7,220 Min 310 Mean 1,638 Ac-ft 1,186,000
Water year 1950-51: Max 7,250 Min 394 Mean 1,880 Ac-ft 1,361,000

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

South Fork Payette River near Banks, Idaho

Location.--Lat 44°05'30", long. 116°06'00", in sec. 28, T. 9 N., R. 3 E., on right bank 1 mile upstream from North Fork Payette River and 1½ miles northeast of Banks.

Drainage area.--1,200 sq mi, approximately.

Records available.--August 1921 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 2,805 ft (from river-profile map). Prior to Sept. 12, 1922, staff gage at same site and datum.

Average discharge.--30 years, 1,679 cfs.

Extremes.--Maximum discharge during year, 8,820 cfs May 28 (gage height, 8.63 ft); minimum, 355 cfs Jan. 30 (gage height, 0.25 ft).
1921-51: Maximum discharge, 13,800 cfs May 17, 1927 (gage height, 10.6 ft, from floodmarks); minimum, about 225 cfs Dec. 15, 1935, Jan. 26, 1936, Dec. 26, 1939.

Remarks.--Records excellent except those for period of no gage-height record, which are fair. Small diversions above station for irrigation. Since Nov. 2, 1930, flow has been regulated by Deadwood Reservoir (see p. 160).

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

0.4	420	4.0	3,030
1.0	720	6.0	5,250
2.0	1,370	8.6	8,770
3.0	2,130		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,420	1,070	872	840	a650	744	1,610	4,990	5,870	4,370	2,810	1,990
2	2,360	1,120	792	938	a720	804	1,850	4,560	5,460	4,200	2,700	1,960
3	2,240	1,050	798	1,210	a760	750	2,300	4,220	5,120	3,880	2,660	1,930
4	2,240	996	905	1,220	a760	780	2,800	3,920	4,980	3,900	2,800	1,910
5	2,240	957	886	1,190	a800	792	3,290	3,680	5,210	3,620	2,870	1,910
6	2,190	931	786	1,170	a750	780	3,870	4,240	5,070	3,360	2,620	1,970
7	2,030	912	944	1,050	a1,000	774	4,200	5,370	4,760	3,290	2,560	1,940
8	2,030	996	931	1,370	a1,500	750	4,310	5,950	4,410	3,080	2,510	1,920
9	2,070	898	879	1,480	a1,400	768	4,140	5,960	4,110	2,970	2,510	1,970
10	1,990	732	866	1,360	a1,500	687	4,170	6,130	4,030	2,800	2,460	1,940
11	1,970	846	860	866	a1,600	648	3,890	6,510	4,070	2,760	2,480	1,900
12	1,950	840	866	834	*1,650	738	3,940	6,230	4,500	2,560	2,450	1,870
13	*1,950	792	860	786	1,560	768	*4,310	5,650	5,060	*2,490	2,560	1,870
14	1,860	792	828	798	1,380	780	4,920	5,050	*5,560	2,510	2,550	1,820
15	1,550	780	866	822	1,290	822	5,130	4,650	6,250	2,660	2,520	1,790
16	1,430	768	872	762	1,200	1,020	4,930	4,750	7,130	2,500	2,480	1,670
17	1,110	822	828	714	1,080	892	4,920	*5,220	7,260	2,140	*2,440	1,480
18	828	950	810	709	1,110	810	5,240	5,750	6,960	2,110	2,430	879
19	804	1,010	798	720	964	872	5,720	6,060	6,560	2,850	2,410	726
20	744	879	798	714	996	944	5,520	6,120	6,050	3,620	2,400	709
21	714	944	786	726	964	1,040	5,000	6,090	5,550	3,370	2,390	698
22	698	886	750	744	912	1,140	4,600	6,380	5,700	2,060	2,420	704
23	687	834	768	698	905	1,080	4,520	7,030	5,120	3,420	2,470	704
24	676	804	768	750	898	1,110	4,690	7,300	4,860	3,360	2,410	698
25	692	792	756	774	898	1,250	4,510	7,230	4,640	3,350	2,240	709
26	860	810	704	750	810	1,380	4,500	7,900	4,300	3,290	2,380	*872
27	924	822	682	732	816	1,540	4,660	8,230	4,220	3,230	2,340	774
28	1,030	*810	752	643	*846	1,510	5,600	8,710	4,210	3,220	2,300	732
29	1,170	798	*964	474	-	1,530	6,250	8,270	4,170	3,350	2,090	714
30	1,320	828	1,020	452	-	1,590	5,540	7,370	4,190	3,240	2,070	714
31	1,170	-	970	560	-	1,510	-	6,550	-	3,070	2,030	-
Total	45,947	26,469	25,945	26,856	29,719	30,603	130,930	186,070	155,380	96,630	76,360	41,473
Mean	1,482	882	837	866	1,061	987	4,364	6,002	5,179	3,117	2,463	1,382
Ac-ft	91,130	52,500	51,460	53,270	58,950	60,700	259,700	369,100	308,200	191,700	151,500	82,260

Calendar year 1950: Max 8,990 Min 440 Mean 2,205 Ac-ft 1,596,000
Water year 1950-51: Max 8,710 Min 452 Mean 2,390 Ac-ft 1,730,000

* Discharge measurement made on this day.
a No gage-height record: discharge computed on basis of weather records and records for station near Garden Valley.

Payette Lake at McCall, Idaho

Location.--Lat 44°55', long. 116°07', in sec. 8, T. 18 N., R. 3 E., at outlet of lake on North Fork Payette River, at McCall.

Drainage area.--144 sq mi.

Records available.--August 1921 to September 1950 (fragmentary prior to Nov. 23, 1943).

Gage.--Water-stage recorder. Datum of gage is 4,982.73 ft above mean sea level (unadjusted). Prior to Aug. 26, 1931, staff gage at site 25 ft downstream at 2.0 ft higher datum. Aug. 26, 1931, to Nov. 22, 1943, staff gage at site 75 ft downstream at present datum.

Extremes.--Maximum gage height during year, 7.08 ft July 4; minimum, 3.49 ft Apr. 11, 12. 1921-51: Maximum gage height observed, 8.75 ft July 13, 1935; minimum observed, 0.95 ft Oct. 3, 1931.

Remarks.--Flow from Payette Lake is regulated within natural range by tainter gates and removable stoplogs of a buttress and slab-type dam completed in November 1943. During period 1923 to 1943 lake was regulated by structure consisting of a series of concrete-filled cribs supporting removable flashboards. Some regulation is reported to have been effected by timber flashboards for several years prior to 1923. Lake area is approximately 5,000 acres. No capacity table has been developed. Water is used for irrigation of lands in vicinity of Emmett. No diversion above station.

Cooperation.--Water-stage recorder inspected by United States Forest Service.

Revisions (water years).--W 753: 1931. W 1013: Drainage area.

Gage height, in feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.65	5.58	4.08	4.15	3.96	4.01	3.93	3.82	4.82	7.04	4.92	4.57
2	4.63	5.53	4.09	4.16	3.94	4.00	3.93	3.72	4.57	7.05	4.89	4.56
3	4.63	5.41	4.11	4.17	3.95	3.98	3.94	3.63	4.38	7.03	4.87	4.54
4	4.62	5.31	4.17	4.16	4.02	4.03	3.96	3.59	4.34	7.04	4.86	4.53
5	4.65	5.21	4.19	4.15	4.06	4.08	4.01	3.64	4.45	6.96	4.85	4.53
6	4.67	5.18	4.21	4.13	4.06	4.10	4.04	3.81	4.61	6.97	4.85	4.51
7	4.65	5.05	4.27	4.11	4.09	4.11	3.88	4.13	4.67	7.03	4.84	4.51
8	4.61	4.99	4.26	4.09	4.10	4.10	3.72	4.40	4.67	7.01	4.83	4.49
9	4.57	4.87	4.26	4.08	4.12	4.11	3.59	4.58	4.62	6.98	4.81	4.48
10	4.53	4.75	4.24	4.07	4.15	4.09	3.54	4.78	4.63	6.98	4.79	4.47
11	4.49	4.62	4.21	4.08	4.15	4.07	3.50	5.02	4.73	5.94	4.77	4.46
12	4.45	4.50	4.20	4.06	4.16	4.06	3.49	5.10	4.91	6.93	4.74	4.43
13	4.44	4.40	4.20	4.06	4.15	4.04	3.53	4.95	5.09	6.96	4.73	4.42
14	4.42	4.31	4.20	4.08	4.14	4.03	3.62	4.73	5.24	6.96	4.71	4.40
15	4.39	4.20	4.20	4.08	4.13	4.04	3.71	4.53	5.48	6.97	4.69	4.37
16	4.35	4.11	4.20	4.07	4.12	4.06	3.79	4.47	5.75	6.97	4.60	4.35
17	4.35	-	4.19	4.11	4.12	4.04	3.81	4.64	5.85	6.94	4.64	4.30
18	4.39	-	4.18	4.10	4.12	4.03	3.86	4.82	5.83	6.82	4.64	4.23
19	4.39	-	4.18	4.10	4.11	4.00	3.91	4.93	5.82	6.70	4.63	4.19
20	4.38	-	4.16	4.08	4.10	3.99	3.91	4.99	6.20	6.57	4.60	4.17
21	4.37	-	4.15	4.10	4.09	3.98	3.87	5.07	6.56	6.43	4.59	4.09
22	4.37	-	4.14	4.09	4.08	3.97	3.78	5.20	6.75	6.30	4.58	4.04
23	4.35	-	4.15	4.09	4.07	3.96	3.68	5.46	6.83	6.15	4.61	3.99
24	4.33	-	4.14	4.09	4.05	3.94	3.62	5.61	6.88	6.01	4.62	3.91
25	4.33	-	4.13	4.08	4.06	3.94	3.57	5.62	6.90	5.85	4.62	3.87
26	4.39	-	4.12	4.07	4.05	3.93	3.56	5.59	6.90	5.70	4.61	3.83
27	4.41	-	4.10	4.05	4.03	3.93	3.63	5.65	6.90	5.55	4.59	3.75
28	4.51	4.00	4.11	4.04	4.02	3.93	3.77	5.75	6.98	5.40	4.60	3.70
29	4.74	4.02	4.12	4.02	-	3.92	3.92	5.67	7.02	5.25	4.60	3.65
30	5.25	4.05	4.14	3.98	-	3.94	3.90	5.42	7.03	5.09	4.59	3.65
31	5.55	-	4.15	3.96	-	3.93	-	5.12	-	4.96	4.58	-

North Fork Payette River at McCall, Idaho

Location.--Lat 44°54'30", long. 116°07'30", in sec. 8, T. 18 N., R. 3 E., at McCall, a quarter of a mile downstream from outlet of Payette Lake.

Drainage area.--144 sq mi.

Records available.--September 1908 to June 1917, May 1919 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,970 ft (by barometer). Prior to Oct. 14, 1908, staff gage at site 1 mile downstream at different datum. Oct. 14, 1908, to Dec. 18, 1923, staff gages at sites near present gage at present datum.

Average discharge.--40 years (1908-16, 1919-51), 351 cfs.

Extremes.--Maximum discharge during year, 2,400 cfs May 28 (gage height, 5.97 ft); minimum, 8 cfs Sept. 6 (gage height, 1.38 ft).
1908-17, 1919-51: Maximum discharge, 4,260 cfs June 10, 1933, June 4, 1948; maximum gage height, 7.71 ft June 4, 1948; practically no flow Nov. 5-8, 1931, Nov. 17-24, 1933, Nov. 14-27, 1935, Oct. 22 to Nov. 11, 1938.

Remarks.--Records good except those for periods of no gage-height record and those below about 10 cfs, which are fair. Flow partly regulated by gates at outlet of Payette Lake (see preceding page) and several smaller lakes upstream. No diversions above station.

Cooperation.--Water-stage recorder inspected by employee of United States Forest Service.

Revisions.--W 963: Drainage area.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.5	13	3.5	486
1.7	23	4.0	770
2.0	48	4.5	1,100
2.3	90	5.0	1,490
2.6	154	6.0	2,430
3.0	275		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	648	147	165	121	130	108	824	1,510	733	94	24
2	36	642	147	170	126	128	108	770	1,310	745	83	23
3	36	625	152	173	132	*126	113	720	1,080	739	67	22
4	36	614	170	170	137	135	119	696	872	1,070	47	21
5	36	602	170	168	147	149	130	727	918	878	40	20
6	64	586	176	a160	144	157	403	824	1,000	517	44	18
7	154	575	193	a155	157	159	842	1,040	1,040	472	46	20
8	152	564	187	a150	159	154	751	1,230	1,040	512	45	19
9	152	548	187	a145	165	159	678	1,370	1,010	467	43	17
10	149	527	184	a145	170	154	548	1,520	1,020	424	41	17
11	147	517	*181	a145	173	149	486	1,720	1,080	376	39	16
12	118	501	181	a140	178	144	486	1,780	1,170	316	38	16
13	51	491	178	a140	173	142	501	1,640	1,280	294	37	16
14	84	472	176	a145	170	137	537	1,460	1,380	272	34	82
15	126	462	181	a145	168	142	569	1,310	1,560	261	32	21
16	94	448	181	a145	168	147	684	1,270	1,780	261	32	79
17	108	438	176	*157	165	142	824	1,390	1,850	418	32	162
18	162	424	176	154	162	135	872	1,520	1,830	476	*31	142
19	222	416	173	149	159	130	878	1,630	971	*476	31	73
20	*196	214	170	147	154	126	878	1,680	*398	481	30	82
21	128	87	170	149	154	121	848	1,740	571	443	29	134
22	128	95	168	149	149	119	806	1,870	866	434	28	143
23	128	103	165	149	147	117	758	2,090	897	462	29	85
24	128	108	165	149	144	113	714	2,240	918	467	28	201
25	128	115	159	147	144	111	*684	2,250	925	467	27	*84
26	142	121	154	144	142	111	684	*2,220	925	462	26	145
27	213	126	149	140	140	107	714	2,280	702	452	26	109
28	216	130	154	135	135	105	800	2,360	684	443	25	141
29	222	132	159	130	-	107	884	2,290	770	434	24	91
30	235	140	159	126	-	113	878	2,020	708	429	24	83
31	460	-	168	124	-	108	-	1,750	-	224	24	-
Total	4,287	11,471	5,256	4,610	4,283	4,077	18,285	48,231	32,065	14,905	1,176	2,106
Mean	138	382	170	149	153	132	610	1,556	1,069	481	37.9	70.2
Ac-ft	8,500	22,750	10,430	9,140	8,500	8,090	36,270	95,660	63,600	29,560	2,330	4,180

Calendar year 1950: Max 2,880 Min 36 Mean 438 Ac-ft 317,300
Water year 1950-51: Max 2,360 Min 16 Mean 413 Ac-ft 299,000

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of gage-height relation curve and gage heights for Payette Lake.

Fish hatchery diversion at McCall, Idaho

Location.--Lat 44°54'30", long. 116°07'00", in sec. 8, T. 18 N., R. 3 E., immediately below below outlet from fish hatchery tanks, just above point of return to North Fork Payette River, 1 mile west of McCall.

Records available.--October 1942 to September 1951.

Gage.--Staff gage and Parshall flume. Altitude of gage is 4,980 ft (from topographic map).

Extremes.--1942-51: Maximum daily discharge, 4.8 cfs several days during April, May and July 1943; no flow Sept. 22 to Nov. 7, 1943.

Remarks.--Records fair. Flow regulated by fish hatchery, water for which is diverted from Payette Lake or North Fork Payette River and bypasses gaging station on that stream.

Cooperation.--Gage readings furnished by Idaho State Fish and Game Commission.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

0.5	1.4
.6	2.0
.7	2.5
.9	3.7
1.1	5.0

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	1.9	1.6	1.6	1.8	1.8	1.8	2.1	2.9	3.1	3.0	2.7
2	1.9	1.8	1.6	1.6	1.8	1.8	1.8	2.2	2.9	3.1	3.0	2.7
3	1.9	1.8	1.6	1.6	1.8	*1.8	1.8	2.2	2.9	3.3	3.1	2.7
4	1.8	1.8	1.6	1.6	1.8	1.8	1.8	2.2	2.9	3.1	3.1	2.6
5	1.9	1.8	1.6	1.6	1.8	1.8	1.8	2.2	2.9	3.1	2.6	2.6
6	1.9	1.8	1.6	1.6	1.8	1.8	1.8	2.1	2.9	3.1	2.6	2.6
7	1.9	1.8	1.6	1.6	1.8	1.8	1.8	2.1	2.9	3.1	2.6	2.6
8	2.0	1.8	1.6	1.6	1.8	1.8	1.8	4.4	2.8	3.1	2.6	2.4
9	2.1	1.8	1.6	1.7	1.8	1.8	1.9	4.4	2.8	3.1	2.6	2.4
10	2.1	1.8	1.6	1.7	1.8	1.8	1.9	4.4	2.8	3.1	2.5	2.4
11	2.1	1.8	*1.6	1.7	1.8	1.8	1.9	4.4	2.8	3.1	2.5	2.4
12	2.1	1.8	1.6	1.7	1.8	1.8	1.9	4.4	3.0	3.1	2.6	2.4
13	2.1	1.8	1.6	1.7	1.8	1.8	1.9	4.4	3.0	3.1	2.6	2.4
14	2.1	1.8	1.7	1.7	1.8	1.8	1.9	4.4	3.1	3.1	2.8	2.4
15	2.1	1.8	1.7	1.7	1.8	1.8	1.9	4.5	3.1	3.2	2.8	2.4
16	2.1	1.8	1.7	1.7	1.8	1.8	1.9	4.4	3.3	3.2	2.8	2.4
17	2.2	1.8	1.7	*1.7	1.8	1.8	2.0	4.3	3.3	3.1	2.8	2.4
18	2.2	1.8	1.6	1.7	1.8	1.8	2.0	4.2	3.2	3.1	2.8	2.4
19	2.2	1.8	1.6	1.7	1.8	1.8	2.0	4.0	3.2	*3.1	*2.8	2.2
20	*2.1	1.8	1.6	1.7	1.8	1.8	2.0	4.0	*3.2	3.1	2.9	2.2
21	2.2	1.8	1.6	1.7	1.8	1.8	2.0	3.8	3.3	3.1	2.8	2.2
22	2.2	1.7	1.7	1.7	1.8	1.8	2.0	3.6	3.3	3.1	2.8	2.2
23	2.1	1.7	1.7	1.7	1.8	1.8	2.0	3.1	3.3	3.1	2.8	2.2
24	2.1	1.7	1.7	1.7	1.8	1.8	2.0	3.3	3.3	3.1	2.4	*2.2
25	1.6	1.7	1.7	1.7	1.8	1.8	*2.0	3.1	3.3	3.1	2.7	2.2
26	1.6	1.7	1.7	1.7	1.8	1.8	2.0	*3.5	3.3	3.1	2.7	2.2
27	1.6	1.7	1.6	1.7	1.8	1.8	2.0	3.6	3.3	3.0	2.7	2.2
28	1.6	1.6	1.6	1.8	1.8	1.8	2.0	3.6	3.3	3.0	2.7	2.2
29	1.9	1.6	1.6	1.8	-	1.8	2.0	3.4	3.3	3.0	2.7	2.2
30	1.9	1.6	1.6	1.8	-	1.8	2.0	3.0	3.3	3.0	2.6	2.2
31	1.9	-	1.6	1.8	-	1.8	-	3.0	-	3.0	2.6	-
Total	61.4	52.9	50.5	52.3	50.4	55.8	57.6	108.3	92.9	96.0	84.6	71.3
Mean	1.98	1.76	1.63	1.69	1.80	1.80	1.92	3.49	3.10	3.10	2.73	2.38
Ac-ft	122	105	100	104	100	111	114	215	184	190	168	141

Calendar year 1950: Max 2.2 Min 0.9 Mean 1.54 Ac-ft 1,120
Water year 1950-51: Max 4.5 Min 1.6 Mean 2.28 Ac-ft 1,650

* Discharge measurement made on this day.

Lake Fork Payette River above Jumbo Creek, near McCall, Idaho

Location.--Lat 44°55', long. 115°59', in NE¼ sec. 8, T. 18 N., R. 4 E., on left bank 200 ft upstream from bridge at abandoned powerplant, a quarter of a mile upstream from Jumbo Creek, 3½ miles upstream from Lake Fork Reservoir dam, and 5½ miles east of McCall.

Drainage area.--48.9 sq mi.

Records available.--October 1945 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,140 ft (from topographic map). Prior to Nov. 10, 1945, staff gage at site 200 ft downstream at different datum.

Average discharge.--6 years, 151 cfs.

Extremes.--Maximum discharge during year, 1,080 cfs May 28 (gage height, 7.51 ft); minimum, 12 cfs Sept. 20-25; minimum gage height, 2.25 ft Sept. 25.
1945-51: Maximum discharge, 2,600 cfs June 3, 1948 (gage height, 9.19 ft), from rating curve extended above 1,000 cfs by logarithmic plotting; minimum, 8.9 cfs Sept. 28, 1949 (gage height, 1.89 ft).

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

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Aug. 12						Aug. 13 to Sept. 30	
2.5	17	4.0	94	6.0	390	2.2	12
2.7	23	4.5	135	6.5	560	2.4	18
3.0	34	5.0	190	7.2	895	2.6	24
3.5	60	5.5	270			2.9	36
						3.2	50

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	147	72	b53	37	a45	40	216	339	368	46	23
2	20	134	b68	52	39	*b46	47	197	305	357	44	22
3	19	126	b65	52	39	b46	59	193	308	344	41	21
4	21	130	b68	55	39	a45	74	255	310	423	40	20
5	34	140	*b55	52	38	a44	99	288	433	319	39	20
6	45	135	b65	b50	38	a44	126	430	357	280	38	19
7	31	134	b65	b46	b40	a43	151	576	324	263	35	18
8	34	130	b64	b45	b50	a42	166	560	310	244	34	17
9	35	101	64	b47	b60	a42	176	580	322	222	33	17
10	28	99	69	b48	b65	a40	177	671	376	206	31	16
11	25	101	68	b48	b60	a38	176	675	472	189	30	16
12	24	93	67	48	b55	a38	206	533	556	176	29	16
13	23	89	64	46	b52	a39	257	414	568	173	27	16
14	22	87	64	47	b52	a40	317	344	661	172	26	15
15	23	82	65	*46	b50	a40	314	341	819	160	25	15
16	23	80	64	44	b48	b38	322	472	808	145	24	14
17	31	80	63	41	b48	b36	362	622	708	136	23	14
18	99	79	61	b38	b50	b35	390	643	648	126	22	14
19	61	74	61	b41	b48	b35	376	639	600	118	*22	13
20	*46	79	60	b40	b47	b36	329	634	592	*107	21	12
21	40	85	59	b40	b45	b36	270	675	549	93	21	12
22	38	78	58	b39	b44	b35	245	782	486	85	22	13
23	34	75	59	b39	b45	b35	230	890	*452	79	46	12
24	32	73	60	41	b45	b34	227	819	446	74	41	12
25	49	75	58	41	a45	36	*219	767	405	71	28	*15
26	90	76	b48	40	b45	37	242	*777	382	66	24	19
27	88	78	b44	38	b44	37	290	829	376	61	23	15
28	98	75	b52	b37	b44	b36	379	862	393	58	28	14
29	439	73	58	b36	-	37	319	639	370	55	29	14
30	290	76	58	b35	-	37	252	515	362	52	28	17
31	185	-	55	b35	-	37	-	408	-	48	25	-
Total	2,047	2,884	1,901	1,360	1,312	1,209	6,837	17,226	14,037	5,270	945	481
Mean	66.0	96.1	61.3	43.9	46.9	39.0	228	556	468	170	30.5	16.0
Cfsm	1.35	1.97	1.25	0.898	0.959	0.798	4.66	11.4	9.57	3.48	0.624	0.327
In.	1.56	2.19	1.45	1.03	1.00	0.92	5.20	13.10	10.68	4.01	0.72	0.37
Ac-ft	4,060	5,720	3,770	2,700	2,600	2,400	13,560	34,170	27,840	10,450	1,870	954

Calendar year 1950: Max 1,160 Min 17 Mean 161 Cfsm 3.29 In. 44.75 Ac-ft 116,700
Water year 1950-51: Max 890 Min 12 Mean 152 Cfsm 3.11 In. 42.23 Ac-ft 110,100

Peak discharge (base, 850 cfs).--May 22 (11 p.m.) 1,060 cfs (7.48 ft); May 28 (2 a.m.) 1,080 cfs (7.51 ft); June 15 (10:30 p.m.) 1,070 cfs (7.49 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for station below Lake Irrigation District Canal.

b Stage-discharge relation affected by ice.

Lake Fork Reservoir near McCall, Idaho

Location.--Lat 44°54', long. 116°03', in NW¼NW¼ sec. 13, T. 18 N., R. 3 E., on Lake Fork Payette River, 3 miles east of McCall.

Drainage area.--64 sq mi, approximately.

Records available.--April 1926 to September 1951.

Gage.--Staff gage and graduations on concrete gate-control structure of dam; gage read once daily. Datum of gage is at mean sea level (levels by Lake Irrigation District).

Extremes.--Maximum contents observed during year, 19,360 acre-ft July 5 (elevation, 5,118.52); practically no storage at times during fall and winter.
1926-51: Maximum contents observed, 19,740 acre-ft June 19, 1941 (elevation, 5,118.75 ft); no storage above elevation 5,101.0 ft for long periods during fall and winter of most years.

Remarks.--Reservoir is formed by earth and rock-fill dam completed in 1926. Capacity, 16,940 acre-ft between elevations 5,101.0 ft (lower limit of capacity table, 4.0 ft above gate sill of outlet) and 5,117.0 ft (top of flashboards, 5.0 ft above spillway crest). Dead storage unknown. Water is used for irrigation of about 6,800 acres of land near McCall and Norwood. Figures given herein represent contents above 5,101.0 ft. There is some usable storage below elevation 5,101.0 ft, but natural flow passing through reservoir when outlet gates are operating prevents withdrawal of storage to elevation of sill of gates. Storage figures from gage heights as observed.

Cooperation.--Elevation record and capacity table furnished by Lake Irrigation District.

Contents, in acre-feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-								13,850	19,120	13,310	4,991
2	-								-	19,200	12,970	4,811
3	-								-	19,220	12,590	-
4	2,497								-	19,310	12,240	-
5	-								-	19,360	11,880	-
6	2,490								-	19,250	11,520	4,173
7	-								-	19,140	11,160	-
8	-								-	19,040	10,820	-
9	2,203								-	18,970	10,530	-
10	-								-	18,880	10,170	-
11	-								-	18,810	9,810	-
12	-								-	18,680	9,522	-
13	-								-	18,490	9,311	2,983
14	-								-	18,380	8,973	-
15	1,690								-	18,240	8,770	2,693
16	-								-	18,060	8,500	-
17	1,486								-	17,890	8,176	-
18	-								-	17,730	7,903	-
19	-								-	17,410	7,563	-
20	-								-	17,210	7,260	-
21	1,545								18,240	16,970	6,958	1,873
22	-								-	16,550	6,652	-
23	-								-	16,270	6,535	-
24	-								-	15,940	6,535	-
25	-						3,032		-	15,620	6,320	1,420
26	-								-	15,310	6,093	1,327
27	-							15,000	18,540	15,050	5,898	-
28	-								18,680	14,740	5,687	-
29	-								18,810	14,370	5,510	-
30	-								18,960	14,000	5,288	-
31	-						-		-	13,620	5,182	-

Monthly elevation and contents, water year October 1950 to September 1951

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
June 30	5,118.27	18,960	-
July 31	5,114.85	13,620	-5,340
Aug. 31	5,108.60	5,182	-8,438
Sept.30	†5,103.78	1,380	-3,802

† Interpolated.

Lake Irrigation District Canal near McCall, Idaho

Location.--Lat 44°54', long. 116°03', in SW¼ sec. 13, T. 18 N., R. 3 E., on right bank 600 ft downstream from head of canal, half a mile south of Lake Fork Reservoir, and 3 miles southeast of McCall.

Records available.--May 1926 to September 1951.

Gage.--Staff gage read once or twice daily. Altitude of gage is 5,090 ft (from topographic map). Prior to May 1947, staff gage at same site at different datum.

Extremes.--1926-51: Maximum daily discharge, 201 cfs June 30, 1948; no flow or small amount of leakage through headgate during nonirrigation seasons.

Remarks.--Records good except those for periods of no gage-height record, which are poor. No diversions between head and station. Canal diverts from right bank of Lake Fork Payette River in SW¼ sec. 13, T. 18 N., R. 3 E., for irrigation of 6,800 acres of land near McCall and Norwood, in the Lake Irrigation District project.

Cooperation.--Gage readings furnished by Lake Irrigation District.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

0.5	0	2.0	48
.7	2	2.5	75
.9	5	3.0	109
1.2	12	3.5	149
1.5	24	3.9	186

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a9							0	a40	179	144	48
2	a9							0	a40	181	144	47
3	a9					(*)		0	a50	179	139	48
4	9		(**)					0	a60	176	139	48
5	a7							0	a70	172	140	a48
6	5							0	a75	170	140	45
7	a5							0	a80	169	139	a42
8	a5							0	a80	171	138	a42
9	5							0	a80	170	121	a42
10	a5							0	a80	173	107	42
11	a4							0	a85	172	109	a42
12	a4							a1	a80	173	106	a42
13	a4							a1	a60	173	101	34
14	a3							a1	a60	172	101	a30
15	3							a1	a60	169	103	30
16	a3			(**)				a1	a50	168	101	25
17	**2							a2	a50	164	96	25
18	a2							a2	a110	164	*90	25
19	a2							a3	a175	163	86	25
20	a2							a3	a175	*163	83	25
21	1							a3	*178	161	83	25
22	0							a3	a178	*151	77	25
23	0							a3	a178	150	72	26
24	0						(**)	a3	a178	152	70	26
25	0							a3	a179	152	69	*26
26	0							a3	a179	147	69	18
27	0							*3	179	148	69	a13
28	0							a15	181	149	a68	a13
29	0							a30	181	148	60	a13
30	0							a35	181	145	51	a13
31	0							a40	-	143	48	-
Total	98	0	0	0	0	0	0	156	3,352	5,067	3,063	953
Mean	3.2	0	0	0	0	0	0	5.0	112	163	98.8	31.8
Ac-ft	194	0	0	0	0	0	0	309	6,650	10,050	6,080	1,890

Calendar year 1950: Max 182 Min 0 Mean 37.5 Ac-ft 27,130
Water year 1950-51: Max 181 Min 0 Mean 34.8 Ac-ft 25,170

* Discharge measurement or observation of no flow made on this day.
** Field estimate made on this day.
a No gage-height record; discharge estimated on basis of inflow-outflow study of Lake Fork Reservoir, record of gate changes, and record for Lake Fork Payette River below Lake Irrigation District Canal.

Lake Fork Payette River below Lake Irrigation District Canal, near McCall, Idaho

Location.--Lat 44°54', long. 116°03', in SW¼ sec. 13, T. 18 N., R. 3 E., on right bank 300 ft downstream from diversion dam for Lake Irrigation District Canal, half a mile downstream from Lake Fork Reservoir, and 3 miles southeast of McCall.

Drainage area.--64 sq mi, approximately.

Records available.--October 1940 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,080 ft (from topographic map).

Average discharge.--11 years, 131 cfs.

Extremes.--Maximum discharge during year, 942 cfs May 28 (gage height, 5.72 ft); minimum, 2.8 cfs Oct. 6 (gage height, 2.08 ft).
1940-51: Maximum discharge, 2,120 cfs June 3, 1948 (gage height, 7.09 ft), from rating curve extended above 1,200 cfs by logarithmic plotting; minimum, 0.4 cfs Mar. 27, 28, 1944; minimum gage height, 1.76 ft Mar. 28, 1944.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by Lake Fork Reservoir (see p. 169). Lake Irrigation District Canal diverts above station for irrigation of about 6,800 acres.

Revisions (water years).--W 963: 1941.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 11 to Mar. 15, May 18-31, June 15-18)

2.7	33	4.0	273
2.9	54	4.5	436
3.2	94	5.0	635
3.5	148	5.5	900

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	227	86	62	b42	b53	b46	102	426	140	75	54
2	44	242	84	62	b42	b54	47	102	341	163	74	54
3	44	245	82	62	b42	*b54	51	104	297	170	74	54
4	44	229	84	61	b43	b52	56	105	211	216	72	55
5	44	214	*80	61	b43	b52	65	107	119	229	70	54
6	62	204	80	b59	43	b51	78	110	119	184	67	54
7	104	194	84	b57	44	b51	96	115	159	152	67	55
8	92	187	82	55	45	52	115	115	140	123	69	54
9	66	170	80	55	52	b51	134	121	150	97	67	54
10	66	157	78	54	56	b49	150	130	175	75	69	53
11	66	146	76	53	60	b48	166	206	184	71	67	52
12	66	138	76	52	62	46	182	387	206	72	66	52
13	66	130	75	52	62	45	204	450	318	72	64	52
14	65	123	74	52	62	b45	235	447	398	69	62	51
15	65	117	75	52	61	45	262	415	526	69	59	51
16	65	112	75	*52	62	b44	276	418	630	64	58	52
17	*65	108	74	b52	b61	b43	297	506	645	60	59	50
18	66	105	72	b51	61	b42	315	630	554	69	*60	48
19	66	102	72	51	b60	b42	331	720	401	71	62	50
20	66	99	71	b50	59	b43	341	710	347	*78	62	48
21	70	97	69	50	59	44	344	720	*370	79	61	48
22	78	96	67	48	b58	b44	341	768	364	84	62	47
23	78	92	67	48	58	b43	334	872	279	80	65	46
24	76	91	67	48	56	b42	328	894	265	82	65	45
25	75	90	67	47	55	b43	*325	867	192	79	59	*45
26	78	88	65	47	b54	43	322	840	202	75	53	48
27	144	86	62	b46	b52	b44	216	*872	163	72	53	52
28	194	86	64	b45	b52	b45	94	900	159	76	52	51
29	209	85	64	b44	-	45	99	812	138	78	52	50
30	229	85	65	b43	-	b45	100	665	124	75	52	48
31	229	-	65	b42	-	b45	-	546	-	72	53	-
Total	2,726	4,145	2,282	1,613	1,506	1,445	5,950	14,756	8,602	3,096	1,950	1,527
Mean	87.9	138	73.6	52.0	53.8	46.6	198	476	287	99.9	62.9	50.9
Ac-ft	5,410	8,220	4,530	3,200	2,990	2,870	11,800	29,270	17,060	6,140	3,870	3,030

Calendar year 1950: Max 1,050 Min 12 Mean 148 Ac-ft 107,200
Water year 1950-51: Max 900 Min 42 Mean 136 Ac-ft 98,390

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

Cascade Reservoir at Cascade, Idaho

Location.--Lat 44°31'30", long. 116°03'00", in NE¼NE¼ sec. 26, T. 14 N., R. 3 E., just upstream from left abutment of dam on North Fork Payette River, half a mile downstream from Willow Creek and three-quarters of a mile northwest of Cascade.
Drainage area.--620 sq mi.
Records available.--January to December 1948 (fragmentary), January 1949 to September 1951.
Gage.--Staff gage read once daily. Datum of gage is at mean sea level (preliminary, unadjusted levels of U. S. Coast and Geodetic Survey).
Extremes.--Maximum contents observed during year, 188,100 acre-ft June 20 (elevation, 4,801.78 ft); minimum observed, 50,000 acre-ft Mar. 22 (elevation, 4,787.50 ft).
1948-51: Maximum contents observed, 314,400 acre-ft July 6, 1950; no contents at times during March and September 1948.
Remarks.--Reservoir is formed by earth-fill dam completed in May 1949. Storage began Nov. 7, 1947. Capacity, 703,200 acre-ft between elevations 4,766 ft (4.0 ft above sill of outlet tunnel) and 4,828 ft (top of spillway gates). Figures herein show contents above elevation 4,766 ft. The Bureau of Reclamation plans to limit withdrawal to elevation 4,787.5 ft, retaining 50,000 acre-ft capacity as dead storage. Contents table computed from tables furnished by Bureau of Reclamation (revised 1950). Water is used for irrigation of lands in the Payette Division of the Boise project and for power at Black Canyon powerplant near Emmett, pending construction of Scriver Creek power development and Garden Valley Reservoir.
Cooperation.--Gage readings and capacity table furnished by Bureau of Reclamation.

Contents, in acre-feet, at about 8 a.m., water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80,970	90,790	85,250	90,520	97,480	114,200	50,620	91,150	175,800	170,900	117,500	92,060
2	80,970	90,790	85,600	90,340	97,390	114,500	50,500	90,790	177,500	168,500	116,600	92,060
3	81,130	89,710	85,780	90,520	97,390	114,500	50,620	90,520	177,900	168,200	115,400	91,970
4	81,130	88,630	85,960	90,610	97,670	110,900	51,120	89,890	177,900	165,000	114,400	91,790
5	81,130	87,380	85,490	90,790	98,320	107,900	51,610	89,350	177,900	162,300	113,400	91,790
6	82,650	85,780	86,850	91,420	98,510	104,000	52,610	88,990	177,900	161,000	112,400	91,610
7	83,250	84,720	87,560	91,420	99,260	100,800	54,120	88,810	177,900	158,600	111,200	91,420
8	83,590	83,760	88,000	91,700	99,640	96,370	57,110	90,070	177,900	155,900	110,000	91,150
9	84,370	82,140	88,180	92,060	100,500	92,970	59,510	91,520	177,200	153,100	108,900	90,970
10	84,810	80,470	88,720	92,610	101,600	88,900	61,950	92,970	177,200	150,000	107,800	90,790
11	85,070	78,820	88,990	93,060	102,800	84,720	64,360	95,540	176,000	146,400	106,400	90,610
12	85,340	76,890	89,080	93,340	104,400	80,970	66,480	98,600	175,400	143,000	105,500	90,160
13	85,600	74,560	89,260	93,610	105,600	77,210	68,980	102,100	176,100	139,700	104,000	90,070
14	85,870	74,560	89,350	93,980	106,600	73,340	71,560	105,600	176,700	137,100	103,300	89,890
15	85,870	74,560	89,620	94,340	107,700	69,690	74,720	108,500	177,600	132,300	102,100	89,350
16	85,870	74,870	90,070	94,800	108,400	68,000	77,290	110,500	178,100	129,100	101,100	88,990
17	85,420	75,640	90,430	95,080	109,100	64,840	79,560	112,100	181,800	125,400	100,000	88,630
18	85,870	78,010	90,610	95,540	109,600	61,230	80,970	114,100	184,000	121,700	98,980	86,220
19	86,310	80,060	90,700	95,720	110,200	57,880	82,650	117,000	186,400	119,300	98,040	84,020
20	86,580	81,300	90,880	96,000	110,700	54,560	84,630	119,300	188,100	118,100	97,390	82,140
21	86,580	82,990	91,060	96,090	111,400	51,360	86,040	123,800	186,700	117,900	96,460	80,640
22	86,580	83,850	91,150	96,460	111,900	50,000	86,760	126,900	186,700	114,400	95,720	78,900
23	86,490	84,550	91,150	96,740	112,500	50,120	87,380	129,800	184,000	114,300	95,450	76,890
24	86,490	84,980	91,150	97,300	112,600	50,120	87,740	136,100	183,200	114,200	94,620	75,020
25	86,220	84,900	91,150	97,390	113,300	50,310	87,910	141,700	181,900	114,000	93,700	73,040
26	86,670	84,900	91,150	97,580	113,500	50,370	88,090	147,500	180,600	114,800	93,240	71,850
27	86,670	84,900	90,970	97,860	113,800	50,620	88,090	153,000	179,200	115,300	92,520	70,330
28	88,090	84,720	90,700	98,040	114,000	50,810	87,820	158,100	177,900	116,000	92,430	68,840
29	90,070	84,720	90,430	98,130	-	50,930	89,800	163,700	175,300	116,500	92,430	67,440
30	92,790	84,460	90,610	97,860	-	51,120	90,970	169,200	173,000	116,800	92,240	65,930
31	92,790	-	90,700	97,860	-	50,930	-	173,300	-	117,400	92,240	-

Monthly elevation and contents, water year October 1950 to September 1951

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	4,791.96	80,970	-
Oct. 31	4,793.30	92,790	+11,820
Nov. 30	4,792.37	84,460	-8,330
Dec. 31	4,793.07	90,700	+6,240
Calendar year 1950	-	-	+87,810
Jan. 31	4,793.85	97,860	+7,160
Feb. 28	4,795.51	114,000	+16,140
Mar. 31	4,787.85	50,930	-63,070
Apr. 30	4,793.10	90,970	+40,040
May 31	4,800.64	173,300	+82,330
June 30	4,800.62	173,000	-300
July 31	4,795.84	117,400	-55,600
Aug. 31	4,793.24	92,240	-25,160
Sept. 30	4,789.96	65,930	-26,310
Water year 1950-51	-	-	-15,040

† Elevation at about 8 a.m.

North Fork Payette River at Cascade, Idaho

Location.--Lat 44°31', long. 116°02', in NE¼ sec. 36, T. 14 N., R. 3 E., on right bank at Cascade, 285 ft downstream from Halleck and Howard mill dam, half a mile upstream from Beaver Creek, and 1½ miles downstream from Cascade Dam.

Drainage area.--626 sq mi.

Records available.--May 1941 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,730 ft (from topographic map of Bureau of Reclamation). Prior to Jan. 28, 1947, staff gages at present or nearby sites at present datum.

Average discharge.--10 years, 1,023 cfs.

Extremes.--Maximum discharge during year, 2,840 cfs July 22 (gage height, 3.13 ft); minimum, 32 cfs July 22 (gage height, 0.31 ft).
1941-51: Maximum discharge recorded, 7,320 cfs May 10, 1947 (gage height, 6.29 ft); minimum, 2 cfs or less in January 1948 when stage was below intake.

Remarks.--Records good. Flow regulated by Cascade Reservoir (see p. 172), Payette Lake (see p. 165), Lake Fork Reservoir (see p. 169), and occasionally by Halleck and Howard mill dam. Diversions above station for irrigation of about 37,000 acres.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 31 to Nov. 12, Mar. 3-21, Apr. 9 to May 8)

0.8	154	2.0	1,110
1.0	237	2.5	1,910
1.3	409	2.9	2,640
1.6	653		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	158	1,910	514	506	a446	402	907	2,160	2,440	2,500	555	219
2	158	1,910	514	467	453	409	919	2,160	2,440	2,480	731	219
3	162	1,910	522	409	344	1,350	992	2,140	2,460	2,480	805	215
4	162	1,910	522	416	350	2,260	1,190	2,120	2,460	2,480	783	215
5	170	1,910	514	310	350	2,240	1,370	2,120	2,480	2,460	722	215
6	166	1,910	522	392	350	2,240	1,400	2,100	2,460	2,460	712	215
7	162	1,910	522	233	357	2,160	1,400	2,060	2,350	2,460	712	215
8	162	1,910	514	224	357	2,160	1,640	2,160	2,480	2,460	712	215
9	158	1,890	514	228	364	2,120	1,640	2,140	2,460	2,440	*712	215
10	215	1,890	514	257	357	2,140	1,780	2,140	2,460	2,440	702	219
11	*252	2,100	*514	327	357	2,140	1,780	2,160	2,460	*2,430	702	219
12	252	2,220	514	327	364	2,060	1,840	2,160	2,480	2,430	712	215
13	252	1,400	522	333	364	2,080	1,840	2,200	2,460	2,430	722	215
14	293	718	522	333	357	2,100	1,860	2,180	*2,460	2,410	682	252
15	344	722	531	333	357	2,040	1,890	2,260	2,480	2,410	644	338
16	390	721	531	338	416	2,020	1,930	2,280	2,460	2,370	644	344
17	467	*563	522	338	409	2,000	1,930	2,300	2,480	2,350	626	990
18	446	177	522	*333	370	1,950	2,020	2,320	2,500	1,950	599	1,360
19	*438	257	514	344	370	1,860	2,100	2,320	2,500	1,180	539	1,300
20	438	211	506	344	370	1,750	2,120	2,370	2,510	915	506	1,310
21	438	228	506	344	370	1,290	2,120	2,390	2,500	1,390	490	1,250
22	438	230	514	344	376	678	2,120	2,350	2,510	1,300	*416	1,250
23	383	460	514	344	376	514	*2,120	2,280	2,530	644	506	1,250
24	440	506	514	344	383	522	2,140	*1,930	2,510	547	644	1,240
25	443	539	514	350	390	531	2,120	1,970	2,510	370	506	1,210
26	462	498	514	402	396	547	2,120	2,370	2,510	242	390	1,110
27	617	539	514	357	396	572	2,160	2,350	2,510	267	350	*1,080
28	692	608	678	357	402	617	2,160	2,280	2,510	272	304	1,040
29	871	522	506	364	-	692	2,160	2,200	2,500	267	267	1,020
30	1,490	514	506	364	-	805	2,140	2,430	2,500	267	267	1,020
31	1,910	-	506	a370	-	895	-	2,430	-	350	247	-
Total	13,429	32,793	16,156	10,732	10,551	45,144	53,908	68,830	74,370	51,451	17,909	20,175
Mean	433	1,093	521	346	377	1,456	1,797	2,220	2,479	1,660	578	672
Ac-ft	26,640	65,040	32,040	21,290	20,930	89,540	106,900	136,500	147,500	102,100	35,520	40,020

Calendar year 1950: Max 2,840 Min 145 Mean 1,083 Ac-ft 783,900
Water year 1950-51: Max 2,530 Min 158 Mean 1,138 Ac-ft 824,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for station near Banks.

North Fork Payette River near Banks, Idaho

Location.--Lat 44°07', long. 116°06', in SE¼ sec. 16, T. 9 N., R. 3 E., on right bank 40 ft downstream from highway bridge, 2½ miles north of Banks, and 3 miles upstream from confluence with South Fork.

Drainage area.--933 sq mi.

Records available.--April 1947 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 3,081.13 ft above mean sea level, preliminary unadjusted elevation.

Extremes.--Maximum discharge during year, 3,810 cfs Apr. 29 (gage height, 9.91 ft); minimum, 238 cfs Oct. 1, 2 (gage height, 4.21 ft).
1947-51: Maximum discharge, 8,830 cfs May 11, 1947, estimated on basis of records for station near Smiths Ferry; minimum recorded, 36 cfs Dec. 31, 1947 (gage height, 3.01 ft).

Remarks.--Records excellent except those below about 500 cfs, which are good. Flow regulated by Payette Lake (see p.165), Lake Fork Reservoir (see p. 169), Cascade Reservoir (see p. 172) and occasionally by mill dam at Cascade. Many diversions from tributaries above station for irrigation.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

4.2	236	6.0	876
4.4	280	7.0	1,400
4.6	332	8.0	2,060
5.0	457	9.0	2,900
5.5	649	10.0	3,910

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	244	2,070	700	645	530	549	1,250	3,100	3,190	2,690	471	316
2	242	2,120	657	653	678	560	1,320	3,000	3,130	2,680	674	295
3	242	2,060	666	553	549	530	1,460	2,940	3,090	2,660	800	290
4	246	2,030	726	588	504	2,140	1,720	2,940	3,070	2,670	819	290
5	255	2,020	709	576	512	2,430	2,140	2,940	3,250	2,680	790	288
6	292	2,020	687	407	523	*2,410	2,620	3,010	3,290	2,610	753	278
7	282	2,010	758	457	596	2,380	2,810	3,150	3,110	2,580	744	278
8	266	2,050	763	338	637	2,360	2,930	3,310	3,050	2,570	735	278
9	264	1,990	731	382	674	2,320	2,980	3,290	3,030	2,550	735	275
10	255	1,960	717	391	717	2,320	3,130	3,290	3,010	2,520	731	275
11	302	1,990	709	447	800	2,320	3,050	3,310	3,030	2,520	726	275
12	335	2,200	709	479	*886	2,290	3,110	3,350	3,100	2,500	726	278
13	329	*2,110	695	475	828	2,280	3,180	3,390	3,140	*2,480	726	278
14	324	1,080	683	479	786	2,280	3,250	3,250	3,100	2,450	726	275
15	376	847	722	486	749	2,310	3,200	3,180	3,100	2,440	678	329
16	*417	847	740	475	726	2,320	3,150	3,200	3,100	2,420	666	391
17	493	866	704	443	735	2,290	3,150	3,280	3,060	2,400	*662	391
18	592	530	691	493	674	2,240	3,150	3,310	3,020	2,360	620	1,260
19	560	391	687	457	604	2,200	3,160	3,290	3,000	1,790	596	1,250
20	541	464	678	464	624	2,130	3,120	3,270	2,950	1,260	545	1,310
21	530	430	670	461	608	2,000	3,040	3,270	2,930	905	530	1,260
22	523	433	657	482	588	1,350	2,960	3,310	2,890	2,000	504	1,240
23	519	450	674	450	584	862	*2,940	3,350	*2,860	828	457	1,250
24	504	645	674	489	584	833	2,940	*3,080	2,850	731	641	1,240
25	526	657	657	500	588	842	2,940	2,930	2,830	596	678	1,270
26	580	687	645	512	553	871	2,930	3,300	2,790	423	486	1,210
27	612	653	637	557	564	920	2,940	3,370	2,770	349	426	*1,120
28	852	726	662	457	564	955	3,370	3,450	2,760	361	413	1,120
29	1,060	674	*790	397	-	1,020	3,650	3,240	2,730	358	364	1,080
30	1,160	678	691	413	-	1,140	3,340	3,280	2,710	352	338	1,070
31	1,980	-	670	420	-	1,180	-	3,270	-	352	332	-
Total	15,703	37,688	21,559	14,826	17,965	52,632	84,930	99,650	89,940	56,085	19,092	20,760
Mean	507	1,256	695	478	642	1,698	2,831	3,215	2,998	1,809	616	692
Ac-ft	31,150	74,750	42,760	29,410	35,630	104,400	168,500	197,700	178,400	111,200	37,870	41,180

Calendar year 1950: Max 3,180 Min 220 Mean 1,393 Ac-ft 1,009,000
Water year 1950-51: Max 3,650 Min 242 Mean 1,454 Ac-ft 1,053,000

* Discharge measurement made on this day.

Payette River near Horseshoe Bend, Idaho

Location.--Lat 43°56'00", long. 116°11'30", in SW¼SW¼ sec. 14, T. 7 N., R. 2 E., on right bank 100 ft east of tracks of Idaho Northern branch of Oregon Short Line Railroad and 1½ miles north of Horseshoe Bend.

Drainage area.--2,230 sq mi.

Records available.--February 1906 to September 1916, July 1919 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 2,623.5 ft above mean sea level (levels by Corps of Engineers). Feb. 13, 1906, to Nov. 22, 1912, staff gage st site 2 miles upstream at different datum.

Average discharge.--40 years (1907-15, 1919-51), 3,062 cfs.

Extremes.--Maximum discharge during year, 13,400 cfs May 28 (gage height, 7.57 ft); minimum, 643 cfs Jan. 30 (gage height, 0.89 ft).
1906-16, 1919-51: Maximum discharge, 22,100 cfs June 9, 1921 (gage height, 9.57 ft); minimum, 350 cfs Dec. 17, 1935 (gage height, 0.26 ft), from rating curve extended below 600 cfs.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are good. Flow regulated by Deadwood Reservoir (see p. 160), Payette Lake (see p. 165), Lake Fork Reservoir (see p. 169) and Cascade Reservoir (see p. 172). Diversions from tributaries above station for irrigation of about 50,000 acres.

Revisions.--W 533: Drainage area.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,740	3,190	1,590	1,540	1,030	1,320	2,980	8,320	9,400	7,360	3,260	2,340
2	2,700	3,300	1,470	1,640	1,370	1,420	3,310	7,740	8,840	7,180	3,330	2,300
3	2,570	3,170	1,470	1,820	1,420	1,330	3,990	7,340	8,400	6,760	3,420	2,280
4	2,570	3,100	1,660	1,910	1,420	2,670	4,890	6,920	8,170	6,740	3,550	2,250
5	2,590	3,040	1,650	1,850	1,610	3,220	5,860	6,740	8,600	6,510	3,720	2,250
6	2,570	3,000	1,490	b1,600	1,530	*3,190	7,040	7,360	8,540	6,120	3,390	2,300
7	2,410	2,970	1,720	b1,500	2,030	3,200	7,600	8,870	8,080	5,990	3,300	2,260
8	2,360	3,080	1,730	b1,650	2,380	3,140	7,880	9,870	7,520	5,710	3,200	2,240
9	2,410	2,980	1,650	b1,850	2,360	3,140	7,600	9,840	7,160	5,580	3,250	2,290
10	2,300	2,780	1,600	b1,800	2,370	3,060	7,840	9,920	7,020	5,370	3,200	2,260
11	2,320	2,870	1,590	1,410	2,550	3,010	7,360	10,500	7,040	*5,330	3,200	2,240
12	2,360	3,070	1,600	1,330	*2,780	3,070	7,360	10,300	7,570	5,110	3,200	2,210
13	2,330	3,040	1,590	1,290	2,590	3,130	7,790	9,510	8,270	4,990	3,280	2,210
14	2,280	2,130	1,530	1,310	2,320	3,140	8,500	8,650	*8,820	4,970	3,280	2,160
15	1,960	1,660	1,600	1,340	2,200	3,240	8,670	7,980	9,580	5,150	*3,250	2,170
16	1,930	1,650	1,640	1,290	2,070	3,500	8,520	8,100	10,700	4,950	3,200	2,120
17	1,630	1,700	1,570	1,210	1,940	3,330	*8,470	8,670	10,800	a4,550	3,160	1,930
18	1,450	1,550	1,530	1,230	1,940	3,160	8,800	*9,350	10,400	a4,600	3,100	2,100
19	1,360	1,460	1,490	1,210	1,690	3,180	9,530	9,710	9,840	a4,700	3,060	2,020
20	1,270	1,340	1,490	1,160	1,710	3,190	9,250	9,740	9,220	a4,950	3,010	2,030
21	1,200	1,370	1,470	1,220	1,700	3,220	8,440	9,690	8,620	4,430	2,970	1,990
22	1,180	1,330	1,410	1,260	1,600	2,690	7,790	10,100	8,800	3,990	2,970	1,960
23	*1,160	1,260	1,450	1,170	1,580	2,170	7,570	11,000	8,170	4,340	2,960	1,980
24	1,110	1,430	1,460	1,220	1,570	2,070	7,740	11,100	7,860	4,140	3,060	1,960
25	1,170	1,460	1,420	1,290	1,580	2,220	7,550	10,800	7,670	3,990	2,920	1,990
26	1,380	1,510	1,370	1,270	1,450	2,390	7,450	11,900	7,220	3,770	2,920	2,130
27	1,510	1,470	1,320	1,300	1,430	2,660	7,640	12,600	7,180	3,620	2,800	*1,940
28	1,840	1,530	1,390	1,110	1,480	2,690	9,200	13,200	7,200	3,620	2,770	1,690
29	2,200	*1,510	*1,770	854	-	2,770	10,700	12,500	7,180	3,750	2,490	1,820
30	2,520	1,520	1,770	720	-	2,910	9,320	11,300	7,110	3,650	2,450	1,780
31	3,130	-	1,700	926	-	2,840	-	10,300	-	3,500	2,410	-
Total	62,510	65,470	48,190	42,280	51,700	86,270	226,640	299,920	250,980	155,420	96,100	63,400
Mean	2,016	2,182	1,555	1,364	1,846	2,783	7,555	9,675	8,366	5,014	3,100	2,113
Ac-ft	124,000	129,900	95,580	83,860	102,500	171,100	449,500	594,900	497,800	308,300	190,600	125,800

Calendar year 1950: Max 12,000 Min 790 Mean 3,675 Ac-ft 2,661,000
Water year 1950-51: Max 13,200 Min 720 Mean 3,970 Ac-ft 2,874,000

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for station near Emmett and for North Fork and South Fork Payette River near Banks.
b Stage-discharge relation affected by ice.

Payette River near Emmett, Idaho

Location.--Lat 43°56', long. 116°27', in sec. 22, T. 7 N., R. 1 W., on right bank three-eighths of a mile downstream from Black Canyon Dam and 5 miles northeast of Emmett.

Drainage area.--2,680 sq mi, approximately.

Records available.--June 1925 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 2,400 ft (from topographic map).

Average discharge.--26 years, 2,925 cfs.

Extremes.--Maximum discharge during year, 12,700 cfs May 27 (gage height, 9.40 ft); minimum, 159 cfs Jan. 29 (gage height, 1.44 ft); minimum daily, 811 cfs Feb. 1.
1925-51: Maximum discharge, 22,800 cfs May 1, 1938 (gage height, 12.90 ft); minimum daily, 3 cfs Jan. 10-14, Feb. 2, 22-25, 1938, when gates in dam were closed.

Remarks.--Records excellent. Diversions above station for irrigation of about 135,000 acres. Flow regulated by diversion at and operation of gates in Black Canyon Dam and by Cascade Reservoir (see p. 172), Deadwood Reservoir (see p. 160), Payette Lake (see p. 165), and Lake Fork Reservoir (see p. 169).

Cooperation.--Gage-height record collected in cooperation with Bureau of Reclamation.

Revisions (water years).--W 1153: 1946(m), 1948(m).

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

2.4	770	6.0	5,710
3.0	1,410	7.0	7,570
4.0	2,620	8.0	9,600
5.0	4,010	9.0	11,800

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,070	3,290	1,690	1,730	811	1,730	3,590	8,170	8,590	5,840	1,870	1,330
2	2,060	3,380	1,670	1,720	834	1,570	3,890	7,570	8,130	5,690	2,060	1,270
3	1,910	3,250	1,590	2,060	1,550	1,640	4,590	7,130	7,670	5,220	2,070	1,240
4	1,910	3,130	1,900	2,150	1,710	2,570	5,490	6,620	7,530	5,210	2,140	1,220
5	1,950	3,060	1,880	1,940	2,880	3,480	6,520	6,560	7,990	5,080	2,440	1,210
6	2,000	3,050	1,750	1,850	2,280	3,560	7,810	7,020	8,110	4,660	2,060	1,270
7	1,890	3,010	2,070	1,550	4,520	*3,490	8,610	8,290	7,770	4,470	1,940	1,230
8	1,730	3,110	2,090	1,610	4,070	3,390	8,930	9,330	7,230	4,200	1,890	1,220
9	1,880	3,020	1,840	2,070	3,820	3,420	8,650	9,200	6,810	4,070	1,910	1,270
10	1,820	2,820	1,850	2,020	3,740	3,280	8,770	9,200	6,720	3,780	1,830	1,280
11	1,790	2,880	1,870	1,790	4,070	3,240	8,330	9,810	6,700	*3,830	1,810	1,200
12	1,870	3,060	1,790	1,530	4,190	3,250	8,270	9,890	7,130	3,580	1,810	1,200
13	1,850	3,130	1,810	1,470	*3,620	3,420	8,390	9,430	7,790	3,480	1,850	1,210
14	2,110	2,400	1,780	1,460	2,920	3,490	9,050	8,610	*8,210	3,350	1,930	1,160
15	1,930	1,790	1,840	1,510	2,880	3,800	9,240	8,010	8,670	3,530	*1,890	1,150
16	1,950	1,670	1,970	1,470	2,680	4,280	8,870	7,970	9,620	3,480	1,820	1,170
17	1,660	1,830	1,830	1,460	2,510	3,830	*8,670	8,450	9,870	2,980	1,790	1,060
18	1,570	1,820	1,710	1,710	2,440	3,560	8,650	*9,010	9,330	2,880	1,760	1,140
19	1,450	1,650	1,650	1,590	2,210	3,600	9,240	9,500	8,890	2,890	1,750	1,160
20	1,380	1,510	1,650	1,350	2,130	3,680	8,990	9,450	8,390	3,480	1,670	1,150
21	1,340	1,420	1,650	1,590	2,130	3,840	8,170	9,220	7,630	3,020	1,650	1,110
22	1,120	1,480	1,630	1,810	2,010	3,620	7,570	9,430	7,610	2,420	1,640	1,120
23	*1,180	1,450	1,520	1,510	1,950	3,000	7,270	10,200	7,080	2,890	1,690	1,120
24	1,240	1,450	1,580	1,460	1,910	2,720	7,340	10,300	6,640	2,650	1,840	1,090
25	1,190	1,540	1,570	1,710	1,960	2,250	7,170	9,890	6,470	2,510	1,850	1,140
26	1,330	1,630	1,570	1,690	1,830	2,970	6,960	10,600	6,000	2,340	1,700	1,300
27	1,570	1,610	1,390	1,690	1,700	3,220	7,080	11,300	5,840	2,200	1,610	1,200
28	1,720	1,470	1,530	1,400	1,750	3,180	8,530	11,800	5,780	2,170	1,660	*1,160
29	2,250	*1,630	*1,930	1,240	-	3,210	10,500	11,400	5,710	2,300	1,530	1,140
30	2,550	1,630	2,010	1,320	-	3,600	9,140	10,300	5,490	2,320	1,480	1,090
31	3,110	-	2,090	977	-	3,420	-	9,450	-	2,230	1,450	-
Total	55,380	68,170	54,700	50,437	71,105	99,310	234,280	283,110	225,400	108,750	56,390	35,610
Mean	1,786	2,272	1,765	1,627	2,539	3,204	7,809	9,133	7,513	3,508	1,819	1,187
Ac-ft	109,800	135,200	108,500	100,000	141,000	197,000	464,700	561,500	447,100	215,700	111,800	70,630

Calendar year 1950: Max 11,100 Min 635 Mean 3,413 Ac-ft 2,471,000
Water year 1950-51: Max 11,800 Min 811 Mean 3,678 Ac-ft 2,663,000

* Discharge measurement made on this day.

Payette River near Payette, Idaho

Location.--Lat 44°02'30", long. 116°55'30", in SW¼ sec. 10, T. 8 N., R. 5 W., on right bank at highway bridge, 1¾ miles south of Payette.

Drainage area.--3,240 sq mi, approximately.

Records available.--August 1935 to September 1951. Records for January 1895 to July 1897 (published as "at Payette") found to be unreliable.

Gage.--Water-stage recorder. Datum of gage is 2,138.44 ft above mean sea level, unadjusted. January 1895 to July 1897, staff gage at site 2 miles downstream at different datum. Prior to Aug. 8, 1939, wire-weight gage at site 50 ft downstream at present datum.

Average discharge.--16 years (1935-51), 3,070 cfs.

Extremes.--Maximum discharge during year, 11,800 cfs May 28 (gage height, 9.60 ft); minimum, 958 cfs Mar. 25 (gage height, 4.64 ft); minimum daily, 1,000 cfs Feb. 2.
1895-97, 1935-51: Maximum discharge observed, 28,300 cfs June 4, 1896 (gage height, 9.30 ft, site and datum then in use); minimum, 180 cfs Oct. 13, 20, 1935 (gage height, 2.04 ft); minimum daily, 220 cfs Oct. 5, 1935.

Remarks.--Records good. Diversions above station for irrigation of about 188,000 acres. Flow regulated by Black Canyon Dam and reservoirs on tributary streams.

Rating table, water year 1950-51, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 10 to Aug. 26)

4.7	1,000	8.0	7,090
5.0	1,430	9.0	9,800
6.0	3,020	9.5	11,400
7.0	4,900		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,160	3,720	1,940	2,130	b1,150	1,900	3,890	8,560	8,530	5,140	1,680	1,370
2	2,160	3,890	2,030	1,940	b1,000	1,740	4,060	7,760	7,920	5,120	1,580	1,340
3	2,110	3,800	1,940	2,250	b1,500	1,790	4,540	7,230	7,460	4,840	1,600	1,270
4	2,060	3,650	2,060	2,330	1,730	1,910	5,420	6,640	7,160	4,760	1,640	1,210
5	2,160	3,580	2,320	2,350	3,540	3,700	6,410	6,620	7,360	4,860	1,790	1,140
6	2,220	*3,560	2,090	2,110	2,730	3,690	7,660	6,480	8,130	4,390	1,780	1,130
7	2,270	3,450	*2,300	1,820	5,110	3,800	8,560	7,560	7,920	4,080	1,580	1,130
8	2,090	3,490	2,530	1,860	5,250	3,720	8,890	8,950	7,330	3,970	1,540	1,080
9	2,090	3,540	2,250	1,920	4,620	3,670	9,010	9,240	6,900	3,740	1,520	1,110
10	2,080	3,310	2,190	2,350	4,250	3,670	8,810	9,010	6,640	3,520	1,560	1,140
11	1,970	3,220	2,110	2,050	4,400	3,490	8,700	9,470	6,550	3,450	1,490	1,130
12	2,000	3,420	2,130	1,840	4,560	3,520	8,240	10,300	6,690	3,290	1,490	1,100
13	1,960	3,490	2,060	1,620	4,080	3,600	8,420	10,000	7,400	3,110	1,500	1,110
14	2,060	3,270	2,110	1,660	3,540	3,840	8,780	9,090	7,710	3,020	*1,560	1,130
15	2,090	2,330	2,080	1,730	3,130	3,910	9,500	8,240	8,130	3,090	1,560	1,110
16	2,080	2,020	2,270	1,860	2,900	4,860	9,090	7,920	8,980	*3,160	1,490	1,140
17	1,940	2,160	2,140	1,700	2,650	4,220	8,500	8,150	9,440	2,950	1,490	1,130
18	1,740	2,110	2,060	1,910	2,610	3,950	*8,420	8,720	*9,240	2,580	1,440	*1,080
19	1,610	2,000	1,920	1,780	2,490	3,800	8,750	9,120	8,750	2,380	1,430	1,180
20	1,660	1,910	1,940	1,660	2,240	3,990	8,640	9,180	8,210	2,660	1,430	1,080
21	1,620	1,740	1,920	1,660	2,250	4,100	8,070	*9,040	7,560	2,760	1,360	1,110
22	1,610	1,820	1,920	1,900	2,270	4,120	7,280	8,810	7,070	2,110	1,380	1,100
23	1,620	1,820	1,820	1,860	2,160	3,540	6,900	9,180	6,850	2,250	1,430	1,100
24	1,670	1,740	1,820	1,760	2,030	3,070	6,740	9,740	6,130	2,270	1,670	1,110
25	1,640	1,800	1,850	1,860	2,050	2,370	6,740	9,300	5,860	2,080	1,720	1,110
26	1,700	1,900	1,820	2,030	2,060	3,330	6,370	9,530	5,500	1,960	1,560	1,220
27	1,970	1,980	1,720	1,940	1,820	3,330	6,460	10,500	5,140	1,820	1,580	1,300
28	2,110	1,780	1,730	1,840	*1,880	3,470	7,380	11,100	5,040	1,790	1,550	1,250
29	2,450	1,910	1,880	1,580	-	3,470	10,600	11,300	4,960	1,800	1,540	1,200
30	2,900	1,970	2,290	*b1,350	-	3,820	10,000	10,300	4,680	1,910	1,430	1,170
31	3,200	-	2,460	b1,400	-	3,890	-	9,500	-	1,820	1,420	-
Total	62,980	80,380	63,700	58,050	80,000	107,280	230,830	276,560	215,240	96,680	47,790	34,780
Mean	2,032	2,679	2,055	1,873	2,857	3,461	7,694	8,921	7,175	3,119	1,542	1,159
Ac-ft	124,900	159,400	126,300	115,100	158,700	212,800	457,800	548,500	426,900	191,800	94,790	68,990

Calendar year 1950: Max 10,600 Min 1,030 Mean 3,396 Ac-ft 2,459,000
Water year 1950-51: Max 11,300 Min 1,000 Mean 3,710 Ac-ft 2,686,000

Weiser River at Tamarack, Idaho

Location.--Lat 44°57', long. 116°23', in sec. 31, T. 19 N., R. 1 E., on left bank 43 ft upstream from railroad bridge, 0.65 mile south of Tamarack, and 1½ miles upstream from Beaver Creek.

Drainage area.--36.5 sq mi.

Records available.--September 1936 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,080 ft (by barometer). Prior to Oct. 8, 1949, staff gage at site a quarter of a mile upstream at different datum.

Average discharge.--15 years, 42.0 cfs.

Extremes.--Maximum discharge during year, 474 cfs Apr. 6 or 7 (gage height, 4.87 ft); minimum, 1.9 cfs Oct. 9 (gage height, 1.11 ft).
1936-51: Maximum discharge observed, 775 cfs Mar. 27, 1940 (gage height, 6.00 ft, site and datum then in use); minimum observed, 1.0 cfs Sept. 2, 1947 (gage height, 0.55 ft, site and datum then in use).

Remarks.--Records good except those for periods of ice effect, which are fair, and those for periods of no gage-height record, which are poor. No diversions above station. Diurnal fluctuation caused by millpond at Tamarack. Small flow from Boulder Creek in Salmon River basin enters Weiser River above station through transmountain diversion during late irrigation season.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	5.0	2.6	85
1.5	10	3.0	142
1.7	18	3.5	225
2.0	34	4.0	314
2.3	55	4.8	460

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	21	20	16	14	17	140	216	26	11	6.0	6.2
2	6.9	22	16	19	15	16	190	172	26	11	6.0	6.2
3	7.2	19	19	17	15	16	250	147	23	10	7.2	6.0
4	7.4	18	27	18	16	16	350	136	22	13	7.4	6.0
5	11	18	22	b16	16	16	430	132	32	13	7.7	6.0
6	*11	17	19	b13	16	16	450	133	33	12	7.4	5.7
7	9.1	17	20	b13	17	16	440	160	40	11	7.2	6.0
8	8.0	16	19	14	20	*b16	420	153	35	9.9	7.4	6.4
9	5.9	15	18	14	25	b15	400	136	27	9.9	7.2	6.2
10	7.7	10	18	14	32	b15	370	124	25	9.4	6.9	6.2
11	7.4	*13	17	14	40	b15	350	130	24	9.1	7.2	6.2
12	7.4	13	*17	14	50	b15	330	138	26	8.8	7.2	6.2
13	7.2	13	17	14	44	b16	330	116	27	9.1	6.7	6.4
14	7.2	14	17	14	39	17	360	99	22	8.8	6.4	6.0
15	7.4	13	19	14	34	19	*375	85	21	8.5	6.9	6.0
16	8.2	14	21	b13	30	22	350	78	20	8.0	6.7	6.0
17	7.7	14	21	b14	29	22	334	76	18	7.7	6.0	6.2
18	13	28	21	14	28	30	330	71	17	8.0	*6.2	6.0
19	10	18	21	14	28	35	314	66	17	*7.7	6.4	5.7
20	8.0	8.9	21	13	27	37	276	60	*16	7.7	6.4	6.4
21	6.7	12	21	13	27	48	225	55	15	7.4	6.2	5.7
22	6.9	13	21	14	26	60	189	49	14	7.7	6.7	*5.7
23	7.2	12	21	b12	26	62	155	46	14	6.9	8.2	6.0
24	7.2	12	21	*13	25	64	144	44	14	8.0	8.5	6.0
25	7.4	12	16	12	23	80	138	*41	15	7.4	7.7	6.0
26	13	13	17	13	21	100	*142	36	14	7.4	6.9	6.2
27	13	13	18	b12	20	130	156	35	13	6.4	6.4	6.2
28	36	13	18	b11	19	130	264	33	12	6.4	7.2	6.2
29	39	14	18	b11	-	120	336	30	12	6.0	8.0	6.2
30	34	18	19	b12	-	120	271	30	11	5.7	6.9	6.7
31	22	-	18	13	-	110	-	29	-	6.0	6.7	-
Total	357.3	453.9	598	428	722	1,411	8,809	2,856	631	268.9	215.9	182.9
Mean	11.5	15.1	19.3	13.8	25.8	45.5	294	92.1	21.0	8.67	6.96	6.10
Ac-ft	709	900	1,190	849	1,430	2,800	17,470	5,660	1,250	533	428	363

Calendar year 1950: Max 363 Min 4 Mean 46.1 Ac-ft 33,400
Water year 1950-51: Max 450 Min 5.7 Mean 46.4 Ac-ft 33,580

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 31 to Mar. 7, Mar. 18 to Apr. 14; discharge estimated on basis of weather records and records for other Weiser River stations and nearby streams.

Lost Valley Reservoir near Tamarack, Idaho

Location.--Lat 44°57'30", long. 116°28'00", in sec. 28, T. 19 N., R. 1 W., a short distance upstream from outlet gates near left end of dam on Lost Creek, 4 miles west of Tamarack and 16 miles north of Council.

Drainage area.--29.4 sq mi.

Records available.--May to September 1924, May 1926 to September 1951.

Gage.--Staff gage. Datum of gage is 4,748.8 ft above mean sea level (river-profile survey). Prior to May 1926, datum 1.4 ft higher.

Extremes.--Maximum gage height observed during year, 26.66 ft June 21, minimum observed, 15.20 ft Oct. 16.
1924, 1926-51: Maximum gage height observed, 26.90 ft May 14, 1940; no storage at times during several years prior to 1938.

Remarks.--Reservoir is formed by earth dam completed in 1910 and raised 6 ft in 1929. Permanent spillway crest is at gage height 22.26 ft; flashboard structure built in 1938 to permit storage to gage height about 26 ft. Water is used for irrigation of lands in Weiser River basin.

Cooperation.--Several gage readings furnished by Lost Valley Reservoir Co.

Revisions.--W 833: Drainage area.

Gage height, in feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-						-		-	-	-
2	-	-						-		-	-	-
3	-	-						-		-	-	-
4	-	-						-		-	-	-
5	-	-						-		-	-	-
6	16.32	15.50						-		-	-	-
7	-	-						-		-	-	-
8	-	-						-		-	-	-
9	-	-						-		-	-	-
10	-	-						-		-	-	-
11	-	15.6						-		-	-	-
12	-	-						-		-	21.20	-
13	-	-	16.3					-		-	-	-
14	-	-						-		-	-	-
15	-	-						-		26.10	-	-
16	15.20	-						24.16		-	-	15.50
17	-	-						-		-	-	-
18	-	-						-		-	20.44	-
19	-	-						-		25.60	-	-
20	-	-						24.00		-	-	-
21	-	-				18.75		-	26.66	-	-	-
22	-	-						-		-	-	-
23	-	-						-		-	-	15.38
24	-	-						-		-	-	-
25	-	-						24.86		-	-	-
26	-	-						-		-	-	-
27	-	-						-		-	-	-
28	-	-						25.05		-	-	-
29	-	-						-		24.10	-	-
30	-	-						-		-	-	-
31	-	-						-	-	-	-	-

Lost Creek near Tamarack, Idaho

Location.--Lat 44°57', long. 116°28', in sec. 28, T. 19 N., R. 1 W., on right bank a quarter of a mile downstream from dam of Lost Valley Reservoir, 4 miles west of Tamarack, and 16 miles north of Council.

Drainage area.--29.4 sq mi.

Records available.--January 1910 to August 1914, May 1920 to September 1921, May 1924 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,729.6 ft above mean sea level (river-profile survey). Prior to Apr. 1, 1912, staff gage at same site and datum.

Average discharge.--21 years (1930-51), 37.1 cfs.

Extremes.--Maximum discharge during year, 267 cfs Apr. 30 (gage height, 2.82 ft); minimum, 6.7 cfs June 7; minimum gage height, 1.24 ft for long periods in November, December, and January.
1910-14, 1920-21, 1924-51: Maximum discharge, 688 cfs May 17, 18, 1921 (gage height, 4.29 ft); practically no flow at times when gates in dam were closed.

Remarks.--Records good except those below 10 cfs and those for periods of no gage-height record, which are fair. No diversion between reservoir and station; practically entire flow diverted below station during irrigation season. Flow regulated since 1910 by Lost Valley Reservoir (see preceding page).

Cooperation.--Water-stage recorder inspected occasionally by Lost Valley Reservoir Co.

Revisions.--W 833: Drainage area.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.2	5.7	2.0	70
1.3	9.0	2.3	116
1.4	14	2.6	187
1.5	20	2.9	280
1.7	36		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	8.0	7.7	8.0	7.8	8.1	8.3	241	17	19	74	62
2	45	8.0	7.7	8.0	7.8	8.1	8.7	210	20	18	74	62
3	45	7.7	7.7	8.0	7.9	8.2	8.7	179	22	16	73	62
4	45	7.7	7.7	8.0	7.9	8.2	8.7	158	25	18	71	62
5	45	8.0	8.0	8.0	7.9	8.2	9.0	148	31	17	71	61
6	*45	8.0	8.0	8.0	7.9	8.2	9.0	148	35	16	71	61
7	45	7.7	8.0	8.0	7.9	8.2	9.4	165	18	15	71	61
8	44	7.7	7.7	8.0	7.9	8.2	9.4	184	7.4	14	70	61
9	43	7.7	7.7	8.0	7.9	8.2	9.4	193	8.3	13	70	61
10	43	8.0	8.0	7.7	7.9	8.2	9.4	193	9.9	12	70	61
11	43	*8.0	8.0	7.7	7.9	8.2	21	202	11	10	69	60
12	43	8.0	8.0	7.7	7.9	8.3	48	219	12	9.9	69	60
13	43	8.0	*7.7	7.7	8.0	8.3	86	210	11	9.9	68	60
14	42	8.0	7.7	7.7	8.0	8.3	124	193	12	40	68	60
15	42	8.0	7.7	7.7	8.0	8.3	160	168	12	69	68	59
16	42	7.7	7.7	7.7	8.0	8.3	193	155	13	68	68	45
17	42	7.7	7.7	7.7	8.0	8.3	207	150	15	66	68	9.0
18	42	7.7	7.7	7.7	8.0	8.3	225	143	16	65	*68	9.0
19	42	7.7	7.7	7.7	8.0	8.3	235	138	18	*65	68	9.4
20	42	7.7	7.7	7.7	8.0	8.3	225	103	18	64	68	9.4
21	28	7.7	7.7	7.7	8.0	*8.3	207	55	*18	64	68	14
22	8.0	7.7	7.7	7.7	8.1	8.3	182	32	18	64	66	18
23	8.0	7.7	7.7	7.8	8.1	8.3	155	40	18	64	66	18
24	8.0	7.7	7.7	7.8	8.1	8.3	143	46	32	62	66	*18
25	8.0	7.7	7.7	7.8	8.1	8.3	132	*51	30	62	65	18
26	8.0	7.7	7.7	7.8	8.1	8.3	128	54	28	62	65	18
27	8.0	7.7	7.7	7.8	8.1	8.3	130	58	26	62	64	18
28	8.0	7.7	7.7	7.8	8.1	8.3	168	38	23	61	64	18
29	8.0	7.7	7.7	7.8	-	8.3	244	18	22	68	64	18
30	8.0	7.7	7.7	7.8	-	8.3	264	16	20	74	62	17
31	8.0	-	8.0	7.8	-	8.3	-	16	-	74	62	-
Total	977.0	234.0	240.8	242.3	223.3	256.0	3,367.0	3,924	566.6	1,341.8	2,109	1,169.8
Mean	31.5	7.80	7.77	7.82	7.98	8.26	112	127	18.9	43.3	68.0	39.0
Ac-ft	1,940	464	478	481	443	508	6,680	7,780	1,120	2,660	4,180	2,320

Calendar year 1950: Max 301 Min 5 Mean 39.2 Ac-ft 28,360
Water year 1950-51: Max 264 Min 7.4 Mean 40.1 Ac-ft 29,050

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 14 to Mar. 20 when gates were nearly closed and were not reset; discharge estimated on basis of head in reservoir.

Weiser River near Council, Idaho

Location.--Lat 44°41', long. 116°29', in sec. 29, T. 16 N., R. 1 W., on left bank 0.7 mile downstream from Cottonwood Creek, 2 miles upstream from Middle Fork, and 3¼ miles southwest of Council.

Drainage area.--390 sq mi.

Records available.--April 1937 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 2,850 ft (by barometer). Prior to Oct. 28, 1938, staff gage at site 370 ft downstream at datum 0.58 ft higher. Oct. 28, 1938, to Apr. 21, 1939, staff gage at present site and datum.

Average discharge.--14 years, 406 cfs.

Extremes.--Maximum discharge during year, 2,210 cfs Apr. 7 (gage height, 6.03 ft); minimum, 29 cfs Sept. 20 (gage height, 0.69 ft).
1937-51: Maximum discharge, 6,700 cfs Mar. 16 or 17, 1938 (gage height, 7.6 ft, from floodmark, site and datum then in use), from rating curve extended above 3,500 cfs; minimum, 22 cfs June 29, 1940.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Flow partly regulated by Lost Valley Reservoir (see p. 179) and other reservoirs. Many diversions above station for irrigation.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	25	2.5	385
.7	33	3.0	547
1.0	62	3.5	742
1.3	104	4.0	980
1.6	160	5.0	1,540
2.0	250	6.0	2,220

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	160	129	158	b130	228	885	1,370	365	114	68	81
2	80	164	106	173	b140	233	1,080	1,160	336	106	69	78
3	80	146	127	185	b150	190	1,310	1,020	323	96	68	78
4	81	138	221	185	b160	217	1,570	960	314	127	69	73
5	94	132	185	173	b200	*217	1,830	950	418	129	68	72
6	*114	127	183	123	214	210	2,090	1,010	424	112	67	73
7	102	123	301	118	393	199	2,120	1,190	397	107	68	72
8	96	123	243	138	554	190	2,060	1,200	362	99	68	70
9	91	111	224	b160	692	194	1,860	1,180	323	94	68	72
10	88	*88	219	160	773	162	1,740	1,180	306	85	67	72
11	87	111	208	160	915	162	1,580	1,240	306	77	64	72
12	85	111	*203	154	975	177	1,550	1,320	328	67	64	73
13	84	104	181	146	773	170	1,650	1,200	334	57	66	70
14	84	109	185	146	621	183	1,840	1,080	312	55	64	64
15	85	104	217	156	533	358	1,850	980	317	70	64	64
16	88	109	208	156	475	583	*1,760	935	309	82	64	64
17	94	125	214	162	412	443	1,720	955	283	81	66	51
18	119	123	212	203	400	394	1,740	955	268	*78	*64	31
19	109	127	203	192	339	456	1,670	915	252	77	61	30
20	102	111	194	162	336	591	1,530	866	*224	75	61	29
21	98	104	185	177	317	742	1,290	768	210	77	61	30
22	84	106	179	181	298	786	1,120	721	194	77	64	*31
23	69	106	179	166	296	782	995	738	183	77	73	37
24	67	102	175	*168	293	846	900	725	177	72	72	36
25	73	102	168	168	291	995	837	*680	177	69	69	36
26	119	104	156	170	248	1,120	832	640	166	67	69	36
27	116	106	156	168	250	1,120	890	648	156	66	70	37
28	190	104	160	b110	240	970	1,370	640	146	67	82	38
29	293	106	166	b70	-	950	1,880	522	129	63	91	39
30	248	125	217	b55	-	970	1,630	459	121	68	85	51
31	179	-	190	b120	-	823	-	412	-	69	85	-
Total	3,379	3,511	5,894	4,803	11,418	15,661	45,179	28,619	8,160	2,560	2,139	1,660
Mean	109	117	190	155	408	505	1,506	923	272	82.6	69.0	55.3
Ac-ft	6,700	6,960	11,690	9,530	22,650	31,060	89,610	56,760	16,190	5,080	4,240	3,290

Calendar year 1950: Max 2,650 Min 43 Mean 418 Ac-ft 302,400
Water year 1950-51: Max 2,120 Min 29 Mean 364 Ac-ft 263,800

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

Mesa Orchards Canal near Mesa, Idaho

Location.--Lat 44°38', long. 116°25', in sec. 14, T. 15 N., R. 1 W., on left side of flume 1,500 ft from lower end, 1½ miles northeast of Mesa, and 3 miles downstream from headgates.

Records available.--1924, 1928-51 (irrigation seasons only prior to 1947).

Gage.--Staff gage read twice daily. Prior to 1938, staff gages in flume at sites within 600 ft of present site at different datums.

Extremes.--1924, 1928-51: Maximum daily discharge, 39 cfs several days in July 1945, July 1947, and July 1951; no flow during nonirrigation seasons.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Canal diverts from Middle Fork Weiser River in SE¼NW¼ sec. 9, T. 15 N., R. 1 E., for irrigation of Mesa orchards and for domestic supply of Mesa. Flow regulated by gates in diversion dam and waste gates in flume above gage.

Cooperation.--Gage readings furnished by The Mesa Co.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a7						0	7.4	26	34	37	26
2							0	6.5	23	36	36	26
3							0	6.5	23	37	35	25
4							0	6.5	25	37	34	25
5	*7.3						0	6.5	28	37	34	23
6							0	6.5	28	36	33	22
7							0	6.5	28	35	33	22
8							0	6.5	30	35	32	21
9							0	8.9	32	35	32	21
10							0	8.9	31	35	31	21
11							0	3.0	31	36	31	21
12							0	0	32	37	30	20
13							0	0	33	38	30	20
14							0	10	34	38	30	20
15							0	15	35	39	28	19
16							0	16	35	39	28	18
17							0	17	34	39	*27	19
18							0	9.8	34	*39	26	18
19	a7						0	7.1	35	39	26	18
20							0	7.1	*34	39	26	17
21							0	8.1	35	23	25	17
22							0	8.9	35	29	26	*18
23							2.5	10	30	38	29	18
24							3.8	*17	26	38	31	18
25							2.5	24	27	37	28	18
26							*.4	25	31	36	27	20
27							5.0	25	34	37	26	19
28							7.4	26	35	37	30	18
29							7.4	28	36	38	29	18
30							7.4	29	36	36	27	18
31							-	27	-	37	28	-
Total	217.3	0	0	0	0	0	36.4	383.7	936	1,126	925	604
Mean	7.01	0	0	0	0	0	1.21	12.4	31.2	36.3	29.8	20.1
Ac-ft	431	0	0	0	0	0	72	761	1,860	2,230	1,830	1,200

Calendar year 1950: Max 38 Min 0 Mean 12.3 Ac-ft 8,900
Water year 1950-51: Max 39 Min 0 Mean 11.6 Ac-ft 8,380

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of reported operation by The Mesa Co. and 1 discharge measurement.

Weiser River near Cambridge, Idaho

Location.--Lat 44°35', long. 116°38', in NE¼ sec. 1, T. 14 N., R. 3 W., on left bank 2¼ miles northeast of Cambridge and 2½ miles upstream from Rush Creek.

Drainage area.--605 sq mi.

Records available.--March 1939 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 2,660 ft (by barometer). Prior to Apr. 23, 1939, staff gage at same site and datum.

Average discharge.--12 years 639 cfs.

Extremes.--Maximum discharge during year, 3,060 cfs Apr. 7 (gage height, 6.02 ft); minimum, 39 cfs Sept. 20, 21, 22 (gage height, 0.77 ft).
1939-51: Maximum discharge, 6,670 cfs Mar. 31, 1940 (gage height, 8.30 ft); minimum, 23 cfs Oct. 1, 1943; minimum gage height, 0.66 ft Dec. 12, 1949.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Flow partly regulated by Lost Valley Reservoir (see p.179) and other reservoirs. Diversions above station for irrigation of about 9,200 acres.

Rating table, water year 1950-51, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	39	3.0	665
1.0	60	3.5	940
1.3	105	4.0	1,260
1.6	168	5.0	2,020
2.0	273	6.0	2,970
2.5	451		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	95	a250	182	247	241	352	1,370	2,060	846	250	56	100
2	96	a260	152	273	270	374	1,590	1,760	774	236	53	98
3	96	244	175	288	279	311	1,880	1,570	742	217	53	98
4	96	220	298	288	285	338	2,190	1,510	715	244	53	93
5	*109	217	301	276	374	342	2,500	1,520	892	267	56	90
6	161	207	264	197	412	331	2,900	1,640	916	230	59	85
7	134	200	536	173	981	*324	2,980	2,040	829	212	61	82
8	122	200	439	185	1,460	304	2,910	2,050	768	194	65	82
9	116	*173	397	258	1,450	318	2,650	2,040	685	182	66	80
10	109	143	378	256	1,620	261	2,480	2,080	656	173	65	82
11	96	156	352	247	1,640	244	2,240	2,240	670	154	64	82
12	96	163	*335	239	1,840	285	2,230	2,350	715	137	64	82
13	100	154	292	222	1,420	282	2,370	2,120	726	124	65	82
14	103	156	285	225	1,110	307	2,700	1,890	685	111	63	78
15	105	154	352	236	934	605	2,720	1,680	710	113	63	76
16	107	152	335	247	812	1,170	*2,590	1,670	700	132	64	73
17	111	170	331	253	695	852	2,570	1,760	651	120	*63	72
18	159	175	342	335	680	726	2,630	1,770	609	*105	63	49
19	150	175	311	321	561	852	2,570	1,760	*566	103	60	41
20	132	156	298	267	561	1,110	2,330	1,680	524	98	57	40
21	120	154	282	292	524	1,420	2,010	1,580	491	98	56	*40
22	113	150	270	288	495	1,450	1,760	1,560	455	100	59	40
23	93	152	270	264	495	1,370	1,580	1,660	424	91	72	42
24	88	147	258	270	487	1,460	1,460	*1,610	412	82	78	44
25	90	147	250	*267	487	1,660	1,370	1,520	404	74	76	45
26	a175	150	236	270	401	1,830	1,410	1,440	374	72	76	42
27	a170	152	228	267	408	1,840	1,510	1,450	342	61	78	43
28	a300	152	236	197	389	1,550	2,160	1,490	311	57	96	45
29	a500	150	241	b105	-	1,490	2,880	1,250	288	54	114	47
30	a480	170	304	b140	-	1,600	2,480	1,090	261	56	107	50
31	a350	-	324	197	-	1,330	-	958	-	59	102	-
Total	4,772	5,249	9,254	7,590	21,311	26,688	67,020	52,798	18,141	4,206	2,127	2,003
Mean	154	175	299	245	761	861	2,234	1,703	605	136	68.6	66.8
Ac-ft	9,470	10,410	18,360	15,050	42,270	52,930	132,900	104,700	35,980	8,340	4,220	3,970

Calendar year 1950: Max 3,520 Min 53 Mean 664 Ac-ft 480,600
Water year 1950-51: Max 2,980 Min 40 Mean 606 Ac-ft 438,600

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for other Weiser River stations.
b Stage-discharge relation affected by ice.

Pine Creek near Cambridge, Idaho

Location.--Lat 44°35', long. 116°44', in SW¼ sec. 32, T. 15 N., R. 3 W., on right bank 300 ft upstream from West Fork and 3.2 miles northwest of Cambridge.

Drainage area.--54 sq mi, approximately.

Records available.--April 1938 to September 1951.

Gage.--Staff gage. Altitude of gage is 2,800 ft (by barometer). Prior to Mar. 7, 1951, staff gages at nearby sites at present datum.

Average discharge.--13 years, 37.5 cfs.

Extremes.--Maximum discharge observed during year, 156 cfs May 22 (gage height, 2.05 ft); minimum observed, 2.0 cfs July 25, 27; minimum gage height, 0.68 ft Oct. 1, 3, July 25, 27.

1938-51: Maximum discharge observed, 505 cfs May 27, 1948 (gage height, 3.60 ft), from rating curve extended above 200 cfs by logarithmic plotting, but may have been more when gage was overtopped June 3, 1948; minimum observed, 0.7 cfs Aug. 3, 1949; minimum gage height observed, 0.43 ft Aug. 27, 28, 1947.

Remarks.--Records fair except those for periods of ice effect, which are poor. Gage read twice daily. Several diversions above station for irrigation.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second) (Shifting-control method used Mr. 7-14, Apr. 14 to May 28, July 13 to Sept. 30)

0.5	1.0	1.2	32
.6	2.5	1.5	60
.7	5.0	1.8	97
.8	8.8	2.2	156
1.0	19		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	14	14	13	b11	b23	68	79	74	19	3.0	5.0
2	4.5	16	14	17	b12	b22	73	76	66	18	3.5	4.8
3	4.0	14	16	18	b13	b21	76	73	66	19	3.8	4.2
4	4.5	14	18	16	b14	b23	92	76	60	19	3.8	4.5
5	*5.0	13	18	b15	b15	b22	100	78	53	21	4.5	4.0
6	6.1	14	20	b12	b20	b20	104	78	57	19	4.8	4.0
7	6.1	12	18	b12	b30	*19	107	121	57	17	4.5	4.0
8	6.5	12	18	b14	31	19	122	119	51	16	4.0	4.0
9	6.1	11	19	b15	33	18	118	121	52	15	3.8	4.0
10	6.5	*9.8	18	b15	36	19	103	124	51	15	4.0	4.0
11	5.8	10	*17	b15	54	20	97	132	53	13	4.2	4.2
12	6.5	9.8	16	15	46	18	94	132	57	11	3.8	4.2
13	6.5	10	16	14	44	18	96	115	62	9.3	3.5	3.5
14	6.1	12	18	16	43	18	100	105	60	8.4	3.5	3.2
15	5.8	13	18	15	38	28	*94	104	62	8.4	3.2	3.2
16	6.1	13	17	16	39	34	97	107	57	8.0	3.0	3.5
17	6.5	15	19	18	39	38	98	112	52	*7.7	*3.5	3.2
18	7.3	16	18	15	38	38	94	119	46	7.3	3.5	3.5
19	6.9	14	17	b15	31	38	94	118	*44	6.5	3.5	3.8
20	7.3	14	17	b14	28	47	82	121	44	5.4	3.8	3.2
21	6.5	14	16	16	29	58	73	119	42	4.8	4.2	*3.5
22	6.1	14	16	16	29	54	73	145	39	3.8	4.5	3.2
23	6.5	14	16	17	31	57	73	*148	40	2.5	5.8	3.5
24	6.5	14	16	17	31	62	74	132	34	2.4	5.0	3.8
25	7.3	15	16	*16	b27	66	74	125	28	2.2	5.4	4.5
26	9.3	15	14	17	b26	76	*76	119	24	2.4	4.8	4.0
27	12	15	15	18	b25	70	78	110	23	2.4	5.4	3.8
28	14	15	16	b15	b23	70	108	103	22	2.4	7.3	4.2
29	15	15	16	b12	-	73	101	92	22	2.4	6.1	4.2
30	12	16	18	b9.0	-	61	88	833	21	2.5	5.8	5.4
31	11	-	15	b10	-	62	-	78	-	3.2	5.4	-
Total	224.3	403.6	520	463.0	836	1,212	2,727	3,364	1,419	294.0	134.9	118.1
Mean	7.24	13.5	16.8	14.9	29.9	39.1	90.9	109	47.3	9.48	4.35	3.94
Ac-ft	445	801	1,030	918	1,660	2,400	5,410	6,670	2,810	583	268	234

Calendar year 1950: Max 161 Min 1.9 Mean 37.7 Ac-ft 27,250
Water year 1950-51: Max 148 Min 2.2 Mean 32.1 Ac-ft 23,230

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

Little Weiser River near Indian Valley, Idaho

Location.--Lat 44°30', long. 116°24', in NE¼ sec. 1, T. 13 N., R. 1 W., on left bank 60 ft downstream from barn at Richardson Ranch, 1 mile upstream from diversion feeding C. Ben Ross Reservoir, and 4¾ miles southeast of Indian Valley.

Drainage area.--81.9 sq mi.

Records available.--June 1920 to February 1921, March to September 1923, February 1924 to October 1927, April 1938 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,250 ft (by barometer). Prior to Feb. 25, 1924, staff gage at approximately present site at different datum. Feb. 25 to Apr. 22, 1924, staff gage at Burger Ranch 1 mile downstream at different datum. Apr. 23, 1924, to Nov. 18, 1927, water-stage recorder or staff gage at site half a mile downstream at different datum. May 6, 1938, to Aug. 11, 1950, staff gage at present site and datum.

Average discharge.--16 years (1924-27, 1938-51), 101 cfs.

Extremes.--Maximum discharge during year, 568 cfs May 22 (gage height, 3.45 ft); minimum, 7.8 cfs Sept. 19, 20, 21 (gage height, 0.11 ft).
1920-21, 1923-27, 1938-51: Maximum discharge observed, about 1,840 cfs Feb. 4, 1925; minimum observed, 3.6 cfs Aug. 28-30, Sept. 4, 5, 1924.

Remarks.--Records good. One small ranch diversion above station. Many diversions below station for irrigation including feeder canal to C. Ben Ross Reservoir.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 23				May 24 to Sept. 30			
0.5	11	1.6	107	0.1	7.6	1.3	78
.7	20	2.0	177	.3	12	1.6	112
1.0	38	2.5	287	.5	19	2.0	177
1.3	68	3.2	484	.7	29	2.5	287
				1.0	49	3.2	484

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	30	26	27	b28	47	123	285	265	82	18	16
2	12	41	22	34	b30	46	153	261	252	79	17	15
3	11	34	27	35	32	39	189	252	238	74	17	14
4	12	34	34	35	33	48	229	265	229	80	17	14
5	*16	32	29	31	92	44	273	275	280	71	16	13
6	23	29	30	21	80	*42	310	320	245	65	15	12
7	16	29	45	21	285	40	317	371	216	61	15	12
8	17	30	42	b29	236	37	310	402	197	58	15	12
9	17	21	43	33	280	38	285	402	189	55	15	12
10	15	*18	47	32	285	34	273	419	199	54	14	12
11	13	25	*48	33	249	33	261	443	216	51	14	11
12	13	25	48	31	205	37	275	440	236	48	13	11
13	13	23	42	29	149	37	310	437	222	45	13	11
14	13	23	41	30	118	42	346	393	229	43	13	10
15	14	22	52	42	101	102	335	365	242	40	13	8.6
16	13	23	49	37	92	90	*333	379	233	39	12	8.4
17	15	23	45	37	85	70	346	402	214	37	*12	8.4
18	25	24	42	38	78	64	360	410	195	*35	12	8.2
19	18	23	40	35	69	67	352	408	179	35	11	8.0
20	15	23	38	31	67	83	325	405	*166	33	11	8.0
21	14	24	37	35	64	110	282	408	*151	32	11	*8.0
22	14	23	35	40	61	103	263	440	141	30	11	8.4
23	13	23	36	36	60	90	256	474	132	27	15	8.4
24	13	23	35	41	57	96	252	*468	123	25	13	8.2
25	15	23	34	*50	57	106	238	452	115	25	11	11
26	25	24	32	56	47	110	249	446	108	24	11	13
27	23	24	32	55	54	112	265	449	102	23	11	9.3
28	27	24	32	b32	48	104	382	446	97	23	15	8.7
29	44	24	32	b26	-	109	360	382	92	22	18	8.7
30	41	27	35	b22	-	113	317	343	87	21	18	12
31	30	-	34	b25	-	106	-	297	-	20	17	-
Total	561	771	1,164	1,059	3,042	2,199	8,569	11,939	5,590	1,357	434	320.3
Mean	18.1	25.7	37.5	34.2	109	70.9	286	385	186	43.8	14.0	10.7
Cfsm	0.221	0.314	0.458	0.418	1.33	0.866	3.49	4.70	2.27	0.535	0.171	0.131
In.	0.25	0.35	0.53	0.48	1.38	1.00	3.89	5.42	2.54	0.82	0.20	0.15
Ac-ft	1,110	1,530	2,310	2,100	6,030	4,360	17,000	23,680	11,090	2,690	861	635

Calendar year 1950: Max 372 Min 6 Mean 94.4 Cfsm 1.15 In. 15.63 Ac-ft 68,320
Water year 1950-51: Max 474 Min 8.0 Mean 101 Cfsm 1.23 In. 16.81 Ac-ft 73,400

Peak discharge (base, 400 cfs).--Apr. 18 (10 p.m.) 405 cfs (2.94 ft); Apr. 28 (6 p.m.) 440 cfs (3.08 ft); May 12 (5 p.m.) 500 cfs (3.25 ft); May 22 (9 p.m.) 568 cfs (3.45 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Weiser River above Crane Creek, near Weiser, Idaho

Location.--Lat 44°18', long. 116°48', in sec. 10, T. 11 N., R. 4 W., on left bank 1 mile upstream from Crane Creek and 9 miles northeast of Weiser.

Drainage area.--1,160 sq mi.

Records available.--July 1920 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 2,270 ft (by barometer).

Average discharge.--30 years (1921-51), 863 cfs.

Extremes.--Maximum discharge during year, 4,320 cfs Feb. 12 (gage height, 5.13 ft); maximum gage height, 7.18 ft Feb. 7 (ice jam); minimum discharge, 37 cfs sometime during period July 16 to Aug. 15; minimum gage height, 0.84 ft Sept. 21.
1920-51: Maximum discharge, 16,900 cfs Mar. 19, 1932 (gage height, 10.8 ft, from floodmarks), from rating curve extended above 9,000 cfs by logarithmic plotting; minimum, 5 cfs (estimated) Aug. 11 to Sept. 10, 1931.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow partly regulated by Lost Valley Reservoir (see p. 179) and other reservoirs. Diversions above station for irrigation of about 22,000 acres.

Revisions (water years).--W 903: 1932(M).

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	34	2.5	800
1.0	66	3.0	1,230
1.3	146	4.0	2,430
1.6	260	5.0	4,030
2.0	463		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	380	292	475	500	655	2,030	2,640	1,260	274	54	143
2	140	407	287	441	600	662	2,250	2,290	1,140	252	50	137
3	*146	386	274	549	620	575	2,540	2,010	1,090	231	45	134
4	150	339	334	575	b640	549	2,850	1,880	1,040	227	45	127
5	153	325	542	517	b800	662	3,220	1,890	1,190	274	50	124
6	192	315	418	429	b900	628	3,580	1,970	1,350	256	54	118
7	235	*292	628	344	b2,200	669	3,690	2,500	1,220	223	58	104
8	200	287	*816	b350	b3,300	*595	3,590	2,660	1,140	204	62	96
9	189	282	628	b500	3,300	601	3,330	2,660	1,040	189	64	91
10	189	248	582	b500	3,670	530	3,100	2,700	986	181	62	93
11	178	227	562	b480	3,670	463	2,880	2,910	1,020	164	60	96
12	174	256	536	b460	3,940	505	2,760	3,170	1,090	153	60	102
13	164	260	499	b450	3,070	523	2,850	3,010	1,170	134	62	102
14	164	252	469	b450	2,150	648	3,170	2,620	1,110	118	63	96
15	170	256	536	b470	1,670	1,100	3,280	2,330	1,120	120	*64	91
16	170	248	601	b500	1,450	2,580	3,170	2,260	1,110	*124	61	88
17	174	260	542	523	1,240	1,720	*3,090	2,390	1,040	135	61	88
18	189	274	562	697	1,190	1,530	3,140	2,460	944	115	57	86
19	248	278	523	655	1,020	1,640	3,100	2,440	*872	105	57	*64
20	219	269	493	499	977	2,220	2,930	2,360	800	102	61	48
21	204	252	463	517	936	2,930	2,560	2,280	718	102	61	47
22	192	252	446	530	944	2,840	2,210	*2,220	655	103	57	47
23	181	252	435	530	936	2,350	1,990	2,360	588	100	75	47
24	167	252	435	505	904	2,350	1,840	2,390	562	90	93	48
25	164	252	418	511	912	2,660	1,690	2,250	530	80	93	50
26	185	252	407	530	770	2,730	1,670	2,100	463	75	88	55
27	274	256	380	*549	755	2,820	1,770	2,070	429	68	91	55
28	260	256	386	446	725	2,350	2,330	2,160	380	58	107	57
29	429	252	396	b230	-	2,250	3,520	1,880	330	55	143	57
30	635	264	446	b300	-	2,560	3,090	1,620	305	55	153	66
31	481	-	608	b400	-	2,140	-	1,430	-	59	150	-
Total	6,750	8,381	14,944	14,912	43,789	47,035	83,230	71,910	26,692	4,426	2,261	2,557
Mean	218	279	482	481	1,564	1,517	2,774	2,320	890	143	72.9	85.2
Ac-ft	13,390	16,620	29,640	29,580	86,850	93,290	165,100	142,600	52,940	8,780	4,480	5,070

Calendar year 1950: Max 6,280 Min 52 Mean 995 Ac-ft 720,200
Water year 1950-51: Max 3,940 Min 45 Mean 896 Ac-ft 648,300

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Feb. 1-3, July 14, 15, July 17 to Aug. 15; discharge estimated on basis of weather records and records for other stations in Weiser River basin.

Crane Creek Reservoir near Midvale, Idaho

Location.--Lat 44°22', long. 116°37', in SE¼ sec. 19, T. 12 N., R. 2 W., at gate-control structure near left end of dam on Crane Creek, 10 miles southeast of Midvale.

Drainage area.--242 sq mi.

Records available.--November 1923 to September 1951.

Gage.--Staff gage. Altitude of gage is 3,190 ft (by barometer).

Extremes.--Maximum gage height observed during year, 49.5 ft Mar. 22; minimum observed, 32.5 ft Nov. 3, 22.
1923-51: Maximum gage height observed, 56.3 ft Feb. 22, 1927; no usable contents Sept. 23, 1928, to Feb. 28, 1929, Sept. 25 to Dec. 1, 1929.

Remarks.--Reservoir is formed by earth dam completed in 1910 and raised in 1920-21. Capacity is reported to be about 60,000 acre-ft at gage height 55.0 ft (elevation of spillway crest). Water is used for irrigation of lands in lower Weiser Valley.

Cooperation.--Gage readings furnished by Crane Creek Reservoir Administration Board.

Revisions.--W 833: Drainage area.

Gage height, in feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	33.6	-	-	-	48.1	48.5	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	37.5
3	-	32.5	-	-	-	-	48.2	-	-	47.9	-	-
4	32.9	-	-	-	-	-	-	-	-	-	43.0	37.3
5	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	40.5	46.85	-	-	48.3	-	-	-
8	-	-	-	-	-	-	-	-	-	47.6	42.1	36.7
9	-	32.6	-	-	43.7	-	-	-	-	-	-	-
10	-	-	-	-	-	-	47.8	-	-	-	-	-
11	-	-	33.05	-	-	46.9	-	-	-	47.4	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	32.6	-	32.9	-	46.9	-	-	48.9	-	-	-	-
14	-	-	-	-	-	-	-	-	48.2	-	40.7	35.9
15	-	-	-	-	-	-	-	49.0	-	-	-	-
16	-	-	-	-	47.2	-	-	-	-	-	40.4	-
17	-	-	-	-	-	-	47.9	48.8	-	46.7	-	-
18	-	-	-	-	-	-	-	-	-	46.5	-	-
19	-	-	-	-	-	-	47.9	48.6	48.2	-	-	-
20	-	-	-	-	47.2	49.1	-	-	-	-	-	35.3
21	-	-	-	-	-	-	-	-	-	-	39.3	-
22	-	32.5	-	36.1	-	49.5	47.9	48.5	-	45.8	-	35.1
23	-	-	-	-	-	-	-	48.52	-	-	-	34.8
24	-	-	-	-	47.1	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	45.2	38.5	-
26	-	-	-	36.8	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	48.1	-	-	-
28	-	-	-	-	-	-	-	48.5	-	-	38.1	-
29	-	-	-	-	-	48.4	-	-	-	-	-	33.9
30	-	-	-	-	-	-	-	-	-	44.1	-	-
31	-	-	-	-	-	-	-	-	-	43.8	-	-

Crane Creek near Midvale, Idaho

Location.--Lat 44°22'00", long. 116°37'30", in SE¼ sec. 19, T. 12 N., R. 2 W., on right bank 400 ft downstream from Crane Creek Dam and 10 miles southeast of Midvale.

Drainage area.--242 sq mi.

Records available.--October 1910 to April 1916, May 1924 to September 1951.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 3,140 ft (by barometer). Prior to May 1, 1924, staff gage at site 100 ft upstream at different datum.

Average discharge.--30 years (1912-15, 1924-51), 69.7 cfs.

Extremes.--Maximum discharge during year, 384 cfs Mar. 27 (gage height, 2.58 ft); no flow for long periods.
1910-16, 1924-51: Maximum discharge observed, 4,240 cfs Dec. 3, 1910 (gage height, 8.9 ft), from rating curve extended above 3,500 cfs; no flow at times in may years when gates in dam were closed.

Remarks.--Records good except those below 10 cfs and those for periods of no gage-height record, which are poor. Flow regulated since 1911 by Crane Creek Reservoir (see p. 187). No large diversion above station.

Cooperation.--Water-stage recorder inspected by Crane Creek Reservoir Adminstration Board.

Revisions (water years).--W 833: Drainage area. W 963: 1941(M).

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

0	0	1.1	66
.1	.5	1.5	111
.2	3.0	1.9	168
.3	6.5	2.3	260
.5	18	2.7	400
.8	39		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	5.8	0.2	a0.3	0	96	243	6.5	15	13	210	83
2	19	5.4	.2	a.3	0	96	243	6.5	15	14	207	60
3	19	5.4	.1	a.3	0	94	212	6.5	15	22	207	42
4	*19	5.1	0	a.3	0	94	190	6.5	15	45	207	53
5	19	4.4	0	a.2	0	94	190	6.5	15	45	207	85
6	19	4.8	0	a.2	0	94	190	6.5	15	45	201	85
7	19	5.1	0	a.1	15	*94	190	6.5	11	45	201	85
8	19	5.1	0	0	40	94	190	6.5	7.5	45	199	89
9	19	*4.8	0	0	68	94	190	6.5	7.0	45	199	106
10	19	4.8	0	0	109	94	113	6.5	6.5	45	199	106
11	19	4.0	*.3	0	111	69	2.8	6.5	6.5	74	190	106
12	19	3.4	.3	0	112	32	2.5	6.5	5.4	99	179	106
13	12	3.4	.3	0	159	32	2.5	36	5.4	99	179	106
14	5.8	3.4	.3	0	249	32	2.5	70	5.1	a110	179	94
15	5.8	3.0	.3	0	246	33	2.5	154	5.1	a125	179	63
16	5.8	3.0	.3	0	243	34	2.5	220	5.1	a140	*181	63
17	5.4	3.0	.3	0	246	35	2.5	220	5.1	*158	179	64
18	5.4	3.0	.3	0	246	35	2.5	220	5.4	158	179	64
19	5.4	3.4	.3	0	243	35	1.3	147	*5.4	158	179	65
20	5.4	3.0	.3	0	243	85	0	16	5.1	158	179	*65
21	5.1	2.8	a.3	0	243	232	0	16	5.8	158	179	64
22	5.1	.5	a.3	0	240	306	1.1	15	5.8	179	177	88
23	5.4	.2	a.3	0	238	376	6.2	*16	4.8	194	177	101
24	5.4	.2	a.3	0	156	376	6.5	16	4.4	a225	177	101
25	5.8	.2	a.3	0	97	376	6.5	16	4.8	257	154	101
26	5.8	.2	a.3	0	96	376	6.5	16	4.4	260	146	101
27	5.8	.2	a.3	0	96	376	6.5	15	5.8	260	146	101
28	5.8	.2	a.3	0	96	376	6.5	a15	13	260	113	101
29	5.4	.2	a.3	0	-	287	6.5	a15	13	260	82	72
30	5.8	.2	a.3	0	-	243	6.5	a15	13	240	82	56
31	5.8	-	a.3	0	-	243	-	a15	-	222	82	-
Total	341.2	88.2	6.8	1.7	3,592	4,933	2,025.4	1,331.0	250.4	4,158	5,355	2,476
Mean	11.0	2.94	0.22	0.05	128	159	67.5	42.9	8.35	134	173	82.5
Ac-ft	677	175	13	3.4	7,120	9,780	4,020	2,640	497	8,250	10,620	4,910

Calendar year 1950: Max 713 Min 0 Mean 63.0 Ac-ft 45,580
Water year 1950-51: Max 376 Min 0 Mean 67.3 Ac-ft 48,700

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of gate changes, weather records, and records for station at mouth near Weiser.

Crane Creek at mouth, near Weiser, Idaho

Location.--Lat 44°18', long. 116°47', on right bank in sec. 14, T. 11 N., R. 4 W., just downstream from highway bridge at Harris Ranch, a quarter of a mile upstream from mouth and 10 miles northeast of Weiser.

Drainage area.--288 sq mi.

Records available.--July 1920 to September 1951.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 2,240 ft (by barometer).

Average discharge.--30 years (1921-51), 77.8 cfs.

Extremes.--Maximum discharge during year, 1,020 cfs Mar. 15 (gage height, 5.37 ft); minimum, 0.9 cfs Apr. 17, 18 (gage height, 1.65 ft); minimum daily, 1.0 cfs Apr. 18.
1920-51: Maximum discharge, 2,350 cfs about Feb. 7, 1925 (gage height, 6.80 ft, from well-defined marks on gage), from rating curve extended above 1,000 cfs; minimum, 0.2 cfs May 26, 1931; minimum daily, 1 cfs or less at times during many years; minimum gage height, 1.30 ft Jan. 21, 1922.

Remarks.--Records good except those below 5 cfs, which are fair. Flow regulated since 1911 by Crane Creek Reservoir (see p. 187). Several small ditches divert above station for irrigation.

Revisions.--W 833: Drainage area.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.5	0.3	2.5	40
1.6	1.2	2.8	68
1.7	2.3	3.1	113
1.8	4.0	3.5	195
1.9	6.5	3.9	296
2.0	10	4.3	422
2.2	20	4.7	593

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	10	5.8	12	10	108	299	5.8	8.6	3.8	202	74
2	21	11	5.8	11	9.6	106	293	5.2	10	3.5	209	60
3	*22	9.6	6.5	13	8.9	106	263	4.0	12	4.5	204	36
4	23	9.3	7.6	11	10	106	220	3.5	12	16	204	37
5	23	8.6	6.5	9.3	76	106	216	3.2	13	25	200	73
6	23	8.2	6.8	7.2	84	106	216	3.3	13	27	197	76
7	23	*8.2	9.6	6.8	562	106	213	5.2	14	27	197	74
8	23	8.6	17	7.2	343	106	213	12	10	27	191	74
9	23	8.6	15	7.2	302	*108	211	7.2	8.2	30	191	92
10	23	8.9	*9.6	6.8	374	106	173	6.5	6.5	29	195	94
11	22	8.9	7.6	6.8	526	94	13	5.8	6.0	44	188	94
12	21	8.9	6.8	6.8	381	42	5.2	11	7.9	78	182	93
13	21	8.6	6.5	6.8	250	42	4.0	23	7.9	81	182	96
14	12	9.3	6.5	6.5	322	52	3.5	56	7.9	92	175	94
15	9.6	8.9	9.6	8.8	308	300	3.5	113	6.8	117	*169	59
16	9.6	8.2	20	35	310	198	3.3	230	5.5	*138	165	59
17	10	8.6	9.6	21	296	94	*1.2	230	4.5	142	169	60
18	11	8.6	7.6	42	293	80	1.0	235	*4.8	144	169	60
19	10	8.6	7.2	25	288	112	1.3	202	4.5	144	169	*59
20	10	8.6	6.5	15	285	213	3.0	25	3.7	144	167	56
21	9.6	8.6	6.2	14	288	454	3.0	16	3.2	144	165	57
22	8.9	8.2	6.2	38	290	456	2.3	*12	3.2	160	167	68
23	8.9	7.6	6.2	25	290	550	1.5	9.3	3.2	186	165	88
24	8.9	5.8	6.2	20	220	545	3.5	5.2	2.8	188	160	90
25	9.6	5.2	6.2	20	122	541	3.3	4.8	2.6	211	148	92
26	11	5.2	6.0	21	115	523	3.7	6.0	2.2	258	128	92
27	9.6	5.5	6.0	*21	111	510	3.5	5.2	2.1	260	132	96
28	9.3	5.5	6.2	13	110	493	5.8	4.8	2.0	252	118	94
29	10	5.5	6.5	12	-	415	7.6	5.2	2.3	250	74	77
30	9.6	5.8	20	11	-	371	7.2	5.2	3.5	240	74	57
31	9.3	-	30	12	-	331	-	5.0	-	223	74	-
Total	474.9	241.1	283.8	472.2	6,584.5	7,480	2,397.4	1,265.4	193.9	3,688.8	5,130	2,231
Mean	15.3	8.04	9.15	15.2	235	241	79.9	40.8	6.46	119	165	74.4
Ac-ft	942	478	563	937	13,060	14,840	4,760	2,510	385	7,320	10,180	4,430

Calendar year 1950: Max 1,040 Min 2.2 Mean 77.8 Ac-ft 56,340
Water year 1950-51: Max 562 Min 1.0 Mean 83.4 Ac-ft 60,400

* Discharge measurement made on this day.

Weiser Irrigation District Canal near Weiser, Idaho

Location.--Lat 44°15', long. 116°51', in sec. 32, T. 11 N., R. 4 W., on left bank 3¼ miles downstream from headworks of canal and 7 miles east of Weiser.

Records available.--April 1920 to September 1951 (winter records fragmentary prior to 1950).

Gage.--Water-stage recorder. Altitude of gage is 2,160 ft, revised (by barometer).

Extremes.--1920-51: Maximum daily discharge, 213 cfs July 1, 1947; no flow at times when gates were closed.

Remarks.--Records good except those below 5 cfs, which are poor. Canal diverts water from Weiser River in sec. 35, T. 11 N., R. 4 W., 3¼ miles above station for irrigation of about 9,000 acres included in projects of Weiser and Weiser Bench Irrigation Districts. One farm lateral diverts a quarter of a mile above station.

Cooperation.--Water-stage recorder inspected by Weiser Irrigation District.

Rating table, water year 1950-51 (gage height in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 14 to Aug. 17)

0.1	0.6	1.0	73
.2	4.5	1.5	113
.3	10	2.0	147
.4	16	2.9	204
.6	33		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	126	2.8	0.6	0.6	0.9	1.6	0.9	139	179	200	194	172
2	123	2.4	.6	.6	.9	1.6	.9	141	176	200	192	173
3	117	2.4	.6	.6	.9	1.6	.9	141	177	199	192	156
4	*100	2.0	.9	.9	.9	1.6	.9	142	178	194	196	144
5	104	2.0	.9	.6	.9	1.2	23	142	178	192	197	164
6	123	1.6	.9	.9	1.2	1.2	77	147	174	189	190	166
7	118	1.6	.9	.9	2.4	1.2	88	141	168	190	184	157
8	103	1.2	*.9	.6	1.2	*1.2	91	136	176	191	192	144
9	103	*1.2	.9	.6	1.2	1.2	90	138	175	192	194	151
10	103	1.2	.9	.6	.9	1.2	87	139	177	187	197	160
11	102	1.2	.9	.9	.9	1.2	98	141	179	172	190	161
12	100	1.2	.9	.9	.9	1.2	118	139	179	194	189	167
13	100	1.2	.9	.9	1.6	1.2	136	125	177	188	187	170
14	100	1.2	.9	.9	1.6	1.2	155	115	177	180	188	161
15	100	.9	.9	.9	2.0	1.2	170	112	182	190	*185	135
16	100	.9	.9	1.2	1.6	1.2	170	111	183	200	177	121
17	100	.9	.9	1.2	1.6	1.2	*158	115	183	*198	179	119
18	100	.9	.9	1.2	1.2	1.2	159	121	*184	197	179	119
19	101	.9	.9	1.2	1.2	1.2	166	132	182	194	178	*104
20	101	.9	.9	a1.0	1.2	1.2	167	139	180	190	178	80
21	102	.9	.9	a1.0	1.2	1.2	164	139	176	179	182	68
22	50	.9	.9	a1.2	1.2	1.2	163	*157	182	184	178	77
23	14	.9	.6	a1.0	1.2	1.2	166	173	195	202	188	108
24	14	.9	.6	aa.9	1.2	1.2	171	175	194	199	184	113
25	14	.9	.9	a.9	1.2	1.2	172	177	193	194	178	114
26	14	.9	.9	a.9	1.2	.9	161	177	192	202	177	117
27	14	.9	.9	*.9	1.6	.9	166	184	197	202	179	121
28	14	.9	.9	.9	1.6	.9	163	185	199	199	174	128
29	14	.9	.9	.9	-	.9	152	184	197	199	169	121
30	11	.9	.6	.9	-	.9	138	184	194	196	173	92
31	2.8	-	.6	.9	-	.9	-	183	-	192	172	-
Total	2,387.8	37.6	25.8	27.6	35.6	37.0	3,572.6	4,574	5,483	5,985	5,712	3,983
Mean	77.0	1.25	0.83	0.89	1.27	1.19	119	148	183	193	184	133
Ac-ft	4,740	75	51	55	71	73	7,090	9,070	10,880	11,870	11,330	7,900

Calendar year 1950: Max 199 Min 0.5 Mean 87.5 Ac-ft 63,370
Water year 1950-51: Max 202 Min 0.6 Mean 87.3 Ac-ft 63,200

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Weiser River above Crane Creek and Crane Creek at mouth, assuming leakage varied with changing head at headgates.

Mann Creek near Weiser, Idaho

Location.--Lat 44°24', long. 116°54', in sec. 11, T. 12 N., R. 5 W., on left bank 2 miles upstream from U. S. Highway 95, 10 miles northeast of Weiser and 11½ miles upstream from mouth.

Drainage area.--56 sq mi, approximately.

Records available.--March 1911 to September 1913, July to November 1920, April 1937 to September 1951.

Gage.--Staff gage. Altitude of gage is 2,830 ft (from topographic map). Prior to Feb. 9, 1951, staff gages at sites within 1,000 ft upstream at different datums.

Average discharge.--16 years (1911-13, 1937-51), 40.7 cfs.

Extremes.--Maximum discharge observed during year, 421 cfs Apr. 5 (gage height, 2.70 ft); minimum observed, 0.2 cfs Sept. 7, 8 (gage height, 0.30 ft).
1911-13, 1920, 1937-51: Maximum discharge, 1,540 cfs Mar. 27, 1940 (gage height, 5.45 ft, from floodmark, site and datum then in use), from rating curve extended above slope-area determination at gage height 4.21 ft; no flow Aug. 18 to Sept. 22, 1937, July 31 to Sept. 13, 1939.

Remarks.--Records fair except those for periods of ice effect, which are poor. Gage read twice daily. One diversion above station for irrigation.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 9 to Apr. 8)

Oct. 1 to Feb. 8

1.0	0.8	1.6	28
1.1	2.8	1.8	43
1.2	6.7	2.0	70
1.4	16		

Feb. 9 to Sept. 30

0.3	0.2	1.0	34
.4	.9	1.2	63
.5	2.4	1.5	129
.6	5.3	1.9	245
.7	9.8	2.3	370
.8	16		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	5.5	5.5	b8.0	b8.0	22	114	126	34	11	1.2	2.0
2	2.4	12	5.5	8.1	b9.0	18	132	109	34	10	1.2	1.8
3	2.4	9.1	5.5	8.1	b9.5	18	168	102	34	9.8	1.2	1.4
4	*2.4	6.7	6.3	6.3	b10	22	179	106	33	11	1.2	.9
5	2.6	6.3	6.3	6.3	b11	22	307	109	32	11	1.2	.8
6	5.1	6.3	8.1	6.3	b20	18	367	114	30	9.8	1.2	.6
7	3.6	6.3	10	5.5	b40	18	273	124	28	9.8	1.2	.3
8	2.8	6.3	11	5.5	60	*16	218	122	27	8.9	1.2	.3
9	2.8	*b4.5	10	6.3	72	17	197	119	26	8.9	1.2	.5
10	2.8	b4.2	9.1	6.3	*102	17	200	114	24	8.4	1.2	.6
11	2.8	5.5	*9.1	6.3	93	18	168	124	23	7.6	1.2	.9
12	2.8	5.5	9.6	6.3	86	16	191	126	22	7.1	1.0	1.2
13	2.8	5.5	11	5.5	69	15	191	119	19	6.2	.9	1.2
14	2.8	5.5	13	5.5	53	22	212	106	24	6.2	.9	.9
15	2.8	5.5	12	5.5	43	43	200	104	23	5.8	.9	.9
16	2.8	5.5	11	5.5	37	55	194	104	16	5.3	*.8	.8
17	4.8	5.5	11	6.3	33	44	*185	97	15	*5.0	.8	.8
18	6.7	5.5	11	8.6	33	42	182	95	14	4.7	.8	.8
19	5.5	5.5	10	b8.0	29	49	173	86	*14	4.1	.8	.8
20	4.4	5.5	9.6	b7.0	25	72	156	76	14	3.3	.8	*.8
21	4.0	5.5	9.1	b8.0	27	97	137	*69	14	3.0	.8	.9
22	3.6	5.5	8.1	b8.5	24	89	126	65	14	3.0	.8	1.2
23	3.6	5.5	8.1	b8.0	25	78	112	*61	14	2.7	.9	1.4
24	3.2	5.5	7.2	b10	25	84	97	60	14	2.4	1.0	1.4
25	4.8	5.5	8.1	11	18	97	89	55	14	2.1	1.8	1.6
26	6.3	5.5	9.1	*12	25	122	86	52	13	2.0	1.5	2.1
27	6.3	5.5	9.1	14	25	116	93	46	12	1.8	1.2	2.2
28	6.3	5.5	8.1	69	25	100	203	42	12	1.8	2.0	2.2
29	5.9	4.8	8.1	b6.0	-	100	165	35	11	1.5	3.0	2.1
30	5.1	4.8	8.1	b6.5	-	102	145	34	11	1.5	2.2	2.7
31	4.8	-	8.1	b7.0	-	102	-	34	-	1.4	2.1	-
Total	121.6	175.8	275.8	231.2	1,036.5	1,651	5,260	2,735	615	177.1	38.2	36.1
Mean	3.92	5.86	8.90	7.46	37.0	53.3	175	88.2	20.5	5.71	1.23	1.20
Ac-ft	241	349	547	459	2,060	3,270	10,430	5,420	1,220	351	76	72

Calendar year 1950: Max 241 Min 0.3 Mean 33.4 Ac-ft 24,200
Water year 1950-51: Max 367 Min 0.3 Mean 33.8 Ac-ft 24,500

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

Snake River at Weiser, Idaho

Location (revised).--Lat 44°14'40", long. 116°58'25", in sec. 31, T. 11 N., R. 5 W., on right bank a third of a mile upstream from highway bridge at Weiser and a third of a mile downstream from Weiser River.

Drainage area.--69,200 sq mi, approximately.

Records available.--October 1910 to September 1951. Fragmentary gage-height record obtained by United States Weather Bureau since 1895.

Gage.--Water-stage recorder. Datum of gage is 2,086.64 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Oct. 1, 1914, staff gage at site half a mile downstream at different datum. Oct. 1, 1914, to Oct. 11, 1933, staff gage at present site and datum.

Extremes.--Maximum discharge during year, 45,900 cfs May 17 (gage height, 9.92 ft); minimum, 10,300 cfs July 19 (gage height, 3.30 ft).

1910-51: Maximum discharge observed, 83,100 cfs May 23, 1921 (gage height, 13.60 ft); minimum observed, 5,100 cfs Aug. 5, 1924 (gage height, 1.35 ft).

Flood of Mar. 3, 1910, reached a stage of 15.7 ft on old United States Weather Bureau gage (discharge, about 100,000 cfs). Flood in June 1894 was considerably higher.

Remarks.--Records excellent. Flow regulated by many reservoirs above station. Diurnal fluctuation caused by Swan Falls powerplant. About 2,240,000 acres of land irrigated by diversion from river and its tributaries above station.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

3.4	10,700	7.0	28,000
4.0	13,300	8.0	33,800
5.0	17,800	9.0	39,900
6.0	22,800	9.9	45,800

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15,500	19,400	16,300	17,100	18,000	23,800	32,700	34,200	39,100	21,000	12,200	12,700
2	16,100	19,200	15,800	16,900	19,200	22,200	33,900	33,600	37,700	18,800	11,600	12,500
3	15,200	18,600	15,800	17,000	22,200	22,600	34,300	35,100	35,400	17,100	12,200	12,400
4	*17,600	17,300	14,500	18,700	22,900	23,400	35,900	37,000	32,100	16,700	12,100	12,100
5	18,800	18,300	17,400	16,100	25,800	24,400	39,000	38,100	31,500	17,100	12,400	12,100
6	18,400	18,200	18,300	18,400	30,200	24,800	43,700	36,800	31,800	16,200	12,700	11,900
7	18,200	*15,600	18,600	16,900	35,600	25,600	44,700	35,800	31,800	13,900	12,200	11,800
8	17,400	17,800	*19,200	15,700	43,500	25,200	44,100	36,100	30,500	15,300	12,000	11,900
9	16,300	18,200	18,200	16,600	40,900	26,200	43,000	36,000	28,900	15,700	12,600	11,600
10	15,200	18,200	18,200	18,300	38,500	25,800	42,500	34,600	27,600	12,600	12,900	11,900
11	17,800	17,600	16,900	16,600	37,800	26,500	43,600	34,300	25,600	11,500	12,700	12,000
12	16,000	17,600	17,800	16,900	37,800	26,000	42,600	37,600	24,200	12,700	12,000	12,400
13	16,300	16,500	18,700	17,900	36,000	25,800	43,400	39,300	23,200	12,200	11,900	12,300
14	16,400	17,600	17,800	19,600	32,900	26,800	42,600	38,100	22,200	12,500	11,900	12,400
15	17,200	18,600	17,300	20,300	29,800	27,500	41,700	39,800	21,800	12,600	12,000	12,800
16	18,000	16,000	17,600	20,600	28,500	31,000	39,000	43,500	23,200	*12,900	11,900	13,200
17	16,600	15,900	17,300	21,200	26,800	31,300	37,800	*44,900	24,000	12,800	11,600	13,700
18	17,600	16,000	16,500	21,000	26,400	30,500	*37,000	45,200	25,300	11,500	11,400	13,500
19	17,800	15,200	18,400	21,400	25,400	30,200	35,800	41,900	24,800	10,900	11,400	13,400
20	16,700	15,600	17,300	21,000	25,000	32,400	33,500	38,300	23,800	11,000	*11,400	13,100
21	16,900	15,500	17,600	21,000	25,200	33,400	30,400	36,300	*22,400	11,800	13,000	12,400
22	17,000	16,500	16,800	20,000	25,600	33,900	29,500	35,700	21,200	11,200	13,800	12,600
23	16,900	16,700	17,200	19,800	25,800	34,800	29,800	35,700	20,600	11,500	12,900	13,000
24	16,400	16,300	17,300	21,000	25,300	35,300	28,400	37,500	19,400	11,900	13,000	13,400
25	17,800	16,200	16,700	21,300	24,400	33,700	27,700	39,800	20,000	11,500	12,800	*13,700
26	16,200	17,600	17,200	*23,300	23,600	33,700	25,800	38,700	20,800	11,600	12,800	13,600
27	15,900	17,000	17,300	24,200	23,900	34,600	25,400	39,100	21,200	11,500	13,300	14,000
28	15,900	17,500	18,100	23,200	*23,800	32,900	27,400	40,700	18,400	11,500	13,000	14,300
29	16,400	18,600	16,700	22,400	-	33,300	33,800	41,800	17,600	11,400	13,000	14,300
30	18,000	17,300	18,600	21,800	-	32,900	34,600	40,400	18,500	11,900	12,900	14,500
31	16,900	-	17,800	21,200	-	32,700	-	39,500	-	11,400	12,900	-
Total	523,600	516,600	539,200	607,400	800,800	903,200	‡1,083.6	‡1,185.4	764,600	412,200	384,500	385,500
Mean	16,890	17,220	17,390	19,590	28,600	29,140	36,120	38,240	25,490	13,300	12,400	12,850
Ac-ft	‡1,039	‡1,025	‡1,069	‡1,205	‡1,588	‡1,791	‡2,149	‡2,351	‡1,517	817,600	762,000	764,600

Calendar year 1950: Max 38,400 Min 9,570 Mean 19,840 Ac-ft 14,360,000
Water year 1950-51: Max 45,200 Min 10,900 Mean 22,210 Ac-ft 16,080,000

* Discharge measurement made on this day.
‡ Expressed in thousands.

Unity Reservoir near Unity, Oreg.

Location.--Lat 44°30', long. 118°11', in SW¼ sec. 21, T. 12 S., R. 37 E., at Unity Dam on Burnt River, just downstream from Job Creek, half a mile downstream from confluence of North, Middle, and South Forks of Burnt River, and 4½ miles north of Unity.

Drainage area.--309 sq mi.

Records available.--March 1938 to September 1951.

Gage.--Staff gage above elevation 3,803.3 ft, reference marks for lower readings; gage read once daily. Datum of gage is at mean sea level, datum of Bureau of Reclamation (to convert elevations to datum of 1929, add 0.12 ft). Prior to Nov. 4, 1941, reference mark or mercury pressure gage at same site and datum.

Extremes.--Maximum contents observed during year, 25,220 acre-ft May 14, 15 (elevation, 3,820.0 ft); minimum observed, 2,960 acre-ft Sept. 30 (elevation, 3,787.6 ft).
1938-51: Maximum contents observed, 25,770 acre-ft Apr. 13, 1942 (elevation, 3,820.6 ft); minimum observed, 256 acre-ft Oct. 7, 1947 (elevation, 3,778.2 ft).

Remarks.--Reservoir is formed by earth-fill dam with concrete spillway and outlet works, completed by Bureau of Reclamation in 1937; storage began Feb. 19, 1938. Capacity, 25,220 acre-ft between elevations 3,776.5 ft (bottom of outlet gates) and 3,820.0 ft (top of radial gates on spillway when closed). Dead storage, 600 acre-ft below elevation 3,776.5 ft. Records given herein represent usable contents. Water used for irrigation of lands in Burnt River Irrigation District near Hereford and Bridgeport. Contents computed from capacity table based on surveys by Bureau of Reclamation.

Monthly elevation and contents, water year October 1950 to September 1951

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	3,793.2	5,630	-
Oct. 31	3,792.2	5,100	-530
Nov. 30	3,793.6	5,840	+740
Dec. 31	3,795.9	7,110	+1,270
Calendar year 1950	-	-	+5,460
Jan. 31	3,798.9	8,910	+1,800
Feb. 28	3,804.3	12,470	+3,560
Mar. 31	3,807.4	14,700	+2,230
Apr. 30	3,817.9	23,320	+8,620
May 31	3,818.0	23,410	+90
June 30	3,812.2	18,420	-4,990
July 31	3,805.8	13,540	-4,880
Aug. 31	3,796.1	7,230	-6,310
Sept.30	3,787.6	2,960	-4,270
Water year 1950-51	-	-	-2,670

Burnt River near Hereford, Oreg.

Location.--Lat 44°30', long. 118°11', in SE¼ sec. 21, T. 12 S., R. 37 E., on left bank at entrance to canyon, 1,250 ft downstream from Unity Dam, 0.3 mile upstream from Van Cleve ditch, 0.7 mile downstream from South Fork, and 7 miles west of Hereford.

Drainage area.--309 sq mi.

Records available.--March 1915 to September 1916, October 1928 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 3,756.75 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Mar. 16, 1915, to Sept. 4, 1916, staff gage at site 2 miles downstream at different datum, below Van Cleve ditch and another small irrigation ditch. Oct. 22, 1928, to June 28, 1932, water-stage recorder at site half a mile downstream from present site at different datum, below Van Cleve ditch. June 29, 1932, to Sept. 16, 1937, water-stage recorder at site 300 ft upstream from present site at different datum. Sept. 17 to Oct. 28, 1937, temporary staff gage at site 300 ft downstream from present site at different datum. Mar. 5, 1939, to Apr. 15, 1943, sharp-crested weir.

Average discharge.--22 years (1929-51), 77.4 cfs.

Extremes.--Maximum discharge during year, 614 cfs Apr. 22 (gage height, 4.56 ft); no flow Nov. 7, 8.

1915-16, 1928-51: Maximum discharge, 2,220 cfs Apr. 17, 1943 (caused by opening of automatic spillway gates), from rating curve extended above 1,300 cfs by logarithmic plotting; maximum gage height, 6.91 ft Apr. 14, 1936, site and datum then in use; no flow at times; minimum discharge before construction of Unity Reservoir Dam, 1.6 cfs Aug. 31, 1935.

Remarks.--Records fair. Many small diversions above station for irrigation; Van Cleve ditch with about 3 cfs capacity diverts below gage but above cableway. Flow regulated by Unity Reservoir (see preceding page) and partly regulated by reservoir (capacity, about 700 acre-ft) on South Fork Burnt River, 3 miles above mouth.

Revisions (water years).--W 903: 1939.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	46	43	34	29	44	287	166	124	86	98	76
2	69	45	43	27	29	44	290	158	128	74	104	75
3	69	45	43	27	29	44	296	149	119	65	98	83
4	69	46	43	27	29	44	302	142	120	69	93	87
5	69	46	43	27	33	45	*308	137	110	71	98	86
6	69	34	43	27	37	46	332	132	107	73	*95	85
7	69	0	44	27	37	47	401	122	*112	70	102	84
8	69	0	44	27	*37	51	*455	134	105	63	104	84
9	69	1	44	27	37	41	510	160	104	59	104	84
10	69	22	45	27	38	33	510	155	110	62	104	84
11	69	*47	45	27	38	33	535	158	109	68	104	84
12	69	43	46	27	39	49	535	164	107	62	105	75
13	52	43	46	27	39	63	528	185	101	68	104	65
14	46	43	46	27	40	61	521	200	98	78	104	65
15	46	43	46	27	40	68	563	208	104	73	104	65
16	46	43	*46	27	40	97	582	218	110	80	104	85
17	46	43	46	27	41	130	582	210	105	81	104	64
18	46	43	46	28	41	156	574	205	98	84	102	67
19	46	43	46	28	41	144	570	192	112	98	110	69
20	45	43	46	28	41	142	563	*158	113	102	114	68
21	46	43	46	28	41	195	560	146	105	107	114	68
22	46	43	54	28	41	236	436	144	98	98	113	67
23	46	43	52	28	41	225	208	136	100	96	110	66
24	46	43	52	29	42	251	208	122	102	95	107	65
25	46	43	52	29	43	287	208	118	100	90	110	64
26	46	43	52	29	43	329	212	116	97	87	112	68
27	46	43	52	29	43	365	163	113	95	89	109	71
28	46	43	52	29	44	347	146	124	92	91	106	70
29	46	43	52	29	-	290	190	130	90	97	105	68
30	46	43	52	29	-	287	185	114	89	98	104	67
31	46	-	52	29	-	287	-	118	-	95	85	-
Total	1,707	1,149	1,462	866	1,073	4,481	11,760	4,733	3,164	2,529	3,230	2,189
Mean	55.1	38.3	47.2	27.9	38.3	145	392	153	105	81.6	104	73.0
Ac-ft	3,390	2,280	2,900	1,720	2,130	8,890	23,330	9,390	6,280	5,020	6,410	4,340

Calendar year 1950: Max 383 Min 0 Mean 91.9 Ac-ft 66,570
Water year 1950-51: Max 582 Min 0 Mean 105 Ac-ft 76,080

* Discharge measurement made on this day.

Powder River at Salisbury, Oreg.

Location.--Lat 44°39', long. 117°52', in NE¼ sec. 36, T. 10 S., R. 39 E., on right bank 700 ft downstream from Salisbury siding of Sumpter Valley Railroad and Stices Gulch and 8½ miles south of Baker.

Drainage area.--219 sq mi.

Records available.--December 1903 to August 1914 and October 1928 to September 1951 in reports of Geological Survey. January 1904 to July 1914 and June 1926 to September 1941 in reports of State Engineer.

Gage.--Water-stage recorder and concrete bag-filled control. Datum of gage is 3,632.31 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Dec. 20, 1903, to Feb. 29, 1912, staff gage at site 400 ft upstream at different datum. Mar. 1, 1912, to Aug. 1, 1914, and June 16, 1926, to Oct. 16, 1933, staff gage at site 0.4 miles downstream from present site at different datums.

Average discharge.--33 years (1904-13, 1926-28, 1929-51), 110 cfs.

Extremes.--Maximum discharge during year, 822 cfs Apr. 6 (gage height, 4.84 ft); minimum, 4.5 cfs Sept. 28, 29 (gage height, 1.12 ft).
1903-14, 1926-51: Maximum discharge, 1,820 cfs Mar. 20, 1910 (gage height, 7.05 ft, site and datum then in use); no flow Aug. 31, 1909, Sept. 7, 1931.

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

Revisions (water years).--W 813: 1935. W 1093: Drainage area.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from debris June 2-16)

1.1	3.8	2.1	124
1.2	7.5	2.5	210
1.3	13	3.0	328
1.5	30	4.0	575
1.8	70	4.8	810

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	38	34	48	a20	b65	354	333	249	52	19	7.1
2	10	43	32	56	a22	b60	400	304	212	48	18	7.1
3	11	43	34	50	a25	b55	480	275	203	47	17	7.1
4	11	47	32	52	a30	b60	609	304	203	46	16	6.8
5	11	47	36	48	a35	68	*762	318	219	47	16	6.4
6	14	47	41	30	a45	70	804	342	198	56	15	6.4
7	18	46	47	b25	62	62	777	418	*187	51	14	7.1
8	16	45	43	b20	*b80	66	756	418	178	45	15	7.1
9	15	42	43	b25	b110	67	723	438	159	42	13	6.4
10	15	34	50	b30	152	b50	684	458	148	41	*15	6.8
11	15	*32	51	b40	203	b40	621	562	159	38	15	6.8
12	15	32	51	b50	194	b45	595	666	163	36	13	6.8
13	13	34	52	55	169	48	627	570	165	34	12	6.8
14	12	36	54	60	150	62	753	490	161	32	11	6.8
15	12	34	54	56	140	120	777	428	163	31	11	6.0
16	12	34	*51	41	128	136	678	*402	161	29	11	5.6
17	12	36	52	52	126	132	627	425	148	27	9.7	6.4
18	14	40	52	40	109	140	a600	438	138	26	11	6.4
19	15	38	55	b35	109	157	a570	420	128	25	9.2	6.4
20	17	37	58	b30	111	205	a540	410	118	*25	8.6	*6.0
21	15	34	55	b35	98	261	a500	410	111	21	8.0	6.0
22	15	30	54	b40	89	282	a450	418	105	20	8.0	5.6
23	14	29	54	b45	96	256	a400	465	101	19	8.0	5.6
24	13	30	56	52	98	273	326	478	94	18	7.1	5.3
25	13	30	62	54	92	314	302	460	85	18	7.5	5.3
26	13	30	58	55	b85	345	294	432	77	19	7.5	5.3
27	17	31	55	b45	b80	376	297	428	70	21	7.1	4.9
28	23	31	58	b35	b70	369	374	412	64	22	7.5	4.9
29	27	30	60	b30	-	374	408	359	58	24	8.6	5.3
30	37	34	61	b25	-	366	366	330	56	21	7.5	6.4
31	37	-	56	b20	-	333	-	294	-	20	7.5	-
Total	492	1,094	1,551	1,279	2,728	5,257	16,454	12,937	4,281	1,001	353.8	186.9
Mean	15.9	36.5	50.0	41.3	97.4	170	548	417	143	32.3	11.4	6.23
Ac-ft	976	2,170	3,080	2,540	5,410	10,430	32,640	25,660	8,490	1,990	702	371

Calendar year 1950: Max 482 Min 6.8 Mean 113 Ac-ft 81,620
Water year 1950-51: Max 804 Min 4.9 Mean 130 Ac-ft 94,460

Peak discharge (base, 300 cfs).--Apr. 6 (9 a.m.) 822 cfs (4.84 ft); Apr. 15 (9 a.m.) 801 cfs (4.77 ft); May 12 (9 to 11 a.m.) 684 cfs (4.38 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Powder River near Haines and Wolf Creek near North Powder.

b Stage-discharge realtion affected by ice.

Powder River near Haines, Oreg.

Location.--Lat 44°56'30", long. 117°56'50", in S½ sec. 21, T. 7 S., R. 39 E., on left bank 0.1 mile upstream from Muddy Creek, 1 mile downstream from Rock Creek, and 1.7 miles north of Haines.

Drainage area.--572 sq mi.

Records available.--October 1946 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 3,293.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Average discharge.--5 years, 119 cfs.

Extremes.--Maximum discharge during year, 761 cfs Apr. 9 (gage height, 5.03 ft); minimum, 1.5 cfs Aug. 6, 7, 19-23.
1946-51: Maximum discharge, 1,300 cfs June 8, 9, 1948 (gage height, 6.67 ft); minimum, 1.2 cfs Sept. 6, 1950.

Remarks.--Records good except those for periods of ice effect, which are fair. Many diversions above station for irrigation; no seasonal regulation.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 1				June 2 to Sept. 30			
0.2	5.6	1.5	111	-0.1	0.8	0.4	14
.3	11	2.0	174	.0	2.3	.7	33
.4	16	3.0	340	.1	4.3	1.0	58
.6	30	5.0	754	.2	7.0	1.6	123
1.0	62						

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	44	60	76	37	111	390	275	128	12	6.7	6.2
2	11	58	56	88	44	113	374	263	86	13	5.4	6.2
3	12	67	58	86	47	83	385	221	43	13	5.4	7.7
4	11	60	70	87	52	99	416	200	37	14	4.3	6.4
5	14	60	70	80	59	107	488	191	47	19	2.6	5.9
6	18	60	73	64	61	b100	611	169	57	27	2.0	6.2
7	17	60	85	48	*77	103	687	202	80	29	2.0	5.6
8	17	60	86	42	109	99	717	210	90	24	2.1	4.8
9	17	54	82	48	173	100	754	210	84	23	2.3	4.8
10	17	50	80	59	215	89	745	198	78	21	2.1	5.0
11	22	*46	83	64	358	82	733	317	82	19	2.0	5.6
12	20	52	83	69	394	100	685	456	89	18	2.1	5.6
13	18	56	82	66	299	108	614	508	89	*18	2.3	5.6
14	18	58	90	68	*248	110	605	622	81	17	2.3	5.6
15	17	55	*96	80	248	209	674	600	106	12	2.3	5.6
16	18	57	93	77	210	313	722	*512	112	9.8	2.1	5.4
17	16	58	90	74	196	345	696	407	89	9.1	*2.0	5.4
18	20	62	90	76	187	249	*640	405	90	9.8	2.0	5.4
19	19	64	88	72	152	232	598	381	66	9.4	1.8	5.0
20	16	61	86	62	153	260	574	387	53	7.4	1.8	*4.6
21	15	60	85	52	164	302	556	362	*41	7.4	1.8	4.6
22	16	59	84	60	152	317	520	340	45	7.7	1.8	4.8
23	16	57	86	68	140	313	462	354	32	6.7	1.8	5.4
24	15	57	85	72	135	306	385	358	25	6.7	2.0	5.4
25	14	58	86	76	147	322	304	363	27	6.2	2.0	5.0
26	16	58	88	76	113	329	253	354	27	5.9	2.1	5.0
27	18	57	86	b60	102	331	223	340	24	6.4	9.4	5.0
28	20	56	87	b50	111	336	212	317	19	5.9	5.6	5.6
29	52	57	92	b45	-	*354	241	272	12	6.2	5.0	5.6
30	44	59	99	b40	-	387	266	221	12	6.4	5.0	5.9
31	41	-	94	b35	-	405	-	173	-	6.2	5.4	-
Total	595	1,720	2,573	2,020	4,383	6,714	15,530	10,188	1,851	396.2	97.5	164.9
Mean	19.2	57.3	83.0	65.2	157	217	518	329	61.7	12.8	3.15	5.50
Ac-ft	1,180	3,410	5,100	4,010	8,690	13,320	30,800	20,210	3,670	786	193	327

Calendar year 1950: Max 554 Min 1.6 Mean 98.6 Ac-ft 71,410
Water year 1950-51: Max 754 Min 1.8 Mean 127 Ac-ft 91,700

Peak discharge (base, 300 cfs).--Feb. 11 (10 p.m.) 446 cfs (3.58 ft); Mar. 16 (10 p.m.) 407 cfs (3.37 ft); Apr. 9 (4 a.m.) 761 cfs (5.03 ft); May 14 (12:30 p.m.) 642 cfs (4.51 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Wolf Creek near North Powder, Oreg.

Location.--Lat 45°03', long. 118°01', in SE¼ sec. 11, T. 6 S., R. 38 E., on left bank 5 miles northwest of North Powder and 6½ miles upstream from mouth.

Drainage area.--32.9 sq mi.

Records available.--September 1946 to September 1951. May 1913 to July 1914 at site 1½ miles upstream, records not equivalent.

Gage.--Water-stage recorder. Datum of gage is 3,577.36 ft above mean sea level (Bureau of Reclamation benchmark).

Average discharge.--5 years, 24.3 cfs.

Extremes.--Maximum discharge during year, 212 cfs Apr. 14 (gage height, 3.48 ft); minimum, 0.2 cfs Aug. 5.
1946-51: Maximum discharge, 433 cfs May 23, 1948 (gage height, 4.46 ft); minimum, 0.2 cfs Sept 12-14, 1948, Aug. 5, 1951.

Remarks.--Records good except those for periods of shifting-control or doubtful gage-height record, which are fair, and periods of ice effect, which are poor. Many small diversions above station for irrigation of about 1,150 acres.

Rating table, water year 1950-51, except periods of ice effect or shifting control (gage height, in feet, and discharge, in cubic feet per second)

1.5	0.2	1.9	5.4	2.5	43
1.6	.8	2.0	8.1	2.8	82
1.7	1.8	2.1	12	3.2	151
1.8	3.3	2.3	24	3.5	216

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	4.7	4.3	b5	b5	b7.5	50	107	d18	4.1	1.2	1.2
2	2.2	5.9	4.3	b5	b5	5.6	60	97	d16	3.7	.9	1.1
3	2.3	6.4	4.5	5.2	b5	b6.5	75	91	d15	3.1	.4	1.1
4	2.2	6.1	5.0	b5.5	5.0	b6.5	96	94	d15	4.3	.3	1.0
5	2.5	5.2	5.6	b5.5	4.5	5.9	108	99	d16	4.7	.3	1.0
6	2.5	4.7	4.3	b6	b4.5	5.6	115	118	d16	5.6	.7	1.0
7	2.2	4.5	5.4	b5.5	*b5	5.6	118	157	d16	5.4	1.2	1.0
8	2.0	4.7	5.2	5.2	b5	5.2	120	151	d16	4.7	1.2	1.1
9	2.6	3.7	5.4	b5.5	b5.5	5.0	120	147	d15	3.9	1.2	1.0
10	2.8	*3.3	5.9	4.7	b6	b5	115	147	d13	3.3	1.2	1.0
11	2.5	3.9	5.9	4.7	b6.5	b5	110	185	d14	3.3	1.1	1.1
12	2.5	4.3	5.6	4.5	b7	4.7	117	183	d14	3.7	1.1	1.1
13	2.5	4.1	5.2	4.5	b8	4.7	149	151	d12	*3.5	1.1	1.1
14	2.5	3.9	5.2	4.5	*b9	5.6	196	126	d11	3.3	1.0	1.1
15	2.5	3.5	*5.0	b4.5	b9	b7	181	110	d11	3.1	.9	1.0
16	2.5	4.5	5.2	b4.5	b9	b9	166	*110	d10	2.9	.9	1.0
17	2.9	4.5	5.2	4.3	b9	b11	176	110	d10	2.8	*.8	.9
18	3.5	5.0	5.2	b4.5	9.3	b13	*190	102	d12	2.6	.8	1.0
19	3.1	4.3	5.2	b4.5	b8.5	b15	181	91	d12	2.5	.8	.9
20	2.8	4.7	5.2	b4.5	7.8	b17	145	81	d10	2.3	.7	*.9
21	3.3	4.7	5.2	b4	6.6	b20	118	71	*9.7	2.3	.8	.9
22	3.1	4.7	5.2	b4	6.9	24	103	59	6.6	2.3	.9	1.0
23	2.9	5.0	5.6	4.1	b7	23	94	56	5.6	2.2	1.0	1.0
24	2.9	4.7	5.6	4.1	b7	26	88	51	5.0	2.2	.9	.9
25	3.1	4.7	5.2	4.3	6.6	32	86	45	5.0	2.2	.9	1.0
26	3.1	5.0	5.2	4.5	b7.5	39	91	40	5.0	2.0	.9	1.1
27	3.7	5.0	5.0	b4	b7.5	43	103	35	4.7	2.0	.8	1.1
28	4.3	4.7	4.3	b4.5	b8	45	120	31	4.5	1.6	.9	1.1
29	5.0	4.5	5.9	b4.5	-	*47	129	d28	3.9	1.5	1.2	1.1
30	4.1	5.0	5.9	b5	-	42	118	d26	4.1	1.5	1.4	1.4
31	3.9	-	4.7	b5	-	43	-	d23	-	1.1	1.2	-
Total	90.2	139.9	160.6	146.1	190.7	534.4	3,638	2,922	326.1	93.7	28.7	31.2
Mean	2.91	4.66	5.18	4.71	6.81	17.2	121	94.3	10.9	3.02	0.93	1.04
Ac-ft	179	277	319	290	378	1,060	7,220	5,800	647	186	57	62

Calendar year 1950: Max 242 Min 0.9 Mean 24.5 Ac-ft 17,720
Water year 1950-51: Max 196 Min 0.3 Mean 22.7 Ac-ft 16,480

Peak discharge (base, 200 cfs).--Apr. 14 (5 a.m.) 212 cfs (3.48 ft); May 11 (11:30 a.m.) 205 cfs (3.45 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record because of clogged inlets; discharge computed on basis of appearance of recorder graph, weather records and records for Powder River near Haines.
Note.--Shifting-control method used Oct. 9 to Nov. 9, Dec. 4 to Mar. 16.

Powder River near Robinette, Oreg.

Location (revised).--Lat 44°46'10", long. 117°04'10", in E½ sec. 22, T. 9 S., R. 46 E., on left bank 2¼ miles northwest of Robinette, and 2½ miles upstream from mouth.

Drainage area.--1,660 sq mi (revised), approximately.

Records available.--September 1928 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 1,937.01 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Aug. 24, 1936, staff gage at site half a mile upstream at different datum. Aug. 25, 1936, to Oct. 31, 1948, staff gage at present site and datum.

Average discharge.--23 years, 501 cfs.

Extremes.--Maximum discharge during year, 2,450 cfs Apr. 18 (gage height, 3.77 ft); minimum, 58 cfs Jan. 30 (gage height, 0.19 ft).
1928-51: Maximum discharge, 5,320 cfs May 28, 1948 (gage height, 6.6 ft, from floodmark); minimum observed, 18 cfs Sept. 2-10, 1931 (corrected).

Remarks.--Records good except those for periods of ice effect, which are fair. Many diversions above station for irrigation; none below. One canal with capacity of about 5 cfs diverts around station on left bank. Flow partly regulated by several reservoirs, the largest being Thief Valley Reservoir near North Powder (capacity, 17,400 acre-ft).

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.3	72	2.0	710
.6	127	2.5	1,080
1.0	240	3.0	1,560
1.5	440	3.8	2,490

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	178	275	234	208	244	372	944	1,150	1,000	515	121	164
2	181	300	247	221	306	368	1,030	1,030	864	525	119	156
3	178	289	261	211	364	334	1,170	968	801	500	114	151
4	170	300	244	205	436	368	*1,340	960	710	612	101	132
5	184	296	208	202	b380	359	1,490	936	738	562	93	123
6	227	289	234	b150	372	350	1,650	1,020	680	515	92	121
7	221	286	275	123	*b740	350	1,770	1,760	650	455	92	112
8	214	282	342	b150	b800	346	1,910	1,600	622	413	95	104
9	208	250	334	b170	b860	350	2,010	1,580	622	390	101	99
10	202	218	338	b190	1,020	b300	2,060	1,650	656	377	95	104
11	190	*221	338	205	1,010	b300	2,000	1,990	759	368	90	102
12	187	230	334	b190	850	326	2,030	2,130	871	334	88	95
13	178	227	326	b170	622	330	2,120	2,130	878	306	88	97
14	181	227	346	202	*510	350	2,350	1,940	968	289	88	102
15	184	218	*445	205	480	570	2,310	1,800	1,190	278	88	99
16	178	214	445	208	584	801	2,240	1,900	1,190	278	86	93
17	181	208	450	199	612	794	2,280	2,000	1,120	258	83	97
18	230	208	450	199	584	745	2,370	1,970	1,060	227	83	97
19	218	202	440	b220	530	745	2,320	1,860	976	208	83	92
20	202	196	436	230	515	780	2,130	*1,760	899	181	85	*83
21	196	196	426	278	480	913	1,860	1,770	815	154	92	80
22	196	193	413	292	470	952	1,630	1,880	731	190	99	80
23	193	193	422	275	465	885	1,480	2,160	674	214	106	83
24	193	190	390	286	445	864	1,340	2,070	650	181	116	82
25	196	196	240	286	440	920	1,160	2,010	612	167	112	83
26	224	193	214	292	408	968	1,040	1,960	595	162	119	83
27	224	193	208	268	400	1,000	1,040	2,060	595	137	123	85
28	227	202	214	b150	377	960	1,260	2,070	584	127	125	88
29	264	224	218	b90	-	952	1,430	1,730	556	134	164	86
30	292	230	221	b95	-	976	1,290	1,450	525	125	173	112
31	268	-	224	b150	-	944	-	1,190	-	*123	178	-
Total	6,365	6,946	9,917	6,320	15,304	19,572	51,054	52,484	23,591	9,305	3,292	3,085
Mean	205	232	320	204	547	631	1,702	1,693	786	300	106	103
Ac-ft	12,620	13,780	19,670	12,540	30,360	38,820	101,300	104,100	46,790	18,460	6,530	6,120

Calendar year 1950: Max 3,000 Min 74 Mean 544 Ac-ft 393,900
Water year 1950-51: Max 2,370 Min 80 Mean 568 Ac-ft 411,100

Peak discharge (base, 1,100 cfs).--Feb. 10 (7 p.m.) 1,150 cfs (2.58 ft); Apr. 18 (5 a.m.) 2,450 cfs (3.77 ft); Apr. 29 (4 a.m.) 1,480 cfs (2.92 ft); May 23 (2 a.m.) 2,350 cfs (3.69 ft); June 16 (1:30 a.m.) 1,400 cfs (2.84 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Snake River at Oxbow, Oreg.

Location.--Lat 44°57', long. 116°51', in NW¼ sec. 16, T. 7 S., R. 48 E., on left bank at Oxbow, five-eighths of a mile upstream from intake of diversion tunnel for Oxbow powerplant and 2½ miles upstream from Indian Creek.

Drainage area.--72,800 sq mi, approximately.

Records available.--May 1923 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 1,696.71 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Dec. 20, 1923, staff gage at same site and datum.

Extremes.--Maximum discharge during year, 47,500 cfs May 18; maximum gage height, 16.15 ft Apr. 8; minimum discharge, 10,600 cfs July 20 (gage height, 8.33 ft).
1923-51: Maximum discharge, 74,600 cfs Apr. 21, 1943 (gage height, 20.71 ft); maximum gage height, about 29 ft (ice jam), from floodmark, sometime during period Jan. 17-27, 1949; minimum discharge, 4,890 cfs Aug. 6, 1924 (gage height, 6.30 ft).

Remarks.--Records excellent. Flow regulated by many reservoirs above station. Diurnal fluctuation caused by Swan Falls powerplant. About 2,243,000 acres of land irrigated by diversions from river and its tributaries above station.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 12-30)

8.5	11,100	12.0	25,100
9.0	12,800	14.0	35,500
10.0	16,500	16.1	47,400

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,800	17,400	17,600	18,100	19,000	*24,100	33,600	34,900	40,500	19,200	11,700	12,700
2	15,700	19,700	16,700	17,700	19,500	23,600	35,000	34,600	39,200	20,400	12,000	12,600
3	16,100	19,300	16,500	17,500	22,000	22,100	35,900	34,800	37,500	18,200	11,700	12,400
4	15,000	18,300	16,200	17,900	23,000	23,400	37,000	37,200	34,400	16,900	12,100	12,200
5	18,300	17,400	15,300	18,900	25,000	24,000	39,300	38,800	32,400	17,000	12,000	12,000
6	18,500	18,500	18,300	16,700	30,000	24,700	43,600	39,000	32,300	17,200	12,300	12,000
7	*18,500	18,100	19,300	18,300	35,000	25,400	46,600	37,600	32,300	15,400	12,500	11,800
8	17,700	*15,100	19,300	17,200	40,000	25,600	46,700	37,900	32,200	14,300	11,900	11,800
9	17,300	18,700	*19,500	16,300	44,000	25,800	46,000	37,500	29,700	15,700	12,500	11,700
10	15,800	18,100	18,500	17,600	40,000	26,000	44,800	36,800	28,700	14,900	12,600	11,700
11	15,500	18,000	18,600	18,500	39,000	26,200	45,000	36,600	27,500	12,200	12,700	11,900
12	17,700	17,700	17,500	17,400	38,000	26,400	45,200	38,000	25,800	12,600	12,700	12,000
13	16,200	17,700	18,400	18,000	37,000	26,000	45,300	40,500	24,200	12,800	12,100	12,300
14	16,700	16,700	18,700	19,200	34,000	26,400	45,300	41,100	23,800	12,500	12,000	12,300
15	16,800	17,800	18,600	20,500	31,000	27,400	44,800	39,500	22,800	12,800	12,000	12,600
16	17,800	18,500	17,900	20,800	30,000	29,700	43,000	43,800	22,900	12,800	12,200	12,800
17	18,000	16,200	18,500	21,400	28,000	32,700	40,600	45,700	24,400	*13,400	11,900	13,400
18	16,400	16,400	17,700	21,400	27,000	31,600	40,400	*47,100	25,200	12,600	11,600	13,600
19	17,800	16,000	17,500	21,900	27,000	31,000	*38,000	45,700	26,100	11,700	11,500	13,400
20	18,100	15,800	18,700	21,700	26,000	32,200	37,800	41,600	24,300	11,100	*11,500	13,100
21	16,500	15,800	18,100	21,500	26,000	34,000	34,000	38,700	24,200	11,600	11,800	13,000
22	17,200	15,800	18,100	21,200	26,000	34,800	31,800	37,600	*21,900	12,000	13,600	12,300
23	17,000	17,100	17,400	20,400	26,000	34,800	31,600	37,300	21,300	11,500	13,500	12,900
24	16,900	17,200	17,900	20,700	26,000	36,200	31,000	38,300	20,200	11,900	12,500	13,200
25	16,500	16,700	17,800	21,600	26,000	35,900	29,600	41,000	19,500	12,000	12,900	*13,500
26	17,900	16,900	17,500	22,800	25,000	34,600	28,400	41,100	21,000	11,800	12,600	13,700
27	16,300	17,800	18,000	24,400	24,000	35,400	26,400	40,400	20,500	11,800	12,900	13,500
28	15,700	17,700	17,900	23,800	24,000	35,000	27,200	41,600	20,800	11,800	13,200	14,100
29	16,400	18,100	18,400	*23,300	-	34,000	31,800	42,800	17,900	11,700	12,700	14,200
30	17,000	18,500	17,700	22,400	-	34,200	36,100	42,400	18,100	11,600	13,000	14,300
31	18,000	-	19,000	22,000	-	34,500	-	40,600	-	11,800	12,800	-
Total	524,100	523,000	557,100	621,100	817,500	917,700	‡1,141.8	‡1,230.5	791,600	423,200	383,000	383,000
Mean	16,910	17,430	17,970	20,040	29,200	29,600	38,060	39,690	26,390	13,650	12,350	12,770
Ac-ft	‡1,040	‡1,037	‡1,105	‡1,232	‡1,621	‡1,820	‡2,265	‡2,441	‡1,570	839,400	759,700	759,700

Calendar year 1950: Max 39,900 Min 9,170 Mean 20,350 Ac-ft 14,730,000
Water year 1950-51: Max 47,100 Min 11,100 Mean 22,780 Ac-ft 16,490,000

* Discharge measurement made on this day.
‡ Expressed in thousands.
Note.--No gage-height record Jan. 31 to Feb. 28; discharge computed on basis of records for station at Weiser.

Imnaha River above Gumboot Creek, Oreg.

Location.--Lat 45°11', long. 116°53', in sec. 30 or 31, T. 4 S., R. 48 E., on left bank at downstream side of bridge, 0.1 mile upstream from Gumboot Creek, and 5 miles northeast of Coverdale forest guard station.

Drainage area.--98 sq mi, approximately.

Records available.--October 1944 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 3,812.67 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Average discharge.--7 years, 255 cfs.

Extremes.--Maximum discharge during year, 1,320 cfs May 27 (gage height, 3.67 ft); minimum, 10 cfs Jan. 29 (gage height, 0.18 ft), result of freezeup.
1944-51: Maximum discharge, 2,400 cfs May 27, 1948 (gage height, 5.07 ft); minimum, that of Jan. 29, 1951.

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

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 28				Jan. 29 to Sept. 30			
0.6	38	1.5	180	0.7	52	2.0	340
.8	62	2.0	320	.9	79	2.5	550
1.1	104	2.4	472	1.2	130	3.0	830
				1.5	195	3.5	1,180

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	190	120	85	69	b90	125	476	580	615	208	105
2	76	167	110	92	87	84	*145	436	550	610	202	102
3	75	160	115	82	104	76	188	424	545	615	195	98
4	81	162	112	88	b100	90	250	440	530	746	188	97
5	100	160	104	85	*b95	87	313	452	550	620	180	93
6	95	150	106	54	90	b70	372	545	510	535	175	92
7	82	144	102	b60	102	90	396	911	488	500	168	90
8	85	140	100	b75	114	95	408	848	472	484	164	89
9	85	124	100	b80	114	85	400	842	496	468	157	87
10	78	124	112	86	132	b75	396	918	575	452	153	85
11	75	124	120	81	145	b80	388	1,000	668	424	149	85
12	75	120	*124	76	145	92	420	884	770	416	145	84
13	74	115	118	74	132	90	480	758	800	424	141	82
14	72	114	122	75	130	82	545	662	884	428	138	81
15	71	112	118	71	123	85	545	625	1,040	420	134	79
16	71	110	115	71	114	81	545	686	1,060	412	130	78
17	85	114	114	70	110	76	575	*776	974	400	125	76
18	118	112	112	72	112	73	595	794	904	392	121	75
19	89	104	110	b70	95	78	570	788	860	376	119	73
20	82	104	106	b65	105	87	500	794	824	348	117	72
21	79	102	104	74	98	97	444	842	788	319	116	72
22	*78	101	101	71	93	98	404	953	746	298	116	72
23	75	100	101	74	93	97	384	1,120	722	286	117	71
24	74	101	100	74	90	100	368	1,070	722	277	112	69
25	86	106	98	70	90	112	368	1,000	680	*274	109	69
26	122	110	92	66	b70	121	412	1,030	662	259	105	69
27	114	112	96	63	b80	128	452	1,120	650	247	*104	69
28	156	112	94	38	b85	125	686	1,090	640	241	141	68
29	439	110	92	b32	-	130	662	890	615	232	136	66
30	301	122	95	b60	-	130	545	764	605	218	117	75
31	217	-	89	b70	-	123	-	662	-	212	109	-
Total	3,386	3,726	3,302	2,204	2,917	2,927	12,881	24,600	20,910	12,548	4,391	2,423
Mean	109	124	107	71.1	104	94.4	429	794	697	405	142	80.8
Cfsm	1.11	1.27	1.09	0.726	1.06	0.963	4.38	8.10	7.11	4.13	1.45	0.824
In.	1.28	1.41	1.25	0.84	1.11	1.11	4.89	9.33	7.94	4.76	1.67	0.92
Ac-ft	6,720	7,390	6,550	4,370	5,790	5,810	25,550	48,790	41,470	24,890	8,710	4,810

Calendar year 1950: Max 1,610 Min 22 Mean 256 Cfsm 2.61 In. 35.46 Ac-ft 185,400
Water year 1950-51: Max 1,120 Min 32 Mean 264 Cfsm 2.69 In. 36.51 Ac-ft 190,800

Peak discharge (base, 800 cfs).--May 10 (11 p.m.) 1,020 cfs (3.29 ft); May 27 (11 p.m.) 1,320 cfs (3.67 ft); June 15 (10 p.m.) 1,270 cfs (3.61 ft); July 4 (10 a.m.) 967 cfs (3.21 ft).

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

Imnaha River at Imnaha, Oreg.

Location.--Lat 45°34', long. 116°50' (revised), in SW¼ sec. 16, T. 1 N., R. 48 E., on left bank at Imnaha and three-eighths of a mile downstream from Sheep Creek.

Drainage area.--640 sq mi (revised), approximately.

Records available.--June 1928 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 1,941.14 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Aug. 6, 1934, staff gages at site a quarter of a mile upstream at different datum.

Average discharge.--23 years, 462 cfs.

Extremes.--Maximum discharge during year, 2,140 cfs May 7 (gage height, 4.58 ft); minimum, not determined, occurred during period of ice effect.
1928-51: Maximum discharge, 5,700 cfs May 28, 1948 (gage height, 7.06 ft); minimum observed, 16 cfs Nov. 22, 1931.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation. Water is diverted above station from Sheep Creek and Little Sheep Creek to Grande Ronde River basin for irrigation of about 5,200 acres in Wallowa Valley.

Revisions (water years).--W 883: 1938.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	100	3.0	640
1.9	154	3.5	1,010
2.1	216	4.0	1,470
2.3	292	4.5	2,040
2.6	427		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	140	441	326	234	*b95	b220	a450	1,210	954	773	241	157
2	137	393	292	241	b300	b210	*470	1,060	858	773	230	151
3	137	356	305	234	b450	197	604	986	843	759	223	146
4	140	352	326	227	b250	230	815	1,020	808	874	220	140
5	166	348	292	227	b240	227	1,030	1,060	922	858	210	140
6	194	330	280	b160	b220	216	1,210	1,240	843	724	203	134
7	160	326	284	b150	b200	206	1,240	1,960	815	640	197	132
8	154	334	276	b180	b250	213	1,260	2,000	780	604	194	128
9	175	288	272	227	292	220	1,200	1,870	773	574	184	126
10	169	252	305	223	384	b150	1,150	1,870	815	564	181	126
11	163	284	366	227	510	b170	1,100	2,040	922	525	178	126
12	163	272	*413	210	552	213	1,120	2,000	1,050	505	172	123
13	160	260	398	200	505	210	1,270	1,750	1,090	490	169	121
14	157	260	384	203	465	210	1,510	1,570	1,140	490	166	118
15	157	245	370	206	432	230	1,480	1,420	1,320	485	160	118
16	157	252	343	197	393	252	1,420	1,450	1,390	a480	157	116
17	160	252	330	200	361	248	1,460	*1,550	1,320	a470	154	113
18	227	272	321	197	361	234	1,530	1,540	1,240	a460	148	116
19	203	252	313	187	317	252	1,500	1,490	1,150	a450	140	110
20	184	248	305	148	321	292	1,330	1,440	1,120	a410	140	108
21	a180	248	292	187	309	374	1,150	1,450	1,050	a380	140	108
22	*172	245	284	203	288	417	1,010	1,510	1,000	a350	146	108
23	169	245	276	181	264	403	938	1,720	954	a340	157	110
24	163	248	272	200	272	393	890	1,700	954	a335	148	110
25	166	264	268	197	264	437	858	1,570	914	*334	140	113
26	245	292	256	197	210	495	930	1,520	874	305	137	113
27	234	326	248	194	b200	520	1,030	1,620	850	284	*140	113
28	284	334	248	172	b210	500	1,390	1,660	836	272	151	110
29	772	321	248	b150	-	495	1,680	1,390	801	272	203	108
30	780	326	252	b125	-	495	1,390	1,220	780	256	178	110
31	542	-	252	b100	-	461	-	1,080	-	245	163	-
Total	7,010	8,866	9,397	5,984	8,915	9,390	34,415	46,966	29,166	15,281	5,370	3,650
Mean	226	296	303	193	318	303	1,147	1,515	972	493	173	122
Ac-ft	13,900	17,590	18,640	11,870	17,680	18,620	68,260	93,160	57,850	30,310	10,650	7,240

Calendar year 1950: Max 2,090 Min 50 Mean 520 Ac-ft 376,800
Water year 1950-51: Max 2,040 Min 95 Mean 505 Ac-ft 365,800

Peak discharge (base, 1,300 cfs).--Apr. 19 (3 a.m.) 1,580 cfs (4.11 ft): Apr. 29 (1:30 a.m.) 1,760 cfs (4.27 ft); May 7 (1:30 p.m.) 2,140 cfs (4.58 ft); June 16 (5 a.m.) 1,550 cfs (4.08 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records and records for station above Gumboot Creek.

b Stage-discharge relation affected by ice.

Salmon River near Obsidian. Idaho

Location.--Lat 43°58', long. 114°48', in sec. 3, T. 7 N., R. 14 E., on left bank three-eighths of a mile below irrigation diversion dam, 1 mile upstream from Lost Creek, and 2½ miles southeast of Obsidian.

Drainage area.--94.7 sq mi.

Records available.--November 1940 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,950 ft (by barometer).

Average discharge.--10 years (1941-51), 78.9 cfs.

Extremes.--Maximum discharge during year, 712 cfs May 28 (gage height, 4.13 ft); minimum daily, 15 cfs Jan. 29; minimum gage height, 1.47 ft Aug. 19, 20.
1940-51: Maximum discharge, that of May 28, 1951; maximum gage height, 5.50 ft probably between Jan. 27 and Mar. 1, 1949 (ice jam); minimum discharge, 2 cfs Sept. 7-11, 1942, Apr. 1, 1945.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 1,700 acres above station.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 28, 29)

Oct. 1 to May 28				May 29 to Sept. 30			
1.5	12	3.0	211	1.5	16	2.6	140
1.7	22	3.4	330	1.7	27	3.0	239
2.0	46	3.8	495	2.0	53	3.4	405
2.3	81	4.2	695	2.3	92	4.0	715
2.6	127						

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	64	46	38	18	24	24	131	387	346	70	66
2	51	64	42	38	19	24	24	125	333	346	61	65
3	52	63	42	38	19	24	25	127	295	342	59	64
4	57	63	46	38	18	24	27	143	279	346	65	64
5	58	62	41	36	19	24	29	169	303	307	60	63
6	61	61	46	33	*18	24	31	206	275	261	59	61
7	58	61	45	32	19	25	34	245	246	250	91	60
8	58	63	44	34	20	26	37	251	203	236	110	60
9	56	49	44	35	22	26	40	259	184	230	106	59
10	56	52	44	35	22	23	41	287	174	230	102	59
11	55	*55	44	33	22	24	42	327	192	205	100	58
12	54	55	43	31	20	26	42	313	243	177	95	58
13	53	54	40	33	19	26	50	284	295	*170	94	57
14	54	53	40	34	22	26	61	257	*387	174	91	55
15	58	48	*43	34	23	26	73	259	490	170	85	55
16	55	50	42	33	24	23	89	287	605	161	45	54
17	56	50	40	33	25	24	110	337	600	148	18	55
18	55	49	41	32	25	25	134	399	572	144	18	55
19	53	48	42	30	24	25	140	459	535	138	17	54
20	53	49	42	28	24	26	*143	437	515	133	16	54
21	53	49	40	29	25	26	136	*428	505	126	18	54
22	53	48	41	30	26	25	132	383	465	118	36	54
23	53	47	43	31	26	25	134	459	392	95	49	54
24	53	47	41	31	26	*25	134	490	360	88	48	53
25	57	49	40	29	25	26	129	500	351	86	45	54
26	63	48	40	27	24	25	131	495	351	81	*44	54
27	66	47	40	23	24	23	141	562	360	75	44	53
28	63	46	41	20	25	23	165	663	364	82	43	52
29	78	46	43	15	-	24	155	600	356	94	46	52
30	77	47	39	16	-	24	140	540	346	81	68	52
31	69	-	34	17	-	23	-	450	-	75	68	-
Total	1,789	1,587	1,299	946	623	764	2,593	10,872	10,963	5,515	1,871	1,708
Mean	57.7	52.9	41.9	30.5	22.2	24.6	86.4	351	365	178	60.4	56.9
Ac-ft	3,550	3,150	2,580	1,880	1,240	1,520	5,140	21,560	21,740	10,940	3,710	3,390

Calendar year 1950: Max 486 Min 6.1 Mean 82.5 Ac-ft 59,740
Water year 1950-51: Max 663 Min 15 Mean 111 Ac-ft 80,400

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 14, 18, 21, 22, 25-28, Jan. 1 to Feb. 21, Feb. 23, Feb. 25 to about Mar. 20. No gage-height record Feb. 3-5, 10-12, Mar. 7-20, Mar. 25 to Apr. 9; discharge estimated on basis of weather records and records for stations on nearby streams.

Alturas Lake Creek near Obsidian, Idaho

Location.--Lat 43°56', long. 114°50', in SW¼ sec. 9, T. 7 N., R. 14 E., on right bank 1 mile downstream from outlet of Perkins Lake, 1½ miles downstream from outlet of Alturas Lake, and 4 miles south of Obsidian.

Drainage area.--35.7 sq mi.

Records available.--November 1940 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 7,000 ft (by barometer).

Average discharge.--10 years (1941-51), 74.9 cfs.

Extremes.--Maximum discharge during year, 594 cfs May 29 (gage height, 5.24 ft); minimum recorded, 9.7 cfs Sept. 27 (gage height, 1.92 ft), but may have been less during period of ice effect.
1940-51: Maximum discharge, 612 cfs May 31, 1943; maximum gage height, 5.41 ft June 9, 1948; minimum discharge recorded, 9.4 cfs Sept. 26, 1949.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.0	16	3.5	171
2.2	29	4.0	264
2.5	55	4.5	387
3.0	105	5.3	612

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	51	35		22		21	118	400	336	100	a34
2	25	52	35				20	111	334	338	92	a32
3	24	50	34				19	106	285	338	87	30
4	24	49	36				18	104	249	338	85	29
5	25	47	36				19	107	240	326	82	29
6	28	45	35		(*)		19	116	232	294	77	28
7	27	45	40				21	137	217	271	73	28
8	28	50	38		27		23	152	196	255	68	27
9	28	47	36	20			25	162	182	242	64	26
10	28	44	35				28	177	174	232	60	26
11	28	*42	34				32	211	179	218	58	25
12	27	42	33			23	36	242	206	197	53	24
13	28	41	32				42	240	260	*184	50	23
14	28	42	31				50	222	*326	179	48	23
15	31	41	*31				60	208	400	176	45	23
16	30	41	26				70	201	489	171	43	23
17	31	45	24				80	211	543	164	42	22
18	31	51	23				93	240	549	158	40	21
19	31	50	23				*106	276	532	152	39	21
20	31	50	22		24		116	301	503	146	37	21
21	31	49	22	22			122	*321	492	138	37	19
22	31	45	21				124	346	470	128	39	19
23	30	41	20				125	395	421	119	42	20
24	30	39	19			*21	123	445	371	111	*43	23
25	31	38	19			21	118	473	351	105	a42	22
26	35	36	19			21	115	475	344	100	a41	19
27	40	35	21			20	113	501	338	95	a40	16
28	43	34	23			19	119	567	341	95	a39	19
29	51	33	21	20	-	19	129	588	341	106	a38	19
30	53	33	19		-	21	125	540	341	110	a38	19
31	52	-	21		-	21	-	470	-	105	a36	-
Total	986	1,308	864	640	690	692	2,111	8,763	10,306	5,927	1,678	710
Mean	31.8	43.6	27.9	20.6	24.6	22.3	70.4	283	344	191	54.1	23.7
Cfsm	0.891	1.22	0.782	0.577	0.689	0.625	1.97	7.93	9.64	5.35	1.52	0.664
In.	1.03	1.36	0.90	0.67	0.72	0.72	2.20	9.13	10.74	6.17	1.75	0.74
Ac-ft	1,960	2,590	1,710	1,270	1,370	1,370	4,190	17,380	20,440	1,760	3,330	1,410

Calendar year 1950: Max 515 Min - Mean 85.1 Cfsm 2.38 In. 32.35 Ac-ft 61,590
Water year 1950-51: Max 588 Min - Mean 95.0 Cfsm 2.66 In. 36.13 Ac-ft 68,780

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.
Note.--Stage-discharge relation affected by ice about Dec. 13, 17, 18, 21, 22, 24-28, Dec. 31 to Mar. 25, Mar. 28 (no gage-height record Jan. 8 to Feb. 5, Mar. 19-23; discharge estimated as shown under "a" above).

Valley Creek at Stanley, Idaho

Location.--Lat 44°13', long. 114°56', in sec. 3, T. 10 N., R. 13 E., a quarter of a mile upstream from mouth, three-eighths of a mile downstream from upper Stanley, and three-quarters of a mile upstream from lower Stanley.

Drainage area.--176 sq mi.

Records available.--December 1910 to October 1913, May 1921 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 6,221.81 ft above mean sea level, datum of 1929. Prior to May 28, 1911, staff gage at site a quarter of a mile upstream and May 28, 1911, to Oct. 31, 1913, at site three-quarters of a mile upstream, at different datum. May 2, 1921, to Apr. 30, 1949, staff gage at present site and datum.

Average discharge.--31 years (1911-13, 1922-51), 190 cfs.

Extremes.--Maximum discharge during year, 1,340 cfs May 28 (gage height, 3.41 ft); minimum daily, 80 cfs Jan. 30, 31; minimum gage height, 0.96 ft Mar. 28.
1910-13, 1921-51; Maximum discharge observed, 1,850 cfs May 29, 1921 (gage height, 4.4 ft), from rating curve extended above 1,300 cfs; minimum, 40 cfs (estimated) Nov. 17-30, 1929, Dec. 8-13, 1932.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions for irrigation of about 590 acres above station.

Rating tables, water year 1950-51, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 31		Apr. 1 to Sept. 30			
1.0	79	1.1	95	2.5	648
1.2	114	1.3	136	3.0	990
1.5	191	1.6	224	3.4	1,330
1.9	341	2.0	386		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	141	201	121	108	a90	a110	101	428	768	607	299	152
2	132	198	116	114	a95	a110	103	414	673	613	272	144
3	129	179	134	112	*b105	a105	112	448	607	607	291	139
4	127	176	139	110	b110	a105	123	540	574	613	299	136
5	134	165	118	103	118	a100	136	562	660	607	268	134
6	162	165	125	92	118	a95	152	613	673	552	253	129
7	152	165	134	89	127	a95	168	803	631	504	242	132
8	152	185	136	103	149	a100	194	730	540	488	221	127
9	149	129	136	110	149	a100	224	742	483	478	211	125
10	139	146	134	110	152	a95	238	782	468	488	201	125
11	134	146	134	104	157	a95	246	866	473	478	191	121
12	132	*141	*132	95	152	*101	264	796	568	419	182	121
13	129	136	114	103	162	101	303	723	660	*400	174	121
14	132	139	114	110	152	101	368	636	698	405	171	118
15	179	127	129	112	a150	104	400	607	*803	414	165	116
16	149	127	127	112	a140	104	424	631	968	405	149	114
17	146	132	118	111	a130	104	458	667	1,040	395	141	110
18	165	136	116	114	a130	101	514	723	1,010	386	141	112
19	152	136	121	118	a120	101	*574	762	952	382	141	110
20	144	157	121	a115	a120	101	568	*768	901	372	149	108
21	136	179	112	a110	a125	99	483	817	859	346	174	110
22	132	165	110	a110	a125	93	448	859	831	324	176	112
23	129	159	118	a115	a125	99	473	938	749	299	208	112
24	127	146	114	a118	a120	101	463	998	685	291	*228	110
25	134	144	108	a118	a120	103	438	1,010	667	295	191	127
26	176	136	108	a115	a115	103	530	990	654	283	171	146
27	221	127	108	a110	a115	95	590	1,090	642	280	157	125
28	214	127	112	a100	a115	92	723	1,290	632	316	154	118
29	312	118	118	a90	-	95	636	1,150	625	364	154	116
30	295	136	110	a80	-	95	488	1,010	619	312	165	116
31	228	-	99	a80	-	93	-	894	-	283	157	-
Total	4,983	4,523	3,736	3,291	3,586	3,096	10,942	24,287	21,113	13,006	6,096	3,686
Mean	161	151	121	106	128	99.9	365	783	704	420	197	123
Cfsm	0.915	0.858	0.688	0.602	0.727	0.568	2.07	4.45	4.00	2.39	1.12	0.699
In.	1.05	0.96	0.79	0.70	0.76	0.65	2.31	5.13	4.46	2.75	1.29	0.78
Ac-ft	9,880	8,970	7,410	6,530	7,110	6,140	21,700	48,170	41,880	25,800	12,090	7,310

Calendar year 1950: Max 1,030 Min 72 Mean 253 Cfsm 1.44 In. 19.48 Ac-ft 182,900
Water year 1950-51: Max 1,290 Min 80 Mean 280 Cfsm 1.59 In. 21.63 Ac-ft 203,000

Peak discharge (base, 600 cfs).--Apr. 19 (6:30 p.m.) 736 cfs (2.64 ft); Apr. 28 (9 p.m.) 859 cfs (2.82 ft); May 11 (12 p.m.) 908 cfs (2.89 ft); May 28 (10:30 a.m.) 1,340 cfs (3.41 ft); June 17 (12 m. to 3 p.m.) 1,050 cfs (3.08 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Salmon River below Valley Creek, at Stanley, Idaho

Location.--Lat 44°14', long. 114°55', in SE¼SE¼ sec. 34, T. 11 N., R. 13 E., on left bank three-quarters of a mile downstream from Valley Creek and 1¼ miles northeast of upper Stanley.

Drainage area.--535 sq mi.

Records available.--July 1925 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 6,190.32 ft above mean sea level, datum of 1929. Prior to Oct. 13, 1925, staff gage at same site and datum.

Average discharge.--26 years, 633 cfs.

Extremes.--Maximum discharge during year, 4,090 cfs May 28 (gage height, 3.91 ft); minimum daily, 300 cfs Jan. 30, 31; minimum gage height recorded, 0.97 ft Jan. 30, 1925-51: Maximum discharge, 5,020 cfs June 27, 1927 (gage height, 4.41 ft), from rating curve extended above 4,000 cfs; minimum, 100 cfs (estimated) Nov. 20-30, 1929.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions for irrigation of about 6,000 acres above station.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	296	2.5	1,750
1.1	404	3.0	2,420
1.5	722	3.5	3,300
2.0	1,200	4.0	4,300

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	558	722	519	369	320	369	440	1,320	2,610	2,240	1,160	600
2	542	731	495	387	*b355	390	440	1,280	2,280	2,260	1,090	584
3	534	687	511	392	b380	375	450	1,320	2,030	2,260	1,110	575
4	527	660	558	404	431	390	470	1,450	1,900	2,300	1,180	575
5	558	634	503	404	452	370	530	1,510	1,990	2,260	1,100	567
6	617	626	495	363	b450	370	600	1,620	1,960	2,100	1,060	558
7	600	626	542	369	495	370	670	1,950	1,860	2,000	1,030	550
8	600	678	550	381	519	380	720	1,860	1,650	1,940	1,010	534
9	584	550	542	404	511	400	750	1,900	1,520	1,870	964	527
10	558	511	534	392	511	390	731	1,970	1,460	1,900	916	527
11	558	*575	534	404	519	*b390	740	2,170	1,520	1,850	878	519
12	550	567	527	392	503	400	777	2,190	1,700	1,680	841	511
13	542	558	*458	404	458	410	832	2,060	1,960	*1,580	804	503
14	550	567	438	424	458	400	983	1,870	*2,170	1,550	777	495
15	634	519	495	418	465	410	1,050	1,770	2,600	1,560	749	488
16	575	503	480	404	458	415	1,120	1,800	3,090	1,540	696	488
17	584	527	458	363	431	b400	1,220	1,920	3,380	1,520	626	480
18	609	584	458	375	438	b380	1,330	2,100	3,410	1,490	609	480
19	584	575	472	398	411	b390	*1,430	2,240	3,260	1,480	600	472
20	575	609	465	398	431	431	1,430	*2,320	3,110	1,460	609	465
21	558	652	438	387	418	438	1,370	2,380	3,020	1,400	660	458
22	550	600	392	381	404	438	1,320	2,560	2,930	1,320	660	465
23	542	584	452	387	418	398	1,370	2,860	2,660	1,230	758	472
24	534	558	438	411	418	398	1,370	3,070	2,450	1,170	*804	465
25	575	558	411	424	411	404	1,300	3,130	2,340	1,150	722	495
26	678	534	375	418	387	420	1,410	3,090	2,300	1,100	678	527
27	749	519	363	392	398	420	1,500	3,410	2,260	1,080	634	495
28	731	511	387	375	387	400	1,730	3,990	2,260	1,140	626	488
29	935	495	418	336	-	410	1,650	3,870	2,270	1,310	617	488
30	906	542	411	b300	-	440	1,440	3,510	2,260	1,230	634	488
31	795	-	392	b300	-	440	-	3,040	-	1,180	617	-
Total	18,992	17,562	14,511	11,956	12,237	12,436	31,173	71,530	70,210	50,150	25,219	15,339
Mean	613	585	468	386	437	401	1,039	2,307	2,340	1,618	814	511
Cfsm	1.15	1.09	0.875	0.721	0.817	0.750	1.94	4.31	4.37	3.02	1.52	0.955
In.	1.32	1.22	1.01	0.83	0.85	0.86	2.17	4.97	4.88	3.49	1.75	1.07
Ac-ft	37,670	34,830	28,780	23,710	24,270	24,670	61,830	141,900	139,300	99,470	50,020	30,420

Calendar year 1950: Max 3,340 Min 250 Mean 832 Cfsm 1.56 In. 21.10 Ac-ft 601,900
Water year 1950-51: Max 3,990 Min 300 Mean 963 Cfsm 1.80 In. 24.42 Ac-ft 696,900

Peak discharge (base, 1,700 cfs).--Apr. 28 (9 p.m.) 1,920 cfs (2.64 ft); May 12 (12:30 a.m.) 2,330 cfs (2.92 ft); May 28 (3 p.m.) 4,090 cfs (3.91 ft); June 18 (1 p.m.) 3,450 cfs (3.64 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Feb. 1, Mar. 2-10, 12-16, Mar. 26 to Apr. 9; discharge estimated on basis of weather records and records for other Salmon River stations.

Salmon River below Yankee Fork, near Clayton, Idaho

Location.--Lat 44°16', long. 114°44', in sec. 20, T. 11 N., R. 15 E., on left bank a quarter of a mile downstream from Sunbeam Dam and Yankee Fork and 18 miles upstream from Clayton.

Drainage area.--841 sq mi.

Records available.--October 1921 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,900 ft (by barometer). Prior to Oct. 3, 1926, staff gage at site 200 ft downstream at datum approximately 1.5 ft higher. Oct. 3, 1926, to Sept. 2, 1927, staff gage and Sept. 3, 1927, to Nov. 5, 1934, water-stage recorder, at site 200 ft downstream at approximately present datum.

Average discharge.--28 years (1922-24, 1925-51), 924 cfs.

Extremes.--Maximum discharge during year, 7,140 cfs May 28 (gage height, 9.45 ft); minimum daily, 360 cfs Jan. 30, 31; minimum gage height, 2.26 ft Dec. 27.
1921-51: Maximum discharge, 8,000 cfs (estimated) June 27, 1927; minimum, 160 cfs (estimated Nov. 25-30, 1929.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions for irrigation of about 6,000 acres above Stanley.

Rating table, water year 1950-51, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 17 to July 23)

2.2	349	5.0	2,160
2.5	491	6.0	3,030
3.0	754	7.0	4,070
3.5	1,040	8.0	5,280
4.0	1,380	9.3	7,100

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	684	899	652	462	b410	457	522	1,900	4,360	3,400	1,420	754
2	663	894	594	496	*b460	476	537	1,780	3,770	3,390	1,330	732
3	658	848	599	496	511	462	589	1,780	3,330	3,360	1,340	722
4	652	826	674	527	a560	471	663	2,000	3,070	3,390	1,440	711
5	674	831	568	511	a580	452	782	2,260	3,160	3,280	1,320	705
6	754	820	568	437	a580	457	905	2,720	3,110	3,030	1,290	695
7	727	815	663	437	a610	462	1,030	3,420	2,940	2,850	1,250	679
8	749	865	652	457	a610	481	1,140	3,400	2,650	2,730	1,200	663
9	732	695	636	511	584	491	1,230	3,440	2,450	2,620	1,150	652
10	705	*636	626	506	563	*471	1,290	3,700	2,410	2,600	1,090	647
11	695	749	610	537	573	462	1,260	4,100	2,640	2,510	1,030	636
12	679	749	615	511	599	476	1,360	3,990	3,070	2,270	992	631
13	668	716	*516	516	547	491	1,610	3,560	3,570	2,150	957	626
14	668	727	457	522	537	481	1,940	3,110	4,060	*2,110	916	615
15	776	668	594	527	542	496	2,040	2,860	*4,840	2,100	894	605
16	716	668	610	511	552	501	2,060	2,930	5,740	2,050	848	605
17	711	700	568	471	516	471	2,210	3,350	6,090	1,990	782	594
18	738	743	558	442	537	462	*2,420	3,920	5,850	1,950	760	599
19	716	727	578	486	496	476	2,510	4,270	5,490	1,920	749	589
20	700	754	578	496	527	481	2,470	*4,400	5,220	1,890	760	584
21	684	798	522	516	516	491	2,260	4,510	4,980	1,810	843	578
22	674	754	447	486	491	491	2,080	4,840	4,720	1,710	826	584
23	663	722	578	501	501	462	2,100	5,500	4,240	1,590	*939	584
24	658	689	563	532	506	476	2,060	5,910	3,900	1,500	992	578
25	700	695	506	542	506	491	1,930	5,780	3,750	1,460	894	610
26	798	679	437	542	466	506	2,010	5,670	3,640	1,400	837	652
27	888	652	418	516	486	506	2,170	6,260	3,550	1,370	804	610
28	876	642	471	b470	481	481	2,480	7,060	3,530	1,420	787	599
29	1,110	620	547	b400	-	511	2,490	6,700	3,500	1,630	770	594
30	1,160	684	547	b360	-	522	2,130	5,890	3,440	1,510	782	599
31	1,010	-	516	b360	-	522	-	5,050	-	1,440	770	-
Total	23,286	22,265	17,468	15,084	14,847	14,936	50,278	126,060	117,070	68,430	30,762	19,032
Mean	751	742	563	487	530	482	1,676	4,066	3,902	2,207	992	634
Cfsm	0.893	0.882	0.669	0.579	0.630	0.573	1.99	4.83	4.64	2.62	1.18	0.754
In.	1.03	0.98	0.77	0.67	0.66	0.66	2.22	5.57	5.18	3.03	1.36	0.84
Ac-ft	46,190	44,160	34,650	29,920	29,450	29,630	99,720	250,000	232,200	135,700	61,020	37,750

Calendar year 1950: Max 5,730 Min 330 Mean 1,242 Cfsm 1.48 In. 20.04 Ac-ft 899,600
Water year 1950-51: Max 7,060 Min 360 Mean 1,423 Cfsm 1.69 In. 22.97 Ac-ft 1,030,000

Peak discharge (base, 2,350 cfs).--Apr. 28 (11 p.m.) 2,790 cfs (5.71 ft); May 12 (12:30 a.m.) 4,220 cfs (7.19 ft); May 28 (5:30 p.m.) 7,140 cfs (9.45 ft); June 17 (2 a.m.) 6,150 cfs (8.76 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for other Salmon River stations.

b Stage-discharge relation affected by ice.

Salmon River near Challis, Idaho

Location.--Lat 44°23', long. 114°15', in sec. 7, T. 12 N., R. 19 E., on left bank 250 ft downstream from Bayhorse Creek and 9 miles south of Challis.

Drainage area.--1,800 sq mi, approximately.

Records available.--October 1928 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 5,163.99 ft above mean sea level, datum of 1929.

Average discharge.--23 years, 1,374 cfs.

Extremes.--Maximum discharge during year, 10,600 cfs May 28 (gage height, 8.74 ft); minimum, 228 cfs Jan. 30 (gage height, 1.18 ft).
1928-51: Maximum discharge, that of May 28, 1951; minimum, 160 cfs Dec. 14, 1940.

Remarks.--Records excellent. Diversions for irrigation of about 10,000 acres above station.

Revisions.--W 1043: Drainage area.

Rating table, water year 1950-51 (gage height in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 9		Nov. 10 to Sept. 30			
2.7	938	1.6	378	4.0	2,030
3.0	1,140	2.0	555	5.0	3,300
3.2	1,280	2.5	820	6.0	4,930
4.0	2,030	3.0	1,140	7.0	6,870
		3.5	1,540	8.7	10,500

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,020	1,260	963	699	512	631	803	2,720	6,570	5,350	2,440	1,230
2	988	1,250	884	753	636	668	843	2,510	5,710	5,350	2,330	1,200
3	981	1,200	866	809	748	662	914	2,440	5,090	5,310	2,260	1,180
4	981	1,160	963	798	814	662	1,020	2,610	4,680	5,400	2,580	1,160
5	981	1,150	902	770	832	684	1,160	2,960	4,660	5,240	2,360	1,140
6	1,080	1,130	814	652	809	631	1,320	3,500	4,560	4,810	2,220	1,130
7	1,060	1,110	981	610	908	684	1,480	4,370	4,390	4,560	2,130	1,100
8	1,090	1,160	963	652	1,060	668	1,640	4,680	4,010	4,400	2,030	1,080
9	1,070	1,020	938	742	1,060	694	1,710	4,690	3,730	4,250	1,940	1,060
10	1,050	*861	932	721	1,100	*641	1,830	4,900	3,640	4,230	1,860	1,050
11	1,030	1,030	908	759	1,070	631	1,780	5,460	3,880	4,160	1,760	1,030
12	1,010	1,050	908	737	944	678	1,850	5,580	4,420	3,720	1,680	1,040
13	1,000	1,010	832	759	820	726	2,110	5,110	5,220	3,500	1,620	1,030
14	994	1,010	742	832	748	705	2,540	4,500	5,970	*3,480	1,580	1,020
15	1,140	938	872	832	798	748	2,770	4,100	*7,110	3,520	1,530	994
16	1,110	950	*920	792	809	781	2,780	4,110	8,610	3,430	1,470	988
17	1,080	981	861	764	737	684	2,890	4,620	9,010	3,380	1,380	975
18	1,090	1,050	843	*694	792	657	*3,160	5,520	8,740	3,270	1,330	975
19	1,060	1,030	861	673	737	715	3,310	6,170	8,280	3,270	1,300	963
20	1,040	1,020	861	689	753	764	3,370	*6,370	7,860	3,240	1,300	957
21	1,020	1,110	809	748	759	832	3,130	6,530	7,560	3,070	1,430	963
22	1,010	1,060	699	798	721	775	2,860	7,030	7,210	2,890	1,430	969
23	994	1,030	837	748	710	673	2,850	7,980	6,510	2,730	*1,510	969
24	969	981	866	803	737	705	2,810	8,640	5,970	2,600	1,650	963
25	1,000	994	798	792	721	775	2,640	8,550	5,730	2,550	1,530	963
26	1,100	969	726	781	673	826	2,670	8,360	5,630	2,460	1,420	1,050
27	1,220	957	668	759	684	781	2,840	9,100	5,500	2,360	1,360	1,010
28	1,210	938	748	694	684	710	3,100	10,400	5,480	2,470	1,320	981
29	1,370	914	849	575	-	748	3,330	9,830	5,460	3,120	1,290	969
30	1,530	957	849	390	-	770	3,000	8,660	5,370	2,720	1,280	963
31	1,410	-	803	415	-	786	-	7,580	-	2,580	1,260	-
Total	33,688	31,280	26,466	22,240	22,376	22,095	68,510	179,580	176,560	113,420	52,580	31,102
Mean	1,087	1,043	854	717	799	713	2,284	5,793	5,885	3,659	1,696	1,037
Cfsm	0.604	0.579	0.474	0.398	0.444	0.396	1.27	3.22	3.27	2.03	0.942	0.576
In.	0.70	0.65	0.55	0.46	0.46	0.46	1.42	3.71	3.65	2.34	1.09	0.64
Ac-ft	66,820	62,040	52,490	44,110	44,380	43,820	135,900	356,200	350,200	225,000	104,300	61,690

Calendar year 1950: Max 7,740 Min 460 Mean 1,725 Cfsm 0.958 In. 13.01 Ac-ft 1,248,000
Water year 1950-51: Max 10,400 Min 390 Mean 2,137 Cfsm 1.19 In. 16.13 Ac-ft 1,547,000

* Discharge measurement made on this day.

Challis Creek near Challis, Idaho

Location.--Lat 44°34', long. 114°19', in sec. 2, T. 14 N., R. 18 E., 0.1 mile downstream from Eddy Creek, 6 miles northwest of Challis, and 6¾ miles upstream from mouth.

Drainage area.--85 sq mi, approximately.

Records available.--October 1943 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,370 ft (by barometer). Prior to Sept. 27, 1944, staff gage and Sept. 27, 1944, to Nov. 10, 1948, water-stage recorder, at site 350 ft downstream at present datum.

Average discharge.--8 years, 44.6 cfs.

Extremes.--Maximum discharge during year, 345 cfs May 28, 29; maximum gage height, 6.26 ft May 25; minimum daily discharge, 11 cfs Jan. 29; minimum gage height, 3.51 ft Sept. 9. 1943-51: Maximum discharge, 418 cfs June 4, 1948 (gage height, 2.30 ft, site then in use); minimum, 5.7 cfs Mar. 11, 29, 1950, but may have been less in January 1950 during period of ice effect.

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

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 7-9, May 23 to June 2)

Oct. 1 to May 28				May 29 to Sept. 30)			
3.6	8.8	5.0	121	3.5	22	5.0	189
3.7	12	5.5	190	3.7	36	5.5	262
3.8	18	6.0	265	4.0	65	6.0	340
4.0	30	6.5	345	4.5	123		
4.5	70						

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	25	16	15	14	16	25	57	259	133	66	39
2	37	25	15	15	16	15	27	55	252	131	63	38
3	37	25	17	16	15	15	30	52	232	139	63	37
4	36	24	19	16	15	15	32	51	217	144	67	36
5	36	24	17	15	15	15	35	57	210	139	64	36
6	35	24	18	13	14	14	36	73	202	131	65	36
7	29	24	19	13	17	*14	39	98	192	127	61	33
8	28	24	18	14	20	14	39	134	178	122	61	25
9	27	*16	18	17	20	14	41	155	171	118	66	25
10	26	16	18	16	20	13	39	158	165	118	65	31
11	26	20	18	16	20	13	39	172	165	112	63	32
12	26	22	18	16	19	14	42	175	176	106	61	32
13	25	21	17	16	18	15	47	175	189	100	61	32
14	25	21	16	16	18	15	55	167	199	*97	59	32
15	28	21	20	16	18	15	*59	161	223	95	56	32
16	26	20	*19	16	18	15	59	161	*262	92	54	31
17	25	20	19	*16	18	15	61	168	277	89	52	31
18	25	21	18	15	17	14	66	178	278	85	50	31
19	25	20	18	15	17	15	66	*205	272	84	48	30
20	25	20	17	16	17	15	65	226	262	82	*50	30
21	25	20	16	16	17	16	62	240	250	77	48	31
22	25	20	16	16	17	17	57	247	241	74	50	30
23	25	20	17	16	17	18	56	287	226	72	50	29
24	25	19	17	16	17	18	56	310	209	69	48	30
25	25	17	16	16	17	19	54	321	199	67	46	29
26	25	17	15	16	16	20	53	311	190	64	44	29
27	26	17	14	16	16	23	54	315	179	66	43	29
28	27	16	15	14	16	22	56	337	174	67	43	27
29	29	16	16	11	-	21	61	332	169	59	42	27
30	29	17	16	13	-	22	59	311	159	57	40	26
31	27	-	16	14	-	22	-	283	-	58	40	-
Total	873	612	529	472	479	509	1,470	5,972	6,377	2,974	1,689	936
Mean	28.2	20.4	17.1	15.2	17.1	16.4	49.0	193	213	95.9	54.5	31.2
Ac-ft	1,730	1,210	1,050	936	950	1,010	2,920	11,850	12,650	5,900	3,350	1,860

Calendar year 1950: Max 241 Min - Mean 45.3 Ac-ft 32,810
Water year 1950-51: Max 337 Min 11 Mean 62.7 Ac-ft 45,420

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 2, 3, 5, 6, 8-11, 13-15, 21-24, 26-29, Dec. 31 to Jan. 3, Jan. 5-21, Jan. 28 to Mar. 6, Mar. 10-30 (no gage-height record Feb. 4 to Mar. 6, Mar. 12-29; discharge estimated on basis of weather records and records for stations on nearby streams).

Pahsimeroi River near May, Idaho

Location.--Lat 44°42', long. 114°03', in W½ sec. 25, T. 16 N., R. 20 E., on right bank a quarter of a mile downstream from old highway bridge on Challis-Salmon River highway, a quarter of a mile upstream from mouth, and 10 miles northwest of May.

Drainage area.--845 sq mi, approximately.

Records available.--October 1929 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is 4,636.95 ft above mean sea level, adjustment of 1912.

Average discharge.--21 years (1930-51), 206 cfs.

Extremes.--Maximum discharge observed during year, 333 cfs Nov. 20 (gage height, 2.55 ft); maximum gage height observed, 2.79 ft May 29 (backwater from Salmon River); minimum discharge observed, 104 cfs May 10 (gage height, 1.73 ft).
1929-51: Maximum discharge observed, 454 cfs May 30, 1943 (gage height, 2.81 ft); maximum gage height observed, 3.21 ft June 4, 1948 (backwater from Salmon River); minimum discharge observed, 75 cfs Apr. 28, 1934.

Remarks.--Records good except those for periods of ice effect, no gage-height record, or backwater from Salmon River, which are fair. Diversions for irrigation of about 12,500 acres above station.

Rating table, water year 1950-51, except periods of ice effect or backwater from Salmon River (gage height, in feet, and discharge, in cubic feet per second)

1.7	93
1.8	109
2.0	150
2.3	240
2.6	352

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	269	280	325	258	251	262	251	160	c155	153	179	220
2	291	276	322	254	251	262	265	153	158	155	188	224
3	291	272	322	258	254	269	272	141	155	153	195	227
4	295	269	318	258	251	265	269	130	150	153	201	224
5	295	269	314	251	251	262	272	117	153	155	204	217
6	295	276	314	244	247	258	276	122	155	158	210	214
7	299	276	306	247	258	*258	272	120	158	158	207	207
8	306	276	310	251	262	262	265	113	153	163	207	198
9	306	*284	310	251	258	265	262	107	155	163	201	188
10	310	284	314	247	254	262	247	104	160	166	201	188
11	306	287	314	244	295	251	247	106	163	166	201	192
12	306	a290	310	247	269	247	240	109	168	166	198	192
13	310	a292	306	251	262	262	233	130	163	168	192	192
14	310	295	306	258	258	269	233	126	168	*155	185	192
15	303	303	303	*247	254	276	230	120	176	158	179	192
16	303	329	295	254	247	272	*214	115	*c180	160	173	192
17	295	314	*284	258	244	269	217	113	c180	158	173	188
18	284	310	280	258	251	269	217	111	c180	153	171	192
19	280	325	280	254	251	272	210	*113	179	150	176	192
20	280	333	276	251	247	280	210	111	176	150	185	188
21	276	329	269	251	244	276	207	117	173	143	*185	188
22	280	329	269	251	247	272	201	120	173	143	185	188
23	287	325	265	251	251	265	198	c125	171	146	201	188
24	287	325	262	254	247	265	198	c130	a168	150	198	192
25	287	325	269	254	254	265	201	c135	166	153	201	195
26	284	325	265	251	258	265	204	c140	168	153	204	201
27	284	325	265	254	262	262	192	c140	166	150	204	207
28	284	325	262	b250	258	254	182	c145	163	171	204	210
29	287	325	262	b245	-	251	173	c150	158	173	201	217
30	287	325	258	b245	-	262	168	c155	158	173	210	217
31	284	-	258	247	-	258	-	c160	-	176	217	-
Total	9,061	9,098	9,013	7,794	7,136	8,187	6,826	3,938	4,949	4,892	6,036	6,022
Mean	292	303	291	251	255	264	228	127	165	158	195	201
Ac-ft	17,970	18,050	17,880	15,460	14,150	16,240	13,540	7,810	9,820	9,700	11,970	11,940

Calendar year 1950: Max 333 Min 98 Mean 224 Ac-ft 162,400
Water year 1950-51: Max 333 Min 104 Mean 227 Ac-ft 164,500

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.
b Stage-discharge relation affected by ice.
c Backwater from Salmon River.

Salmon River at Salmon, Idaho

Location.--Lat 45°11'00", long. 113°53'40", in NE¼ sec. 6, T. 21 N., R. 22 E., on left bank 1,000 ft downstream from island, 0.4 mile upstream from Lemhi River, and 0.5 mile (revised) downstream from highway bridge at Salmon.

Drainage area.--3,760 sq mi.

Records available.--April 1912 to September 1916, July 1919 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 3,911.14 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Apr. 25, 1912, to Sept. 30, 1916, July 6, 1919, to Oct. 21, 1929, staff gage at site 700 ft upstream at different datum.

Average discharge.--34 years (1913-16, 1920-51), 1,850 cfs.

Extremes.--Maximum discharge during year, 11,400 cfs May 29 (gage height, 7.38 ft); minimum daily, 580 cfs Jan. 31; minimum gage height, 2.34 ft, probably Jan. 31 (backwater from ice).
1912-16, 1919-51: Maximum discharge observed, 16,400 cfs June 12, 1921 (gage height, 9.35 ft, site and datum then in use); minimum, 242 cfs Jan. 8, 1937 (gage height, 1.50 ft).

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

Revisions.--W 1043: Drainage area.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 31				June 1 to Sept. 30			
2.3	610	4.0	2,700	2.9	1,180	5.0	4,810
2.6	850	5.0	4,730	3.2	1,530	6.0	7,500
3.0	1,240	6.0	7,280	3.6	2,110	7.0	10,500
3.5	1,890	7.4	11,300	4.0	2,750		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,570	1,800	1,650	1,280	620	1,180	1,350	3,400	8,790	6,150	2,910	1,680
2	1,580	1,700	1,610	1,180	760	1,100	1,370	3,090	7,710	6,070	2,860	1,660
3	1,570	1,600	1,520	1,350	950	1,150	1,430	2,860	6,820	6,050	2,730	1,600
4	1,560	1,600	1,540	1,350	1,020	1,110	1,530	2,830	6,240	6,070	2,880	1,560
5	1,540	1,600	1,610	1,340	1,150	1,150	1,650	3,050	5,990	6,100	3,000	1,530
6	1,530	1,690	1,520	1,250	b1,250	1,120	1,850	3,500	6,020	5,750	2,820	1,490
7	1,550	1,710	1,510	1,030	b1,300	1,110	2,020	4,330	5,860	5,330	2,720	1,460
8	1,550	1,720	1,610	895	b1,400	*1,180	2,190	5,270	5,430	5,120	2,600	1,410
9	1,550	*1,720	1,610	1,040	b1,500	1,170	2,330	5,420	5,050	4,930	2,500	1,380
10	1,600	1,560	1,570	b1,050	b1,700	b1,050	2,470	5,570	4,720	4,810	2,400	1,360
11	1,600	1,540	1,570	b1,100	b1,800	1,050	2,490	6,040	4,720	4,930	2,280	1,330
12	1,580	1,740	1,540	1,210	b1,650	1,040	2,450	6,580	5,050	4,560	2,170	1,310
13	1,550	1,760	1,510	1,160	b1,500	1,210	2,570	6,580	5,830	4,230	2,060	1,310
14	1,500	1,720	1,400	1,380	b1,350	1,280	3,010	5,960	6,570	4,050	1,980	1,310
15	1,500	1,720	b1,250	b1,400	1,280	1,280	3,380	5,300	7,650	4,030	1,880	1,300
16	1,600	1,650	b1,400	b1,360	1,350	1,480	*3,500	5,060	*9,030	*3,960	1,810	1,290
17	1,550	1,680	*b1,440	*b1,280	1,340	1,340	3,520	5,220	9,990	3,860	1,750	1,280
18	1,550	1,720	b1,400	b1,210	1,260	1,180	3,760	5,930	10,200	3,750	1,670	1,280
19	1,500	1,780	1,420	1,150	1,280	1,210	3,950	*6,790	9,810	3,630	1,610	1,270
20	1,500	1,760	1,430	1,080	1,250	1,360	4,040	7,200	9,360	3,630	1,590	1,260
21	1,500	1,780	b1,200	1,060	1,280	1,470	3,910	7,450	8,940	3,500	*1,590	1,250
22	1,500	1,830	b1,150	1,280	1,260	1,610	3,640	7,700	8,610	3,320	1,730	1,270
23	1,500	1,790	1,240	b1,350	1,230	1,340	3,400	8,370	8,130	3,130	1,930	1,280
24	1,500	1,750	1,400	1,300	1,250	1,230	3,380	9,380	7,270	3,000	2,110	1,290
25	1,450	1,690	1,380	b1,300	1,260	1,320	3,300	9,860	6,820	2,910	2,100	1,270
26	1,400	1,690	1,280	1,320	1,230	1,440	3,130	9,740	6,650	2,820	1,930	1,280
27	1,600	1,680	1,220	1,300	1,200	1,440	3,220	9,800	6,510	2,750	1,840	1,330
28	1,600	1,640	1,230	1,140	1,170	1,310	3,320	10,800	6,370	2,750	1,810	1,310
29	1,650	1,610	1,320	967	-	1,240	3,760	11,300	6,290	3,090	1,770	1,300
30	1,700	1,580	1,400	720	-	1,300	3,720	10,700	6,240	3,340	1,740	1,280
31	1,900	-	1,340	580	-	1,320	-	9,830	-	3,040	1,710	-
Total	48,330	50,810	44,270	36,412	35,590	38,770	85,640	204,910	212,670	130,660	66,480	40,930
Mean	1,559	1,694	1,428	1,175	1,271	1,251	2,855	6,610	7,089	4,215	2,145	1,364
Ac-ft	95,860	100,800	87,810	72,220	70,590	76,900	169,900	406,400	421,800	259,200	131,900	81,180

Calendar year 1950: Max 8,820 Min 770 Mean 2,218 Ac-ft 1,606,000
Water year 1950-51: Max 11,300 Min 580 Mean 2,727 Ac-ft 1,975,000

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 6 to Nov. 5, Jan. 30 to Feb. 5; discharge estimated on basis of weather records and records for other Salmon River stations.

Panther Creek near Shoup, Idaho

Location.--Lat 45°19', long. 114°23', in sec. 19, T. 23 N., R. 18 E., 25 ft downstream from bridge on private road, 1 mile upstream from mouth, and 7 miles southwest of Shoup.

Drainage area.--529 sq mi.

Records available.--October 1944 to September 1951.

Gage.--Staff gage read once daily. Altitude of gage is 3,280 ft (from river-profile).

Average discharge.--7 years, 252 cfs.

Extremes.--Maximum discharge observed during year, 1,880 cfs May 24 (gage height, 3.55 ft); minimum daily, 50 cfs Jan. 29; minimum gage height observed, 0.06 ft Jan. 7. 1944-51: Maximum discharge observed, 2,500 cfs May 9, 1947 (gage height, 4.20 ft); maximum gage height observed, 4.4 ft Jan. 6, 1947 (backwater from ice); minimum discharge observed, 35 cfs Dec. 17, 1946 (gage height, -0.08 ft).

Remarks.--Records fair except those for periods of ice effect, which are poor. Diversions above station for irrigation of about 1,000 acres.

Revisions (water years).--W 1063: 1945.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0	45	1.5	449
.2	70	2.0	715
.5	126	2.5	1,030
.8	198	3.0	1,410
1.1	290	3.6	1,920

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	118	126	110	106	90	95	114	431	1,100	547	188	130
2	118	126	91	96	95	95	110	356	936	526	185	126
3	118	122	91	102	100	90	120	356	897	521	182	126
4	122	118	118	98	105	90	133	372	804	521	198	122
5	122	122	73	90	110	91	137	449	810	458	172	118
6	122	126	90	70	120	118	139	601	773	440	188	116
7	126	*133	105	52	130	91	180	923	715	440	182	114
8	126	130	105	70	140	91	220	1,100	686	414	177	106
9	135	70	102	75	150	*93	259	1,070	629	405	177	110
10	130	78	110	85	150	90	283	1,100	601	384	172	114
11	130	91	106	90	160	90	244	1,170	686	384	172	116
12	122	102	110	95	140	98	256	1,250	773	397	162	110
13	122	106	96	105	130	91	312	1,170	897	349	158	110
14	116	118	73	115	120	91	397	1,030	996	345	148	110
15	122	118	105	120	115	95	405	897	1,210	*319	148	110
16	122	118	98	*120	115	91	431	936	*1,300	308	135	106
17	122	122	94	115	110	89	*427	1,070	1,250	290	137	106
18	126	126	*90	110	110	72	449	1,250	1,170	283	135	106
19	130	116	90	105	105	89	449	*1,350	1,060	256	126	106
20	126	95	90	105	100	96	440	1,330	1,030	256	126	98
21	122	118	87	105	100	100	431	1,330	962	250	126	102
22	126	118	85	100	95	102	397	1,390	897	250	*146	102
23	122	114	92	100	95	93	349	1,650	773	232	198	102
24	122	116	92	95	94	100	326	1,880	744	226	198	98
25	126	116	92	90	92	95	312	1,740	744	215	160	102
26	126	114	84	85	91	106	341	1,610	715	209	148	106
27	122	106	70	80	95	110	356	1,700	657	198	144	106
28	122	102	84	60	95	118	431	1,830	629	212	137	106
29	126	102	106	50	-	102	516	1,700	574	198	135	106
30	126	118	106	70	-	110	477	1,490	547	193	144	106
31	122	-	110	80	-	114	-	1,290	-	185	135	-
Total	3,837	3,387	2,955	2,839	3,152	2,996	9,441	35,821	25,565	10,211	4,939	3,296
Mean	124	113	95.3	91.6	113	96.6	315	1,156	852	329	159	110
Cfsm	0.234	0.214	0.180	0.173	0.214	0.183	0.595	2.19	1.61	0.622	0.301	0.208
In.	0.27	0.24	0.21	0.20	0.22	0.21	0.66	2.52	1.80	0.72	0.35	0.23
Ac-ft	7,610	6,720	5,860	5,630	6,250	5,940	18,730	71,050	50,710	20,250	9,800	6,540

Calendar year 1950: Max 1,370 Min - Mean 238 Cfsm 0.450 In. 6.11 Ac-ft 172,500
Water year 1950-51: Max 1,880 Min 50 Mean 297 Cfsm 0.561 In. 7.63 Ac-ft 215,100

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 6-8, 15-20, 22-25, Jan. 2, 3, 5, Jan. 8 to Feb. 25, Feb. 27, Mar. 1-4, 10-12.

Salmon River near Shoup, Idaho

Location.--Lat 45°19'30", long. 114°26'00", in NE¼SW¼ sec. 14, T. 23 N., R. 17 E., 0.6 mile upstream from Owl Creek, 2.3 miles downstream from Panther Creek, and 9 miles southwest of Shoup.

Drainage area.--6,270 sq mi, approximately.

Records available.--October 1944 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,160 ft (from river-profile map). Prior to May 4, 1947, wire-weight gage at site 1.3 miles upstream at datum 3,168.69 ft above mean sea level, unadjusted. May 4, 1947, to Sept. 17, 1951, staff gage read once daily at site 200 ft downstream from wire-weight gage at datum 1.28 ft higher than present datum.

Average discharge.--7 years, 3,031 cfs.

Extremes.--Maximum discharge observed during year, 15,400 cfs May 29 (gage height, 7.34 ft); minimum daily, 800 cfs Jan. 31, Feb. 1.
1944-51: Maximum discharge observed, 16,900 cfs June 4, 1948 (gage height, 7.90 ft, site and datum then in use); minimum daily, that of Jan. 31, 1950, Feb. 1, 1951.

Remarks.--Records fair. Diversions above station for irrigation of about 88,000 acres.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 17				Sept. 17-30	
0.8	1,200	3.0	4,850	2.5	1,660
1.0	1,410	4.0	7,100	2.7	1,900
1.5	2,070	6.0	11,900		
2.0	2,840	7.4	15,600		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,160	2,680	2,190	1,750	*800	1,690	2,080	5,140	13,500	7,650	3,950	2,280
2	2,160	2,680	2,190	1,600	1,000	1,690	2,120	4,700	10,700	7,650	3,580	2,250
3	2,220	2,370	2,190	1,870	1,300	1,660	2,260	4,280	9,450	7,420	3,460	2,190
4	2,220	2,340	2,070	1,850	1,400	1,560	2,420	4,200	8,590	7,650	3,460	2,130
5	2,220	2,340	2,160	1,850	1,600	1,560	2,570	4,280	8,110	8,020	4,500	2,100
6	2,280	2,370	2,100	1,700	1,700	1,560	2,570	5,160	8,110	7,650	3,860	2,010
7	2,280	*2,400	2,040	1,400	1,800	1,690	3,060	6,500	8,110	6,960	3,700	1,990
8	2,280	2,370	2,040	1,300	1,900	1,820	3,250	8,590	7,880	6,730	3,460	1,960
9	2,250	2,280	2,010	1,370	2,100	*1,690	3,520	8,590	7,970	6,500	3,150	1,900
10	2,340	2,130	2,070	1,390	2,300	1,660	3,640	8,590	6,960	6,270	3,080	1,850
11	2,280	2,070	2,100	1,600	2,600	1,660	3,640	8,830	6,960	6,270	3,080	1,850
12	2,220	2,160	2,130	1,700	2,800	1,690	3,600	9,780	8,110	6,040	2,940	1,820
13	2,220	2,220	2,010	1,600	2,700	1,820	3,760	10,000	9,070	5,600	2,840	1,790
14	2,190	2,340	1,870	1,900	2,600	1,900	4,220	9,070	10,000	5,160	2,810	1,790
15	2,160	2,310	1,760	2,200	2,400	1,960	4,920	8,350	10,300	*5,200	2,680	1,820
16	2,340	2,250	1,760	*2,200	2,200	2,040	4,920	7,650	*11,000	5,200	2,650	1,820
17	2,220	2,280	2,010	1,900	2,100	*5,000	7,880	12,200	5,110	2,430	1,790	
18	2,220	2,280	*1,790	1,800	2,000	1,740	5,270	9,070	13,000	4,940	2,250	*1,740
19	2,190	2,310	1,820	1,600	2,000	1,690	5,360	*9,780	12,100	4,590	2,130	1,760
20	2,190	2,310	1,960	1,500	1,900	1,660	5,580	10,500	11,500	4,280	2,070	1,730
21	2,160	2,340	1,660	1,500	1,900	2,100	5,440	10,500	10,700	3,860	2,070	1,710
22	2,130	2,370	1,630	1,790	1,900	2,870	5,140	10,700	10,300	3,860	*2,100	1,730
23	2,130	2,370	1,610	1,940	1,800	2,250	4,920	11,500	10,000	3,660	2,250	1,740
24	2,100	2,370	1,870	1,800	1,800	2,100	4,700	13,500	9,310	3,860	2,650	1,760
25	2,070	2,310	1,930	1,800	1,800	2,250	4,700	14,300	8,830	3,860	2,740	1,780
26	2,040	2,310	1,930	1,800	1,800	2,310	4,500	13,800	8,590	3,660	2,580	1,760
27	2,220	2,280	1,760	1,700	1,700	2,250	4,600	13,300	8,350	3,480	2,430	1,780
28	2,250	2,220	1,790	1,500	1,700	2,400	4,700	14,600	7,880	3,480	2,430	1,790
29	2,370	2,220	1,870	1,100	-	2,220	5,140	15,400	7,880	3,660	2,400	1,780
30	2,460	2,220	1,930	900	-	2,060	5,360	14,900	7,880	4,500	2,370	1,760
31	2,400	-	1,900	800	-	2,000	-	13,500	-	4,280	2,310	-
Total	68,970	69,500	60,150	50,710	53,600	59,650	122,960	296,940	283,340	167,010	88,410	58,140
Mean	2,225	2,317	1,940	1,636	1,914	1,924	4,099	9,579	9,445	5,387	2,852	1,871
Ac-ft	136,800	137,900	119,300	100,600	106,300	118,300	243,900	589,000	562,000	331,300	175,400	111,400

Calendar year 1950: Max 11,900 Min 990 Mean 3,049 Ac-ft 2,207,000
Water year 1950-51: Max 15,400 Min 800 Mean 3,774 Ac-ft 2,732,000

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of records for other Salmon River stations.
Note.--Stage-discharge relation affected by ice Jan. 1, 2, 6-8, 11-21, Jan. 24 to Feb. 28.

Middle Fork Salmon River near Cape Horn, Idaho

Location.--Lat 44°25', long. 115°11', in sec. 34, T. 13 N., R. 11 E., on left bank 1,100 ft downstream from Little Beaver Creek, half a mile downstream from confluence of Marsh and Beaver Creeks, and 2 miles northwest of Cape Horn.

Drainage area.--138 sq mi.

Records available.--September 1928 to September 1951 (no winter records 1941-45).

Gage.--Water-stage recorder. Altitude of gage is 6,435 ft (by barometer).

Average discharge.--19 years (1928-41, 1945-51), 222 cfs.

Extremes.--Maximum discharge during year, 1,950 cfs May 28 (gage height, 5.89 ft); minimum, 58 cfs Mar. 28 (gage height, 2.33 ft), but may have been less during period of ice effect.
1928-51: Maximum discharge, 2,340 cfs June 9, 1933, about May 31, 1943, June 3, 1948; maximum gage height, 6.26 ft June 9, 1933, June 3, 1948; minimum discharge recorded, 31 cfs Apr. 14, 1945 (gage height, 2.12 ft), but may have been less during some winters.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are poor. No diversion above station.

Revisions.--W 738: Drainage area.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.3	53	4.0	575
2.5	85	4.5	850
2.8	145	5.0	1,180
3.1	223	6.0	2,060
3.5	359		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	132	167	110	95	75	85	80	418	1,080	740	242	138
2	125	169	105	100	80	85	80	390	942	713	217	134
3	125	159	115	100	80	85	89	402	874	691	223	132
4	125	157	119	95	85	85	98	491	856	713	229	127
5	138	155	113	90	85	80	109	580	930	647	215	127
6	157	152	110	85	85	80	119	724	874	590	245	123
7	145	152	120	80	90	80	130	896	796	551	238	121
8	152	159	120	90	*95	80	143	923	740	522	206	119
9	147	105	115	95	95	80	159	1,040	708	496	198	119
10	134	110	113	95	100	75	164	1,140	730	466	190	119
11	130	130	a110	90	100	80	169	1,200	796	460	182	117
12	125	130	a110	85	100	80	187	1,060	975	*427	177	117
13	121	127	a100	90	105	80	223	930	*1,060	406	172	117
14	121	130	100	95	105	80	270	832	1,190	390	169	115
15	138	125	110	95	100	80	298	886	1,420	375	162	113
16	125	125	111	95	100	80	333	968	1,590	359	157	113
17	127	134	100	90	95	80	382	1,080	1,570	344	152	111
18	152	136	100	90	90	80	427	1,200	1,460	326	150	111
19	134	125	105	85	90	80	448	1,300	1,360	315	147	107
20	125	141	103	80	90	83	452	1,350	1,270	304	155	107
21	121	145	96	85	90	83	418	1,390	1,200	290	167	107
22	117	136	98	85	90	80	398	1,520	1,120	277	162	107
23	115	130	103	90	90	78	398	1,680	982	267	195	107
24	113	125	96	90	89	*77	390	1,720	923	264	187	105
25	134	125	95	90	87	80	367	1,700	880	261	*159	138
26	159	123	90	85	87	80	386	1,710	856	242	150	134
27	179	115	95	80	85	75	418	1,820	820	238	145	117
28	164	113	100	70	85	75	504	1,850	808	251	147	113
29	248	105	105	65	-	78	509	1,660	734	254	147	111
30	254	115	100	65	-	78	452	1,460	757	232	150	113
31	192	-	90	70	-	76	-	1,250	-	229	143	-
Total	4,474	4,020	3,257	2,695	2,548	2,478	8,600	35,572	30,301	12,660	5,578	3,539
Mean	144	134	105	86.9	91.0	79.9	287	1,147	1,010	408	180	118
Cfsm	1.04	0.971	0.761	0.630	0.659	0.579	2.08	8.31	7.32	2.96	1.30	0.855
In.	1.21	1.08	0.88	0.73	0.69	0.67	2.32	9.59	8.17	3.41	1.50	0.95
Ac-ft	8,870	7,970	6,460	5,350	5,050	4,920	17,060	70,560	60,100	25,110	11,060	7,020

Calendar year 1950: Max 1,710 Min - Mean 305 Cfsm 2.21 In. 30.00 Ac-ft 220,800
Water year 1950-51: Max 1,850 Min 65 Mean 317 Cfsm 2.30 In. 31.20 Ac-ft 229,500

Peak discharge (base, 930 cfs).--May 10 (8 p.m.) 1,420 cfs (5.31 ft); May 28 (1 a.m.) 1,950 cfs (5.89 ft); June 16 (11:30 p.m.) 1,650 cfs (5.60 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.
Note.--Stage-discharge relation affected by ice Nov. 9, 10, Nov. 27 to Dec. 3, Dec. 6-8, 14, 15, 17-18, 22, Dec. 25 to Feb. 23, Feb. 26 to Mar. 19, Mar. 24, 25.

Bear Valley Creek near Cape Horn, Idaho

Location.--Lat 44°26', long. 115°17', in sec. 29, T. 13 N., R. 10 E., on right bank 250 ft downstream from Fir Creek, 3 miles upstream from mouth, and 7 miles northwest of Cape Horn.

Drainage area.--180 sq mi.

Records available.--September 1921 to September 1928 (fragmentary), October 1928 to September 1951 (no winter records 1941-45).

Gage.--Water-stage recorder. Altitude of gage is 6,340 ft (by barometer).

Average discharge.--19 years (1928-41, 1945-51), 270 cfs.

Extremes.--Maximum discharge during year, 2,560 cfs May 27 (gage height, 4.85 ft); minimum daily, 85 cfs Jan. 29, 30; minimum gage height recorded, 1.37 ft Dec. 21.
1921-51: Maximum discharge, 3,450 cfs June 9, 1933 (gage height, 5.49 ft), from rating curve extended above 2,000 cfs; minimum recorded, 28 cfs Nov. 11, 1931.

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

Revisions.--W 573: Drainage area.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.2	74	3.0	875
1.5	135	3.5	1,250
1.8	225	4.0	1,670
2.1	348	5.0	2,730
2.5	555		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	148	267	140	125	100	110	117	555	1,380	766	222	164
2	143	240	135	130	105	110	121	511	1,250	746	215	161
3	143	225	150	130	105	110	128	511	1,160	708	218	156
4	143	229	160	125	110	110	140	609	1,140	734	240	151
5	153	225	150	115	110	105	153	720	1,310	720	263	151
6	198	222	145	110	110	105	173	952	1,380	627	255	148
7	176	211	155	105	120	105	194	1,260	1,200	573	275	143
8	194	218	155	120	*120	105	225	1,320	1,100	533	222	143
9	194	145	150	125	125	105	252	1,430	968	500	208	140
10	170	155	150	125	130	100	275	1,560	960	484	198	140
11	153	161	145	120	130	105	304	1,690	1,030	467	191	138
12	145	158	145	110	130	110	326	1,470	1,170	*425	182	138
13	138	155	130	120	135	110	357	1,230	*1,330	400	182	138
14	133	160	*130	125	135	110	420	1,100	1,310	376	179	135
15	138	150	150	125	130	110	462	1,120	1,470	357	179	133
16	135	150	148	125	130	110	472	1,350	1,650	339	173	133
17	138	160	130	120	125	110	511	1,560	1,690	326	173	130
18	194	165	130	120	120	110	573	1,690	1,610	308	167	130
19	198	165	140	110	120	110	609	1,820	1,540	292	164	130
20	156	180	133	105	120	120	621	1,830	1,440	284	167	128
21	145	200	130	110	120	120	561	1,810	1,380	271	173	128
22	138	180	130	110	120	115	538	2,000	1,300	263	179	128
23	133	170	135	115	120	115	538	2,210	1,220	252	201	128
24	130	160	126	115	120	120	538	2,220	1,100	252	252	128
25	140	160	120	115	115	130	500	2,250	1,040	244	*191	145
26	194	160	120	110	115	130	511	2,210	982	236	179	208
27	255	150	120	105	110	130	579	2,340	917	229	170	156
28	225	145	125	95	110	*128	720	2,320	882	233	170	145
29	317	135	140	85	-	120	727	2,080	833	267	173	140
30	445	160	130	85	-	117	627	1,840	792	236	179	138
31	353	-	115	95	-	115	-	1,620	-	222	173	-
Total	5,665	5,361	4,262	3,530	3,340	3,510	12,272	47,188	36,534	12,670	6,113	4,274
Mean	183	179	137	114	119	113	409	1,522	1,218	409	197	142
Cfsm	1.02	0.994	0.761	0.633	0.661	0.628	2.27	8.46	6.77	2.27	1.09	0.789
In.	1.17	1.11	0.88	0.73	0.69	0.73	2.54	9.75	7.55	2.62	1.26	0.88
Ac-ft	11,240	10,630	8,450	7,000	6,620	6,960	24,340	93,600	72,460	25,130	12,120	8,480

Calendar year 1950: Max 2,190 Min - Mean 369 Cfsm 2.05 In. 27.84 Ac-ft 267,200
Water year 1950-51: Max 2,340 Min 85 Mean 396 Cfsm 2.20 In. 29.91 Ac-ft 287,000

Peak discharge (base, 1,200 cfs).--May 11 (4 to 7 p.m.) 1,730 cfs (407 ft); May 27 (9:30 a.m.) 2,560 cfs (4.85 ft); June 16 (4 to 5 p.m.) 1,760 cfs (4.10 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 9, 10, Dec. 14, 15, 17-19, 21-23, Dec. 25 to about Mar. 20, Mar. 29, 31. No gage-height record Nov. 13 to Dec. 13, Jan. 21 to Feb. 7, Mar. 11-27; discharge estimated on basis of weather records and records for stations on nearby streams.

Big Creek near Big Creek, Idaho

Location.--Lat 45°07', long. 114°55', in NE¼ sec. 36, T. 21 N., R. 12 E., on left bank three-quarters of a mile downstream from Cabin Creek, 1¾ miles southeast of Wallace Ranch, and 19 miles east of Big Creek post office.

Drainage area.--470 sq mi, approximately.

Records available.--September 1944 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,950 ft (from river profile). Prior to Oct. 22, 1948, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.--7 years, 498 cfs.

Extremes.--Maximum discharge during year, 3,600 cfs May 28 (gage height, 5.74 ft); minimum, 92 cfs Jan. 7 (gage height, 1.56 ft), but may have been less during period of ice effect.

1944-51: Maximum discharge, 5,800 cfs June 3, 1948 (gage height, 7.12 ft, from floodmark, former site and datum), from rating curve extended above 3,000 cfs by logarithmic plotting; minimum observed, 66 cfs Dec. 17, 1946 (discharge measurement), but may have been less during period of ice effect.

Remarks.--Records good except those for periods of ice effect, which are fair. No regulation. Small diversions above station for irrigation.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 20-24)

Oct. 1 to June 20				June 21 to Sept. 30			
1.6	97	3.0	790	2.1	153	3.0	681
1.8	132	4.0	1,720	2.4	275	3.5	1,130
2.1	221	5.6	3,410	2.7	450	5.0	2,680
2.5	427						

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	210	398	238	176	160	160	210	915	1,790	1,320	368	238
2	210	362	207	179	160	130	217	838	1,610	1,340	362	229
3	210	335	225	179	170	160	274	790	1,480	1,290	350	225
4	217	330	225	179	180	160	374	806	1,390	1,390	350	221
5	225	324	179	173	190	162	497	870	1,370	1,280	339	217
6	293	324	196	122	200	155	602	1,140	1,330	1,170	344	213
7	247	324	230	110	200	165	694	1,670	1,280	1,090	327	208
8	238	324	214	130	210	155	766	1,770	1,240	1,040	317	200
9	255	255	214	140	240	165	782	1,670	1,210	986	306	196
10	242	225	214	150	260	145	790	1,810	1,270	959	296	196
11	234	293	207	160	280	145	750	2,070	1,460	887	285	196
12	230	274	207	180	303	155	782	2,010	1,730	833	280	200
13	225	255	189	190	250	168	915	1,730	1,910	806	266	196
14	217	251	170	199	220	155	1,110	1,490	2,040	788	261	192
15	238	238	214	199	200	162	1,120	1,340	2,410	770	257	188
16	238	242	207	199	190	173	1,090	1,360	2,630	726	252	184
17	260	242	199	182	180	162	1,130	1,650	2,430	690	243	181
18	340	242	192	165	180	145	1,220	*2,010	2,240	656	238	181
19	*324	234	192	149	170	155	1,190	2,160	2,040	623	234	181
20	293	238	189	155	170	162	1,110	2,130	2,000	590	*229	178
21	269	247	182	160	170	168	987	2,160	*1,910	544	225	178
22	255	234	168	170	160	173	897	2,360	1,800	514	238	178
23	247	234	199	160	160	*170	830	2,780	1,640	*493	301	178
24	234	225	185	160	160	176	790	3,000	1,620	471	327	174
25	247	230	185	168	168	179	766	2,760	1,540	457	266	174
26	274	234	168	162	155	199	806	2,590	1,510	437	252	184
27	298	242	154	154	160	203	879	2,860	1,430	424	243	178
28	303	242	196	*120	160	207	1,010	3,400	1,420	418	247	*174
29	458	238	203	100	-	207	1,120	2,840	1,380	450	261	170
30	546	238	192	125	-	214	1,020	2,380	1,340	404	266	170
31	471	-	182	140	-	214	-	2,030	-	379	252	-
Total	8,548	8,074	6,122	4,935	5,406	5,279	24,728	59,389	50,450	24,225	8,782	5,778
Mean	276	269	197	159	193	170	824	1,916	1,682	781	283	193
Cfsm	0.587	0.572	0.419	0.338	0.411	0.362	1.75	4.08	3.58	1.66	0.602	0.411
In.	0.68	0.64	0.48	0.39	0.43	0.42	1.96	4.70	3.99	1.92	0.69	0.46
Ac-ft	16,950	16,010	12,140	9,790	10,720	10,470	49,050	117,800	100,100	48,050	17,420	11,460

Calendar year 1950: Max 3,530 Min 105 Mean 560 Cfsm 1.19 In. 16.18 Ac-ft 405,600
Water year 1950-51: Max 3,400 Min 100 Mean 580 Cfsm 1.23 In. 16.76 Ac-ft 420,000

Peak discharge (base, 2,000 cfs).--May 11 (10:30 p.m.) 2,160 cfs (4.38 ft); May 28 (6 a.m.) 3,600 cfs (5.74 ft); June 16 (3 to 5 a.m.) 2,790 cfs (5.02 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 7-13, 20-24, Jan. 28 to Feb. 11, Feb. 13-24, Feb. 26 to Mar. 4, Mar. 6, 8, 10-12, 14, 18, 19 (no gage-height record Feb. 1-9).

South Fork Salmon River near Knox, Idaho

Location.--Lat 44°39', long. 115°42', in NW¼ sec. 11, T. 15 N., R. 6 E., on left bank 800 ft downstream from Curtis Creek, 1 mile upstream from Warm Lake Creek, 1½ miles southwest of Knox, and 21 miles northeast of Cascade.

Drainage area.--92 sq mi, approximately.

Records available.--September 1928 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 5,090.31 ft above mean sea level, unadjusted. Prior to Oct. 22, 1942, staff gage at site 800 ft downstream at datum 2.09 ft lower.

Average discharge.--23 years, 137 cfs.

Extremes.--Maximum discharge during year, 1,080 cfs May 28 (gage height, 5.55 ft); minimum daily, 38 cfs Jan. 29; minimum gage height, 2.53 ft Sept. 20, 21, 25.
1928-51: Maximum discharge observed, 1,560 cfs June 9, 1933 (gage height, 4.69 ft, site and datum then in use), from rating curve extended above 1,000 cfs; minimum observed, 16 cfs Feb. 17, Aug. 19, 20, 1931, Nov. 16, 1944.

Remarks.--Records excellent except those for periods of ice effect, which are fair. No diversion above station.

Revisions (water years).--W 1043: 1943.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.5	37	3.6	254
2.6	48	4.0	384
2.8	79	4.5	580
3.0	116	5.0	817
3.3	179	6.0	1,340

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	124	70	58	50	*66	86	325	580	318	79	56
2	52	116	65	62	60	66	97	296	518	309	76	54
3	52	110	74	62	60	64	120	289	485	289	74	52
4	55	110	77	65	60	64	142	315	466	335	76	51
5	67	106	74	62	62	66	172	342	530	283	81	49
6	77	105	76	50	60	64	207	428	485	254	84	48
7	65	105	83	48	70	64	243	572	424	232	79	47
8	74	108	77	55	80	66	260	624	395	217	74	46
9	74	84	77	64	100	67	268	656	384	204	72	46
10	61	86	84	62	105	63	271	718	402	195	69	45
11	56	95	83	60	105	60	263	772	458	188	65	45
12	54	93	83	60	90	64	280	718	567	175	64	45
13	51	84	77	58	80	64	332	633	589	166	61	45
14	51	86	74	58	75	66	402	546	638	157	61	45
15	55	*79	88	60	80	67	409	513	728	153	59	44
16	52	76	79	60	75	66	406	555	777	144	58	42
17	74	76	76	58	72	64	431	633	742	136	56	42
18	116	83	72	*56	70	62	462	699	694	132	55	42
19	*79	74	72	57	70	66	462	723	647	126	54	41
20	67	81	70	58	70	70	431	733	611	122	*54	41
21	61	93	69	59	68	72	377	752	567	*116	54	41
22	58	76	62	58	68	72	349	817	*522	110	58	41
23	56	70	70	56	68	72	342	927	474	108	70	41
24	55	69	67	56	68	72	*335	*952	454	103	72	40
25	64	67	65	56	68	74	312	932	424	99	58	61
26	97	69	54	56	66	79	315	932	402	95	54	*59
27	106	69	60	55	66	81	335	983	384	92	51	48
28	114	69	65	45	66	84	428	999	370	88	74	46
29	232	67	67	38	-	81	420	872	349	88	69	45
30	184	74	67	43	-	83	363	767	332	84	74	48
31	142	-	64	49	-	83	-	665	-	81	62	-
Total	2,455	2,604	2,241	1,744	2,032	2,152	9,320	20,688	15,398	5,199	2,047	1,396
Mean	79.2	86.8	72.3	56.3	72.6	69.4	311	667	513	168	66.0	46.5
Cfsm	0.861	0.943	0.786	0.612	0.789	0.754	3.38	7.25	5.58	1.83	0.717	0.505
In.	0.99	1.05	0.91	0.70	0.82	0.87	3.77	8.36	6.22	2.10	0.83	0.56
Ac-ft	4,870	5,160	4,440	3,460	4,030	4,270	18,490	41,030	30,540	10,310	4,060	2,770

Calendar year 1950: Max 1,040 Min - Mean 182 Cfsm 1.98 In. 26.92 Ac-ft 132,100
Water year 1950-51: Max 999 Min 38 Mean 184 Cfsm 2.00 In. 27.18 Ac-ft 133,400

Peak discharge (base, 600 cfs).--May 10 (11 p.m.) 812 cfs (4.99 ft); May 28 (1 a.m.) 1,080 cfs (5.55 ft); June 16 (1 a.m.) 862 cfs (5.12 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 10, Dec. 2, 22, 26-29, Dec. 31 to Jan. 2, Jan. 5-20, 23, Jan. 28 to Mar. 8, Mar. 10-12, 14, 16-20, 23, 24.

Johnson Creek at Yellow Pine, Idaho

Location.--Lat 44°58', long. 115°30', in NE¼ sec. 29, T. 19 N., R. 8 E., on right bank 700 ft upstream from mouth and a quarter of a mile southwest of Yellow Pine.

Drainage area.--213 sq mi.

Records available.--August 1928 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,657.70 ft above mean sea level, datum of 1929 (preliminary).

Average discharge.--23 years, 324 cfs.

Extremes.--Maximum discharge during year, 3,020 cfs May 28 (gage height, 5.77 ft); minimum, 66 cfs Jan. 29 (gage height, 1.14 ft).
1928-51: Maximum discharge, 5,150 cfs June 9, 1933 (gage height, 7.62 ft), from rating curve extended above 2,800 cfs; minimum, 22 cfs Nov. 30, 1933; minimum gage height, 0.70 ft Nov. 30, 1937.

Remarks.--Records good. Small diversion from Johnson Creek basin to Deadwood River basin (see Remarks for Deadwood Reservoir near Lowman).

Rating table, water year 1950-51 (gage height, in feet and discharge, in cubic feet per second)

1.2	72	3.0	725
1.5	131	4.0	1,360
2.0	275	5.0	2,220
2.5	475	5.6	2,830

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	107	304	168	127	107	*120	118	671	1,420	906	190	129
2	105	272	160	138	127	116	122	629	1,260	882	181	120
3	107	258	173	129	122	111	138	619	1,160	840	178	116
4	111	261	176	133	122	116	163	698	1,140	966	196	111
5	124	261	148	129	124	116	190	805	1,250	840	184	107
6	153	258	163	103	116	107	222	1,050	1,180	742	184	105
7	133	251	176	105	131	113	261	1,500	1,060	687	176	101
8	145	244	165	122	153	111	297	1,470	1,010	640	165	97
9	168	176	165	141	153	113	334	1,610	996	599	160	97
10	148	187	165	138	155	105	365	1,810	1,070	569	153	97
11	133	219	168	138	155	103	377	1,960	1,220	535	148	95
12	124	210	168	129	148	113	414	1,630	1,480	498	143	93
13	118	193	163	129	131	113	498	1,360	1,580	471	138	93
14	113	201	150	129	136	111	599	1,200	1,710	449	136	91
15	127	184	168	127	141	116	650	1,180	1,970	423	133	89
16	122	*184	160	122	136	113	676	1,450	2,070	402	129	88
17	155	187	155	120	131	105	747	1,630	1,950	377	124	86
18	*255	190	153	113	138	101	828	1,930	1,810	353	122	84
19	222	176	153	111	127	109	870	1,990	1,660	334	118	82
20	173	193	153	*118	133	105	852	1,950	1,590	315	116	82
21	155	207	148	118	131	109	753	2,000	1,490	*304	*118	80
22	145	204	138	116	124	107	709	2,350	*1,370	289	122	80
23	141	193	158	111	124	107	698	*2,630	1,240	272	155	80
24	133	187	150	120	124	107	*682	2,580	1,200	258	168	80
25	143	187	148	120	124	109	645	2,450	1,140	248	138	86
26	190	184	116	122	113	113	676	2,470	1,070	235	127	*116
27	213	178	131	118	113	113	731	2,690	1,010	226	120	99
28	207	176	150	103	118	109	852	2,750	1,000	219	133	91
29	377	176	150	79	-	113	846	2,250	954	219	150	88
30	440	184	150	91	-	116	736	1,910	918	207	155	89
31	353	-	138	101	-	113	-	1,640	-	198	143	-
Total	5,340	6,285	4,827	3,700	3,657	3,433	16,049	52,862	39,978	14,503	4,603	2,852
Mean	172	210	156	119	131	111	535	1,705	1,333	468	148	95.1
Cfsm	0.808	0.986	0.732	0.559	0.615	0.521	2.51	8.00	6.26	2.20	.695	0.446
In.	0.93	1.10	0.84	0.65	0.64	0.60	2.80	9.23	6.98	2.53	0.80	0.50
Ac-ft	10,590	12,470	9,570	7,340	7,250	6,810	31,830	104,900	79,300	28,770	9,130	5,660

Calendar year 1950: Max 2,790 Min 64 Mean 436 Cfsm 2.05 In. 27.76 Ac-ft 315,400
Water year 1950-51: Max 2,750 Min 79 Mean 433 Cfsm 2.03 In. 27.60 Ac-ft 313,600

Peak discharge (base, 1,800 cfs).--May 11 (1 a.m.) 2,170 cfs (4.94 ft); May 28 (4 a.m.) 3,020 cfs (5.77 ft); June 15 (11 p.m.) 2,350 cfs (5.13 ft).
* Discharge measurement made on this day.

Secesh River near Burgdorf, Idaho

Location.--Lat 45°14', long. 115°49', in SW¼ sec. 23, T. 22 N., R. 5 E., on left bank 760 ft upstream from Long Gulch Creek and 5¾ miles southeast of Burgdorf.

Drainage area.--104 sq mi.

Records available.--April 1943 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,690 ft (from river profile map). Prior to Aug. 20, 1943, staff gage and Aug. 20, 1943, to Sept. 30, 1948, water-stage recorder at site 1 mile upstream at different datum.

Average discharge.--8 years, 187 cfs.

Extremes.--Maximum discharge during year, 1,330 cfs May 28 (gage height, 5.41 ft); minimum daily, 44 cfs Jan. 29; minimum gage height, 1.91 ft Sept. 25, 29, 30.
1943-51: Maximum discharge, 2,500 cfs June 3, 1948 (gage height, 8.24 ft, site and datum then in use), from rating curve extended above 970 cfs on basis of slope-area determination of peak flow; minimum observed, 29 cfs (discharge measurement) Jan. 30, 1945, but may have been less during periods of ice effect.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	44	3.5	392
2.2	89	4.0	567
2.6	163	4.5	795
3.0	253	6.0	1,700

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	67	222	110	80	57	60	56	316	695	417	106	67
2	66	202	100	85	70	55	60	311	616	411	101	64
3	67	195	110	80	65	50	70	333	583	398	98	61
4	75	202	110	80	65	55	90	371	575	567	101	60
5	108	199	95	80	65	55	100	414	654	463	98	58
6	119	191	100	60	60	50	110	536	579	395	91	55
7	94	195	115	62	70	55	130	682	532	362	86	55
8	110	182	105	80	85	55	150	690	513	339	86	54
9	108	120	105	90	85	55	170	724	495	316	84	54
10	87	125	105	85	85	50	180	806	528	305	*83	52
11	81	140	110	85	85	45	190	866	588	*289	81	58
12	76	130	110	80	80	55	210	764	695	270	79	58
13	72	125	105	80	75	55	246	664	700	256	78	57
14	68	*130	95	80	75	55	300	596	*748	246	78	54
15	83	120	105	80	80	55	322	600	872	236	75	52
16	86	120	100	75	75	55	339	695	927	222	72	51
17	*113	125	100	75	70	50	377	790	866	211	70	50
18	220	135	100	70	75	45	417	822	817	199	68	50
19	130	120	96	*70	65	55	414	844	759	191	66	*48
20	101	130	92	75	70	53	377	861	733	180	62	48
21	94	140	91	75	65	50	336	894	686	174	64	47
22	89	135	85	70	60	50	311	*1,000	633	167	68	47
23	84	130	95	65	60	50	292	1,160	592	157	94	48
24	83	125	91	70	60	50	286	1,160	596	147	86	47
25	126	125	89	70	60	50	292	1,120	571	139	72	47
26	159	125	75	75	55	*55	322	1,100	524	134	67	50
27	195	115	85	70	55	55	356	1,180	495	126	66	47
28	159	115	95	60	60	52	430	1,190	474	120	81	47
29	555	115	95	44	-	55	401	1,020	446	117	83	45
30	440	120	95	50	-	55	345	900	430	113	78	47
31	278	-	90	55	-	55	-	790	-	110	70	-
Total	4,193	4,353	3,054	2,256	1,932	1,640	7,679	24,199	18,922	7,777	2,492	1,578
Mean	135	145	98.5	72.8	69.0	52.9	256	781	631	251	80.4	52.6
Cfsm	1.30	1.39	0.947	0.700	0.663	0.509	2.46	7.51	6.07	2.41	0.773	0.506
In.	1.50	1.56	1.09	0.81	0.69	0.59	2.75	8.65	6.77	2.78	0.89	0.56
Ac-ft	8,320	8,630	6,060	4,470	3,830	3,250	15,230	48,000	37,530	15,430	4,940	3,130

Calendar year 1950: Max 1,540 Min - Mean 236 Cfsm 2.27 In. 30.83 Ac-ft 171,000
Water year 1950-51: Max 1,190 Min 44 Mean 219 Cfsm 2.11 In. 28.64 Ac-ft 158,800

Peak discharge (base, 900 cfs).--May 10 (11 p.m.) 960 cfs (4.80 ft); May 28 (3:30 a.m.) 1,330 cfs (5.41 ft); June 16 (3 a.m.) 1,030 cfs (4.91 ft).
* Discharge measurement made on this day.
Note.--Stage discharge relation affected by ice Nov. 9 to Dec. 18, Dec. 22, 23, Dec. 26 to Apr. 12.

Salmon River near French Creek, Idaho

Location.--Lat 45°26', long. 115°59', in sec. 8, T. 24 N., R. 4 E., on left bank 100 ft downstream from Fall Creek, 2½ miles northeast of French Creek Post Office, and 16 miles east of Riggins.

Drainage area.--12,270 sq mi, approximately.

Records available.--October 1944 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is 1,908.92 ft above mean sea level, unadjusted.

Average discharge.--7 years, 10,330 cfs.

Extremes.--Maximum discharge observed during year, 57,800 cfs May 28 (gage height, 26.50 ft); minimum daily, 2,200 cfs Jan. 31, Feb. 1; minimum gage height observed, 1.84 ft Jan. 8.
1944-51: Maximum discharge observed, 75,300 cfs May 29, 1948 (gage height, 33.50 ft); minimum observed, 1,890 cfs Dec. 12, 1944 (gage height, 1.44 ft).

Remarks.--Records excellent except those for days of rapidly changing stage and those for periods of ice effect or no gage-height record, which are good. Amount of water diverted above station for irrigation is a negligible percentage of total flow.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,820	7,550	5,840	4,690	b2,200	4,300	5,920	20,000	41,100	25,000	8,580	5,590
2	4,820	7,230	5,840	4,430	b2,800	4,160	6,130	18,200	37,300	24,800	8,240	5,400
3	4,870	7,150	5,770	4,400	b3,400	4,160	6,410	16,600	33,600	24,300	8,210	5,290
4	4,950	7,240	5,570	4,480	3,820	4,130	7,970	16,100	30,300	25,500	8,040	5,090
5	5,230	7,080	5,510	4,350	4,560	4,180	9,860	17,300	29,800	26,400	8,380	5,030
6	5,740	7,080	*5,230	4,250	4,560	4,180	10,800	20,100	29,300	23,300	8,520	4,870
7	5,740	7,160	5,230	3,580	4,820	4,180	12,300	29,300	28,300	20,700	8,140	4,720
8	5,620	7,580	5,260	2,850	4,560	4,130	13,400	36,100	26,700	19,800	8,110	4,660
9	5,620	6,910	5,480	3,290	5,510	4,160	14,100	36,800	26,000	18,900	7,630	4,560
10	5,540	6,000	5,430	3,990	6,250	4,180	14,500	38,100	25,000	18,000	*7,370	4,480
11	5,310	5,890	5,120	3,890	7,050	4,040	*14,100	41,800	25,700	17,200	7,110	4,430
12	5,230	6,160	5,230	d4,000	8,380	3,750	14,100	43,200	28,300	*16,300	6,890	4,400
13	5,090	6,250	5,010	4,040	8,040	4,060	15,000	40,800	33,300	15,700	6,570	4,400
14	4,950	6,100	5,230	4,480	6,730	4,300	17,600	36,300	*35,800	14,800	6,350	4,380
15	4,820	6,000	5,480	*4,660	6,410	4,430	19,400	33,300	38,300	14,300	6,070	4,330
16	d5,000	5,820	5,230	4,690	5,770	4,690	20,300	31,600	43,400	a13,800	5,860	4,300
17	d5,200	5,840	5,120	4,790	5,590	4,640	20,700	34,100	47,400	13,300	5,740	4,180
18	d5,700	6,020	5,200	4,820	5,370	4,460	21,600	37,100	46,900	12,900	5,570	4,160
19	6,330	6,070	4,870	4,350	4,950	4,300	23,200	43,700	44,800	12,300	5,400	*4,130
20	6,100	6,010	4,870	4,060	4,920	4,430	22,500	43,700	42,600	11,900	5,170	4,060
21	5,650	6,130	4,900	3,800	4,920	4,560	d20,800	45,000	40,400	11,500	5,230	4,040
22	5,450	6,190	4,850	3,940	4,920	5,170	d19,400	*46,100	38,100	10,800	5,260	4,010
23	5,230	6,240	4,480	4,230	4,820	5,370	d17,800	50,100	34,800	10,400	6,310	4,040
24	5,030	6,020	4,820	4,300	4,790	5,170	d16,400	54,900	33,600	10,200	6,950	4,040
25	5,010	5,940	4,460	4,330	4,790	4,850	d16,200	55,700	32,300	9,650	6,570	4,040
26	*5,230	5,840	4,920	4,400	4,690	d5,400	16,500	54,400	30,300	9,320	6,250	4,180
27	5,310	5,920	4,510	4,400	*4,400	6,010	d17,000	54,400	28,700	9,180	5,950	4,250
28	5,680	5,920	4,250	4,040	4,300	6,100	18,600	57,800	27,600	9,000	5,710	4,250
29	6,470	5,770	4,640	3,010	-	5,800	20,900	56,800	26,700	9,070	5,800	4,280
30	8,140	5,710	4,820	b2,300	-	5,510	d21,600	53,000	25,700	9,210	5,830	4,290
31	8,800	-	4,980	b2,200	-	5,590	-	47,700	-	9,360	5,740	-
Total	172,680	190,820	158,150	125,040	143,320	144,390	475,090	‡1,210.1	‡1,012.1	476,890	207,550	133,880
Mean	5,570	6,361	5,102	4,034	5,119	4,658	15,836	39,040	33,740	15,380	6,695	4,463
Cfsm	0.454	0.518	0.416	0.329	0.417	0.380	1.29	3.18	2.75	1.25	0.546	0.364
In.	0.52	0.58	0.48	0.38	0.43	0.44	1.44	3.67	3.07	1.45	0.63	0.41
Ac-ft	342,500	378,500	313,700	248,000	284,300	286,400	942,300	‡2,400	‡2,007	945,900	411,700	265,500

Calendar year 1950: Max 56,400 Min 2,400 Mean 11,300 Cfsm 0.921 In. 12.50 Ac-ft 8,182,000
Water year 1950-51: Max 57,800 Min 2,200 Mean 12,190 Cfsm 0.993 In. 13.50 Ac-ft 8,826,000

* Discharge measurement made on this day.
‡ Expressed in thousands.
a No gage-height record; discharge estimated on basis of weather records and records for station at Whitebird.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge computed as described in note for "a."

Mud Creek near Tamarack, Idaho

Location.--Lat 45°00', long. 116°21', in sec. 9, T. 19 N., R. 1 E., on left bank 0.5 mile upstream from Little Mud Creek, 3¾ miles northeast of Tamarack, and 5 miles upstream from mouth.

Drainage area.--15.8 sq mi.

Records available.--April 1937 to September 1940 (incomplete), September 1945 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,990 ft (by barometer). Prior to Sept. 18, 1945, staff gage at site 40 ft downstream at datum 1.21 ft higher.

Average discharge.--6 years (1945-51), 18.1 cfs.

Extremes.--Maximum discharge during year, 193 cfs Apr. 14 (gage height, 3.99 ft); maximum gage height, 4.72 ft Mar. 23 (ice jam); minimum discharge, 1.4 cfs Aug. 19-21; minimum gage height, 2.28 ft Oct. 1-4.
1937-38, 1945-51: Maximum discharge observed, about 300 cfs probably on May 1, 1938 (gage height, 3.34 ft, from floodmark, site and datum then in use); minimum, probably less than 0.5 cfs during late summer of 1937.

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

Revisions (water years).--W 1153: 1948.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 13				Apr. 14 to Sept. 30			
2.2	1.0	3.0	30	2.3	0.6	2.9	28
2.3	2.3	3.2	46	2.4	1.8	3.1	46
2.4	4.4	3.5	87	2.5	3.9	3.4	85
2.6	10	4.0	179	2.6	7.2	3.7	133
2.8	18			2.7	12	4.0	189

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	5.7	5.0	5.0	2.5	3.6	20	94	11	4.4	2.1	2.0
2	1.9	6.0	4.8	5.0	2.7	3.5	31	78	10	4.4	2.0	2.0
3	1.9	5.4	5.0	5.0	2.7	3.5	50	68	10	4.4	1.8	1.8
4	2.0	5.2	5.5	5.0	3.0	3.5	74	66	10	6.0	1.7	1.7
5	2.5	5.2	5.0	4.5	3.0	3.5	112	67	15	5.0	1.7	1.7
6	*2.9	4.9	5.0	3.5	3.5	3.5	144	75	12	4.4	1.7	1.7
7	2.5	4.7	5.2	3.5	4.0	3.5	140	90	17	4.2	1.7	1.7
8	2.3	4.7	5.0	4.0	4.5	3.5	144	86	12	3.9	1.8	1.5
9	2.3	4.2	5.0	4.0	5.0	*3.2	144	79	10	3.6	1.8	1.5
10	2.2	3.5	4.9	4.0	6.0	3.2	144	72	8.5	3.2	1.8	1.5
11	2.2	*4.8	4.7	4.0	7.0	3.2	136	74	8.1	3.2	1.8	1.5
12	2.2	4.7	4.7	4.0	8.0	3.2	138	70	11	2.9	1.8	1.5
13	2.0	3.8	*4.3	4.0	7.0	3.2	165	57	10	2.7	1.8	1.5
14	2.0	3.8	4.5	4.0	6.0	3.5	176	48	8.1	2.7	1.8	1.5
15	2.0	4.0	5.0	4.0	5.5	3.7	*172	42	7.2	2.7	1.8	1.7
16	2.0	4.0	5.5	3.5	5.0	4.0	153	38	6.8	2.7	1.8	1.7
17	2.3	4.0	5.5	3.5	4.8	4.0	149	38	6.4	2.5	1.7	1.7
18	4.9	4.0	5.5	3.5	4.8	4.5	147	38	6.0	2.5	*1.5	1.7
19	2.7	4.0	5.5	3.5	4.7	4.8	137	34	6.0	*2.5	1.4	1.5
20	2.3	3.5	5.5	3.0	4.6	5.0	119	31	*5.7	2.7	1.4	1.5
21	2.3	4.0	5.5	3.0	4.6	5.5	97	28	6.0	2.7	1.4	1.5
22	2.3	4.0	5.5	3.0	4.5	6.0	84	26	5.7	2.7	1.8	1.7
23	2.2	3.8	5.5	*2.5	4.4	7.0	74	24	5.7	2.5	2.3	1.7
24	2.3	3.8	5.5	2.5	4.2	8.0	70	a22	6.0	2.5	2.0	*1.7
25	2.5	3.8	4.5	2.5	4.0	10	67	a20	6.0	2.3	1.8	1.8
26	3.8	4.0	4.8	2.5	3.9	11	74	*17	5.4	2.3	1.7	2.0
27	4.2	4.2	5.0	2.5	3.8	13	84	15	5.0	2.1	1.8	2.0
28	10	4.2	5.0	2.0	3.7	13	121	15	4.7	2.1	2.5	2.0
29	13	4.4	5.0	2.0	-	14	142	12	4.7	2.1	2.3	2.0
30	8.2	4.8	5.0	2.5	-	14	116	12	4.7	2.1	2.0	2.1
31	6.2	-	5.0	2.5	-	15	-	11	-	2.0	2.0	-
Total	104.0	131.1	157.4	108.0	127.4	190.1	3,424	1,447	244.7	96.0	56.5	51.4
Mean	3.35	4.37	5.08	3.48	4.55	6.13	114	46.7	8.16	3.10	1.82	1.71
Cfsm	0.212	0.277	0.322	0.220	0.288	0.388	7.22	2.96	0.516	0.196	0.115	0.108
In.	0.24	0.31	0.37	0.25	0.30	0.45	8.06	3.41	0.58	0.23	0.13	0.12
Ac-ft	206	260	312	214	253	377	6,790	2,870	485	190	112	102

Calendar year 1950: Max 155 Min - Mean 17.3 Cfsm 1.09 In. 14.82 Ac-ft 12,500
Water year 1950-51: Max 176 Min 1.4 Mean 16.8 Cfsm 1.06 In. 14.45 Ac-ft 12,170

Peak discharge (base, 100 cfs).--Apr. 14 (8 p.m.) 193 cfs (3.99 ft); Apr. 28 (10:30 p.m.) 153 cfs (3.79 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, records for Weiser River at Tamarack, and stations on nearby streams.

Note.--Stage-discharge relation affected by ice Nov. 9-11, 15-17, 20-23, Nov. 27 to Mar. 28 (no gage-height record Dec. 15-23, Jan. 17-22, Jan. 28 to Mar. 5, Mar. 7, 8, 10-22; discharge estimated as described under "a").

Little Salmon River at Riggins, Idaho

Location.--Lat 45°24'50", long. 116°19'30", in SE¼SW¼ sec. 15, T. 24 N., R. 1 E., on right bank 250 ft upstream from highway bridge, half a mile upstream from mouth, and three-quarters of a mile southwest of Riggins.

Drainage area.--576 sq mi.

Records available.--February to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 1,760 ft (from topographic map).

Extremes.--Maximum discharge during period, 3,720 cfs June 15 (gage height, 6.48 ft); minimum, 169 cfs Sept. 24 (gage height, 1.90 ft).

Remarks.--Records good. Diversions for irrigation of about 13,600 acres above station.

Rating table, Feb. 1 to Sept. 30, 1951 (gage height, in feet, and discharge, in cubic feet per second)

1.9	169	4.0	1,170
2.2	255	4.5	1,540
2.6	400	5.0	1,980
3.0	590	6.0	3,070
3.5	860	7.0	4,520

Discharge, in cubic feet per second, February to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					a320	380	766	1,760	1,660	1,200	288	230
2					a360	368	920	1,570	1,520	1,160	275	224
3					a400	349	1,170	1,470	1,440	1,130	268	218
4					a420	353	1,440	1,520	1,430	1,460	262	212
5					a450	342	1,930	1,630	1,750	1,330	255	207
6					a460	360	2,660	1,940	1,760	1,130	252	198
7					a480	356	2,670	2,480	1,710	1,020	249	195
8					a500	356	2,500	2,600	1,660	920	246	192
9					*530	364	2,280	2,590	1,590	872	240	195
10					575	345	*2,140	2,840	1,670	822	236	192
11					640	334	2,010	a3,100	1,950	772	230	192
12					734	342	1,950	a3,010	2,330	*722	227	192
13					728	345	2,110	2,610	2,440	690	227	192
14					690	353	2,340	2,270	a2,580	662	224	190
15					651	396	2,360	2,090	*a3,110	620	224	187
16					625	454	2,300	2,300	3,050	580	221	182
17					555	440	2,320	*2,720	2,790	545	215	179
18					545	414	2,420	2,780	2,470	515	212	179
19					505	422	2,340	2,810	2,220	490	207	*177
20					490	450	2,170	2,810	2,120	468	201	172
21					476	481	1,900	2,960	1,940	440	195	174
22					445	500	1,660	*3,110	1,750	418	210	174
23					422	490	1,540	a3,300	1,630	392	221	172
24					432	500	1,450	a3,250	1,590	376	233	172
25					422	545	1,400	a3,150	1,480	364	227	174
26					388	595	1,480	a3,070	1,440	349	218	179
27					368	668	1,630	a3,120	1,370	334	212	177
28					364	690	1,940	a3,150	1,340	323	243	174
29					-	728	2,210	a2,680	1,270	312	262	174
30					-	739	2,020	2,240	1,230	302	255	179
31					-	700	-	1,890	-	292	243	-
Total					13,975	14,159	58,026	78,820	56,290	21,010	7,278	5,654
Mean					499	457	1,934	2,543	1,876	678	235	188
Ac-ft					27,720	28,080	115,100	156,300	111,600	41,670	14,440	11,210

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.

Salmon River at Whitebird, Idaho

Location.--Lat 45°45', long. 116°20', in sec. 22, T. 28 N., R. 1 E., just upstream from Whitebird Creek, half a mile downstream from Canfield-Joseph highway bridge and 1 mile southwest of Whitebird. Records include flow of Whitebird Creek.

Drainage area.--13,550 sq mi, approximately, includes that of Whitebird Creek.

Records available.--August 1910 to September 1917, October 1919 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 1,412.65 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Aug. 18, 1910, to Sept. 30, 1917, Oct. 1, 1919, to Sept. 13, 1920, staff gages at site 600 ft downstream at different datum. Sept. 14, 1920, to Jan. 2, 1931, chain gage on highway bridge 200 ft upstream at datum 10 ft higher.

Average discharge.--39 years, 10,630 cfs.

Extremes.--Maximum discharge during year, 69,000 cfs May 28 (gage height, 27.81 ft); minimum, 2,180 cfs Jan. 31 (gage height, 11.12 ft).

1910-17, 1919-51: Maximum discharge, 103,000 cfs June 3, 1948 (gage height, 32.95 ft); minimum, 1,580 cfs Dec. 11, 1932 (gage height, 10.23 ft), from rating curve extended below 2,200 cfs.

Maximum stage known, about 37.5 ft, present datum, June 1894 (discharge, 120,000 cfs).

Remarks.--Records excellent. Amount of water diverted above station for irrigation is a negligible percentage of total flow.

Revisions (water years).--W 753: 1932. W 1043: Drainage area.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,330	10,100	6,380	5,500	2,420	4,970	6,680	22,800	46,000	27,100	9,360	6,140
2	5,330	9,320	6,260	5,270	3,210	4,900	6,870	20,600	40,000	26,800	9,000	5,920
3	5,330	8,670	6,040	5,080	3,750	4,750	7,640	19,200	35,600	26,300	8,650	5,760
4	5,360	8,240	6,100	5,040	4,360	4,740	9,200	18,600	32,500	27,200	8,530	5,610
5	5,550	8,140	6,220	5,250	4,830	4,840	11,300	19,300	32,100	28,600	8,600	5,440
6	6,040	8,010	6,060	5,040	5,190	4,810	13,800	22,000	32,300	25,900	8,880	5,310
7	6,240	7,990	*5,880	4,360	5,480	4,750	15,400	29,800	31,000	23,600	8,830	5,210
8	6,120	8,170	6,160	3,670	5,520	4,660	16,300	38,100	29,800	21,800	8,560	5,080
9	6,160	7,770	6,200	3,670	6,200	4,790	17,100	41,000	28,100	20,600	8,280	4,990
10	6,180	6,980	6,180	4,220	6,850	4,790	17,300	42,300	27,100	19,700	7,990	4,900
11	6,020	6,640	6,260	4,480	8,100	4,630	*17,200	46,500	28,200	18,900	*7,720	4,840
12	5,780	6,700	6,280	4,480	8,900	4,410	16,800	48,900	31,300	*18,300	7,480	4,840
13	5,550	6,890	6,300	4,660	9,340	4,430	17,300	46,300	35,600	17,200	7,230	4,830
14	5,440	6,870	6,120	4,880	8,300	4,790	19,800	41,400	39,500	16,300	6,980	4,790
15	5,310	6,680	5,760	5,020	7,120	5,120	22,400	36,700	*45,000	15,500	6,750	4,750
16	5,480	6,520	5,690	*5,270	6,660	5,380	23,300	35,000	51,500	15,100	6,500	4,700
17	5,590	6,500	5,880	5,440	6,460	5,570	23,500	37,400	53,800	14,500	6,320	4,630
18	6,140	6,680	5,940	5,290	6,280	5,570	24,800	41,500	52,800	13,900	6,120	4,560
19	*7,000	6,850	5,740	5,100	6,080	5,100	26,000	46,500	49,600	13,300	5,940	4,500
20	6,790	6,700	5,710	4,830	5,900	4,990	25,400	48,900	46,900	12,800	5,740	*4,430
21	6,340	6,600	5,800	4,500	5,840	5,330	23,900	*49,800	44,400	12,400	5,650	4,380
22	6,060	6,720	5,690	4,380	5,800	5,720	21,800	52,000	41,600	12,000	5,650	4,340
23	5,860	6,830	5,400	4,650	5,610	6,400	19,900	57,900	38,800	11,500	6,080	4,360
24	5,650	6,700	5,420	4,840	5,460	6,220	18,700	63,800	36,800	11,000	6,980	4,360
25	5,540	6,600	5,710	4,920	5,500	5,820	18,100	65,100	34,800	10,500	7,310	4,360
26	5,880	6,600	5,720	4,950	5,440	6,140	18,100	63,100	32,700	10,200	6,910	4,380
27	6,420	6,660	5,480	5,010	5,250	6,770	18,700	63,300	31,200	9,830	6,520	4,590
28	7,190	6,640	5,100	4,720	*4,970	7,120	20,200	67,400	29,900	9,510	6,380	4,660
29	9,380	6,500	4,990	3,640	-	6,910	23,400	66,300	28,800	9,410	6,320	4,540
30	12,100	6,300	5,340	2,600	-	6,720	24,500	60,200	27,900	9,510	6,360	4,470
31	11,200	-	5,570	2,410	-	6,640	-	53,200	-	9,860	6,320	-
Total	198,360	216,570	181,380	143,170	164,820	167,780	545,390	‡1,364.9	‡1,115.6	519,120	223,940	145,670
Mean	6,399	7,219	5,851	4,618	5,886	5,412	18,180	44,030	37,190	16,750	7,224	4,856
Cfsm	0.472	0.533	0.432	0.341	0.434	0.399	1.34	3.25	2.74	1.24	0.533	0.358
In.	0.54	0.59	0.50	0.39	0.45	0.46	1.50	3.70	3.06	1.42	0.61	0.40
Ac-ft	393,400	429,600	359,800	284,000	326,900	332,800	‡1,082	‡2,707	‡2,213	‡1,030	444,200	288,900

Calendar year 1950: Max 67,100 Min 2,660 Mean 12,680 Cfsm 0.936 In. 12.70 Ac-ft 9,180,000
Water year 1950-51: Max 67,400 Min 2,410 Mean 13,660 Cfsm 1.01 In. 13.62 Ac-ft 9,892,000

* Discharge measurement made on this day.
‡ Expressed in thousands.

Grande Ronde River near Hilgard, Oreg.

Location.--Lat 45°19', long. 118°16', near center of sec. 11, T. 3 S., R. 36 E., on right bank half a mile upstream from lower reservoir site of Bureau of Reclamation, three-quarters of a mile upstream from Spring Creek, and 3 miles southwest of Hilgard.

Drainage area.--489 sq mi.

Records available.--October 1945 to September 1951 in reports of Geological Survey. March 1937 to September 1941 in reports of State engineer; October 1941 to September 1945 in files of State engineer.

Gage.--Water-stage recorder. Datum of gage is 3,058.05 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Mar. 11 to Dec. 30, 1937, staff gage at site half a mile downstream at different datum. Dec. 31, 1937, to Sept. 16, 1946, water-stage recorder at site 800 ft upstream from present site at different datum.

Average discharge.--14 years, 269 cfs.

Extremes.--Maximum discharge during year, 2,070 cfs Feb. 12 (gage height, 4.60 ft); minimum, 14 cfs Sept. 20, 21 (gage height, 0.81 ft).
1937-51: Maximum discharge, 3,300 cfs May 28, 1948 (gage height, 5.26 ft); minimum, 6 cfs Aug. 10, 12-29, Sept. 1-4, 1940.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. No regulation. Diversion for irrigation of about 100 acres above station.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 5		Dec. 5 to Sept. 30			
1.2	22	0.8	13	3.0	800
1.4	40	1.0	42	4.0	1,480
1.6	78	1.5	150	4.4	1,850
1.9	176	2.0	310		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	86	119	232	180	b120	716	585	274	78	22	25
2	29	161	100	256	211	b108	884	*535	252	76	22	23
3	30	142	112	246	*199	95	1,140	500	242	74	21	22
4	33	119	135	229	184	b110	1,470	520	235	70	20	21
5	39	98	165	214	184	123	*1,620	545	266	72	20	20
6	48	86	*220	118	199	114	1,550	600	298	78	a18	20
7	42	*84	382	102	334	111	1,500	758	*294	*70	a18	18
8	*42	98	*326	b130	670	114	1,480	*764	290	64	a18	18
9	50	*84	256	b150	*974	107	*1,420	740	260	60	a18	18
10	43	60	232	170	*1,370	82	1,300	752	235	56	a18	17
11	37	b70	223	168	*1,790	89	1,160	980	223	56	a18	17
12	35	81	226	162	*1,630	102	1,120	1,030	232	51	a18	17
13	33	63	205	150	1,060	107	1,230	938	229	47	a18	17
14	32	76	*196	*168	812	123	1,440	860	211	44	a18	17
15	31	51	199	205	645	542	1,340	782	199	44	a18	17
16	30	74	187	196	520	908	1,220	770	190	42	a17	*17
17	32	71	184	193	440	752	1,190	794	175	47	a16	16
18	38	92	175	175	378	585	1,190	770	162	40	*16	16
19	40	81	168	165	270	*580	1,120	722	150	39	16	16
20	34	95	162	118	314	758	968	665	142	39	16	14
21	33	112	150	175	263	*932	812	630	*135	37	17	14
22	33	109	145	*175	242	788	710	605	128	36	*18	16
23	32	116	158	148	196	660	625	635	123	34	21	16
24	31	116	152	235	187	740	565	*620	116	*32	21	16
25	33	149	150	310	208	992	520	560	123	31	18	17
26	37	165	140	342	107	*1,160	505	520	111	28	18	17
27	45	165	132	342	b110	1,100	515	485	102	26	18	18
28	63	157	148	202	125	*962	625	435	95	25	18	20
29	128	135	235	130	-	944	704	382	89	25	21	21
30	119	135	334	b125	-	796	645	382	82	25	28	22
31	100	-	278	158	-	692	-	306	-	22	28	-
Total	1,382	3,131	5,994	5,889	13,802	15,396	31,284	20,170	5,663	1,468	592	543
Mean	44.6	104	193	190	493	497	1,043	651	189	47.4	19.1	18.1
Ac-ft	2,740	6,210	11,890	11,680	27,380	30,540	62,050	40,010	11,230	2,910	1,170	1,080

Calendar year 1950: Max 1,650 Min 21 Mean 339 Ac-ft 245,200
Water year 1950-51: Max 1,780 Min 14 Mean 289 Ac-ft 208,900

Peak discharge (base, 1,500 cfs).--Feb. 12 (1 a.m.) 2,070 cfs (4.60 ft); Apr. 4 (12 p.m.) 1,810 cfs (4.36 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for station at LaGrande.
b Stage-discharge relation affected by ice.

Grande Ronde River at La Grande, Oreg.

Location.--Lat 45°21', long. 118°08', in sec. 36, T. 2 S., R. 37 E., on left bank 2 miles northwest of La Grande and 4 miles downstream from Fivepoint Creek.

Drainage area.--678 sq mi.

Records available.--November 1903 to September 1915, February 1918 to June 1923, October 1925 to September 1951. Published as "at Hilgard" 1903-15.

Gage.--Water-stage recorder. Datum of gage is 2,831.25 ft above mean sea level, datum of 1929. Nov. 6, 1903, to Sept. 30, 1915, several staff gages at site 4 miles upstream, just downstream from Fivepoint Creek, at various datums. Feb. 16, 1918, to Nov. 24, 1931, several staff gages at site 1 mile downstream from present site at various datums.

Average discharge.--37 years (1905-9, 1910-11, 1912-15, 1918-20, 1921-22, 1925-51), 361 cfs.

Extremes.--Maximum discharge during year, 3,030 cfs Feb. 11 (gage height, 6.01 ft); minimum, 16 cfs Aug. 20, 21 (gage height, 1.53 ft).
1903-15, 1918-23, 1925-51: Maximum discharge, 8,880 cfs Mar. 18, 1932 (gage height, 8.90 ft); minimum, 3.9 cfs Aug. 26, 1940 (gage height, 1.23 ft).

Remarks.--Records good except those for periods of ice effect, which are poor. Some discharge measurements made at cable 3 miles upstream from station. Diversions for irrigation of about 400 acres above station.

Revisions (water years).--W 768: 1933.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	108	128	362	b290	b180	1,060	893	370	90	22	25
2	31	169	112	385	317	b160	1,360	*802	339	88	21	22
3	33	142	114	358	*278	145	1,720	748	317	83	20	21
4	34	123	139	335	254	b160	2,110	774	317	81	20	20
5	42	102	175	304	254	b190	*2,400	816	366	83	20	20
6	51	92	242	200	262	200	2,300	886	402	92	20	20
7	49	*88	435	165	490	186	2,220	1,120	*398	88	20	19
8	*44	94	*395	b180	1,040	175	2,140	*1,100	402	77	20	18
9	53	*92	335	b220	*1,390	169	*2,040	1,040	362	*72	20	18
10	51	66	312	262	*2,030	131	1,880	1,060	326	70	20	18
11	42	b73	312	234	*2,630	134	1,660	1,370	305	68	20	18
12	37	75	322	226	2,400	157	1,610	1,420	313	64	20	19
13	36	64	290	200	1,520	151	1,760	1,260	309	60	20	19
14	34	64	270	*222	1,160	178	2,040	1,140	284	53	20	19
15	34	53	266	270	945	812	1,910	1,040	268	51	20	18
16	34	64	250	282	764	1,380	1,730	1,000	251	50	19	*18
17	36	66	242	282	668	1,070	1,690	1,020	228	51	19	18
18	41	84	230	262	596	819	1,680	991	212	46	*18	18
19	51	79	218	242	445	*826	1,590	921	197	42	17	18
20	42	77	210	172	490	1,140	1,370	858	183	40	17	17
21	39	100	196	262	430	*1,430	1,160	809	*172	39	16	17
22	39	97	186	254	380	1,170	1,010	781	159	36	*17	18
23	37	104	230	203	312	994	900	809	149	35	18	18
24	36	107	242	294	299	1,110	816	*802	142	*32	19	18
25	36	134	234	425	330	1,510	767	730	149	30	19	19
26	44	157	218	470	182	*1,770	742	682	136	28	18	19
27	47	163	196	500	b190	1,670	754	628	124	25	18	20
28	62	157	210	340	203	1,400	942	564	110	24	17	20
29	119	142	308	214	-	1,380	1,100	503	105	24	19	21
30	124	142	485	b200	-	1,170	998	445	100	23	24	23
31	121	-	435	270	-	1,040	-	402	-	22	28	-
Total	1,512	3,078	7,937	8,595	20,549	23,007	45,459	27,414	7,495	1,667	606	576
Mean	48.8	103	256	277	734	742	1,515	884	250	53.8	19.5	19.2
Ac-ft	3,000	6,110	15,740	17,050	40,760	45,630	90,170	54,370	14,870	3,310	1,200	1,140

Calendar year 1950: Max 2,440 Min 22 Mean 476 Ac-ft 344,400
Water year 1950-51: Max 2,630 Min 16 Mean 405 Ac-ft 293,400

Peak discharge (base, 1,900 cfs).--Feb. 11 (11:30 p.m.) 3,030 cfs (6.01 ft); Mar. 26 (10:30 p.m.) 2,120 cfs (5.21 ft); Apr. 5 (3 a.m.) 2,660 cfs (5.57 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Catherine Creek near Union, Oreg.

Location.--Lat 45°09', long. 117°47', in SE¼ sec. 2, T. 5 S., R. 40 E., on right bank 3 miles downstream from Little Catherine Creek and 6 miles southeast of Union.

Drainage area.--105 sq mi.

Records available.--May 1906 to May 1907 (gage heights only), August 1911 to December 1912, March to September 1915, February 1918 to August 1919, October 1925 to September 1951.

Gage.- Water-stage recorder. Datum of gage is 3,082.11 ft above mean sea level, datum of 1929. Prior to Nov. 27, 1938, staff gages at several sites within 2½ miles of present site at various datums. Nov. 27, 1938, to May 17, 1939, water-stage recorder at site 400 ft downstream from present site at different datum.

Average discharge.--27 years (1911-12, 1918-19, 1925-44, 1945-51), 119 cfs.

Extremes.--Maximum discharge during year, 690 cfs May 11 (gage height, 2.96 ft); maximum gage height, 3.76 ft Feb. 2 (backwater from ice); minimum discharge, 18 cfs Jan. 28 (gage height, 0.50 ft) but may have been less during periods of ice effect.
1906-7, 1911-12, 1915, 1918-19, 1925-51: Maximum discharge, 1,740 cfs May 27, 1948 (gage height, 4.57 ft); minimum recorded, 4 cfs Nov. 26, 27, 1930.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above station for irrigation of about 200 acres; some water diverted into Big Creek, in Powder River basin.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	18	2.0	290
.7	33	2.5	470
1.0	65	3.0	710
1.5	155		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	39	37	49	b27	b35	117	293	237	109	39	31
2	30	46	31	48	b30	b32	137	*266	223	106	38	30
3	30	49	36	45	b33	b30	183	263	215	104	37	29
4	34	52	41	44	b35	b35	234	281	207	109	*36	29
5	46	49	38	42	b38	b38	272	296	234	104	36	28
6	42	46	40	b30	*b42	b40	*299	352	209	102	35	27
7	37	*45	39	b25	b50	b40	308	595	*204	90	35	27
8	*39	45	37	b30	b60	b40	311	*545	194	61	34	27
9	36	33	*37	b35	b80	b35	311	510	191	*79	34	27
10	32	b30	*45	b30	b100	b30	302	525	186	76	33	26
11	31	b33	46	b32	131	b32	290	625	196	72	33	26
12	30	37	49	b35	*129	b34	305	575	223	69	32	25
13	30	35	46	39	113	b35	347	494	223	69	31	25
14	29	34	45	38	99	37	402	438	231	66	32	25
15	28	36	43	37	89	60	394	398	257	65	31	24
16	27	33	41	38	79	68	386	402	257	61	31	*24
17	31	33	40	38	73	65	492	418	240	59	30	23
18	42	35	39	b35	68	63	410	422	a220	57	30	*23
19	32	32	38	b32	63	*65	386	414	a200	54	29	23
20	30	34	38	b30	59	79	338	414	a185	54	28	22
21	29	33	37	b34	58	100	293	418	*178	53	28	22
22	29	33	38	*b37	54	104	266	442	171	52	*29	22
23	28	33	60	b40	54	97	251	490	160	50	31	23
24	28	34	60	b45	52	95	237	*474	157	*49	28	23
25	30	41	57	48	51	111	237	450	146	48	28	24
26	40	40	52	40	b45	*123	251	426	137	45	27	24
27	38	41	51	39	b40	133	266	434	131	44	27	24
28	37	40	49	b25	b38	125	354	410	127	43	44	24
29	41	38	51	b22	-	123	378	338	119	42	48	24
30	38	38	51	b20	-	119	329	299	115	40	38	31
31	36	-	44	b25	-	111	-	263	-	39	34	-
Total	1,039	1,147	1,356	1,107	1,790	2,134	8,996	12,970	5,773	2,091	1,026	762
Mean	33.5	38.2	43.7	35.7	63.9	68.9	300	418	192	67.5	33.1	25.4
Ac-ft	2,060	2,280	2,690	2,200	3,550	4,230	17,840	25,730	11,450	4,150	2,040	1,510

Calendar year 1950: Max 530 Min 25 Mean 115 Ac-ft 83,060
Water year 1950-51: Max 625 Min 20 Mean 110 Ac-ft 79,730

Peak discharge (base, 500 cfs).--May 11 (11 a.m.) 690 cfs (2.96 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for Grande Ronde River near Hilgard and Wolf Creek near North Powder.
b Stage-discharge relation affected by ice.

East Fork Wallowa River near Joseph, Oreg.

Location.--Lat 45°16', long. 117°13', in SE¼ sec. 29, T. 3 E., R. 45 E., a quarter of a mile upstream from confluence with West Fork, 1 mile upstream from Wallowa Lake, and 6 miles south of Joseph.

Drainage area.--10 sq mi, approximately.

Records available.--July 1924 to September 1951.

Gage.--Water-stage recorder and concrete control. Datum of gage is 4,517.69 ft above mean sea level, datum of 1929. Prior to Apr. 8, 1950, staff gage at same site and datum.

Average discharge.--27 years, 20.2 cfs (including flow of Wallowa Falls powerplant tailrace).

Extremes.--Maximum discharge during year, 41 cfs July 4 (gage height, 2.70 ft); minimum, 0.2 cfs Jan. 28, 29 (gage height, 1.42 ft).
1924-51: Maximum discharge, 300 cfs July 25, 1937 (gage height, 3.63 ft, from flood-mark), computed on basis of rating curve extended above 80 cfs and unpublished records of storage in Wallowa Lake Reservoir; minimum, 0.1 cfs Dec. 7, 1929, Nov. 1, 6, 1935

Remarks.--Records good except those for periods of ice effect or shifting control, which are fair. Wallowa Falls powerplant of Pacific Power & Light Co. diverts water 1 mile above station.

Rating table, water year 1950-51, except periods of ice effect or shifting control (gage height, in feet, and discharge in cubic feet per second)

1.4	0.1	1.9	8.5
1.5	.8	2.2	19
1.6	2.0	2.6	36
1.7	3.8		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	8.0	1.9	1.3	b0.6	b0.7	1.0	4.0	25	29	25	7.8
2	1.3	7.0	b2	1.1	b.8	b.6	1.1	4.5	24	29	25	7.2
3	1.6	6.5	b2	8.2	b.7	b.5	1.3	4.7	24	29	25	6.0
4	4.9	4.5	2.0	3.8	b.5	b.7	1.7	6.0	25	36	25	4.2
5	7.2	3.8	1.9	b1.5	b1	b.8	b2.5	6.0	23	34	23	4.9
6	3.8	4.5	2.5	b1.5	b.5	b.7	b3	9.7	22	32	17	5.1
7	3.4	3.3	1.7	b1.5	b1	b.6	2.5	19	21	31	11	3.4
8	3.6	2.9	2.5	b1	b1.5	b.6	2.5	16	21	30	10	4.3
9	2.5	3.2	2.3	b1	b2.5	b.7	2.6	17	21	30	9.4	3.0
10	1.6	6.0	1.9	b1.5	b3	b.6	2.5	21	23	29	8.8	2.8
11	2.6	3.2	1.9	b5	b2.5	b.5	b3	22	27	27	8.2	3.4
12	1.5	2.3	1.9	b3	b2	b.7	b3	19	29	27	7.8	3.8
13	.9	2.0	*1.3	b2	b1	b.7	b3.5	15	29	27	7.0	3.2
14	.7	2.8	2.0	b2.5	b1	b.6	b4	15	29	27	6.5	3.2
15	.6	1.6	2.2	b2	b.9	b.8	b4.5	15	32	27	5.8	2.6
16	.7	2.3	1.7	b1	b.7	b.7	6.2	17	32	27	5.8	3.0
17	2.9	5.3	1.2	b1	b.8	b.6	7.5	18	34	26	5.1	3.2
18	3.4	4.9	1.3	.8	b.7	b.7	7.8	*19	36	26	4.7	3.2
19	1.3	4.0	1.3	b.8	b.6	b.6	7.2	19	34	25	4.2	4.5
20	2.6	2.6	1.5	b.8	b.8	b.6	6.0	19	32	24	3.8	3.4
21	2.4	2.5	1.5	b1.5	b.9	b.9	5.6	22	32	22	3.8	3.8
22	.8	2.2	1.2	b1	b.8	b.6	b4.5	25	32	20	4.0	3.0
23	.5	2.2	2.3	b1.5	b.7	b.6	b4.5	27	33	19	4.2	2.2
24	*.7	b3	1.3	.5	b.6	b.6	4.2	27	34	*19	3.6	2.6
25	2.2	b3	1.1	1.3	b.7	.8	4.7	27	32	19	3.4	2.8
26	1.7	2.3	1.3	b.4	b.5	.8	5.6	30	31	17	3.2	2.3
27	2.5	1.9	1.2	b.4	b.4	b.6	6.2	31	30	17	3.0	2.3
28	10	2.0	1.6	.4	b.5	b.6	7.5	32	29	16	*6.5	2.6
29	20	2.0	1.3	b.4	-	b.6	6.5	30	29	16	7.2	2.0
30	15	2.0	1.5	b.4	-	*b.6	4.7	29	29	15	7.2	3.4
31	10	-	1.1	*b.4	-	b.8	-	28	-	23	7.0	-
Total	114.0	103.8	52.4	49.5	28.2	20.5	127.4	593.9	854	775	291.2	109.8
Mean	3.68	3.46	1.69	1.60	1.01	0.66	4.25	19.2	28.5	25.0	9.39	3.66
Ac-ft	226	206	104	98	56	41	253	1,180	1,690	1,540	578	218

Adjusted for diversion by Wallowa Falls powerplant tailrace

Mean	17.6	16.3	13.8	12.5	11.3	10.6	14.8	30.1	40.1	38.6	21.1	16.8
Cfsm	1.83	1.70	1.44	1.30	1.18	1.10	1.54	3.14	4.18	4.02	2.20	1.75
In.	2.11	1.90	1.65	1.50	1.23	1.28	1.71	3.61	4.66	4.63	2.53	1.95
Ac-ft	1,080	972	846	767	628	655	878	1,850	2,380	2,370	1,300	999

Observed

Calendar year 1950: Max 79 Min 0.4 Mean 9.47 Ac-ft 6,870
Water year 1950-51: Max 36 Min 0.4 Mean 8.55 Ac-ft 6,190

Adjusted

Calendar year 1950: Mean 22.0 Cfsm 2.29 In. 31.09 Ac-ft 15,920
Water year 1950-51: Mean 20.3 Cfsm 2.11 In. 28.76 Ac-ft 14,730

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Shifting-control method used Oct. 1-5, Oct. 29 to Jan. 3, Aug. 28 to Sept. 30.

Wallowa Falls powerplant tailrace near Joseph, Oreg.

Location.--Lat 45°16', long. 117°13', in SE¼ sec. 29, T. 3 S., R. 45 E., on right bank a quarter of a mile upstream from mouth and 6 miles south of Joseph.

Records available.--August 1924 to September 1951. Prior to October 1925, published as Enterprise Electric Co.'s tailrace near Joseph.

Gage.--Water-stage recorder and sharp-crested weir. Datum of gage is 4,624.79 ft above mean sea level, datum of 1929. Prior to Apr. 10, 1950, staff gage at same site and datum.

Average discharge.--27 years, 8.39 cfs.

Extremes.--1924-51: Maximum daily discharge, 17 cfs Aug. 19, 20, 1949, June 22, 1950; no flow at times.

Remarks.--Records fair. Flow regulated for impulse wheel in powerhouse. Water diverted at dam on East Fork Wallowa River into conduit 1 mile upstream from powerhouse and discharged into West Fork a quarter of a mile below station.

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-27, July 19 to Sept. 30		Oct. 28 to July 18	
0.3	2.3	0.3	1.7
.4	3.8	.5	4.6
.5	6.0	.6	7.2
.7	12	.8	14
.9	18		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	12	12	12	8.4	10	9.4	12	10	14	0	11
2	14	12	12	11	9.4	10	9.4	12	12	13	0	13
3	14	12	13	4.5	9.7	10	9.4	12	13	14	0	13
4	15	14	13	9.7	10	11	9.4	12	11	14	1.2	14
5	14	14	13	12	10	11	9.1	13	11	14	2.2	14
6	15	12	12	12	11	11	9.1	13	12	13	9.5	13
7	15	14	13	12	11	10	10	12	11	13	14	14
8	15	14	11	11	10	10	10	11	12	14	14	13
9	15	12	12	12	11	10	10	7.2	13	14	14	14
10	15	13	13	11	11	10	10	8.1	13	13	14	14
11	13	14	13	11	11	10	10	9.7	6.8	13	14	14
12	14	14	12	11	11	10	9.7	12	3.6	14	14	13
13	14	14	*12	12	11	10	9.7	11	8.4	14	14	14
14	15	13	12	11	10	9.7	11	11	12	14	14	13
15	14	12	11	8.8	10	9.7	11	11	12	14	14	14
16	14	11	12	10	10	9.7	11	9.4	11	13	14	13
17	14	11	12	11	11	10	11	10	10	13	14	13
18	15	11	12	12	11	10	11	*10	12	13	14	13
19	15	12	12	11	11	10	11	12	13	15	14	11
20	12	13	12	11	11	10	11	13	13	15	14	13
21	13	13	12	11	9.7	9.7	11	11	13	15	14	12
22	15	13	12	12	10	9.7	11	9.2	9.4	15	14	13
23	15	13	12	12	10	9.7	11	11	14	15	14	14
24	*14	13	12	12	10	9.7	11	11	14	*15	15	13
25	14	13	12	11	10	9.7	12	11	13	16	*14	13
26	15	14	11	11	10	9.4	11	8.8	12	15	14	13
27	13	14	12	11	10	9.7	11	13	13	14	14	13
28	8.7	13	12	11	10	9.7	11	11	13	13	14	13
29	14	13	12	11	-	9.7	12	10	14	14	14	13
30	12	13	11	10	-	*11	12	10	14	11	14	13
31	12	-	12	*9.4	-	9.4	-	11	-	3.2	13	-
Total	431.7	386	374	337.4	288.2	309.5	315.2	338.4	349.2	420.2	362.9	394
Mean	13.9	12.9	12.1	10.9	10.3	9.98	10.5	10.9	11.6	13.6	11.7	13.1
Ac-ft	856	766	742	669	572	614	625	671	693	833	720	781

Calendar year 1950: Max 17 Min 8.7 Mean 12.5 Ac-ft 9,050
Water year 1950-51: Max 16 Min 0 Mean 11.8 Ac-ft 8,540

* Discharge measurement made on this day.

Wallowa Lake near Joseph, Oreg.

Location.--Lat 45°20', long. 117°14', in N½ sec. 5, T. 3 S., R. 45 E., on trash rack structure near west end of Wallowa Lake Dam and three-quarters of a mile south of Joseph, Oreg.

Drainage area.--52 sq mi, approximately.

Records available.--November 1903 to July 1906 (gage heights only), January 1912 to March 1914 and May to September 1915 (gage heights and change in contents only), and October 1950 to September 1951 in reports of Geological Survey. October 1925 to September 1941 in reports of State engineer. October 1941 to September 1950 in files of State engineer. November 1903 to March 1905 published as Wallowa River at Joseph. Change in contents for January 1912 to March 1914 and May to September 1915 published with records for Wallowa River at Joseph.

Gage.--Staff gage read once daily. Datum of gage is 4,355.66 ft above mean sea level, datum of 1929. Prior to Aug. 7, 1929, staff gages at several sites within 600 ft of present site at various datums.

Extremes.--Maximum contents observed during year, 25,560 acre-ft May 22, 23 (gage height, 16.30 ft); minimum observed, 6,190 acre-ft Aug. 25-27 (gage height, 4.00 ft).
1925-51: Maximum contents observed, 45,580 acre-ft July 14-19, 1938, May 8, 9, 1939 (gage height, 28.50 ft); minimum observed, 4,790 acre-ft Oct. 10, 1929 (gage height, 3.10 ft).

Remarks.--Reservoir is formed by concrete dam. Capacity, 42,750 acre-ft between gage heights 0 ft (sill of outlet gates) and 26.8 ft (spillway crest). About 5,300 acre-ft dead storage above outlet gates since outlet channel is about 3.4 ft above outlet gates. Dead storage below outlet gates not known. Records are based on capacities above outlet gates.

Monthly gage height and contents, water year October 1950 to September 1951

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	8.75	13,590	-
Oct. 31	10.30	16,020	+2,430
Nov. 30	12.00	18,700	+2,680
Dec. 31	12.80	19,970	+1,270
Calendar year 1950	-	-	+7,870
Jan. 30	12.00	18,700	-1,270
Feb. 28	11.70	18,230	-470
Mar. 31	11.50	17,910	-320
Apr. 30	13.60	21,240	+3,330
May 31	15.40	24,120	+2,880
June 30	12.50	19,500	-4,620
July 31	8.60	13,350	-6,150
Aug. 31	4.40	6,810	-6,540
Sept.30	4.80	7,430	+620
Water year 1950-51	-	-	-6,160

Wallowa River at Joseph, Oreg.

Location.--Lat 45°20', long. 117°14', in NW¼ sec. 5, T. 3 S., R. 45 E., on left bank 1,000 ft downstream from Wallowa Lake dam, and three-quarters of a mile south of Joseph.

Drainage area.--52 sq mi, approximately.

Records available.--November 1903 to August 1907, June 1908 to March 1914, May to September 1915, and October 1950 to September 1951 in reports of Geological Survey. November 1926 to September 1936 in reports of State engineer. October 1936 to September 1950 in files of State engineer.

Gage.--Water-stage recorder. Datum of gage is 4,326.86 ft above mean sea level, datum of 1929. Nov. 12, 1903, to Sept. 25, 1915, staff gages at several sites at lake outlet or near present gage at various datums.

Average discharge.--24 years (1927-51), 85.0 cfs.

Extremes.--Maximum discharge during year, 530 cfs June 30 (gage height, 3.50 ft); minimum, 2 cfs Mar. 13 (gage height, 0.34 ft).
1903-15, 1927-51: Maximum discharge observed, 850 cfs June 12, 13, 1912; no flow at times.

Remarks.--Records good except those below 20 cfs, which are poor. Flow regulated by Wallowa Lake (see p.228). Diversions above station by Silver Lake Canal (see p.231) and Joseph powerplant (see p. 230). City of Joseph diverts less than 1 cfs from Wallowa Lake for municipal supply.

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 30				July 1 to Sept. 30			
0.4	3	1.5	73	0.9	18	2.5	240
.5	5	2.0	143	1.1	29	3.0	370
.7	12	2.5	240	1.5	63	3.5	530
1.0	28	3.0	370	2.0	133		
		3.5	530				

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	16	15	16	10	9	8	29	298	518	364	53
2	20	17	15	16	*11	9	8	27	216	457	285	50
3	20	17	14	16	11	9	8	41	176	391	238	36
4	20	18	14	16	11	9	8	32	154	320	188	24
5	20	18	14	16	11	9	8	16	180	355	165	22
6	20	18	14	16	11	10	8	16	*198	340	148	21
7	20	18	15	17	11	10	8	16	206	310	142	21
8	20	18	15	17	11	10	8	79	178	300	133	21
9	20	18	15	17	11	11	8	108	163	270	130	22
10	20	18	15	17	10	12	8	120	156	162	123	22
11	20	18	15	17	10	13	8	123	150	104	114	22
12	20	18	15	16	10	10	8	94	148	105	105	22
13	20	18	*15	16	10	4	8	71	148	120	106	23
14	20	18	15	16	10	9	8	80	148	104	106	22
15	21	18	15	16	10	9	8	65	*148	98	108	23
16	21	19	15	17	10	9	8	58	148	98	99	23
17	17	19	15	18	10	9	8	60	150	92	96	24
18	18	19	15	18	10	9	8	42	169	114	80	24
19	18	19	15	17	10	9	8	54	290	150	67	24
20	18	19	15	16	*9	9	8	83	400	252	62	24
21	18	19	15	16	9	9	8	114	460	272	62	25
22	18	19	15	8	9	9	8	176	466	268	57	25
23	18	19	15	4	9	8	7	320	466	278	49	23
24	*17	19	15	4	9	8	*7	364	463	298	48	24
25	*16	19	15	4	9	8	7	382	481	343	48	24
26	16	19	14	4	9	8	7	382	484	373	48	24
27	16	19	16	4	9	8	8	376	502	*406	48	24
28	16	16	16	6	9	8	9	367	498	388	48	24
29	16	15	16	8	-	8	14	367	490	370	*52	23
30	17	15	16	8	-	*8	27	373	466	349	53	22
31	16	-	16	9	-	8	-	358	-	335	53	-
Total	577	540	465	406	279	278	262	4,793	8,600	8,340	3,425	761
Mean	18.6	18.0	15.0	13.1	10.0	9.0	8.7	155	287	269	110	25.4
Ac-ft	1,140	1,070	922	805	553	551	520	9,510	17,060	16,540	6,790	1,510

Calendar year 1950: Max 454 Min 4 Mean 64.7 Ac-ft 46,810
Water year 1950-51: Max 518 Min 4 Mean 78.7 Ac-ft 56,970

* Discharge measurement made on this day.

Joseph powerplant tailrace at Joseph, Oreg.

Location.--Lat 45°21', long. 117° 14', in NE¼ sec. 31, T. 2 S., R. 45 E., in powerhouse at Joseph.

Records available.--October 1950 to September 1951 in reports of Geological Survey. November 1929 to September 1941 in reports of State engineer, and October 1941 to September 1950 in files of State engineer.

Gage.--Water-stage recorder. Datum of gage is 4,188.26 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Oct. 1, 1943, water-stage recorder at present site at different datum. Oct. 1, 1943, to Sept. 30, 1944, water-stage recorder at present site at datum 0.12 ft higher.

Average discharge.--21 years (1930-51), 16.1 cfs.

Extremes.--1929-51: Maximum daily discharge, 98 cfs June 12, 1948; no flow at times.

Remarks.--Records fair except those below 25 cfs and those for periods of no gage-height record, which are poor. Diurnal fluctuation caused by powerplant operation. Water diverted at Wallowa Lake dam (see p. 228) returned to Wallowa River just below this station.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

0.3	3
.5	7
.7	14
1.0	31
2.0	110

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	32	29	59	79	33	79	23	77	70	82	25
2	31	24	32	49	60	28	47	15	84	59	83	24
3	29	27	42	65	55	63	32	4	84	49	82	24
4	29	32	26	50	77	83	39	a10	82	68	77	23
5	32	25	27	44	59	47	33	a30	79	42	71	22
6	24	30	36	65	*47	31	49	a40	*75	42	87	21
7	38	34	30	78	67	41	48	a60	68	50	75	20
8	24	25	29	63	55	45	78	83	67	64	69	20
9	24	44	34	*45	44	32	39	83	69	51	49	20
10	24	39	44	64	56	55	31	82	81	44	*47	21
11	32	39	32	49	73	81	a39	81	71	45	44	16
12	31	30	*26	44	51	42	a39	83	67	51	44	18
13	27	33	33	59	50	37	a39	84	65	66	31	12
14	35	31	38	74	40	37	a54	85	51	64	28	17
15	31	32	32	69	45	36	a79	*84	55	76	19	18
16	30	53	44	71	44	34	a43	83	69	56	24	15
17	30	50	45	50	67	58	31	83	67	*63	23	18
18	43	37	40	42	62	79	37	84	61	53	25	11
19	32	42	*24	44	67	49	45	84	*39	58	26	18
20	34	39	34	67	*28	33	52	83	50	52	27	18
21	30	24	34	80	38	44	50	83	50	62	24	18
22	31	25	37	67	53	32	80	83	51	78	24	17
23	32	45	48	47	49	35	53	84	72	59	22	33
24	*24	22	59	45	59	45	*43	77	57	55	20	19
25	*25	51	54	48	79	78	31	86	51	59	17	21
26	22	41	48	43	63	34	40	87	50	64	16	19
27	33	32	30	68	48	33	38	86	48	83	17	20
28	26	28	39	82	40	38	37	87	47	81	18	27
29	36	26	40	79	-	41	73	84	51	84	*23	30
30	33	24	59	78	-	*34	31	85	76	79	27	27
31	30	-	69	79	-	68	-	71	-	83	26	-
Total	942	1,016	1,194	1,867	1,555	1,426	1,409	2,177	1,914	1,910	1,247	612
Mean	30.4	33.9	38.5	60.2	55.5	46.0	47.0	70.2	63.8	61.6	40.2	20.4
Ac-ft	1,870	2,020	2,370	3,700	3,080	2,830	2,790	4,320	3,800	3,790	2,470	1,210

Calendar year 1950: Max 78 Min 1.7 Mean 46.1 Ac-ft 33,350
Water year 1950-51: Max 87 Min 4 Mean 47.3 Ac-ft 34,250

* Discharge measurement made on this day.
a No gage-height record; discharge estimated by averaging the discharge for each day of the week for 5 weeks before and 1 week after period of no record, or discharge interpolated.

Silver Lake Canal at Joseph, Oreg.

Location.--Lat 45°20', long. 117°14', in NW¼ sec. 5, T. 3 S., R. 45 E., on left bank 800 ft downstream from Wallowa Lake Dam and half a mile south of Joseph.

Records available.--July to December 1905 (gage heights and discharge measurements only). May to September 1915 and October 1950 to September 1951 in reports of Geological Survey. Published as Silver Lake ditch near Joseph 1905 and 1915. June to August 1915 (monthly discharge only) and November 1926 to September 1941 in reports of State engineer. October 1941 to September 1950 in files of State engineer.

Gage.--Water-stage recorder. Datum of gage is 4,352.62 ft above mean sea level, datum of 1929. Prior to Sept. 4, 1915, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.--24 years (1927-51), 21.1 cfs.

Extremes.--1915, 1926-51: Maximum daily discharge, 139 cfs Aug. 2, 1947; no flow at times each year.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Canal diverts at Wallowa Lake Dam. Water used for irrigation of lands east of Joesph.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	3.5	7.1	6.9	6.4	6.6	3.8	5.9	83	110	88	a19
2	18	8.4	7.1	7.1	*6.4	6.6	3.8	5.9	87	108	89	a20
3	17	8.2	7.1	a7.4	6.2	6.6	3.8	5.9	89	106	91	a21
4	17	8.2	7.1	a7.1	6.2	6.6	3.7	6.1	91	98	94	21
5	17	8.0	7.1	a6.9	6.0	6.6	3.7	6.1	73	88	90	17
6	18	8.0	7.1	a6.9	6.0	6.6	3.7	6.1	*102	76	91	16
7	18	8.0	7.1	a6.6	6.0	6.6	3.8	8.6	99	73	92	16
8	18	7.5	7.3	a6.6	6.2	6.6	3.8	*11	87	69	91	16
9	18	7.5	7.3	6.4	6.6	5.2	3.8	11	106	65	87	15
10	18	7.5	7.3	6.4	7.1	3.8	3.8	11	106	65	*82	14
11	18	7.5	7.5	6.4	6.9	2.2	3.8	11	102	59	78	*14
12	18	7.5	*7.5	6.4	6.9	1.8	3.8	11	94	59	73	14
13	18	7.5	7.5	6.4	6.9	1.8	3.8	11	91	59	65	14
14	18	7.5	7.5	6.4	6.6	1.8	3.8	10	91	60	56	14
15	18	7.3	7.5	6.4	6.6	1.9	3.8	*12	*87	52	50	13
16	18	7.3	7.5	6.4	6.6	2.0	3.8	12	79	50	39	13
17	18	7.1	7.5	6.4	6.6	3.0	3.8	21	71	*58	39	13
18	a19	6.9	7.5	6.4	6.6	3.7	3.8	25	62	61	37	13
19	a19	6.9	7.5	6.4	6.6	3.8	3.8	25	*59	*62	33	13
20	a19	7.1	7.5	6.4	*6.6	3.8	3.8	25	59	62	32	13
21	a19	7.1	7.5	6.4	6.6	3.7	3.8	30	73	66	29	13
22	a19	7.3	7.5	6.4	6.6	3.7	2.4	37	78	66	28	13
23	a12	7.3	7.5	6.4	6.6	3.8	0	48	85	68	35	10
24	*8.6	7.3	7.5	6.4	6.6	3.8	0	54	87	78	33	6.7
25	*8.8	7.1	7.5	6.4	6.6	3.8	0	57	95	72	34	6.5
26	8.8	7.1	7.5	6.4	6.6	3.9	0	57	102	70	30	6.7
27	8.8	7.3	7.1	6.6	6.6	3.9	1.8	57	105	68	28	6.7
28	8.6	7.3	6.9	6.6	6.6	3.9	5.7	46	109	65	26	6.5
29	8.6	7.1	6.9	6.4	-	3.9	5.7	17	107	66	*20	6.5
30	8.6	7.3	7.1	6.4	-	3.9	5.9	61	103	74	*17	6.5
31	6.0	-	7.1	6.4	-	3.8	-	73	-	72	a18	-
Total	476.8	219.6	226.7	203.1	182.8	129.7	101.0	777.6	2,662	2,205	1,695	391.1
Mean	15.4	7.32	7.31	6.55	6.53	4.18	3.37	25.1	88.7	71.1	54.7	13.0
Ac-ft	946	436	450	403	363	257	200	1,540	5,280	4,370	3,360	776

Calendar year 1950: Max 110 Min 0 Mean 23.6 Ac-ft 17,060
Water year 1950-51: Max 110 Min 0 Mean 25.4 Ac-ft 18,380

* Discharge measurement made on this day.
a No gage-height record; discharge interpolated, or estimated from recorded range in stage and observer's notes when flow was changed.

Hurricane Creek near Joseph, Oreg.

Location.--Lat 45°20', long. 117°18', in NE¼ sec. 3, T. 3 S., R. 44 E., on left bank 350 ft upstream from intake of Moonshine ditch and 3½ miles southwest of Joseph.

Drainage area.--31 sq mi, approximately

Records available.--April to September 1915, April 1924 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,490 ft (by barometer). Apr. 27 to Sept. 3, 1915, staff gage at site 250 ft downstream at different datum. Apr. 23, 1924, to June 13, 1933, water-stage recorder at site 150 ft downstream from present site at different datum.

Average discharge.--24 years (1927-51), 69.2 cfs.

Extremes.--Maximum discharge during year, 360 cfs June 15 (gage height, 3.00 ft); minimum, 19 cfs Mar. 8, caused by temporary storage behind ice jam upstream.
1915, 1924-51: Maximum discharge, 1,110 cfs June 9, 1948 (gage height, 3.55 ft); minimum, 3.4 cfs Feb. 10, 1938, Feb. 6, 1946, probably caused by temporary storage behind ice jam upstream.

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

Rating table, water year 1950-51, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 30 to June 10)

1.7	25	2.2	82
1.8	31	2.5	160
2.0	50	2.9	330

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	72	42	40	b28	31	30	80	133	207	92	38
2	35	64	38	41	b30	31	32	74	127	211	88	37
3	35	67	41	36	36	30	33	74	125	223	84	37
4	40	68	41	37	33	31	37	80	119	248	79	36
5	50	70	39	37	32	30	42	84	122	211	70	35
6	45	67	41	33	31	30	48	111	*114	184	67	34
7	45	64	40	34	37	29	53	181	103	170	64	34
8	50	59	38	36	35	29	56	154	101	167	60	33
9	55	49	39	*37	40	29	59	160	111	170	58	33
10	55	50	42	40	41	29	60	188	130	164	56	33
11	60	53	43	40	40	28	64	203	151	154	54	33
12	55	54	42	38	38	27	72	174	178	154	53	33
13	55	53	*41	37	35	27	86	154	199	170	50	32
14	50	52	41	37	37	27	95	142	231	174	50	31
15	50	50	40	37	37	29	99	139	290	167	50	31
16	50	48	40	37	35	28	106	157	315	167	49	30
17	60	48	39	37	35	27	119	174	290	164	48	30
18	55	47	38	35	36	27	122	*178	276	164	48	30
19	*50	46	37	37	33	*27	114	184	258	157	48	30
20	46	44	37	36	34	28	101	188	248	145	47	30
21	47	43	37	35	34	29	92	199	235	130	46	30
22	48	42	37	36	33	29	84	244	*215	119	46	30
23	47	42	47	36	32	27	*80	280	215	*119	46	30
24	*46	46	47	36	33	28	77	253	211	130	*43	*29
25	48	52	46	37	33	29	77	223	192	127	41	29
26	49	49	44	37	30	29	82	219	188	116	40	29
27	53	48	43	35	30	30	90	240	199	111	39	29
28	54	47	42	29	30	29	95	235	199	108	50	27
29	119	44	42	26	-	30	90	192	195	101	49	27
30	103	44	41	b25	-	30	82	157	195	92	44	30
31	80	-	40	*b25	-	*30	-	139	-	95	40	-
Total	1,670	1,582	1,265	1,099	958	894	2,277	5,260	5,665	4,819	1,699	950
Mean	53.9	52.7	40.8	35.5	34.2	28.8	75.9	170	189	155	54.8	31.7
Cfsm	1.74	1.70	1.32	1.15	1.10	0.929	2.45	5.48	6.10	5.00	1.77	1.02
In.	2.00	1.90	1.52	1.32	1.15	1.07	2.73	6.31	6.80	5.78	2.04	1.14
Ac-ft	3,310	3,140	2,510	2,180	1,900	1,770	4,520	10,430	11,240	9,560	3,370	1,880

Calendar year 1950: Max 418 Min 20 Mean 77.1 Cfsm 2.49 In. 33.76 Ac-ft 55,820
Water year 1950-51: Max 315 Min 25 Mean 77.1 Cfsm 2.49 In. 33.76 Ac-ft 55,810

Peak discharge (base, 400 cfs).--No peak above base.
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 1-19; discharge estimated on basis of recorded range in stage, and records for Bear Creek near Wallowa and Lostine River near Lostine.

Lostine River near Lostine, Oreg.

Location.--Lat 45°26', long 117°26', in NW¼ sec. 34, T. 1 S., R. 43 E., on left bank 3½ miles south of Lostine and 10 miles upstream from mouth.

Drainage area.--70 sq mi, approximately.

Records available.--August 1912 to March 1914, April to September 1915, July 1925 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,670 ft (by barometer). Aug. 24, 1912, to Sept. 25, 1915, staff gage at site 600 ft upstream at different datum. July 21, 1925, to Sept. 30, 1929, water-stage recorder at site 200 ft upstream from present site at datum about 0.5 ft higher than present datum.

Average discharge.--24 years (1912-13, 1928-51), 186 cfs.

Extremes.--Maximum discharge during year, 1,250 cfs May 27 (gage height, 5.53 ft); minimum, 24 cfs Mar. 13, caused by temporary storage behind ice jam upstream.
1912-14, 1915, 1925-51: Maximum daily discharge, 2,540 cfs May 27, 1913; maximum gage height, 7.64 ft June 16, 1933; minimum discharge recorded, 10 cfs Nov. 28-30, 1933.

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 100 acres above station. Flow slightly regulated by Minam Lake.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from debris Jan. 2 to May 22)

Oct. 1 to May 27				May 28 to Sept. 30			
0.7	30	3.0	400	0.7	28	3.0	375
1.0	53	4.0	700	1.0	50	4.0	665
1.5	106	5.2	1,120	1.5	101	5.4	1,180
2.0	182			2.0	173		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	144	74	83	*b38	b45	*63	186	412	584	132	53
2	50	139	74	86	b40	b50	66	168	372	605	125	49
3	48	139	78	82	46	b45	72	162	370	608	121	47
4	81	142	84	94	43	b45	84	188	345	702	116	44
5	102	142	79	92	41	49	104	207	355	593	107	43
6	86	134	83	b80	40	51	130	285	*315	476	101	41
7	84	130	88	b70	55	52	150	563	295	415	94	71
8	98	125	82	b60	68	*49	162	473	279	402	89	75
9	a115	92	81	b65	87	50	171	452	299	402	84	71
10	a105	91	91	70	a140	49	171	575	358	382	*81	68
11	*a110	81	*94	70	a120	b50	169	714	467	325	77	64
12	100	77	94	*66	99	50	186	584	623	328	75	58
13	95	70	90	69	85	48	228	440	695	358	71	54
14	88	68	87	76	81	48	279	355	835	380	66	48
15	83	61	86	78	78	66	281	311	1,030	360	62	42
16	78	58	84	74	73	61	287	360	a1,150	342	59	39
17	84	61	82	77	70	55	309	*476	a1,000	330	56	36
18	119	65	80	76	69	b55	*323	521	a900	*319	55	34
19	95	62	79	82	64	55	316	563	a800	297	54	34
20	87	64	78	b77	64	58	285	599	a730	261	51	32
21	86	59	76	73	63	60	250	679	*665	224	50	32
22	86	58	77	74	61	58	226	838	629	203	53	*31
23	82	58	112	71	57	55	210	1,110	611	194	52	30
24	76	68	109	72	b55	59	193	1,080	635	197	49	29
25	80	87	101	71	b50	60	190	1,000	563	203	47	32
26	91	83	93	71	b45	63	203	984	557	183	44	33
27	*94	81	92	68	b40	64	222	1,090	572	168	43	31
28	96	78	91	b60	b42	64	256	1,020	575	159	67	29
29	192	77	90	a45	-	67	234	768	563	154	76	28
30	209	78	87	a40	-	65	205	614	560	139	*65	35
31	156	-	83	a35	-	64	-	497	-	130	57	-
Total	3,004	2,672	2,679	2,207	1,814	1,710	6,025	17,862	17,560	10,423	2,279	1,313
Mean	96.9	89.1	86.4	71.2	64.8	55.2	201	576	585	336	73.5	43.8
Ac-ft	5,960	5,300	5,310	4,380	3,600	3,390	11,950	35,430	34,830	20,670	4,520	2,600

Calendar year 1950: Max 1,530 Min 34 Mean 226 Ac-ft 163,300
Water year 1950-51: Max 1,150 Min 28 Mean 191 Ac-ft 137,900

Peak discharge (base, 1,100 cfs).--May 27 (11:30 p.m.) 1,250 cfs (5.53 ft); June 16 (2 a.m.) 1,200 cfs (5.46 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Bear Creek near Wallowa and Hurricane Creek near Joseph.
b Stage-discharge relation affected by ice.

Bear Creek near Wallowa, Oreg.

Location.--Lat 45°32', long. 117°33', in NE¼ sec. 34, T. 1 N., R. 42 E., on right bank 15 ft downstream from unused bridge and 3 miles southwest of Wallowa.

Drainage area.--68 sq mi, approximately.

Records available.--April to September 1915, April 1924 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,220 ft (by barometer). Apr. 13 to Sept. 16, 1915, staff gage at site three-quarters of a mile upstream at different datum. Apr. 22, 1924, to Nov. 2, 1931, water-stage recorder at site 1 mile upstream from present site at different datum above intakes of two irrigation ditches with a combined capacity of about 3 cfs.

Average discharge.--22 years (1929-51), 108 cfs.

Extremes.--Maximum discharge during year, 618 cfs May 23 (gage height, 2.87 ft); maximum gage height, 2.90 ft Feb. 1 (ice jam); minimum discharge, 9 cfs Sept. 19-25, 29, 30. 1915, 1924-51: Maximum discharge, 1,620 cfs Apr. 22, 1936 (gage height, 3.82 ft, from floodmarks), from rating curve extended above 950 cfs; minimum, 3 cfs Jan. 20, Feb. 1, 1937.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 100 acres above station.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 11				May 12 to Sept. 30			
1.1	11	2.0	145	1.0	6	1.7	78
1.3	25	2.3	240	1.1	10	2.0	154
1.5	47	2.8	520	1.3	23	2.4	315
1.7	78			1.5	45	2.8	565

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	75	58	68	*b55	b45	*90	169	214	177	23	14
2	15	73	54	71	b70	45	92	154	202	177	22	14
3	15	82	54	64	b65	b45	105	151	202	167	21	14
4	21	90	63	66	b60	b50	142	172	202	198	21	13
5	29	90	58	61	b55	55	190	193	214	161	21	13
6	26	82	66	60	b50	60	222	252	*195	137	21	13
7	24	78	76	b55	b70	57	240	464	187	120	21	12
8	36	75	75	*b50	b90	48	248	408	184	112	20	12
9	43	60	73	b45	b130	40	240	366	202	105	18	12
10	37	58	80	b50	199	37	230	402	225	98	*17	11
11	40	57	*88	b50	212	36	219	464	267	91	16	11
12	37	53	94	b48	196	33	226	388	364	89	15	11
13	35	48	92	46	163	33	264	315	364	85	15	11
14	33	46	84	46	135	33	315	259	424	85	15	11
15	31	43	80	45	120	53	295	225	502	80	14	11
16	*30	42	73	46	*105	71	285	246	469	73	14	10
17	31	42	68	46	94	71	305	*305	412	67	13	10
18	45	42	64	45	84	66	*315	332	370	*65	13	10
19	36	39	64	42	75	70	285	337	342	58	13	10
20	33	45	61	b41	71	76	248	342	310	52	12	9
21	32	41	58	b40	66	90	208	359	*281	45	12	*10
22	32	40	57	39	61	90	184	443	254	43	13	9
23	30	40	82	35	58	84	169	551	242	38	13	9
24	28	42	86	36	55	78	157	530	250	37	a13	9
25	29	64	86	36	b50	80	157	488	217	35	a12	11
26	*41	70	86	39	b45	a85	169	462	214	32	a12	11
27	45	71	84	41	b40	a90	181	495	210	31	a15	10
28	50	68	80	b40	b42	a90	216	456	202	29	a20	10
29	82	63	76	b38	-	a95	208	354	187	27	a18	9
30	96	64	75	b35	-	a90	190	291	177	26	*15	12
31	76	-	70	b40	-	a90	-	238	-	24	14	-
Total	1,153	1,783	2,265	1,464	2,516	1,986	6,395	10,611	8,085	2,564	502	332
Mean	37.2	59.4	73.1	47.2	89.9	64.1	213	342	270	82.7	16.2	11.1
Ac-ft	2,290	3,540	4,490	2,900	4,990	3,940	12,680	21,050	16,040	5,090	996	659

Calendar year 1950: Max 852 Min 12 Mean 133 Ac-ft 96,240
Water year 1950-51: Max 551 Min 9 Mean 109 Ac-ft 78,660

Peak discharge (base, 600 cfs).--May 23 (11 p.m.) 618 cfs (2.87 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Lostine River near Lostine and Hurricane Creek near Joseph and recorded range in stage when available.
b Stage-discharge relation affected by ice.

Grande Ronde River at Rondowa, Oreg.

Location.--Lat 45°44', long. 117°47', in NW¼ sec. 23, T. 3 N., R. 40 E., on right bank at Rondowa, 500 ft downstream from Wallowa River, at mile 81.4 (U. S. G. S. Plan and Profile).

Drainage area.--2,555 sq mi.

Records available.--October 1926 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 2,281.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Average discharge.--25 years, 2,018 cfs.

Extremes.--Maximum discharge during year, 8,250 cfs Feb. 11 (gage height, 5.73 ft); minimum, 410 cfs Aug. 20, 21, Sept. 20 (gage height, 1.00 ft).
1926-51: Maximum discharge, 19,900 cfs May 28, 1948 (gage height, 9.76 ft); minimum, 225 cfs Dec. 19, 1935.

Remarks.--Records excellent. Many diversions above station for irrigation, chiefly in vicinity of La Grande, Enterprise and Wallowa; one transbasin diversion from Sheep Creek and Little Sheep Creek in Imnaha River basin for irrigation of about 5,200 acres in Wallowa Valley. Flow slightly regulated by Wallowa Lake.

Revisions (water years).--W 1093: 1927-29, 1932-33, 1936, 1938, 1939(M), 1943.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.0	410	3.0	2,550
1.2	545	4.0	4,450
1.5	780	5.5	7,720
2.0	1,250		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	575	1,140	1,010	1,710	1,010	1,420	3,960	4,530	3,460	2,070	636	628
2	582	1,220	955	1,710	1,160	1,420	4,240	4,180	3,120	2,110	628	605
3	590	1,170	964	1,740	1,220	1,280	*4,680	3,960	2,930	2,080	612	598
4	636	1,200	1,100	1,660	1,240	1,300	5,270	3,940	2,830	2,370	598	568
5	748	1,180	1,180	1,580	1,290	1,270	5,900	4,040	3,330	2,300	582	568
6	848	1,130	1,300	1,390	1,340	1,270	6,380	4,450	3,210	2,110	590	552
7	748	1,130	1,650	1,150	1,870	1,230	6,600	6,450	3,330	1,850	590	538
8	772	1,180	1,660	1,100	3,500	1,220	6,690	6,470	3,210	1,760	582	538
9	822	1,050	1,540	1,200	5,180	1,200	6,640	6,230	3,120	1,710	560	538
10	764	*984	1,520	1,250	6,070	1,150	6,450	6,510	3,100	1,690	531	524
11	748	1,020	*1,550	1,280	7,400	1,100	6,160	7,220	3,270	1,550	545	517
12	756	984	1,580	1,230	7,310	1,140	6,050	7,020	3,780	1,470	545	517
13	748	955	1,520	1,220	6,230	1,150	6,290	6,470	3,960	1,420	531	489
14	732	946	1,470	1,370	5,400	1,230	6,780	6,010	4,140	1,430	*524	468
15	700	910	1,440	1,630	4,620	2,570	6,750	5,590	4,790	1,390	517	462
16	692	901	1,390	1,660	3,920	3,500	6,710	5,520	4,930	1,330	496	449
17	724	901	1,340	1,690	3,360	3,380	6,750	5,790	4,510	1,260	496	436
18	848	984	1,320	1,630	2,970	3,140	6,820	5,790	4,100	1,180	482	436
19	814	928	1,280	1,480	2,540	3,060	6,580	5,720	3,680	1,120	442	430
20	764	964	1,250	1,330	2,310	3,330	6,090	5,630	3,400	1,050	416	416
21	756	974	1,220	1,300	2,150	3,760	5,500	5,650	3,120	*937	423	430
22	748	937	1,210	1,340	2,010	3,680	5,040	5,870	2,810	883	449	436
23	740	937	1,440	1,320	1,900	3,400	4,640	6,620	2,630	840	462	430
24	724	937	1,530	1,330	1,840	3,380	4,320	*6,690	2,630	797	456	430
25	724	1,020	1,520	1,510	1,800	3,760	4,080	6,380	2,430	740	442	449
26	831	1,060	1,460	1,850	1,630	4,200	3,940	6,120	2,340	700	456	468
27	822	1,080	1,400	1,950	1,510	4,370	3,940	6,290	2,260	668	462	456
28	901	1,070	1,380	1,540	1,450	4,320	4,760	6,250	2,190	684	503	456
29	1,110	1,040	1,430	1,030	-	4,340	5,230	5,290	2,120	676	724	462
30	1,250	1,050	1,610	955	-	4,160	4,910	4,600	2,070	676	716	510
31	1,160	-	1,750	874	-	3,900	-	4,000	-	644	660	-
Total	24,377	30,982	42,969	44,009	84,230	79,630	168,150	175,280	96,800	41,495	16,656	14,804
Mean	786	1,033	1,386	1,420	3,008	2,569	5,605	5,654	3,227	1,339	537	493
Ac-ft	48,350	61,450	85,230	87,290	167,100	157,900	333,500	347,700	192,000	82,300	33,040	29,360

Calendar year 1950: Max 8,760 Min 489 Mean 2,604 Ac-ft 1,885,000
Water year 1950-51: Max 7,400 Min 416 Mean 2,245 Ac-ft 1,625,000

Peak discharge (base, 5,000 cfs).--Feb. 11 (9:30 p.m.) 8,250 cfs (5.73 ft); Apr. 18 (4 a.m.) 6,910 cfs (5.14 ft); Apr. 29 (2 a.m.) 5,330 cfs (4.42 ft); May 11 (5 to 8 p.m.) 7,420 cfs (5.37 ft); May 24 (4:30 a.m.) 6,930 cfs (5.15 ft); June 16 (4 a.m.) 5,250 cfs (4.38 ft).

* Discharge measurement made on this day.

Grande Ronde River at Troy, Oreg.

Location.--Lat 45°57', long. 117°27', in NW¼ sec. 4, T. 5 N., R. 43 E., at downstream side of left end of bridge at Troy, 100 ft downstream from Wenaha River, at mile 45.4 (U. S. G. S. Plan and Profile).

Drainage area.--3,275 sq mi.

Records available.--August 1944 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 1,587.13 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Oct. 1, 1949, wire-weight gage at same site at datum 12 ft lower.

Average discharge.--7 years, 3,419 cfs.

Extremes.--Maximum discharge during year, 14,200 cfs Feb. 12 (gage height, 8.15 ft); minimum, 600 cfs Aug. 20, 21, but may have been lower during period of doubtful gage-height record.
1944-51: Maximum discharge observed, 30,000 cfs Dec. 15, 1946 (gage height, 11.20 ft, present datum); minimum observed, 470 cfs Sept. 11, 1944.

Remarks.--Records excellent except those for periods of doubtful gage-height record, which are good. Many diversions above station for irrigation, chiefly in vicinity of La Grande, Enterprise and Wallowa; one transbasin diversion from Sheep Creek and Little Sheep Creek in Imnaha River basin for irrigation of about 5,200 acres in Wallowa Valley. Flow slightly regulated by Wallowa Lake.

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Aug. 20				Aug. 21 to Sept. 30	
2.2	695	5.0	4,440	2.0	610
2.5	910	6.0	6,830	2.3	820
3.0	1,390	7.0	9,900	2.6	1,080
3.5	1,960	7.7	12,400		
4.0	2,650				

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	809	1,740	1,630	2,680	1,700	2,170	5,740	6,270	4,400	d2,400	862	927
2	809	2,080	1,520	2,700	1,880	2,180	6,460	5,740	3,990	d2,400	846	900
3	809	1,860	1,490	2,800	1,910	1,970	7,420	5,530	3,780	d2,500	846	876
4	854	1,880	1,840	2,680	*1,900	2,020	8,470	5,550	3,630	2,710	830	852
5	982	1,780	2,060	2,530	1,900	1,960	9,490	5,620	4,270	2,830	809	836
6	1,150	1,680	2,130	2,280	1,910	1,910	10,400	5,960	4,310	2,650	795	828
7	1,050	1,680	2,910	2,020	2,220	1,840	10,700	8,010	4,380	2,360	823	820
8	991	1,760	3,020	1,820	4,130	1,790	10,500	8,650	4,340	2,220	802	812
9	1,090	1,630	2,700	1,850	7,000	1,770	10,300	8,130	4,130	2,160	788	812
10	1,040	1,490	2,560	1,940	10,100	1,680	9,870	8,280	4,030	d2,050	d740	796
11	991	1,480	2,650	1,960	12,300	1,620	9,260	9,010	4,130	d1,950	767	796
12	982	1,420	2,680	1,900	12,300	1,650	9,100	8,850	4,520	d1,850	d760	788
13	973	1,380	2,580	1,850	9,530	1,640	9,630	8,010	4,800	d1,800	d740	772
14	964	1,350	*2,400	2,000	7,980	1,800	10,400	7,390	4,830	d1,800	d740	740
15	937	1,290	2,350	2,220	6,780	2,980	10,000	6,780	5,250	d1,750	d720	740
16	919	1,280	2,250	2,490	5,820	5,550	9,830	6,640	5,570	d1,700	d700	719
17	937	1,310	2,190	2,600	5,090	4,940	9,870	6,940	5,200	d1,600	d700	698
18	1,060	1,490	2,140	2,650	4,630	4,460	9,900	6,940	4,800	d1,500	d680	698
19	1,130	1,460	2,090	2,370	3,950	4,290	9,460	*6,800	4,400	d1,400	d640	684
20	1,020	1,440	2,060	2,130	3,580	4,650	8,530	6,670	4,050	d1,300	d600	670
21	1,000	1,530	1,990	2,080	3,270	5,390	7,540	6,610	3,780	d1,200	d600	677
22	1,000	1,510	1,990	2,080	3,090	5,390	6,860	6,780	3,510	d1,100	d620	684
23	991	1,530	2,640	2,020	2,930	4,910	6,380	7,480	3,260	d1,050	d640	684
24	964	1,540	2,960	2,000	2,860	4,740	6,070	7,770	3,100	d1,000	d620	684
25	964	1,640	2,860	2,190	2,800	5,300	5,820	7,590	d3,000	d950	d620	705
26	*1,090	1,740	2,710	2,700	2,530	6,120	5,770	7,170	d2,800	*928	d660	748
27	1,080	1,780	2,530	3,150	2,350	6,380	5,720	7,190	d2,700	910	d700	733
28	1,360	1,740	2,420	2,760	2,230	6,220	6,510	7,190	d2,600	902	*796	726
29	1,890	1,660	2,360	1,860	-	6,330	7,450	6,300	d2,500	919	972	733
30	1,940	1,640	2,520	1,700	-	6,070	6,830	5,530	d2,500	910	1,030	780
31	1,770	-	2,740	1,640	-	*5,620	-	4,940	-	886	990	-
Total	33,566	47,790	72,970	69,630	128,670	115,340	250,280	216,320	118,560	51,685	23,436	22,918
Mean	1,083	1,593	2,354	2,246	4,595	3,721	8,343	6,978	3,952	1,667	756	764
Ac-ft	66,580	94,790	144,700	138,100	255,200	228,800	496,400	429,100	235,200	102,500	46,480	45,460

Calendar year 1950: Max 15,800 Min 721 Mean 3,863 Ac-ft 2,797,000
Water year 1950-51: Max 12,300 Min 600 Mean 3,154 Ac-ft 2,283,000

Peak discharge (base, 7,000 cfs).--Feb. 12 (1 a.m.) 14,200 cfs (8.15 ft); Apr. 7 (11 p.m.) 11,000 cfs (7.30 ft); May 11 (11:30 p.m.) 9,330 cfs (6.83 ft).
* Discharge measurement made on this day.
d Doubtful gage-height record; discharge computed on basis of recorded graph and records for station at Rondowa.

Asotin Creek near Asotin, Wash.

Location.--Lat 46°19'30", long. 117°12'30", in SE¼ sec. 19 (revised), T. 10 N., R. 45 E., on left bank half a mile upstream from Washington Water Power Co.'s diversion for water supply and irrigation, 5 (revised) miles upstream from George Creek, and 8 miles west of Asotin.

Drainage area.--156 sq mi (revised).

Records available.--March 1904 to November 1906, August 1910 to October 1911, August 1928 to September 1951. Published as "at Shelman's Ranch, near Asotin" 1904-5.

Gage.--Staff gage read twice daily. Prior to August 1928, staff gages within a quarter of a mile of present site at different datums.

Average discharge.--23 years (1928-51), 64.1 cfs.

Extremes.--Maximum discharge observed during year, 490 cfs Feb. 11 (gage height, 2.80 ft); minimum observed, 35 cfs Aug. 19 (gage height, 0.75 ft).
1904-6, 1910-11, 1928-51: Maximum discharge observed, 1,180 cfs Apr. 15, 1904 (gage height, 4.3 ft, site and datum then in use); minimum observed, 16 cfs Jan. 5, 1937.

Remarks.--Records good except those for periods of rapidly changing stage, which are fair, and those for periods of ice effect, which are poor. Large part of low flow diverted for irrigation. No regulation.

Cooperation.--Gage-height record furnished by Washington Water Power Co.

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 10		Feb. 11 to Sept. 30	
1.0	29	0.7	31
1.2	55	.9	49
1.5	105	1.3	110
2.0	206	2.0	260
2.6	352	2.8	490

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	94	85	75	b40	78	114	160	120	64	41	41
2	39	94	80	78	b45	76	116	150	110	64	41	39
3	39	91	77	78	80	72	*126	150	112	62	41	39
4	41	87	78	75	75	73	150	150	118	68	40	37
5	44	84	70	68	72	*73	180	160	160	64	39	37
6	41	*75	80	62	62	70	200	190	150	62	39	37
7	39	73	123	b58	*89	67	200	310	150	60	39	37
8	37	73	132	b60	96	67	210	325	150	56	39	37
9	39	66	125	62	183	66	200	298	140	56	38	37
10	39	64	123	61	352	60	200	272	130	*55	38	37
11	39	64	132	60	490	59	190	*285	140	54	38	39
12	37	64	132	60	430	60	180	285	150	50	39	39
13	39	61	121	58	325	64	180	235	140	50	39	39
14	37	60	112	62	272	70	222	200	140	49	39	37
15	37	56	103	62	222	120	222	180	130	48	38	37
16	37	58	*96	66	190	116	210	170	124	47	38	37
17	37	62	92	80	170	103	210	*170	116	47	37	37
18	45	62	87	72	150	99	222	190	110	46	37	37
19	41	58	84	68	130	96	210	180	105	46	36	36
20	40	64	82	64	126	105	190	170	99	46	38	37
21	39	67	80	68	112	116	170	170	96	45	37	36
22	39	73	78	66	105	118	160	180	94	45	37	36
23	39	78	85	62	103	110	150	200	87	44	*37	37
24	39	84	89	62	97	105	140	200	87	43	37	37
25	37	103	92	66	92	106	140	200	86	43	37	37
26	51	116	96	84	86	120	130	180	79	43	37	38
27	42	114	92	b80	78	128	130	180	73	43	37	39
28	60	103	85	b60	78	126	170	170	72	41	39	39
29	152	92	82	b45	-	126	190	150	67	41	47	39
30	142	92	80	b40	-	126	170	140	66	41	43	39
31	118	-	78	b40	-	118	-	130	-	41	42	-
Total	1,544	2,332	2,949	2,002	4,350	2,893	5,282	6,130	3,401	1,564	1,204	1,130
Mean	49.8	77.7	95.1	64.6	155	93.3	176	198	113	50.5	38.8	37.7
Ac-ft	3,060	4,630	5,850	3,970	8,630	5,740	10,480	12,160	6,750	3,100	2,390	2,240

Calendar year 1950: Max 265 Min 25 Mean 95.0 Ac-ft 68,760
Water year 1950-51: Max 490 Min 36 Mean 95.3 Ac-ft 69,000

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

Selway River near Lowell, Idaho

Location.--Lat 46°05', long. 115°31', in NE¼ sec. 25, T. 32 N., R. 7 E., on right bank a quarter of a mile upstream from O'Hara Creek and 7 miles upstream from Lowell.

Drainage area.--1,910 sq mi, approximately.

Records available.--April 1911 to September 1912 (gage heights or fragmentary discharge records only), October 1929 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 1,540 ft (from river-profile map). Apr. 11 to Sept. 2, 1911, staff gage at site 2 miles downstream at different datum. Feb. 7 to Sept. 22, 1912, and Oct. 14, 1929, to Nov. 19, 1930, staff or chain gages at nearby sites and different datums.

Average discharge.--22 years (1929-51), 3,554 cfs.

Extremes.--Maximum discharge during year, 23,100 cfs May 24 (gage height, 10.84 ft); minimum, 524 cfs Sept. 21 (gage height, 2.71 ft).
1929-51: Maximum discharge, 48,900 cfs May 29, 1948 (gage height, 16.04 ft); minimum, probably less than 100 cfs Jan. 8, 1937, during period of ice effect.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Small diversions from headwaters.

Revisions.--W 1043: Drainage area.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.7	517	6.0	5,440
3.0	748	7.0	8,080
3.5	1,220	8.0	13,400
4.0	1,810	9.0	15,300
5.0	3,360	10.6	22,200

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	825	2,630	2,120	2,380	1,380	1,810	2,480	9,420	11,000	6,680	1,350	800
2	808	2,700	1,970	2,310	b1,500	*1,780	3,010	8,380	9,750	7,190	1,300	740
3	800	2,490	1,860	2,310	b1,600	1,780	4,020	7,730	9,190	6,550	1,230	723
4	843	2,660	2,110	2,240	b1,600	1,730	5,140	8,080	8,940	7,080	1,240	699
5	1,140	3,100	1,850	2,120	1,610	1,740	5,970	9,350	10,100	6,680	1,290	682
6	1,670	3,200	1,680	1,950	1,460	1,640	6,980	12,800	10,200	6,340	1,170	658
7	1,510	3,180	2,090	1,610	1,450	1,630	7,730	17,400	9,820	5,560	1,090	635
8	1,320	3,100	1,970	1,610	2,150	1,480	8,110	17,300	9,220	5,050	1,040	635
9	1,610	2,520	*1,800	1,980	2,940	1,610	7,910	16,400	9,000	4,610	1,010	658
10	1,580	2,220	1,840	1,730	5,920	1,440	7,530	17,800	9,780	4,560	1,000	643
11	1,540	2,500	1,930	1,680	6,820	1,400	7,110	19,600	11,400	4,160	992	682
12	1,620	2,340	2,040	1,680	7,170	1,430	*7,080	19,300	12,700	3,790	982	699
13	1,580	2,110	2,020	1,710	5,560	1,510	7,960	16,600	12,800	3,640	*944	658
14	1,480	2,070	1,930	1,780	4,540	1,540	9,680	14,100	14,000	*3,600	907	628
15	1,440	1,860	1,890	1,740	3,980	1,570	9,850	12,500	15,700	3,500	880	604
16	1,540	1,900	1,840	1,770	3,540	1,840	9,650	12,600	16,600	3,270	852	589
17	1,460	1,880	1,770	1,730	3,160	1,680	9,950	13,800	*14,700	3,060	817	567
18	1,860	1,940	1,730	*1,710	3,030	1,560	10,700	14,900	13,600	2,860	791	560
19	2,020	1,770	1,710	1,600	2,760	1,560	10,600	*15,300	12,100	2,650	765	553
20	1,680	1,690	1,840	1,560	2,580	1,620	9,220	15,400	11,700	2,480	748	531
21	1,600	1,800	1,820	1,560	2,490	1,720	8,080	15,700	10,800	2,250	732	*524
22	1,820	1,840	1,800	1,620	2,320	1,810	7,250	17,200	9,780	2,070	732	539
23	*1,730	2,150	2,700	1,540	2,210	1,780	6,730	20,100	8,940	1,950	954	539
24	1,660	2,140	3,080	1,520	2,210	1,780	6,710	22,200	9,480	1,880	1,080	531
25	1,540	2,460	3,710	1,570	2,150	1,930	7,000	21,000	9,100	1,910	916	560
26	1,600	2,550	3,810	1,640	2,010	2,260	7,700	19,100	8,350	1,810	817	715
27	1,670	2,460	3,380	1,660	1,860	2,460	8,320	19,500	8,200	1,680	782	699
28	1,850	2,320	3,100	1,170	1,850	2,320	9,680	20,400	7,850	1,620	782	620
29	2,940	2,180	2,840	765	-	2,320	11,700	17,100	7,170	1,630	817	575
30	3,320	2,150	2,680	898	-	2,380	10,700	14,800	6,760	1,520	916	575
31	2,940	-	2,550	1,150	-	2,370	-	12,800	-	1,410	880	-
Total	50,996	69,910	69,460	52,293	81,850	55,480	234,550	478,660	318,730	113,040	29,806	18,821
Mean	1,645	2,330	2,241	1,687	2,923	1,790	7,818	15,440	10,620	3,646	961	627
Cfsm	0.861	1.22	1.17	0.883	1.53	0.937	4.09	8.08	5.56	1.91	0.503	0.328
In.	0.99	1.36	1.35	1.02	1.59	1.08	4.57	9.32	6.21	2.20	0.58	0.37
Ac-ft	101,100	138,700	137,800	103,700	162,300	110,000	465,200	949,400	632,200	224,200	59,120	37,330

Calendar year 1950: Max 28,000 Min 553 Mean 4,977 Cfsm 2.61 In. 35.37 Ac-ft 3,603,000
Water year 1950-51: Max 22,200 Min 524 Mean 4,311 Cfsm 2.26 In. 30.64 Ac-ft 3,121,000

Peak discharge (base, 18,000 cfs).--May 12 (3 a.m.) 20,900 cfs (10.36 ft); May 24 (7 a.m.) 23,100 cfs (10.84 ft); June 16 (4 a.m.) 18,300 cfs (9.78 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Lochsa River near Lowell, Idaho

Location.--Lat 46°09', long. 115°35', in SW¼SE¼ sec. 33, T. 33 N., R. 7 E., on right bank 0.7 mile upstream from Lowell, 0.9 mile upstream from mouth, 1.2 miles downstream from Pete King Creek, and 19 miles east of Kooskia.

Drainage area.--1,180 sq mi, approximately.

Records available.--November 1910 to August 1912, October 1929 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 1,452.98 ft above mean sea level, unadjusted. Prior to Nov. 21, 1930, staff gage at site 1 mile upstream at different datum.

Average discharge.--22 years (1929-51), 2,685 cfs.

Extremes.--Maximum discharge during yrar, 16,100 cfs May 24 (gage height, 9.08 ft); minimum, 364 cfs Sept. 20-22 (gage height, 1.73 ft).
1929-51: Maximum discharge, 34,800 cfs June 10, 1933 (gage height, 13.44 ft), from rating curve extended above 25,000 cfs; minimum, probably less than 100 cfs Jan. 8, 1937, during period of ice effect.

Remarks.--Records excellent.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

1.7	345	5.0	4,790
2.1	640	6.0	6,990
2.5	1,000	7.0	9,590
3.0	1,560	8.0	12,500
4.0	3,030	9.0	15,800

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	600	3,160	2,060	2,660	1,250	1,700	2,090	7,560	7,790	4,560	1,030	568
2	576	3,130	1,900	2,580	1,490	*1,650	2,610	6,850	7,040	4,830	990	528
3	584	2,810	1,810	2,580	1,540	1,620	3,380	6,190	6,750	4,520	940	520
4	608	2,900	2,020	2,440	1,520	1,620	4,120	6,560	6,580	4,890	900	512
5	792	3,090	1,690	2,360	1,460	1,610	4,700	7,510	7,540	4,600	891	488
6	1,280	3,130	1,610	2,160	1,370	1,550	5,300	10,300	7,560	4,430	846	466
7	1,170	3,080	2,040	1,890	1,390	1,500	5,870	13,100	7,460	3,920	792	445
8	990	2,930	1,880	1,890	2,250	1,400	6,300	12,700	7,040	3,620	765	445
9	1,170	2,430	*1,760	2,020	2,900	1,480	6,100	12,300	6,700	3,330	738	466
10	1,140	2,190	1,770	1,860	4,280	1,420	5,720	13,600	7,190	3,440	720	466
11	1,110	2,370	1,820	1,810	5,270	1,360	5,550	15,100	8,100	3,190	704	473
12	1,130	2,220	1,960	1,790	5,900	1,360	*5,590	15,000	9,210	2,870	*712	520
13	1,070	2,020	1,900	1,780	4,470	1,430	6,280	13,000	9,100	2,760	688	488
14	1,020	1,970	1,820	1,810	3,800	1,460	7,790	11,400	9,620	*2,690	656	455
15	1,210	1,770	1,770	1,770	3,360	1,490	7,740	9,930	10,700	2,610	632	424
16	1,230	1,770	1,810	1,740	3,060	1,760	7,560	9,670	11,300	2,440	616	410
17	1,200	1,820	1,740	1,770	2,790	1,540	7,770	10,900	*10,200	2,280	584	397
18	1,760	1,880	1,700	*1,690	2,650	1,440	8,310	11,400	9,290	2,130	568	390
19	1,830	1,640	1,680	1,590	2,460	1,430	8,210	*11,300	8,210	2,000	552	384
20	1,490	1,800	1,810	1,560	2,310	1,480	7,140	11,400	7,840	1,850	536	371
21	1,420	1,740	1,810	1,570	2,200	1,560	6,300	11,500	7,240	1,700	520	*364
22	1,480	1,810	1,820	1,600	2,090	1,560	5,740	12,900	6,730	1,590	504	371
23	*1,420	2,090	3,050	1,460	2,060	1,490	5,460	15,100	6,330	1,490	552	371
24	1,400	2,070	3,670	1,490	2,040	1,480	5,590	15,600	6,460	1,430	640	384
25	1,280	2,460	4,210	1,600	2,030	1,600	5,920	15,000	6,400	1,500	608	438
26	1,490	2,500	4,180	1,720	1,850	1,760	6,560	14,000	5,760	1,450	552	648
27	1,490	2,420	3,730	1,620	1,760	1,860	7,040	13,900	5,610	1,310	520	712
28	1,770	2,260	3,440	1,060	1,780	1,790	8,100	14,200	5,340	1,220	528	536
29	3,780	2,120	3,160	930	-	1,850	9,590	11,800	4,910	1,220	584	473
30	4,300	2,100	3,010	1,120	-	1,930	8,680	10,300	4,640	1,170	688	473
31	3,700	-	2,870	1,180	-	1,920	-	8,890	-	1,080	640	-
Total	45,490	69,480	71,500	55,100	71,330	49,100	187,110	358,760	224,640	82,120	21,196	13,976
Mean	1,467	2,316	2,306	1,777	2,548	1,584	6,237	11,570	7,488	2,649	684	466
Cfsm	1.24	1.96	1.95	1.51	2.16	1.34	5.29	9.81	6.35	2.24	0.580	0.395
In.	1.43	2.19	2.25	1.74	2.25	1.55	5.90	11.31	7.08	2.59	0.67	0.44
Ac-ft	90,230	137,800	141,800	109,300	141,500	97,390	371,100	711,600	445,600	162,900	42,040	27,720

Calendar year 1950: Max 23,600 Min 466 Mean 3,983 Cfsm 3.38 In. 45.82 Ac-ft 2,884,000
Water year 1950-51: Max 15,600 Min 364 Mean 3,424 Cfsm 2.90 In. 39.40 Ac-ft 2,479,000

Peak discharge (base, 12,000 cfs).--May 12 (4 a.m.) 16,000 cfs (9.04 ft); May 24 (5:30 a.m.) 16,100 cfs (9.08 ft); June 16 (5:30 a.m.) 12,600 cfs (8.03 ft).
* Discharge measurement made on this day.

South Fork Clearwater River near Elk City, Idaho

Location.--Lat 45°49', long. 115 32', in NE¼ sec. 25, T. 29 N., R. 7 E., on right bank just upstream from bridge on road to Orogrande, 0.2 mile upstream from Crooked River and 4½ miles west of Elk City.

Drainage area.--261 sq mi.

Records available.--September 1944 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 3,816.27 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to June 23, 1949, wire-weight gage at site 24 ft downstream at datum 6.14 ft lower.

Average discharge.--7 years, 268 cfs.

Extremes.--Maximum discharge during year, 1,280 cfs May 12 (gage height, 4.72 ft); minimum, 25 cfs Sept. 21, 22, 23, 24, 25 (gage height, 1.44 ft).
1944-51: Maximum discharge observed, 3,700 cfs May 29, 1948 (gage height, 13.06 ft, site and datum then in use); minimum daily, 17 cfs Dec. 11, 1944.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. No diversion or regulation above station except for mining operations.

Rating tables, water year 1950-51, except periods of ice effect (gage-height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 16						June 17 to Sept. 30			
1.6	41	2.4	173	3.6	598	1.4	22	2.0	96
1.8	60	2.8	285	4.0	795	1.6	38	2.4	190
2.0	90	3.2	426	4.7	1,220	1.8	62	2.8	304

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	74	62	132	60	105	190	755	450	159	53	42
2	49	104	79	126	95	105	250	695	407	174	53	39
3	48	101	85	126	100	*105	300	685	377	159	49	36
4	56	104	101	120	98	100	400	720	374	228	47	34
5	84	97	76	112	96	100	550	770	487	231	46	33
6	118	108	88	87	90	98	700	888	454	187	44	32
7	95	137	108	70	90	95	820	1,040	438	162	41	31
8	79	124	*94	80	120	95	856	1,090	430	146	39	31
9	84	70	87	110	120	98	834	1,060	370	137	38	31
10	76	71	94	100	200	90	780	1,070	345	132	36	31
11	67	101	101	95	250	90	735	1,120	338	125	41	31
12	58	92	114	100	280	90	*755	1,190	370	114	*40	33
13	56	80	103	100	230	100	866	1,130	381	*108	37	33
14	52	74	71	100	210	105	1,000	1,020	338	100	35	32
15	54	51	112	98	200	115	959	947	321	96	34	30
16	66	90	92	98	180	140	923	923	*305	91	34	28
17	59	84	88	94	170	130	959	917	286	87	33	28
18	64	80	82	95	160	115	1,010	*905	274	82	32	28
19	66	80	92	80	150	110	959	856	260	75	30	27
20	56	85	110	80	150	120	817	817	245	72	29	*26
21	54	82	103	*90	140	130	715	770	231	67	28	25
22	71	84	97	94	130	130	641	755	223	65	36	26
23	64	103	198	88	130	125	598	765	217	64	83	26
24	59	104	203	90	130	125	589	795	225	61	80	25
25	*56	130	217	98	130	140	598	770	248	64	52	27
26	58	124	214	100	110	150	636	700	209	62	42	33
27	77	114	171	100	100	160	661	656	193	58	40	32
28	87	110	166	75	105	160	755	617	182	54	39	28
29	84	84	162	50	-	160	959	548	172	78	40	27
30	79	103	152	45	-	170	850	521	156	64	50	27
31	77	-	135	55	-	170	-	504	-	56	54	-
Total	2,103	2,845	3,677	2,888	4,024	3,726	21,665	25,999	9,306	3,358	1,335	912
Mean	67.8	94.8	119	93.2	144	120	722	839	310	108	43.1	30.4
Cfsm	0.260	0.363	0.456	0.357	0.552	0.460	2.77	3.21	1.19	0.414	0.165	0.116
In.	0.30	0.41	0.52	0.41	0.57	0.53	3.09	3.70	1.33	0.48	0.19	0.13
Ac-ft	4,170	5,640	7,290	5,730	7,980	7,390	42,970	51,570	18,460	6,660	2,650	1,810

Calendar year 1950: Max 1,630 Min 35 Mean 281 Cfsm 1.08 In. 14.61 Ac-ft 203,200
Water year 1950-51: Max 1,190 Min 25 Mean 224 Cfsm 0.858 In. 11.66 Ac-ft 162,300

Peak discharge (base, 1,300 cfs).--No peaks above base.
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 7 to Apr. 7 (no gage-height record Feb. 11 to Mar. 2; discharge estimated on basis of weather records, and records for station near Grangeville and nearby streams).

South Fork Clearwater River near Grangeville, Idaho

Location.--Lat 45°55', long. 116°01', in SE¼NW¼ sec. 30, T. 30 N., R. 4 E., on right bank just downstream from powerhouse of Washington Water Power Co. and 6 miles east (revised) of Grangeville.

Drainage area.--865 sq mi.

Records available.--November 1910 to September 1916, April 1923 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 1,830 ft (from river-profile map). Nov. 14, 1910, to July 31, 1911, staff gage at datum 2.2 ft higher than present datum. Nov. 2, 1911, to Sept. 30, 1916, staff gage at datum 1.0 ft higher than present datum. Apr. 1, 1923, to Jan. 7, 1924, chain or staff gage at present datum.

Average discharge.--32 years (1912-16, 1923-51), 841 cfs.

Extremes.--Maximum discharge during year, 4,160 cfs May 11 (gage height, 7.62 ft); minimum, 3 cfs Oct. 1 (gage height, 1.80 ft); minimum daily, 109 cfs Sept. 22.
1910-16, 1923-51: Maximum discharge observed, 12,600 cfs May 29, 1948 (gage height, 12.50 ft); no flow part of day Aug. 27, 1947; minimum daily, 41 cfs Nov. 22, 1931.

Remarks.--Records good. Considerable diurnal fluctuation at low stages caused by powerplant just above station. No diversion for irrigation.

Cooperation.--Water-stage recorder inspected by Washington Water Power Co. in connection with a Federal Power Commission project.

Revisions.--W 633: Drainage area.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

2.6	97	4.4	892
2.8	142	5.0	1,340
3.0	199	6.0	2,270
3.4	349	7.4	3,980
3.8	541		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	214	385	451	526	246	436	627	2,220	1,920	834	250	188
2	222	490	385	500	394	*436	759	2,080	1,740	840	250	186
3	206	490	354	500	413	418	981	2,020	1,630	821	239	168
4	232	490	461	490	399	413	1,300	2,160	1,580	1,120	225	160
5	332	475	376	475	385	408	1,620	2,320	1,990	1,120	219	153
6	485	480	372	358	358	394	1,880	2,760	1,980	892	216	148
7	408	552	485	280	367	385	2,080	3,560	1,890	796	206	133
8	362	583	*475	349	521	372	2,200	3,660	1,920	724	187	142
9	380	422	432	441	610	390	2,170	3,540	1,710	678	193	134
10	354	324	466	390	906	345	2,100	3,680	1,620	660	190	137
11	295	427	521	376	1,200	349	*2,010	3,890	1,640	622	*190	137
12	280	427	557	403	1,250	367	2,020	3,850	1,800	583	190	171
13	257	376	526	394	960	394	2,270	3,560	1,880	*552	190	153
14	232	376	456	399	860	427	2,680	3,250	1,780	516	187	134
15	288	303	441	390	821	470	2,640	3,070	1,830	495	181	136
16	324	320	461	390	765	562	2,560	3,090	*1,840	470	169	131
17	280	362	427	372	689	505	2,680	3,150	1,680	456	158	132
18	272	390	422	*390	678	461	2,840	*3,100	1,580	427	161	115
19	299	345	403	332	622	451	2,770	3,020	1,500	399	157	124
20	272	336	441	328	600	475	2,440	2,910	1,440	390	145	*115
21	264	390	451	358	578	516	2,160	2,860	1,360	372	152	115
22	328	367	427	380	536	521	1,970	2,920	1,260	362	144	109
23	303	441	644	341	510	495	1,830	3,070	1,180	341	266	115
24	*284	475	796	362	521	500	1,790	3,080	1,240	324	316	115
25	261	583	802	394	521	541	1,810	2,980	1,280	328	223	120
26	276	605	821	413	451	610	1,910	2,820	1,130	330	194	151
27	394	583	700	413	426	627	2,010	2,820	1,050	295	172	142
28	418	531	638	303	427	589	2,260	2,680	981	284	178	132
29	475	475	600	190	-	610	2,730	2,370	926	280	182	120
30	490	451	589	178	-	649	2,500	2,190	879	295	226	120
31	446	-	541	229	-	622	-	2,090	-	261	326	-
Total	9,933	13,254	15,921	11,644	17,014	14,738	61,597	90,770	46,236	16,867	6,192	4,136
Mean	320	442	514	376	608	475	2,050	2,930	1,540	544	200	138
Cfsm	0.370	0.511	0.594	0.435	0.703	0.549	2.37	3.39	1.78	0.629	0.231	0.160
In.	0.43	0.57	0.68	0.50	0.73	0.63	2.65	3.90	1.99	0.73	0.27	0.18
Ac-ft	19,700	26,290	31,580	23,100	33,750	29,230	122,200	180,000	91,710	33,460	12,280	8,200

Calendar year 1950: Max 5,220 Min 166 Mean 1,084 Cfsm 1.25 In. 17.00 Ac-ft 784,600
Water year 1950-51: Max 3,890 Min 109 Mean 845 Cfsm .977 In. 13.26 Ac-ft 611,500

Peak discharge (base, 3,200 cfs).--May 11 (8 p.m.) 4,160 cfs (7.62 ft).
* Discharge measurement made on this day.

Clearwater River at Kamiah, Idaho

Location.--Lat 46°14', long. 116°01', in sec. 1, T. 33 N., R. 3 E., on left bank a quarter of a mile downstream from highway bridge at Kamiah, three-quarters of a mile downstream from Lawyer Creek, and 6 miles downstream from South Fork.

Drainage area.--4,850 sq mi, approximately.

Records available.--August 1910 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 1,162.52 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Oct. 2, 1934, staff or chain gage at site 300 ft downstream at same datum.

Average discharge.--41 years, 8,085 cfs.

Extremes.--Maximum discharge during year, 44,200 cfs May 24 (gage height, 12.78 ft); minimum, 919 cfs Sept. 21 (gage height, 3.17 ft).
1910-51: Maximum discharge, 99,000 cfs May 29, 1948 (gage height, 19.22 ft); minimum, probably less than 200 cfs Jan. 8, 1937, during period of ice effect.

Remarks.--Records excellent except those below 5,000 cfs, which are good. Some diurnal regulation at low stages caused by powerplant on South Fork.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 5 to June 21, July 31 to Sept. 30)

3.3	930	8.0	12,800
4.0	1,850	9.0	17,600
5.0	3,680	10.0	23,300
6.0	6,050	11.0	30,000
7.0	9,010	12.7	42,800

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,670	6,440	5,200	6,130	2,480	*4,350	6,100	21,200	22,300	12,200	2,710	1,670
2	1,570	6,760	4,800	5,950	3,100	4,280	6,920	18,600	19,600	12,800	2,620	1,500
3	1,560	6,150	4,440	6,020	3,790	4,210	8,940	17,200	18,400	12,100	2,490	1,440
4	1,570	6,180	4,940	5,750	3,970	4,170	11,300	17,600	17,200	12,700	2,390	1,420
5	1,930	6,570	4,750	5,520	3,860	4,210	13,200	19,900	19,800	12,900	2,440	1,350
6	3,110	7,120	4,120	5,110	3,640	3,990	15,400	25,500	20,900	11,700	2,340	1,310
7	3,490	7,040	5,550	4,350	3,490	3,900	17,000	34,900	20,100	10,500	2,190	1,250
8	2,780	7,290	*5,550	4,010	5,420	3,660	18,200	35,500	19,500	9,600	2,060	1,220
9	3,010	6,210	4,890	4,700	6,490	3,790	17,900	33,700	18,200	8,740	2,010	1,260
10	3,290	5,130	4,750	4,510	11,900	3,660	17,000	35,900	19,000	8,470	1,950	1,260
11	2,960	5,450	4,890	4,140	14,500	3,470	16,200	39,800	21,300	8,240	1,930	1,290
12	3,070	5,400	5,200	4,170	17,500	3,530	*15,800	40,900	24,300	7,380	1,910	1,360
13	3,030	4,940	5,180	4,170	13,300	3,920	17,400	35,800	24,500	6,920	*1,870	1,340
14	2,860	4,700	4,890	4,300	10,700	4,330	21,300	31,400	25,800	6,790	1,790	1,250
15	2,860	4,420	4,580	4,330	9,460	5,080	22,100	27,900	28,500	6,650	1,730	1,180
16	3,230	4,120	4,600	4,350	8,540	6,130	21,400	27,600	31,000	6,390	1,670	1,130
17	3,010	4,370	4,370	*4,280	7,650	5,180	21,900	29,400	*25,700	*5,980	1,600	1,100
18	3,550	4,650	4,260	4,280	7,240	4,600	23,400	31,100	25,600	5,600	1,550	1,070
19	4,420	4,350	4,140	3,970	6,650	4,700	23,700	*31,300	22,900	5,230	1,510	1,060
20	3,790	4,050	4,370	3,790	6,260	5,010	20,800	31,300	21,900	4,940	1,470	1,040
21	3,350	4,460	4,460	3,770	6,000	5,200	18,100	31,500	20,200	4,530	1,440	1,000
22	3,600	4,440	4,370	3,970	5,680	5,180	16,300	33,800	18,400	4,240	1,420	*1,010
23	3,620	5,300	6,000	3,770	5,320	4,890	15,000	39,300	17,200	3,940	1,550	1,040
24	*3,490	5,280	8,180	3,680	5,250	4,870	14,800	42,600	17,200	3,770	2,010	1,040
25	3,270	5,980	8,810	3,970	5,250	5,110	15,400	41,000	17,600	3,790	1,930	1,060
26	3,410	6,340	9,660	4,170	4,820	5,580	16,800	37,600	15,800	3,770	1,630	1,340
27	3,640	6,100	8,500	4,330	4,530	6,080	18,100	37,300	15,100	3,470	1,520	1,620
28	3,880	5,780	7,770	3,190	4,400	5,820	20,700	39,400	14,500	3,190	1,500	1,390
29	6,280	5,380	7,210	1,950	-	5,780	25,100	33,500	13,300	3,210	1,560	1,220
30	8,570	5,130	6,810	1,950	-	6,020	24,000	29,100	12,500	3,110	1,790	1,160
31	7,680	-	6,650	2,290	-	6,020	-	25,400	-	2,880	1,870	-
Total	107,550	165,530	173,890	130,870	191,190	146,720	520,260	977,000	608,300	215,730	58,450	37,380
Mean	3,469	5,518	5,609	4,222	6,828	4,733	17,340	31,520	20,280	6,959	1,885	1,246
Cfsm	0.715	1.14	1.16	0.871	1.41	0.976	3.58	6.50	4.18	1.43	0.389	0.257
In.	0.82	1.27	1.33	1.00	1.47	1.13	3.99	7.49	4.66	1.65	0.45	0.29
Ac-ft	213,300	328,300	344,900	259,600	379,200	291,000	‡1,032	‡1,938	‡1,207	427,900	115,900	74,140

Calendar year 1950: Max 55,900 Min 1,290 Mean 10,680 Cfsm 2.20 In. 29.90 Ac-ft 7,734,000
Water year 1950-51: Max 42,600 Min 1,000 Mean 9,131 Cfsm 1.88 In. 25.55 Ac-ft 6,611,000

Peak discharge (base, 28,200 cfs).--May 12 (7:30 a.m.) 43,100 cfs (12.64 ft); May 24 (11 a.m.) 44,200 cfs (12.78 ft); June 16 (9 to 10 a.m.) 34,000 cfs (11.47 ft).
* Discharge measurement made on this day.
‡ Expressed in thousands.

North Fork Clearwater River at Bungalow ranger station, Idaho

Location.--Lat 46°38', long. 115°30', in sec. 18, T. 38 N., R. 8 E., on left bank at Bungalow ranger station, 300 ft downstream from mouth of Orogrande Creek, 1,000 ft downstream from highway bridge, and 17 miles northeast of Pierce.

Drainage area.--996 sq mi.

Records available.--September 1944 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 2,240 ft (from river-profile map).

Average discharge.--7 years, 2,984 cfs.

Extremes.--Maximum discharge during year, 13,600 cfs May 11 (gage height, 7.48 ft); minimum, 522 cfs Sept. 20, 21 (gage height, 2.59 ft).
1944-51: Maximum discharge, 27,400 cfs May 29, 1948 (gage height, 11.13 ft); minimum daily, 350 cfs Dec. 12, 1944.

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

Cooperation.--Water-stage recorder inspected by United States Forest Service ranger at Bungalow ranger station.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

2.5	490	4.5	3,720
2.8	760	5.0	5,070
3.1	1,100	6.0	8,220
3.5	1,680	7.1	12,200
4.0	2,610		

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	730	2,920	1,940	2,570	1,500	1,750	2,450	7,480	6,770	3,070	1,030	700
2	730	2,880	1,800	2,590	1,700	1,700	3,210	6,710	6,330	3,100	1,000	680
3	730	2,590	1,750	2,470	1,800	1,700	4,100	6,330	6,180	2,920	969	680
4	750	2,570	1,820	2,350	1,800	1,700	4,980	6,640	6,020	3,300	947	642
5	980	2,880	1,420	2,200	1,600	1,650	5,750	7,350	6,330	2,970	947	624
6	1,620	2,690	1,630	1,990	1,550	1,550	6,360	9,460	6,180	2,950	903	615
7	1,180	2,670	1,890	1,680	2,300	1,500	6,840	11,300	6,460	2,610	881	597
8	969	2,490	1,630	1,830	4,200	1,500	7,160	10,800	5,960	2,450	870	606
9	1,090	2,090	1,520	1,990	6,000	1,500	6,390	10,700	5,720	2,320	859	633
10	1,020	1,990	1,540	1,850	7,400	1,450	6,210	11,300	5,990	2,280	837	606
11	1,130	2,120	1,600	1,700	9,000	1,420	6,080	11,700	6,390	2,140	837	710
12	980	1,920	1,710	1,700	6,500	1,400	6,420	12,200	6,960	2,030	826	642
13	936	1,780	1,620	1,700	5,000	1,420	7,830	10,900	6,900	1,960	*793	597
14	892	1,760	1,550	1,750	4,300	1,540	8,630	10,000	6,960	1,890	782	588
15	1,060	1,500	1,580	1,700	3,800	1,550	8,320	9,180	7,320	1,800	771	570
16	992	1,700	1,580	1,750	3,400	1,980	8,050	9,180	7,220	1,710	750	562
17	980	1,630	1,580	1,700	3,100	1,580	8,360	9,460	6,640	*1,650	740	554
18	1,650	1,630	1,580	1,600	2,900	1,440	8,830	9,600	*6,150	1,570	720	554
19	1,440	1,360	1,650	1,550	2,700	1,480	8,630	9,320	5,660	1,500	710	546
20	*1,200	1,540	1,850	1,550	2,500	1,540	7,380	*9,640	5,300	1,440	690	530
21	1,150	1,580	1,900	1,550	2,400	1,620	6,610	10,100	4,950	1,400	690	530
22	1,060	1,660	2,320	*1,490	2,300	1,600	6,120	10,800	4,700	1,330	680	*538
23	1,050	1,750	4,700	1,420	2,200	1,500	5,900	12,000	4,420	1,300	700	538
24	1,030	2,300	4,470	1,490	2,200	1,500	6,120	12,200	4,580	1,260	710	538
25	992	2,630	4,750	1,730	2,000	1,710	6,520	11,900	4,280	1,310	690	756
26	1,310	2,430	4,360	1,850	1,900	2,030	7,030	11,200	3,940	1,230	680	1,100
27	1,260	2,280	3,840	1,580	1,900	2,030	7,620	10,900	3,770	1,160	660	670
28	2,300	2,090	3,460	1,300	1,850	1,940	8,460	10,500	3,530	1,160	690	606
29.	5,660	1,960	3,120	950	-	2,090	9,360	9,220	3,320	1,180	760	588
30	4,180	2,070	3,100	1,000	-	2,180	8,490	8,290	3,160	1,090	881	670
31	3,340	-	2,800	1,100	-	2,160	-	7,420	-	1,050	782	-
Total	44,391	63,460	72,060	53,680	89,800	51,710	203,760	303,780	168,090	59,130	24,785	18,770
Mean	1,432	2,115	2,325	1,732	3,207	1,668	6,792	9,799	5,603	1,907	800	626
Cfsm	1.44	2.12	2.33	1.74	3.22	1.67	6.82	9.84	5.63	1.91	0.803	0.629
In.	1.66	2.37	2.69	2.00	3.35	1.93	7.61	11.34	6.28	2.21	0.93	0.70
Ac-ft	88,050	125,900	142,900	106,500	178,100	102,600	404,200	602,500	333,400	117,300	49,160	37,230

Calendar year 1950: Max 15,800 Min 560 Mean 3,682 Cfsm 3.70 In. 50.18 Ac-ft 2,665,000
Water year 1950-51: Max 12,200 Min 530 Mean 3,160 Cfsm 3.17 In. 43.07 Ac-ft 2,288,000

Peak discharge (base, 9,000 cfs).--Feb. 11 (time unknown) about 10,000 cfs; Apr. 18 (11:30 p.m.) 9,550 cfs (6.38 ft); Apr. 29 (9 to 10 a.m.) 9,640 cfs (6.41 ft); May 11 (12 p.m.) 13,600 cfs (7.48 ft).

* Discharge measurement made on this day.

Note.--No gage-height record; Jan. 10-21, Jan. 28 to Mar. 10; discharge estimated on basis of recorded range in stage, weather records, and records for station near Ahsahka.

North Fork Clearwater River near Ahsahka, Idaho

Location.--Lat 46°31', long. 116°18', in SE¼ sec. 26, T. 37 N., R. 1 E., on right bank at Bruce's Eddy, 1½ miles northeast of Ahsahka and 2 miles upstream from mouth.

Drainage area.--2,440 sq mi, approximately.

Records available.--August 1926 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 969.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Oct. 29, 1930, staff gage on left bank 300 ft upstream at different datum.

Average discharge.--25 years, 5,532 cfs.

Extremes.--Maximum discharge during year, 24,900 cfs May 12 (gage height, 16.60 ft); minimum, 1,050 cfs Sept. 21 (gage height, 2.68 ft).
1926-51: Maximum discharge, 100,000 cfs Dec. 23, 1933 (gage height, 35.5 ft, from floodmarks), from rating curve extended above 24,000 cfs by logarithmic plotting; minimum, probably less than 250 cfs Jan. 8, 1937, during period of ice effect.

Remarks.--Records excellent except those for periods of ice effect, which are fair. No diversion or regulation above station.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,510	6,230	5,030	6,820	b2,600	4,410	7,340	15,600	11,600	5,580	1,960	1,630
2	1,480	7,010	4,550	6,540	b3,500	4,230	9,940	13,600	10,900	5,550	1,950	1,450
3	1,480	5,930	4,210	6,890	b4,100	4,150	11,300	12,400	10,500	5,360	1,900	1,430
4	1,490	5,590	4,320	6,450	4,380	4,120	13,700	12,600	10,100	5,960	1,850	1,410
5	1,620	5,590	4,030	6,020	4,320	4,110	15,700	13,900	10,500	5,910	1,820	1,350
6	2,780	5,620	3,570	5,460	3,950	3,920	17,300	16,400	10,800	5,350	1,810	1,310
7	3,130	5,240	4,470	4,850	3,800	3,800	18,100	21,500	11,100	4,940	1,750	1,280
8	2,250	5,420	4,640	4,550	b5,500	3,470	18,600	21,000	10,900	4,560	1,710	1,260
9	2,250	4,670	*4,130	4,810	b9,900	3,570	17,100	19,900	9,900	4,320	1,690	1,300
10	2,290	4,050	4,100	4,630	14,500	3,590	15,700	21,300	9,900	4,170	1,670	1,320
11	2,720	4,170	4,240	4,360	17,700	3,410	14,700	22,900	10,400	3,990	1,640	1,310
12	2,380	4,050	4,540	4,290	21,600	3,380	14,800	23,400	11,600	3,820	1,620	1,410
13	2,060	3,760	4,680	4,180	15,600	3,500	*16,400	21,300	11,500	3,640	1,590	1,350
14	1,940	3,750	4,480	4,320	12,200	3,630	19,700	20,700	11,400	3,490	*1,560	1,260
15	1,870	3,450	4,420	4,320	10,400	4,120	19,300	18,400	11,800	3,380	1,560	1,220
16	2,050	3,230	4,540	4,230	9,150	5,590	18,100	17,700	12,000	*3,220	1,510	1,180
17	1,930	3,520	4,650	*4,470	8,120	4,880	18,100	18,000	11,100	3,110	1,460	1,170
18	2,220	3,570	4,690	4,290	7,520	4,170	19,000	18,300	10,400	2,980	1,440	1,150
19	3,290	3,240	4,670	3,990	6,900	4,060	19,000	17,700	*9,620	2,820	1,410	1,130
20	2,680	2,890	5,240	3,820	6,410	4,290	16,200	*17,500	8,990	2,720	1,380	1,100
21	*2,280	3,250	5,500	3,800	6,020	4,670	14,200	17,500	8,510	2,620	1,360	1,060
22	2,180	3,430	5,580	3,810	5,690	4,780	13,000	18,500	8,000	2,540	1,350	1,060
23	2,050	3,930	10,400	3,590	5,410	4,500	12,000	20,500	7,670	2,470	1,360	*1,080
24	2,050	4,250	13,800	3,530	5,260	4,320	12,200	20,600	7,700	2,390	1,370	1,100
25	1,970	6,410	12,200	4,060	5,230	4,760	12,600	19,700	7,850	2,340	1,390	1,170
26	2,530	6,380	11,500	4,560	4,820	5,460	13,500	18,700	7,040	2,340	1,370	2,040
27	2,850	5,810	9,860	4,840	4,420	6,060	14,500	18,000	6,720	2,230	1,330	2,010
28	3,280	5,370	8,800	3,310	4,510	6,100	16,000	17,700	6,380	2,160	1,330	1,450
29	11,600	4,940	7,980	2,450	-	6,350	18,400	15,500	6,020	2,200	1,600	1,300
30	10,400	4,740	7,680	b2,250	-	6,720	17,700	14,000	5,750	2,140	1,840	1,300
31	7,760	-	7,670	b2,400	-	6,690	-	12,700	-	2,040	1,920	-
Total	92,370	139,490	190,170	137,890	213,510	140,810	464,180	557,500	286,650	110,340	49,500	39,590
Mean	2,980	4,650	6,135	4,448	7,625	4,542	15,470	17,980	9,555	3,559	1,597	1,320
Cfsm	1.22	1.91	2.51	1.82	3.13	1.86	6.34	7.37	3.92	1.46	0.655	0.541
In.	1.41	2.13	2.90	2.10	3.25	2.15	7.07	8.50	4.37	1.68	0.75	0.60
Ac-ft	183,200	276,700	377,200	273,500	423,500	279,300	920,700	‡1,106	568,600	218,900	98,180	78,530

Calendar year 1950: Max 32,100 Min 1,100 Mean 8,103 Cfsm 3.32 In. 45.08 Ac-ft 5,866,000
Water year 1950-51: Max 23,400 Min 1,060 Mean 6,636 Cfsm 2.72 In. 36.91 Ac-ft 4,804,000

Peak discharge (base, 18,000 cfs).--Feb. 12 (3 a.m.) 23,800 cfs (16.19 ft); Apr. 8 (10 a.m.) 19,500 (14.55 ft); Apr. 14 (11 a.m.) 20,900 cfs (15.12 ft); Apr. 29 (6 to 8 p.m.) 19,400 cfs (14.50 ft); May 12 (9:30 a.m.) 24,900 cfs (16.60 ft).

* Discharge measurement made on this day.

‡ Expressed in thousands.

b Stage-discharge relation affected by ice.

Potlatch Creek at Kendrick, Idaho

Location.--Lat 46°37', long. 116°39', in NW¼ sec. 25, T. 38 N., R. 3 W., near center of main span on upstream side of Mill Street Bridge in Kendrick, 0.9 mile downstream from Bear Creek and 3.2 miles upstream from Middle Potlatch Creek.

Drainage area.--460 sq mi.

Records available.--October 1945 to September 1951.

Gage.--Wire-weight gage read once daily. Datum of gage is 1,198.2 ft above mean sea level, unadjusted.

Average discharge.--6 years, 469 cfs.

Extremes.--Maximum discharge observed during year, 8,550 cfs Feb. 12 (gage height, 10.82 ft, from graph based on gage readings); minimum observed, 5.9 cfs Aug. 23; minimum gage height observed, 4.85 ft Aug. 23, Sept. 23.
1945-51: Maximum discharge observed, 13,000 cfs Feb. 26, 1948 (gage height, 12.6 ft, from floodmarks), by slope-area determination of peak flow; minimum observed, 4.3 cfs Aug. 25, 1946; minimum gage height observed, 3.28 ft Oct. 12-16, 1945.

Remarks.--Records fair. No diversion or regulation.

Revisions (water years).--W 1093: 1946(M).

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 11				Feb. 12 to Sept. 30					
4.8	12	6.5	610	4.8	5	5.7	136	8.0	2,030
4.9	19	7.0	970	4.9	8	6.0	253	9.0	4,080
5.0	30	8.0	2,250	5.0	13	6.5	515		
5.2	70	9.0	4,120	5.2	29	7.0	865		
5.5	155	10.2	7,000	5.4	57	7.5	1,330		
6.0	355								

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	122	203	616	311	294	1,520	421	77	30	12	14
2	18	291	179	550	355	280	1,760	336	72	27	12	11
3	18	211	148	594	343	276	1,820	327	70	27	10	10
4	18	179	163	588	319	271	2,030	249	64	31	10	10
5	19	108	203	530	307	249	1,930	266	92	49	10	8.5
6	43	89	195	425	279	240	1,750	280	114	47	10	7.7
7	37	72	816	385	271	224	1,540	245	192	39	10	7.7
8	34	89	694	375	545	184	1,370	249	351	34	11	7.4
9	28	89	505	380	1,930	224	1,170	253	199	31	10	6.8
10	27	70	*505	323	5,040	180	979	219	133	27	9.5	7.1
11	32	68	530	339	6,820	176	841	195	111	24	9.5	8.0
12	32	57	515	323	6,800	184	762	253	102	23	10	8.0
13	28	55	445	305	2,770	245	718	245	100	22	11	8.0
14	24	55	343	450	1,760	388	*785	362	82	22	*9.0	8.5
15	24	52	445	594	1,400	1,170	740	388	77	*28	9.5	7.1
16	22	50	480	772	1,030	1,930	654	308	68	20	10	6.8
17	22	52	455	*816	825	1,080	588	253	61	15	9.5	7.1
18	27	84	445	730	801	825	551	236	59	18	10	6.8
19	30	77	430	545	647	1,000	527	203	*54	16	9.0	7.4
20	50	84	430	495	582	1,520	473	178	52	16	8.5	6.8
21	34	82	420	475	515	1,890	388	*165	49	16	7.1	7.1
22	*29	129	470	445	449	1,460	341	154	46	15	6.5	6.8
23	27	227	1,750	347	372	1,050	317	140	43	13	5.9	*6.5
24	27	271	1,840	415	388	1,180	276	130	47	13	6.8	6.8
25	24	480	1,070	594	432	1,780	253	127	52	13	6.2	6.8
26	43	420	793	1,000	298	2,030	240	108	55	12	7.1	10
27	68	295	640	1,230	280	1,950	245	108	46	11	6.8	10
28	72	239	545	545	*258	1,720	276	102	40	10	6.8	15
29	207	199	535	450	-	1,610	438	89	35	12	11	11
30	303	163	730	370	-	1,460	594	87	31	11	11	12
31	183	-	706	327	-	1,240	-	82	-	12	14	--
Total	1,568	4,459	17,628	16,331	36,127	28,310	25,876	6,756	2,574	684	289.7	256.7
Mean	50.6	149	569	527	1,290	913	863	218	85.8	22.1	9.35	8.56
Cfsm	0.110	0.324	1.24	1.15	2.80	1.98	1.88	0.474	0.187	0.048	0.020	0.019
In.	0.13	0.36	1.43	1.32	2.92	2.29	2.09	0.55	0.21	0.06	0.02	0.02
Ac-ft	3,110	8,840	34,960	32,390	71,660	56,150	51,320	13,400	5,110	1,360	575	509

Calendar year 1950: Max 6,780 Min 12 Mean 572 Cfsm 1.24 In. 16.89 Ac-ft 413,900
Water year 1950-51: Max 6,820 Min 5.9 Mean 386 Cfsm 0.839 In. 11.40 Ac-ft 279,400

* Discharge measurement made on this day.

Clearwater River at Spalding, Idaho

Location.--Lat 46°25', long. 116°51', in lot 22, sec. 22, T. 36 N., R. 4 W., on right bank a quarter of a mile downstream from Lapqai Creek and three-eighths of a mile northwest of Spalding Post Office.

Drainage area.--9,570 sq mi, approximately.

Records available.--March 1926 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 770 ft (from comparison with gage 2,300 ft upstream). Prior to Oct. 1, 1928, staff gage 2,300 ft upstream at datum 772.49 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Average discharge.--25 years, 14,840 cfs.

Extremes.--Maximum discharge during year, 73,800 cfs May 12 (gage height, 14.82 ft); minimum, 2,070 cfs Sept. 22 (gage height, 2.62 ft).
1926-51: Maximum discharge, 177,000 cfs May 29, 1948; maximum gage height, 25.6 ft Jan. 5, 1928 (present site and datum), from floodmark (ice jam); minimum, probably less than 500 cfs Jan. 9, 1937, during period of ice effect.

Remarks.--Records excellent except those for period of ice effect, which are good. Small diversions from tributaries; slight diurnal fluctuation at times caused by powerplant on South Fork.

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,530	14,200	11,200	15,200	b5,500	*10,000	16,100	41,600	36,300	17,800	4,940	3,640
2	3,370	14,800	10,600	14,500	b7,500	9,640	18,800	36,000	32,400	17,800	4,800	3,230
3	3,290	14,000	9,720	15,000	b11,000	9,360	23,700	32,300	30,300	17,900	4,640	3,020
4	3,290	12,700	9,890	14,500	b11,500	9,360	29,400	31,800	28,600	17,600	4,460	2,940
5	3,470	12,700	10,400	13,700	b11,000	9,330	34,300	35,100	30,300	20,200	4,330	2,840
6	5,140	13,500	8,950	12,600	b10,500	8,990	38,500	41,700	33,700	17,400	4,350	2,710
7	7,320	13,000	12,100	11,200	b10,000	8,720	41,200	58,300	32,500	16,400	4,150	2,660
8	5,990	13,800	14,200	10,100	14,600	8,290	43,300	61,500	33,200	14,700	3,930	2,550
9	5,260	12,600	11,900	10,700	23,600	8,390	41,500	58,100	29,700	13,600	3,800	2,570
10	5,960	10,300	*11,200	10,800	41,700	8,490	38,400	60,300	29,400	12,900	3,740	2,640
11	6,130	9,930	11,400	10,000	46,500	8,000	35,600	66,300	31,900	12,900	3,660	2,590
12	5,820	10,400	11,700	9,780	54,700	7,900	34,600	70,400	36,400	11,700	3,580	2,690
13	5,520	9,580	12,000	9,610	38,800	8,490	*37,000	63,000	37,800	11,000	3,550	2,840
14	5,240	8,880	11,400	10,000	29,300	9,820	44,900	58,900	38,500	10,600	*3,430	2,680
15	4,940	8,750	11,000	10,900	24,600	11,400	46,600	51,800	41,200	*10,400	3,350	2,530
16	5,420	7,840	10,900	*11,000	21,800	15,900	44,400	49,100	45,300	10,100	3,270	2,420
17	5,520	8,360	10,800	11,500	19,000	13,700	44,200	49,900	41,600	9,540	3,150	2,370
18	5,450	8,720	10,600	11,400	17,600	11,900	46,300	52,000	38,000	9,010	3,090	2,340
19	7,900	8,620	10,300	10,400	16,200	11,600	47,100	52,000	*34,100	8,470	3,000	2,280
20	7,410	7,590	10,800	9,610	14,900	13,200	42,000	51,400	31,800	8,050	2,920	2,230
21	*6,210	8,130	11,400	9,400	14,000	14,300	36,300	*51,400	29,600	7,560	2,840	2,180
22	5,960	8,680	11,400	9,540	13,300	13,600	32,200	54,000	27,300	7,120	2,780	2,140
23	6,160	9,780	17,000	9,190	12,400	12,300	29,400	61,600	25,400	6,790	2,750	*2,150
24	5,900	10,900	25,200	8,850	12,000	11,900	28,800	67,500	24,600	6,490	3,060	2,170
25	5,770	13,100	23,100	9,780	12,000	13,200	29,400	67,600	26,200	6,300	3,430	2,230
26	5,880	14,400	23,700	11,600	11,300	14,700	31,500	62,200	23,400	6,440	3,250	2,730
27	7,230	13,500	20,800	12,900	10,300	16,000	34,300	59,100	22,000	6,070	3,370	3,820
28	7,140	12,600	18,800	9,680	9,960	15,500	38,000	61,200	21,100	5,680	2,880	3,270
29	14,400	11,600	17,600	b5,800	-	15,400	45,800	54,500	19,800	5,510	3,000	2,710
30	21,400	10,900	16,700	b5,200	-	16,000	47,600	46,900	18,400	5,560	3,490	2,570
31	17,400	-	16,800	b5,200	-	15,700	-	41,200	-	5,220	3,930	-
Total	209,420	333,860	423,560	329,640	525,560	361,080	‡1,101.2	‡1,648.7	930,800	336,810	110,920	79,740
Mean	6,755	11,130	13,660	10,630	18,770	11,650	36,710	53,180	31,030	10,860	3,578	2,658
Cfsm	0.706	1.16	1.43	1.11	1.96	1.22	3.84	5.56	3.24	1.13	0.374	0.278
In.	0.81	1.30	1.65	1.28	2.04	1.40	4.28	6.41	3.62	1.31	0.43	0.31
Ac-ft	415,400	662,200	840,100	653,800	‡1,042	716,200	‡2,184	‡3,270	‡1,846	668,100	220,000	158,200

Calendar year 1950: Max 91,900 Min 2,400 Mean 21,110 Cfsm 2.21 In. 29.95 Ac-ft 15,280,000
Water year 1950-51: Max 70,400 Min 2,140 Mean 17,510 Cfsm 1.83 In. 24.84 Ac-ft 12,680,000

Peak discharge (base, 50,000 cfs).--Feb. 12 (3:30 a.m.) 57,800 cfs (13.44 ft); May 12 (12 m. to 2 p.m.) 73,800 cfs (14.82 ft); May 24 (4 p.m.) 71,100 cfs (14.57 ft).
* Discharge measurement made on this day.
‡ Expressed in thousands.
b Stage-discharge relation affected by ice.

Snake River near Clarkston, Wash.

Location.--Lat 46°25'30", long. 117°10'30", in lot 1, sec. 16, T. 11 N., R. 45 E., on right bank 2 miles upstream from Alpowa Creek, 7 miles downstream from Clarkston, and 134 miles upstream from mouth.

Drainage area.--103,200 sq mi, approximately.

Records available.--October 1915 to September 1922 and August 1928 to September 1951 in reports of Geological Survey. October 1909 to September 1933 in State Water-Supply Bulletin 5. Prior to October 1935, published as "at Riparia."

Gage.--Water-stage recorder. Datum of gage is 670 ft above mean sea level (Corps of Engineers benchmark). Prior to Sept. 12, 1917, staff gage and Sept. 12, 1917, to Sept. 30, 1922, Aug. 6, 1928, to Sept. 30, 1935, chain gage at site 66 miles downstream at different datum.

Extremes.--Maximum discharge during year, 182,000 cfs May 24, 25; maximum gage height, 29.37 ft May 25; minimum, 16,500 cfs Sept. 23 (gage height, 10.35 ft); minimum daily, 19,200 cfs Sept. 16, 23.

1909-51: Maximum discharge, 369,000 cfs May 29, 1948 (gage height, 40.36 ft, from high-water mark on gage well); minimum observed, 10,600 cfs Aug. 14, 18, 20, 24-28, 30, 31, Sept. 1, 2, 5, 1931, but may have been less during period of ice effect in January 1937.

Maximum stage known, 24.7 ft, Riparia site and datum, June 5, 1894, determined from floodmarks by United States Weather Bureau (discharge, 409,000 cfs).

Remarks.--Records excellent. Small diversions by pumping between this station and station at Oxbow, Oreg. Large diurnal fluctuation caused by powerplant on Clearwater River above Lewiston, Idaho.

Revisions (water years).--W 463: 1916. W 933: 1937.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)

11.0	19,200
16.0	47,200
24.0	117,000
29.2	179,000

Discharge, in cubic feet per second, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26,000	47,200	39,400	44,500	33,000	43,800	68,400	112,000	133,000	70,000	28,100	24,500
2	24,000	47,200	38,200	43,200	31,900	43,200	*70,800	104,000	122,000	70,800	27,600	23,000
3	25,500	47,200	35,800	43,200	34,600	41,900	79,200	97,500	114,000	72,400	27,000	22,000
4	26,000	44,500	35,800	41,900	38,200	40,600	88,200	96,500	106,000	66,800	26,500	22,000
5	25,500	43,200	37,000	41,900	40,600	*41,900	98,500	100,000	104,000	71,600	26,500	21,500
6	30,200	43,200	34,600	41,200	41,900	41,900	108,000	110,000	106,000	68,400	26,500	21,000
7	34,100	*43,200	41,200	37,000	*47,200	42,600	118,000	131,000	104,000	65,200	27,000	20,600
8	34,100	43,200	45,800	35,800	55,100	42,600	125,000	146,000	104,000	58,800	27,000	20,100
9	29,200	39,400	43,200	34,600	78,300	42,600	122,000	148,000	99,500	55,100	25,500	20,100
10	31,400	40,000	41,900	34,600	102,000	43,200	119,000	151,000	94,500	*53,600	26,000	20,100
11	30,200	37,600	41,200	35,200	110,000	42,600	114,000	*157,000	95,500	51,400	25,500	20,100
12	29,700	38,200	41,900	35,800	125,000	42,600	112,000	167,000	99,500	46,500	25,000	20,100
13	30,800	37,000	41,900	34,600	108,000	42,600	114,000	162,000	104,000	45,800	24,500	20,100
14	29,200	35,800	41,200	35,800	93,600	43,800	123,000	156,000	108,000	43,800	23,500	20,600
15	29,700	35,200	40,600	38,800	81,900	47,200	129,000	142,000	114,000	42,600	23,000	20,600
16	28,100	35,200	*40,000	40,600	72,400	58,800	128,000	135,000	123,000	41,900	22,000	19,200
17	30,800	35,800	38,800	41,900	66,800	60,400	124,000	*141,000	125,000	40,600	22,500	21,100
18	30,800	36,400	39,400	42,600	62,000	59,600	125,000	147,000	123,000	39,400	22,000	20,600
19	32,400	34,600	38,200	41,200	58,800	57,400	126,000	153,000	119,000	37,600	21,500	20,100
20	34,600	31,400	38,200	40,600	55,100	58,100	120,000	153,000	112,000	35,800	20,600	20,600
21	33,000	33,600	39,400	39,400	52,800	62,800	112,000	151,000	106,000	33,600	20,600	20,100
22	30,800	34,600	39,400	39,400	52,100	65,200	102,000	152,000	102,000	33,600	20,600	20,100
23	30,200	37,600	43,200	38,200	50,000	63,600	94,500	161,000	94,500	33,000	*22,500	19,200
24	30,800	37,600	55,100	37,600	50,700	63,600	90,900	174,000	90,000	31,400	23,000	19,700
25	30,200	40,000	52,800	38,800	50,000	66,000	89,100	179,000	89,100	31,400	23,500	20,100
26	29,700	39,400	53,600	42,600	47,900	68,400	89,100	178,000	83,700	30,800	24,000	21,100
27	33,000	41,200	50,000	45,800	45,200	69,200	90,000	171,000	81,900	30,200	23,000	22,000
28	32,400	40,600	47,200	45,200	44,500	70,800	93,600	*175,000	79,200	29,200	23,000	22,500
29	40,600	40,000	45,800	38,200	-	69,200	106,000	174,000	75,600	28,600	23,500	22,000
30	54,400	39,400	44,500	34,600	-	70,000	118,000	161,000	71,600	28,600	23,500	22,000
31	52,100	-	45,800	33,600	-	68,400	-	147,000	-	28,100	24,500	-
Total	989,500	‡1,179.5	‡1,311.1	‡1,218.4	‡1,729.6	‡1,674.6	‡3,197.3	‡4,532	‡3,083.6	‡1,416.6	749,500	626,800
Mean	31,920	39,320	42,290	39,300	61,770	54,020	106,600	146,200	102,800	45,700	24,180	20,890
Ac-ft	‡1,963	‡2,340	‡2,601	‡2,417	‡3,431	‡3,322	‡6,342	‡8,989	‡6,116	‡2,810	‡1,487	‡1,243

Calendar year 1950: Max 200,000 Min 17,000 Mean 61,400 Ac-ft 44,460,000
Water year 1950-51: Max 179,000 Min 19,200 Mean 59,480 Ac-ft 43,060,000

* Discharge measurement made on this day.
‡ Expressed in thousands.

Palouse River at Hooper, Wash.

Location.--Lat 46°45'30", long. 118°08'50", in SE¼ sec. 27, T. 15 N., R. 37 E., on left bank 150 ft downstream from State Highway 11B bridge at Hooper and 0.4 mile upstream from Cow Creek.

Drainage area.--2,540 sq mi (revised), approximately.

Records available.--April 1897 to April 1907, June 1908 to March 1916, February to September 1951 (some years fragmentary prior to 1914). Prior to 1904, sometimes published as "near Hooper."

Gage.--Water-stage recorder. Altitude of gage is 1,040 ft (from topographic map). Apr. 1 to Sept. 8, 1897, staff gage at site 2½ miles upstream at different datum. Sept. 9, 1897, to March 1916, various staff gages at site 1½ miles upstream from present site at different datum. Feb. 8 to Mar. 28, 1951, staff gage at present site and datum.

Extremes.--Maximum discharge during period, 9,540 cfs Mar. 16 (gage height, 12.09 ft, from high-water mark on gage well); minimum, 12.5 cfs Aug. 14, 15 (gage height, 3.29 ft). 1897-1916, 1950-51: Maximum discharge observed, 27,800 cfs Mar. 2, 1910 (gage height, 21.0 ft, site and datum then in use); no flow for part of June 25, 1910.

Remarks.--Records good except those for periods of no gage-height record, which are poor. No regulation. Diversions above station for irrigation, domestic, and municipal use.

Rating table, Feb. 8, to Sept. 30, 1951 (gage height, in feet, and discharge, in cubic feet per second)

3.3	13	6.0	640
3.5	26	7.0	1,240
4.0	71	8.0	2,060
4.5	146	9.0	3,240
5.0	265	10.0	4,820
5.5	430	11.6	8,200

Discharge, in cubic feet per second, February to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-	-	-	940	1,540	715	238	115	32	22
2			-	-	-	940	1,460	665	225	110	32	22
3			-	-	-	a900	1,500	578	215	104	32	32
4			-	†1,690	-	a830	1,580	538	*205	98	33	33
5			-	-	-	765	1,700	526	228	*96	31	32
6			-	-	-	*765	1,820	518	265	98	30	30
7			†378	-	-	765	1,860	534	356	110	28	27
8			-	-	3,310	740	1,780	530	398	98	25	26
9			-	-	5,180	715	1,700	510	582	104	25	26
10			-	-	6,800	715	1,580	*506	550	87	25	26
11			-	-	6,800	715	1,380	482	420	93	25	27
12			-	-	7,240	715	1,200	462	313	78	24	27
13			-	-	7,720	940	1,100	458	295	76	23	25
14			-	-	4,520	1,460	1,000	470	274	76	18	23
15			-	-	3,450	2,210	1,030	466	268	75	17	22
16			-	-	2,840	*8,200	1,060	474	256	71	19.5	23
17			-	-	2,480	a4,500	1,000	430	247	68	19	24
18			†679	-	a2,200	a3,000	910	426	235	*67	19	23
19			-	-	1,960	2,540	850	412	222	63	19	25
20			-	-	1,620	2,480	820	398	210	67	18.5	25
21			-	-	1,660	2,480	765	374	198	64	18	25
22			-	†1,000	1,540	2,310	715	350	188	55	*18	25
23			-	-	1,310	2,160	*690	325	177	53	18.5	25
24			-	-	1,200	a2,100	665	310	169	48	18	25
25			-	-	1,200	a2,200	640	292	157	44	18.5	25
26			-	-	1,240	a2,300	600	283	150	42	18	27
27			-	-	1,060	a2,200	534	277	142	40	17	30
28			-	-	1,000	1,780	510	268	135	39	17	30
29			-	-	-	1,580	*538	265	126	39	18	33
30			-	-	-	1,620	590	271	122	36	19.5	36
31			-	-	-	1,620	-	256	-	*35	21	-
Total			-	-	-	57,185	33,117	13,369	7,566	2,249	696.5	801
Mean			-	-	-	1,845	1,104	431	252	72.5	22.5	26.7
Ac-ft			-	-	-	113,400	65,690	26,520	15,010	4,460	1,380	1,590

Calendar year	: Max	Min	Mean	Ac-ft	
Water year	: Max	Min	Mean	Ac-ft	

* Discharge measurement made on this day.
† Result of discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Asotin Creek near Asotin.

Cow Creek at Hooper, Wash.

Location.--Lat 46°45'57", long. 118°08'45", in NW¼ sec. 26, T. 15 N., R. 37 E., on left bank at downstream side of highway bridge, half a mile upstream from mouth, and half a mile north of Hooper.

Drainage area.--370 sq mi.

Records available.--February to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 1,070 ft (from topographic map).

Extremes.--Maximum discharge during period, 136 cfs Feb. 9 (gage height, 3.10 ft); no flow July 27 to Aug. 3.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. Probably some small diversions for domestic use. No regulation.

Rating table, Feb. 1 to Sept. 30, 1951 (gage height, in feet, and discharge, in cubic feet per second)

1.1	0	1.8	16.0
1.2	.7	2.2	36
1.3	2.4	2.6	74
1.5	7.0	3.0	130

Discharge, in cubic feet per second, February to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					a31	45	106	112	55	38	0	5.8
2					a31	45	108	110	55	39	0	5.3
3					a28	47	110	115	53	37	4.4	5.1
4					24	52	110	115	*53	36	5.8	6.3
5					24	55	112	115	59	*36	5.3	5.3
6					24	*57	112	115	65	36	4.8	5.1
7					29	62	114	116	68	35	5.6	4.4
8					*34	64	114	112	68	33	6.0	3.3
9					106	70	114	108	67	33	6.5	2.6
10					94	67	115	*97	66	31	6.5	2.2
11					70	70	115	91	68	29	5.1	1.7
12					50	74	114	91	65	27	5.1	2.6
13					45	77	114	90	63	25	4.8	4.4
14					43	90	112	87	61	24	4.6	1.9
15					43	88	112	84	59	22	3.7	1.5
16					42	90	110	83	56	21	4.2	1.7
17					42	97	109	79	55	20	4.6	4.2
18			†12.5		42	91	104	74	53	*16.5	4.8	4.2
19					42	92	103	66	49	12	5.3	a3.0
20					42	94	103	64	48	6.8	5.3	a2.5
21					40	96	102	70	47	5.1	3.9	a2.8
22				†23	38	97	102	73	47	10	*2.4	a4.0
23					39	97	*100	77	46	14.5	2.6	a4.1
24					40	97	99	74	44	13.5	3.1	a4.3
25					40	97	100	68	43	11	4.2	a4.7
26					42	99	104	62	42	7.0	4.2	a5.2
27					43	100	106	60	41	0	3.9	a5.2
28					44	102	109	57	39	0	4.8	a5.3
29					-	103	114	57	39	0	6.3	a5.8
30					-	104	115	58	39	0	7.6	a6.7
31					-	106	-	54	-	*0	6.8	-
Total			-	-	1,212	2,525	3,262	2,634	1,613	618.4	142.2	121.2
Mean			-	-	43.3	81.5	109	85.0	53.7	19.9	4.59	4.04
Ac-ft			-	-	2,400	5,010	6,470	5,220	3,200	1,230	282	240

Calendar year	: Max	Min	Mean	Ac-ft	
Water year	: Max	Min	Mean	Ac-ft	

* Discharge measurement made on this day.
† Result of discharge measurement.
a No gage-height record; discharge estimated on basis of records for nearby streams.

Measurements of streamflow in the Snake River basin made at points other than gaging stations are given in the following table:

Miscellaneous discharge measurements in Snake River basin during water year October 1950 to September 1951

Henrys Fork basin, Idaho

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
Mar. 15	Teton River.....	Henrys Fork.....	NW¼NE¼ sec. 29, T. 7 N., R. 44 E., about 300 ft upstream from powerplant diversion tunnels.	320

Tributaries between Portneuf River and Salmon Falls Creek, Idaho

Mar. 20	Devils Washbowl Springs.	Snake River.....	NE¼NE¼ sec. 4, T. 10 S., R. 18 E., ½ mile above Twin Falls of Snake River and plant of Idaho Power Co., 3½ miles north of Kimberly.	*25.6
20	Devils Corral Spring (upper outlet).	....do.....	NE¼SE¼ sec. 32, T. 9 S., R. 18 E., on north side of Snake River 100 ft above point where spring cascades down to river.	40.6
20	Devils Corral Spring (lower outlet).	....do.....	SE¼NW¼ sec. 32 T. 9 S., R. 18 E., on north side of Snake River 1/8 mile above mouth of creek.	8.51
19	Unnamed spring....	....do.....	Near center of sec. 31, T. 9 S., R. 18 E., on north side of Snake River, ½ mile above Shoshone Power Plant.	1.87
19	....do.....	....do.....	Outlet to river in NW¼SW¼ sec. 31, T. 9 S., R. 18 E., on north side of Snake River, just above Shoshone Falls, on D. T. Heter property.	5.12
20	....do.....	....do.....	SW¼NW¼ sec. 34, T. 9 S., R. 17 E., on north side of Snake River, 200 yards below Rim to Rim bridge, 2 miles north of Twin Falls.	1.34
30	Blue Lakes outlet.	....do.....	SW¼SW¼ sec. 28, T. 9 S., R. 17 E., at point of entry to Snake River, 4 miles north of Twin Falls.	*258
21	Sunnybrook spring.	....do.....	SE¼SE¼ sec. 19, T. 9 S., R. 17 E., 3/8 mile above point of entry to river.	*24.2
22	Trail Springs (upper outlet).	....do.....	SW¼SW¼ sec. 14, T. 9 S., R. 16 E., 1 mile below Rock Creek and 6 miles northwest of Twin Falls.	*2.53
22	Crystal Springs...	....do.....	Sec. 12, T. 9 S., R. 15 E., 6½ miles above Devils Washboard Falls in Snake River and 7 miles northeast of Buhl.	*575
26	Niagara Springs...	....do.....	E½NE¼ sec. 10, T. 9 S., R. 15 E., 4½ miles above Devils Washboard Falls and 6 miles northeast of Buhl.	*313
26	Clear Lakes Outlet.	....do.....	SW¼SE¼ sec. 2, T. 9 S., R. 14 E., at Clear Lakes plant Idaho Power Co., 4½ miles north of Buhl.	*533
28	Briggs Creek.....	....do.....	NW¼SE¼ sec. 4, T. 9 S., R. 14 E., 2 miles below Clear Lakes outlet and 5½ miles northwest of Buhl.	*109
28	Banbury Springs...	....do.....	SE¼NW¼ sec. 33, T. 8 S., R. 14 E., at footbridge over outlet to Snake River, 7 miles northwest of Buhl.	*138
28	Unnamed spring....	....do.....	SE¼SW¼ sec. 28, T. 8 S., R. 14 E., on east side of Snake River, 0.35 mile above Blind Canyon Spring and 7 miles northwest of Buhl.	5.85
21	Blind Canyon Spring.	....do.....	NE¼SW¼ sec. 28, T. 8 S., R. 14 E., just upstream from Box Canyon, 7½ miles northwest of Buhl.	*10.4

* Discharge represents actual net spring flow adjusted for diversions and surface flow.

Big Lost River basin, Idaho

Oct. 2	Zollinger ditch...	Big Lost River.....	Sec. 32, T. 8 N., R. 23 E., 500 ft east of gaging station on Big Lost River (east channel) above Mackay Reservoir, 3 miles upstream from Mackay Dam and 7½ miles northwest of Mackay.	0
May 17	....do.....	....do.....	....do.....	5.58
18	....do.....	....do.....	....do.....	8.60
18	....do.....	....do.....	....do.....	9.54
June 18	....do.....	....do.....	....do.....	21.8
Aug. 17	Unnamed canal.....	....do.....	NW¼ sec. 5, T. 2 N., R. 29 E., at diversion dam.	2.06
17	Big Lost River....	Snake River.....	NW¼NW¼ sec. 5, T. 2 N., R. 29 E., below diversion dam.	37.2
17	....do.....	....do.....	NW¼NE¼ sec. 33, T. 3 N., R. 29 E., below bridge on U. S. Highway 20.	31.9
17	....do.....	....do.....	SW¼NE¼ sec. 24, T. 3 N., R. 29 E., above bridge on Edwards Boulevard.	23.2
17	....do.....	....do.....	SE¼NE¼ sec. 8, T. 3 N., R. 30 E., at old Idaho Falls stage road ford, 20 miles east of Arco.	19.4
17	....do.....	....do.....	NE¼NE¼ sec. 33, T. 4 N., R. 30 E., at Magazine Road crossing, 21 miles east of Arco.	14.3
17	....do.....	....do.....	SW¼SW¼ sec. 3, T. 4 N., R. 30 E., at West Monument Crossing, 9 miles southeast of Howe.	7.00
17	....do.....	....do.....	SW¼SW¼ sec. 27, T. 5 N., R. 30 E., 8 miles southeast of Howe.	4.77

Miscellaneous discharge measurements in Snake River basin during water year October 1950 to September 1951--Continued

Big Lost River basin, Idaho--Continued

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
Aug. 17	Big Lost River....	Snake River.....	Sec. 22, T. 5 N., R. 30 E., 7 miles southeast of Howe.	0

Tributaries and diversions between Salmon Falls Creek and Malad River

Mar. 23	Thousand Springs..	Snake River.....	Springs enter Snake River between mile 154.05 on river profile near line between secs. 17 and 20, T. 8 S., R. 14 E., and mile 151.15 on river profile about 200 ft upstream from line between sec. 1, T. 8 S., R. 13 E., and sec. 6, T. 8 S., R. 14 E.	†1,140
27	Riley Creek.....	....do.....	SW¼NE¼ sec. 6, T. 8 S., R. 14 E., at Hagerman Hatchery of U. S. Fish and Wildlife Service, 100 yds below confluence of Riley and Lewis Creek and 100 ft below small unnamed spring entering from right, and 5 miles southeast of Hagerman.	*63.0
27	Billingsly Creek..	....do.....	Near line between secs. 31 and 32, T. 7 S., R. 14 E. (spring heads in SW¼NW¼ sec. 32) at E. W. Bean farm 1/8 mile below head of creek and 3⅝ miles southeast of Hagerman.	*46.3
27	Birch Creek.....	....do.....	SE¼SE¼ sec. 34, T. 6 S., R. 13 E., on Bud Smith property, ¾ mile south of Malad River, and 2½ miles north of Hagerman.	*9.85

* Discharge represents actual net spring flow adjusted for diversions and surface flow.
† Discharge obtained by measuring Snake River above and below spring outlets and adjusting for surface flow.

Malad River basin, Idaho

Oct. 26	Malad Springs.....	Snake River.....	Springs head in SE¼ sec. 24, T. 6 S., R. 13 E., and enter Snake River in NW¼ sec. 34, T. 6 S., R. 13 E., 3 miles north of Hagerman.	1,270
Mar. 29	....do.....	....do.....	....do.....	1,240

Canyon Creek basin, Idaho

May 23	Ake lateral No. 2.	Mountain Home feeder canal.	Sec. 36, T. 2 S., R. 6 E., at head, 5 miles north of Mountain Home.	5.52

Boise River basin, Idaho

Oct. 13	Middle Fork Boise River.	Boise River.....	Sec. 4, T. 4 N., R. 7 E., at site of former gaging station 1,000 ft above confluence with North Fork.	251
May 23	Little Camas Creek	South Fork Boise River.	NE¼ sec. 9, T. 1 S., R. 9 E., below Little Camas Reservoir.	27.5
Nov. 29	Boise River.....	Snake River.....	NW¼ sec. 11, T. 2 N., R. 3 E., ½ mile below diversion tunnel for Lucky Peak Dam and 8 miles downstream from Moore Creek.	127
Jan. 12	....do.....	....do.....	....do.....	153
Feb. 9	....do.....	....do.....	....do.....	866
Mar. 5	....do.....	....do.....	....do.....	1,580
Apr. 21	....do.....	....do.....	....do.....	9,800
May 11	....do.....	....do.....	....do.....	9,860
14	....do.....	....do.....	....do.....	10,100
June 7	....do.....	....do.....	....do.....	6,940
27	....do.....	....do.....	....do.....	5,530
July 16	....do.....	....do.....	....do.....	4,450
Aug. 14	....do.....	....do.....	....do.....	4,120
Sept.17	....do.....	....do.....	....do.....	3,190

Malheur River basin, Oreg.

Aug. 7	Warmsprings Creek.	North Fork Malheur River.	Near line between secs. 1 and 2 T. 19 S., R. 37 E., 2½ miles northeast of Beulah.	0.65
Sept.27	....do.....	....do.....	....do.....	2.10
Apr. 11	Nichol's artesian well.	Willow Creek.....	SW¼ sec. 15, T. 14 S., R. 39 E., on Nichol's ranch 1 mile northeast of Ironside.	3.3

Burnt River basin, Oreg.

June 8	Warm Springs.....	South Fork Burnt River.	NW¼SW¼ sec. 13, T. 13 S., R. 36 E., ½ mile above Whited Reservoir Dam and 3 miles west of Unity.	1.4

Powder River basin, Oreg.

Sept.20	Eagle Creek.....	Powder River.....	Sec. 7 or 18, T. 8 S., R. 45 E., ½ mile above mouth of Skull Creek and 6 miles northwest of New Bridge.	91.2

Miscellaneous discharge measurements in Snake River basin during water year October 1950 to September 1951--Continued

Imnaha River basin, Oreg.

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
July 25	Imnaha River.....	Snake River.....	Sec. 23, T. 5 S., R. 47 E., at Coverdale guard station.	270
Aug. 5	Indian Creek.....	Grande Ronde River.	S½ sec. 33, T. 1 S., R. 40 E., above North Fork, at former gaging station, 7 miles southeast of Imbler.	6.78

Owyhee River basin, Oreg.

Oct. 18	Crooked Creek.....	Owyhee River.....	Highway bridge on Route 95, above Rattlesnake Creek, about 15 miles southwest of Rome.	10.3

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