Surface Water Supply of the United States 1954

Part 13. Snake River Basin

Prepared under the direction of J. V. B. WELLS, *Chief, Surface Water Branch*

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1347

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

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1956

UNITED STATES DEPARTMENT OF THE INTERIOR

Fred A. Seaton, *Secretary*

GEOLOGICAL SURVEY

Thomas B. Nolan, *Director*

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price $1 (paper cover)

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, C. G. Paulsen, chief, under the general direction of J. V. B. Wells, chief, Surface Water Branch, and B. J. Peterson, chief, Annual Reports Section.

The data were computed under supervision of district engineers, Surface Water Branch, as follows:

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F. M. Veatch	Tacoma, Wash.
M. T. Wilson	Salt Lake City, Utah

CALENDAR FOR WATER YEAR 1954

OCTOBER 1953

S	M	T	W	T	F	S
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NOVEMBER 1953

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JANUARY 1954

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FEBRUARY 1954

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MARCH 1954

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JUNE 1954

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JULY 1954

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AUGUST 1954

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SEPTEMBER 1954

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SURFACE WATER SUPPLY OF SNAKE RIVER BASIN, 1954

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, 1954. 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 13,050 gaging stations in the 48 States and at many others in the Territories of Alaska and Hawaii. On September 30, 1954, the Geological Survey and cooperating organizations were maintaining 6,750 gaging stations, including those in Alaska and Hawaii. Discharge measurements only were made at many other points in the 1954 water year, most of which are published at the end of this report.

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, Ross Leonard, director; Idaho Water District 7AB, M. H. Coffin, watermaster.

Oregon: Office of the State Engineer, C. E. Stricklin, and State Highway Commission, B. R. Chandler, chairman.

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

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

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 16 gaging stations, of which 10 were in Idaho, 2 in Oregon, and 4 in Wyoming.

Assistance was also furnished by the Forest Service and the Soil Conservation Service of the Department of Agriculture and the Bonneville Power Administration, 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: Washington Water Power Co.

DIVISION OF WORK

The stream gaging work was done by the Water Resources Division of the Geological Survey under the direction of personnel shown in the preface. The data for stations in the several States were collected and prepared for publication in the district offices listed below.

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	307 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, 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 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, diversions from Snake River at and above Milner, and Grassy Lake, Greys River above reservoir, near Alpine, Wyo., Jackson Lake, Salt River above reservoir, near Etna, Wyo., and Snake River at Moran and above reservoir near Alpine, 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.

e/ Except for Pacific Creek near Moran, Buffalo Fork near Moran, Gros Ventre River at Kelly, Hoback River near Jackson, Grassy Lake, Greys River above reservoir, near Alpine, Wyo., Jackson Lake, Salt River above reservoir, near Etna, Wyo., and Snake River at Moran and above reservoir near Alpine.

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.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

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 was 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 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 date 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 curve are necessary to define the extremes of discharge, they are made on the basis of indirect determinations of peak discharge (such as slope-area or contracted-opening determinations, 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 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

A, SNAKE RIVER AT KING HILL, IDAHO

B, NORTH FORK PAYETTE RIVER NEAR BANKS, IDAHO

C, SNAKE RIVER NEAR CLARKSTON, WASH.

FIGURE 1.—GAGING-STATION STRUCTURES

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 in 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. Records are published for the water year which begins on October 1 and ends on September 30. A calendar for the water year 1954 is shown on page IV for the purpose of finding the day of the week for any date.

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 "Records available" are given periods for which there are published records generally equivalent to those at the present site. 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, locations, and datums of previous gages used during the period of records available. 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). In the first paragraph, the data given are for the complete current water year unless otherwise specified. In the second paragraph, the data given are for the periods of record within the calendar year dates in the heading (not necessarily those for the complete years indicated by the heading dates). Reliable information concerning major floods that have occurred outside the period of record are given in the third or last paragraph under "Extremes." 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 nonrecording 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 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. Skeleton rating tables are generally not published for stations on canals.

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 figures for the maximum day and the minimum day for each month are underlined. If the figure 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 figures; 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"). Figures 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 figures 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 diversion, 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.

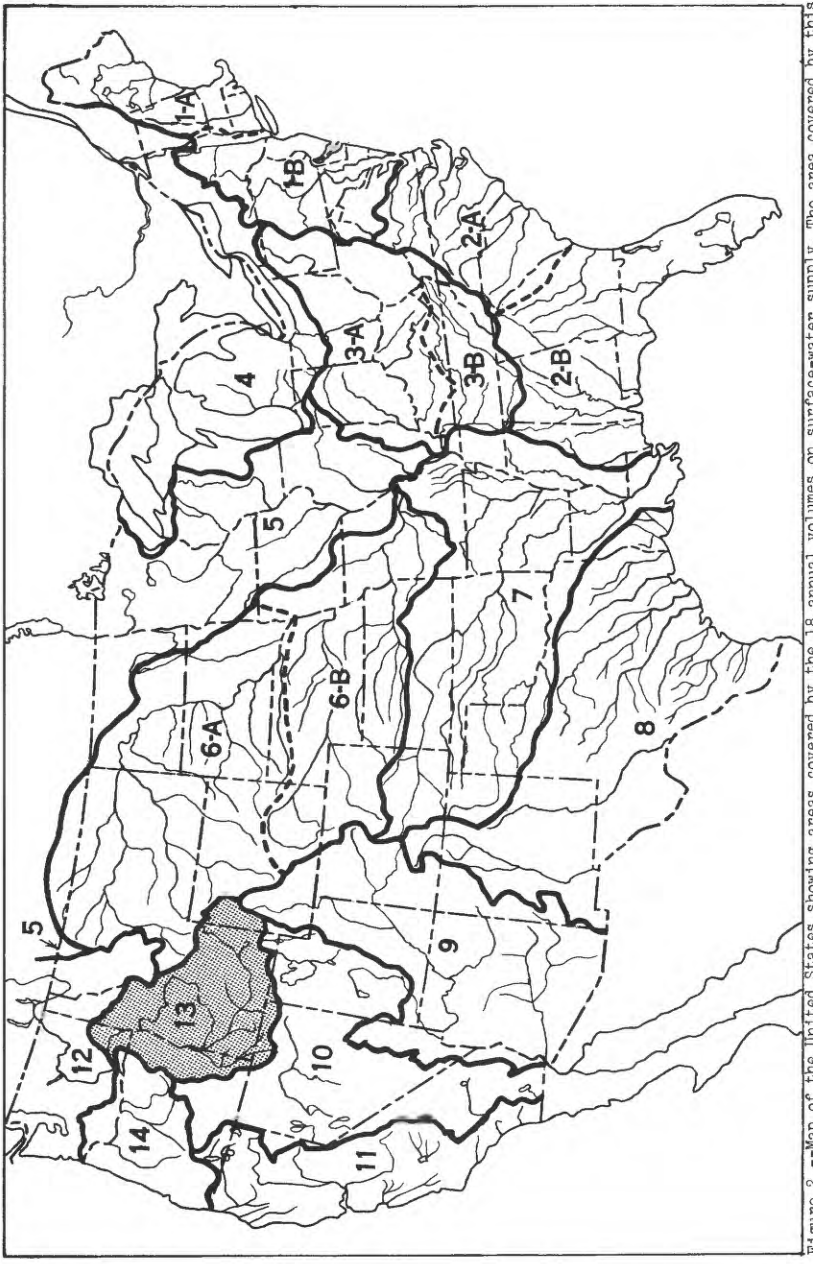

Figure 2.--Map of the United States showing areas covered by the 18 annual volumes on surface-water supply. The area covered by this report is shaded.

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

(A = Annual Report; B = Bulletin)

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.
WSP 11.....	Gage heights.....	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge..	1895-96.
WSP 15.....	Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.	1897.
WSP 16.....	Descriptions, measurements, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge..	1897.
WSP 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.
WSP 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.
WSP 35 to 39.	Descriptions, measurements, gage heights, and ratings.....	1899.
21st A, pt. 4	Monthly discharge.....	1899.
WSP 47 to 52.	Descriptions, measurements, gage heights, and ratings.....	1900.
22d A, pt. 4.	Monthly discharge.....	1900.
WSP 65, 66...	Descriptions, measurements, gage heights, and ratings.....	1901.
WSP 75.....	Monthly discharge.....	1901.

Note.--Records for all stations in Oregon are contained in WSP 370, superseding all reports in this table for these stations.

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, 1899-1954

Year	WSP	Year	WSP	Year	WSP	Year	WSP	Year	WSP
1899	38	1911	312	1923	573	1934	768	1945	1043
1900	51	1912	332-B	1924	593	1935	793	1946	1063
1901	66, 75	1913	362-B	1925	613	1936	813	1947	1093
1902	85	1914	393	1926	633	1937	833	1948	1123
1903	100	1915	413	1927	653	1938	863	1949	1153
1904	135	1916	443	1928	673	1939	883	1950	1183
1905	178	1917	463	1929	693	1940	903	1951	1217
1906	214	1918	483	1930	708	1941	933	1952	1247
1907-8	252	1919-20	513	1931	723	1942	963	1953	1287
1909	272	1921	533	1932	738	1943	983	1954	1347
1910	292	1922	553	1933	753	1944	1013		

Note.--Records for all stations in Oregon through September 1910 are contained in WSP 370, superseding all earlier reports for these stations.

The records at most of the stations discussed in these reports extend over many years. Discharge 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

WSP	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...	1878-1953	Bull. 6, 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:

Report

WSP 771: Floods in the United States, magnitude and frequency.
WSP 847: Maximum discharges at stream-measurement stations through September 1938.
WSP 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 1953 to September 1954 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
Americal Falls Reservoir, inflow to.	Near American Falls, Idaho.....	1927-28, 1932-54	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, Oreg.	1951-54	Oregon State engineer.
Malheur River.....	SW¼ sec. 32, T. 20 S., R. 41 E., near Namorf, Oreg.	1931-54†	Do.
Do.....	SW¼ sec. 21, T. 18 S., R. 45 E., below Nevada Dam, near Vale, Oreg.	1936-42, 1944-54†	Do.
Snake River tributaries..	Near Irwin, Idaho.....	1940-54‡	Idaho Water District 36.
Teton basin tributaries..	Near Driggs, Idaho.....	1934-54‡	Do.
Wolf Creek.....	SE¼ sec. 11, T. 6 S., R. 38 E., 5 miles northwest of North Powder, Oreg. and 6½ miles upstream from mouth.	1953-54‡	Soil Conservation Service.

† 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 1931-36 (including some to December 1936) are published in Bulletin 9 of the State engineer and those for 1937-41 in Bulletin 10; those for 1942-54 have not been published. Records for the stations operated by Idaho Water District 36 are published in the annual reports of that origanization.

HYDROLOGIC CONDITIONS

The water year 1954 was characterized by above median runoff from most of the tributaries above Idaho Falls in the Snake River basin. Below Idaho Falls the runoff from right-bank tributaries was above the median and runoff from left-bank tributaries was below the median. Some fairly high flows occurred during May on right bank tributaries and tributaries above Idaho Falls. However, the only flood of note was a cloudburst type flood on Wild Horse Creek, a tributary to the upper reach of Big Lost River. The drought in the southwestern states reached the headwaters of left-bank tributaries to the Snake River. Runoff from Owyhee River near Gold Creek, Nev., was only about 30 percent of the 26-year median 1918-25, 1937-54. For two key gaging stations in the area covered by this report, a comparison of the monthly discharge during the 1954 water year with the median discharge for the 25-year period 1921-45 is shown below.

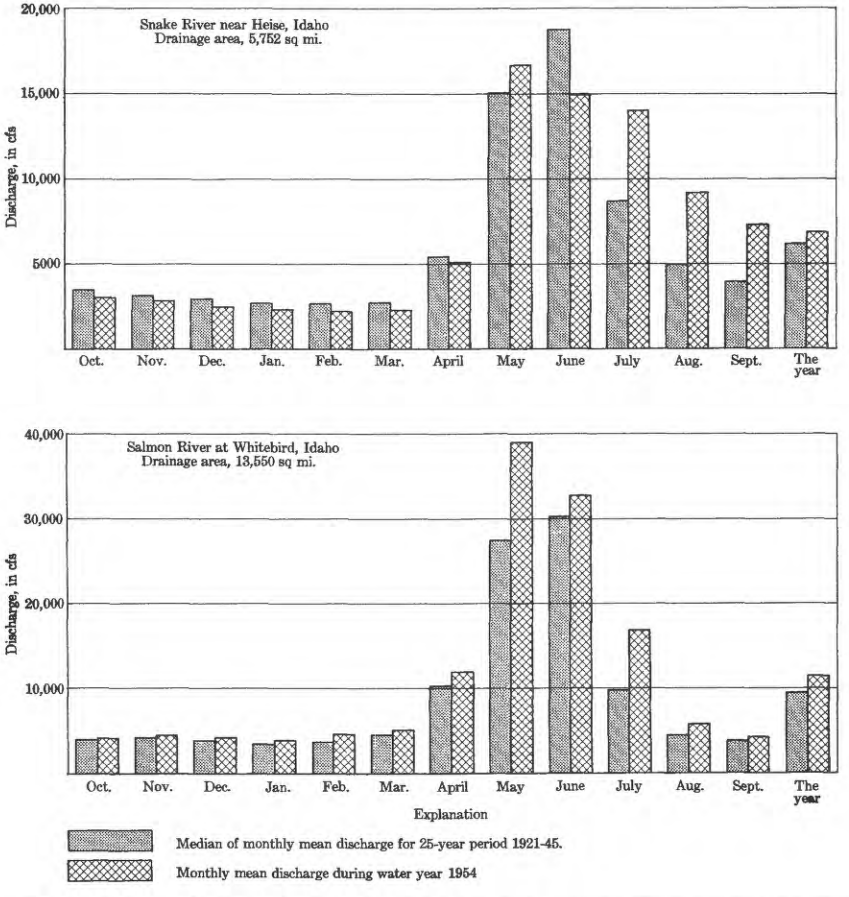

Figure 3. Comparison of discharge at two key gaging stations during 1954 water year with median discharge for 25-year period.

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.

Records available.--July 1908 to September 1954 (1908-10 fragmentary).

Gage.--Electric tape gage read once daily. Datum of gage is 2.19 ft above mean sea level, unadjusted. Prior to June 1, 1941, staff gage at site 300 ft upstream at same datum

Extremes.--Maximum contents during year, 853,640 acre-ft June 28, July 1 (elevation, 6,769.26 ft); minimum, 232,840 acre-ft Oct. 1 (elevation, 6,742.51 ft).
1908-54: 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.

Revisions.--WSP 1217: Drainage area.

Daily contents at 8 a.m., in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	232,840	253,170	277,540	304,180	342,530	372,960	402,740	452,370	708,790	853,640	735,160	495,700
2	233,450	253,990	278,590	305,660	343,400	373,410	403,410	454,640	711,000	853,120	724,530	484,850
3	233,860	255,230	279,000	306,730	344,480	373,850	403,860	457,140	713,950	853,380	714,930	474,990
4	234,260	255,860	280,050	307,810	345,130	374,740	404,530	459,420	713,950	853,380	705,840	465,600
5	234,880	256,680	280,680	309,950	346,000	375,400	405,870	462,390	716,400	853,380	696,520	455,780
6	235,490	257,300	281,940	310,810	346,870	376,070	406,990	466,280	719,100	852,610	692,860	446,460
7	236,300	258,750	283,820	311,240	347,520	376,950	408,330	472,010	721,070	853,120	683,350	438,500
8	237,120	259,160	284,870	311,670	348,170	377,400	409,000	478,200	721,810	852,610	674,570	429,920
9	237,730	259,990	285,510	312,530	349,260	379,390	410,120	485,320	725,270	850,820	665,600	420,000
10	238,140	260,400	286,780	313,170	350,140	381,820	411,010	493,620	729,470	849,530	657,850	411,680
11	238,750	261,020	287,630	313,600	351,230	383,150	411,680	504,930	734,910	848,510	650,340	402,960
12	239,570	261,850	288,270	314,240	352,330	384,260	412,350	517,700	738,120	847,000	641,910	392,680
13	240,180	262,470	288,900	314,870	354,080	385,150	413,250	529,560	745,050	844,680	634,700	383,600
14	240,590	263,500	289,540	315,320	356,280	385,810	415,040	541,490	752,510	840,860	627,720	375,620
15	241,200	264,340	290,600	318,540	357,590	386,260	416,390	552,250	760,730	837,560	621,010	369,000
16	242,220	264,970	291,450	321,970	358,690	387,140	417,290	566,150	770,690	833,990	614,800	361,320
17	243,040	265,810	291,870	322,830	359,780	387,800	417,970	580,780	782,720	830,940	608,350	354,520
18	243,450	266,440	292,510	323,690	360,660	388,910	419,540	596,440	791,250	830,180	602,140	347,300
19	244,480	266,860	293,570	324,540	361,320	389,580	421,330	612,890	799,550	824,070	594,540	341,440
20	244,900	267,280	295,270	325,190	362,420	390,680	424,060	626,280	808,390	819,250	586,480	335,800
21	245,930	267,690	296,540	325,620	363,510	391,350	425,180	642,630	818,750	816,220	578,890	331,680
22	246,340	268,530	297,180	327,120	364,830	392,010	426,310	664,140	831,960	816,220	572,740	327,770
23	246,760	271,050	297,810	329,510	365,920	392,460	427,890	679,940	842,140	815,210	566,850	324,330
24	247,590	271,880	298,450	330,590	366,580	393,570	429,700	689,440	850,050	809,150	560,490	321,330
25	248,210	272,300	298,870	332,330	367,680	394,690	431,720	692,620	851,070	800,310	553,900	318,970
26	249,030	273,140	299,300	332,980	369,210	395,360	434,430	698,970	851,580	790,500	547,340	317,460
27	249,860	274,400	299,720	334,280	370,970	397,370	436,690	703,390	853,380	782,970	540,090	315,960
28	250,480	275,440	300,360	337,100	372,080	398,490	444,180	704,370	853,640	773,940	532,830	315,960
29	251,100	276,070	301,420	338,840	-	400,280	446,680	705,840	853,380	764,960	525,140	316,180
30	251,930	276,700	302,270	340,360	-------	400,950	449,640	706,830	853,380	754,750	515,850	316,600
31	252,550	-------	303,330	341,880	-------	401,400	-------	707,320	-------	745,050	506,320	-------

Monthly elevations and contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	6,742.49	232,430	-
Oct. 31	6,743.47	252,550	+20,120
Nov. 30	6,744.63	276,700	+24,150
Dec. 31	6,745.89	303,330	+26,630
Calendar year 1953	-	-	-43,970
Jan. 31	6,747.68	341,880	+38,550
Feb. 28	6,749.06	372,080	+30,200
Mar. 31	6,750.38	401,400	+29,320
Apr. 30	6,752.52	449,640	+48,240
May 31	6,763.42	707,320	+257,680
June 30	6,769.25	853,380	+146,060
July 31	6,764.95	745,050	-108,330
Aug. 31	6,754.99	506,320	-238,730
Sept.30	6,746.51	316,600	-189,720
Water year 1953-54	-	-	+84,170

† Elevation at 8 a.m.

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, 1,000 ft downstream from Jackson Lake Dam.

Drainage area.--824 sq mi.

Records available.--September 1903 to September 1954. Prior to October 1910, published as South Fork Snake River at Moran.

Gage.--Water-stage recorder. Datum of gage is 6,727.84 ft above mean sea level, unadjusted. 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.--51 years, 1,433 cfs (1,037,000 acre-ft per year).

Extremes.--Maximum discharge during year, 10,700 cfs June 27 (gage height, 10.35 ft); minimum daily, 7 cfs Oct. 24 to Apr. 14.

1903-54: Maximum discharge, 15,100 cfs June 12, 1918 (gage height, 10.41 ft, site and datum then in use); minimum, 2 cfs Nov. 21, 1944, to Apr. 14, 1945.

Flood during early June 1894 was 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.

Revisions (water years).--WSP 1217: 1944(m); drainage area. Revised figures of discharge, in cubic feet per second, for water years 1907-8, 1909-10, superseding those published in WSP 214, 252, and 272, are given herewith. Records for Dec. 25, 1906, to Feb. 16, 1907, not previously published.

1906		1907-Con.	
Oct. 13 to		Sept.25 to	
Dec. 24	†15	Oct. 10	†1,720
Dec. 25-31	†500	1909	
1907		Sept.28 to	
Mar. 1-12	‡b580	Oct. 4	†15
Sept.15-24	†15		

† Each day.
‡ Average for period.
b Stage-discharge relation affected by ice.

Month	Maximum	Minimum	Mean	Runoff in acre-feet
October 1906	560	15	213	13,080
November	15	15	15	893
December	500	15	125	7,660
Calendar year 1906	5,930	15	1,169	846,200
January 1907	-	-	e500	e30,740
February	-	-	e540	e29,990
March	932	-	705	43,350
September	1,720	15	959	57,040
Water year 1906-7	7,380	15	1,756	1,272,000
October 1907	1,730	1,010	1,429	87,850
Calendar year 1907	7,380	15	1,967	1,424,000
Water year 1907-8	6,300	560	1,594	1,158,000
September 1909	1,910	15	1,380	82,160
Water year 1908-9	10,600	15	2,019	1,461,000
October 1909	1,810	15	1,080	66,500
Calendar year 1909	10,600	15	2,118	1,534,000
Water year 1909-10	12,100	15	1,715	1,242,000

e Not previously published; estimated. Revised records for Feb. 16-28, 1907, not available.

Snake River at Moran, Wyo.--Continued

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.0	3	3.0	580
1.1	8	4.0	1,210
1.3	28	5.0	2,110
1.6	70	6.0	3,250
2.0	168	8.0	6,300
2.5	345	10.0	9,930

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	7	7	7	7	7	7	16	2,480	5,940	6,740	6,710
2	25	7	7	7	7	7	7	16	2,490	4,500	6,320	6,440
3	25	7	7	7	7	7	7	14	2,490	4,500	5,930	6,100
4	25	7	7	7	7	7	7	14	2,100	4,550	6,320	5,980
5	25	7	7	7	7	7	7	14	3,500	5,170	3,280	5,740
6	25	7	7	7	7	7	7	14	3,520	3,740	6,330	5,650
7	25	7	7	7	7	7	7	14	3,550	3,670	5,890	5,410
8	25	7	7	7	7	7	7	13	2,510	4,610	5,860	5,650
9	25	7	7	7	7	7	7	13	2,000	4,520	5,400	5,650
10	25	7	7	7	7	7	7	13	2,050	3,740	4,980	5,490
11	26	7	7	7	7	7	7	15	2,080	3,710	5,350	5,770
12	26	7	7	7	7	7	7	15	1,240	3,750	5,360	5,930
13	25	7	7	7	7	7	7	15	137	4,240	4,610	5,490
14	*25	7	7	7	7	7	7	14	137	4,840	4,430	4,800
15	25	7	7	7	7	7	8	14	137	5,040	4,300	4,370
16	25	7	7	7	7	7	9	14	132	4,420	4,130	4,580
17	25	7	7	7	7	7	10	14	122	2,480	4,310	4,480
18	25	7	7	7	7	7	10	191	119	4,870	4,580	4,220
19	25	7	7	7	7	7	10	1,950	119	5,300	5,010	3,840
20	25	7	7	7	7	7	10	2,300	119	3,880	4,800	3,300
21	25	7	7	7	7	7	10	*2,090	119	2,370	4,380	2,800
22	25	7	7	7	7	7	13	570	1,330	1,020	4,190	2,860
23	15	7	7	7	7	7	16	3,440	3,730	4,550	4,070	2,630
24	7	7	7	7	7	7	20	4,430	6,930	5,690	4,130	2,080
25	7	7	7	7	7	7	20	4,460	8,370	6,790	4,260	1,700
26	7	7	7	7	7	7	20	4,490	8,230	*5,980	4,520	1,500
27	7	7	7	7	7	7	20	4,500	9,700	5,990	4,560	1,010
28	7	7	7	7	7	7	32	4,070	7,260	6,230	*5,010	491
29	7	7	7	7	-	7	32	3,260	4,800	6,660	5,410	70
30	7	7	7	7	-	7	34	3,010	5,270	6,500	5,880	48
31	7	----	7	7	-----	7	------	2,650	------	6,560	6,280	------
Total	623	210	217	217	196	217	372	41,653	86,771	145,810	156,620	120,789
Mean	20.1	7.0	7.0	7.0	7.0	7.0	12.4	1,344	2,892	4,704	5,052	4,026
Ac-ft	1,240	417	430	430	389	430	738	82,620	172,100	289,200	310,700	239,600

Calendar year 1953: **Max** 7,000 **Min** 6 **Mean** 1,408 **Ac-ft** 1,019,000
Water year 1953-54: **Max** 9,700 **Min** 7 **Mean** 1,517 **Ac-ft** 1,098,000

* Discharge measurement made on this day.
Note.--Discharge computed from staff-gage readings Oct. 1 to May 20.

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, half a 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 records), September 1944 to September 1954.

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.--10 years (1944-54), 280 cfs (202,700 acre-ft per year).

Extremes.--Maximum discharge during year, 3,470 cfs May 21 (gage height, 4.68 ft in gage well, about 5.45 ft from outside gage); minimum daily, 24 cfs Jan. 21.
1917-18, 1944-54: Maximum discharge, that of May 21, 1954; minimum daily, 24 cfs Nov. 29, 1952, Jan. 21, 1954.

Remarks.--Records good except those above about 1,000 cfs, which are fair, and those for periods of ice effect or no gage-height record, which are poor. No regulation or diversion.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	49	45	45	31	33	45	42	250	875	1,180	159	67
2	49	45	45	31	33	39	41	239	748	1,110	153	67
3	49	47	47	31	33	37	45	250	748	1,020	146	70
4	47	46	*46	31	33	37	50	282	1,010	974	146	72
5	46	46	43	32	32	38	57	442	1,410	908	153	76
6	46	46	40	32	32	40	60	628	1,210	825	163	70
7	46	44	39	31	32	44	56	770	1,020	775	142	67
8	46	40	38	30	33	45	53	910	897	730	130	63
9	45	40	38	29	34	46	55	1,260	952	694	124	63
10	45	40	37	28	36	48	52	1,700	*1,080	610	120	60
11	45	42	37	26	37	50	54	1,830	998	558	120	60
12	44	43	36	26	38	48	59	1,920	998	495	117	60
13	43	45	36	26	39	46	66	1,960	1,100	450	111	63
14	43	45	36	28	40	42	73	1,920	1,170	432	111	60
15	44	46	37	28	41	43	76	2,140	1,180	462	108	60
16	46	46	38	*28	42	43	81	2,390	1,640	409	103	60
17	44	46	39	28	42	45	91	2,520	1,580	*360	97	58
18	44	46	40	28	43	45	97	2,600	1,300	329	94	58
19	44	40	40	27	44	45	94	2,890	1,470	354	92	58
20	44	38	40	25	44	46	90	3,010	1,690	324	92	58
21	*44	37	38	24	45	45	92	3,350	1,940	309	94	58
22	44	40	36	28	*45	46	103	*2,990	2,040	281	97	58
23	41	39	34	30	45	42	123	2,540	2,140	253	89	58
24	44	36	32	30	46	44	161	2,110	2,090	236	84	60
25	43	39	32	30	46	44	208	2,060	1,920	219	81	58
26	42	42	31	28	47	45	273	1,820	1,960	211	81	56
27	43	44	31	29	45	*43	345	1,360	2,190	200	*81	56
28	43	45	31	31	44	43	*372	1,060	1,820	192	76	58
29	43	45	31	33	-	42	361	897	1,390	181	74	60
30	44	42	31	33	------	41	303	886	1,220	173	72	*60
31	44	-----	31	33	-----	37	-----	815	------	166	67	------
Total	1,384	1,285	1,155	905	1,104	1,344	3,633	49,799	41,786	15,420	3,377	1,852
Mean	44.6	42.8	37.3	29.2	39.4	43.4	121	1,606	1,393	497	109	61.7
Cfsm	0.279	0.268	0.233	0.182	0.246	0.271	0.756	10.0	8.71	3.11	0.681	0.386
In.	0.32	0.30	0.27	0.21	0.26	0.31	0.84	11.58	9.71	3.58	0.78	0.43
Ac-ft	2,750	2,550	2,290	1,800	2,190	2,670	7,210	98,770	82,880	30,590	6,700	3,670

Calendar year 1953: Max 2,440 Min 31 Mean 246 Cfsm 1.54 In. 20.90 Ac-ft 178,400
Water year 1953-54: Max 3,350 Min 24 Mean 337 Cfsm 2.11 In. 28.59 Ac-ft 244,100

Peak discharge (base, 1,300 cfs).--May 21 (9 p.m.) 3,470 cfs (4.68 ft); June 5 (1:30 a.m.) 1,720 cfs (4.05 ft); June 24 (2:30 a.m.) 2,770 cfs (4.46 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 19, 20, 23, 24, Dec. 5 to Mar. 25, Apr. 1, 2. No gage-height record Jan. 1-15, Feb. 9-21, 26, Mar. 8-26, 28-31, Apr. 3, 4; discharge estimated on basis of weather records and records for nearby Snake River tributaries.

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 bridge on country road, half a mile upstream from mouth, 2¼ 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 6,720 ft (from topographic map). July 31 to Nov. 20, 1906, staff gage 300 ft upstream from mouth at different datum. July 9, 1917, to Sept. 30, 1918, staff gages at sites within 500 ft upstream from present site at different datums.

Average discharge.--10 years (1944-54), 615 cfs (445,200 acre-ft per year).

Extremes.--Maximum discharge during year, 5,960 cfs June 27 (gage height, 6.71 ft); minimum, 78 cfs Nov. 20 (gage height, 0.88 ft), but may have been less during period of ice effect.
1917-18, 1944-54: Maximum discharge, that of June 27, 1954; minimum, that of Nov. 20, 1953, but may have been less during periods of ice effect.

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

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	199	183	160	120	120	125	140	378	1,240	2,980	659	296
2	196	187	150	120	120	120	140	345	1,140	3,100	623	291
3	196	190	150	120	120	115	140	361	1,110	2,940	589	296
4	196	187	*140	125	120	115	145	365	1,260	3,010	582	306
5	193	180	140	125	120	115	160	487	1,730	2,820	568	359
6	193	183	135	125	115	120	165	610	1,620	2,650	602	364
7	193	180	135	125	120	130	170	714	1,420	2,680	554	316
8	190	162	130	120	120	140	180	858	1,280	2,710	508	296
9	190	165	130	120	115	140	180	1,190	1,320	2,780	483	281
10	193	180	125	115	120	145	185	1,630	*1,400	2,670	470	276
11	193	187	125	110	120	150	190	1,670	1,300	2,640	464	271
12	193	180	125	110	125	140	200	1,910	1,240	2,380	464	266
13	190	187	125	110	130	135	210	2,010	1,280	2,180	458	266
14	190	183	125	115	135	130	220	1,990	1,360	2,050	452	262
15	190	180	125	115	135	130	230	2,120	1,380	2,230	445	258
16	206	174	130	*115	140	135	250	2,320	1,620	2,210	421	253
17	206	174	130	115	140	140	287	2,670	1,570	*1,850	404	244
18	196	174	135	115	140	140	298	2,780	1,400	1,620	392	244
19	193	154	135	110	140	140	272	3,070	1,400	1,540	381	240
20	193	160	140	105	140	140	254	3,460	1,620	1,490	370	235
21	*203	150	135	100	140	140	243	*3,990	2,160	1,300	364	235
22	199	160	130	115	*140	145	250	*4,460	2,560	1,170	370	230
23	187	160	125	120	140	130	283	3,460	3,060	1,030	364	230
24	196	160	120	120	140	140	325	2,880	3,850	954	348	244
25	196	170	120	120	140	140	353	2,830	3,830	902	337	240
26	190	170	120	110	145	140	365	2,650	4,070	877	332	230
27	193	170	120	115	135	*140	391	2,150	5,410	828	*316	226
28	193	165	120	120	135	140	*440	1,780	4,630	788	306	222
29	190	165	120	120	-	135	449	1,520	3,400	765	311	210
30	193	160	120	120	------	135	408	1,450	2,950	718	306	*206
31	190	-----	120	120	-----	135	-----	1,240	------	688	306	------
Total	6,019	5,180	4,040	3,615	3,650	4,165	7,523	59,348	63,610	58,560	13,549	7,893
Mean	194	173	130	117	130	134	251	1,914	2,120	1,889	437	263
Cfsm	0.513	0.458	0.344	0.310	0.344	0.354	0.664	5.06	5.61	5.00	1.16	0.696
In.	0.59	0.51	0.40	0.36	0.36	0.41	0.74	5.84	6.26	5.76	1.33	0.78
Ac-ft	11,940	10,270	8,010	7,170	7,240	8,260	14,920	117,700	126,200	116,200	26,870	15,660

Calendar year 1953: Max 4,450 Min 105 Mean 537 Cfsm 1.42 In. 19.28 Ac-ft 389,000
Water year 1953-54: Max 5,410 Min 100 Mean 650 Cfsm 1.72 In. 23.34 Ac-ft 470,400

Peak discharge (base, 3,100 cfs).--May 22 (12:30 p.m.) 4,660 cfs (5.94 ft); June 27 (12 m. to 3 p.m.) 5,960 cfs (6.71 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 20 to Apr. 15.

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 pier 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 1954.

Gage.--Staff gage read once daily. Altitute 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. Aug. 9, 1949, to June 25, 1953, staff gage at site 10 ft upstream at present datum. Supplementary staff gage for high stages at site 300 ft downstream at datum 1.09 ft higher.

Average discharge.--10 years (1944-54), 481 cfs (348,200 acre-ft per year).

Extremes.--Maximum discharge observed during year, 3,950 cfs May 22 (gage height, 3.35 ft, supplementary gage); minimum observed, 116 cfs Mar. 3 (gage height, 0.38 ft).
1918, 1944-54: 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.
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 good. Diversions above and below station for irrigation.

Revisions.--WSP 1043: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 14, July 24 to Sept. 30

0.3	105	2.0	588
.6	153	3.0	1,110
1.0	239	4.4	2,220
1.5	385		

May 15 to July 23

0.0	640	2.0	2,410
.5	990	3.4	4,010
1.0	1.410		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	140	184	167	139	146	139	135	492	896	1,430	437	190
2	140	177	167	148	133	120	137	415	868	1,500	407	186
3	140	179	161	148	135	116	135	371	826	1,460	385	194
4	140	179	*159	149	132	118	139	357	854	1,430	368	205
5	140	177	157	149	142	119	149	385	854	1,400	350	218
6	139	175	151	149	129	124	159	543	1,110	1,340	371	239
7	139	173	153	149	132	139	167	748	1,090	1,320	396	256
8	139	173	153	151	132	148	173	888	958	1,230	374	249
9	139	159	146	149	125	149	175	1,050	840	1,210	357	237
10	139	157	148	133	142	155	175	1,340	*847	1,180	328	237
11	139	155	144	139	135	159	169	1,570	840	1,120	312	237
12	139	163	144	135	144	151	173	1,770	833	1,090	312	214
13	139	165	142	137	149	140	184	2,040	750	1,010	309	223
14	140	171	140	142	151	133	194	2,220	784	958	304	223
15	139	173	146	149	149	137	209	2,360	826	950	292	223
16	139	173	153	149	148	139	221	2,630	926	1,070	281	221
17	142	173	155	*149	146	144	234	2,740	1,040	1,010	273	216
18	146	171	151	151	146	144	281	2,940	982	*896	261	209
19	144	167	153	148	146	148	318	3,070	882	826	253	201
20	146	149	159	129	144	149	312	3,180	875	744	246	201
21	146	139	157	119	*144	146	295	3,350	1,150	686	218	196
22	*148	139	155	142	142	151	292	*3,910	1,590	705	216	196
23	169	148	144	146	144	132	289	3,650	1,850	686	223	194
24	169	149	133	149	144	140	334	2,800	2,090	635	228	201
25	171	151	129	151	146	140	385	2,360	2,280	574	205	207
26	173	153	132	132	153	146	433	2,300	2,280	530	203	212
27	171	161	130	146	135	140	460	2,040	2,670	517	*201	207
28	173	161	133	148	135	140	*526	1,690	2,900	496	194	207
29	186	169	135	149	-	139	588	1,360	2,150	488	201	*201
30	184	169	133	151	------	135	543	1,120	1,640	476	198	196
31	184	------	132	148	------	132	------	1,050	------	456	194	------
Total	4,682	4,932	4,562	4,473	3,949	4,312	7,984	56,739	38,481	29,423	8,897	6,396
Mean	151	164	147	144	141	139	266	1,830	1,283	949	287	213
Cfsm	0.243	0.264	0.236	0.232	0.227	0.223	0.428	2.94	2.06	1.53	0.461	0.342
In.	0.28	0.29	0.27	0.27	0.24	0.26	0.48	3.39	2.30	1.76	0.53	0.38
Ac-ft	9,290	9,780	9,050	8,870	7,830	8,550	15,840	112,500	76,330	58,360	17,650	12,690

Calendar year 1953: Max 3,140 Min 115 Mean 376 Cfsm 0.605 In. 8.20 Ac-ft 271,900
Water year 1953-54: Max 3,910 Min 116 Mean 479 Cfsm 0.770 In. 10.45 Ac-ft 346,700

* 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 1954.

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.--9 years (1945-54), 732 cfs (529,900 acre-ft per year).

Extremes.--Maximum discharge observed during year, 5,900 cfs May 22 (gage height, 7.02 ft); minimum observed, 135 cfs Feb. 27 (gage height, 2.08 ft).
1917-18, 1944-54: Maximum discharge observed, 6,160 cfs June 16, 1918 (gage height, 13.46 ft, site and datum then in use); minimum observed, 90 cfs Dec. 18, 1946 (gage height, 1.70 ft).

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

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 27				June 28 to Sept. 30			
2.1	145	4.0	1,460	2.5	240	4.0	1,460
2.4	235	5.0	2,550	2.7	352	5.0	2,550
2.7	391	6.0	3,980	3.0	575	6.0	3,980
3.0	600	7.1	6,000	3.5	990		
3.5	1,000						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	253	244	216	198	209	202	192	1,080	1,550	2,230	687	334
2	258	253	195	205	195	192	189	860	1,470	2,300	655	352
3	266	244	205	189	209	b165	198	954	1,370	2,140	639	359
4	271	244	*216	198	183	b160	213	1,060	1,430	2,120	623	340
5	262	248	180	205	198	b165	224	1,430	1,770	2,050	607	406
6	258	240	216	209	189	177	262	1,880	1,710	1,970	687	366
7	253	231	224	183	183	195	248	1,920	1,550	1,950	623	352
8	258	209	192	202	189	209	244	1,900	1,410	1,970	591	328
9	253	216	202	192	b180	216	262	2,170	*1,340	1,910	559	316
10	253	228	224	183	186	224	240	2,610	1,430	1,790	480	304
11	262	240	213	180	202	216	240	3,300	1,370	1,740	575	304
12	253	224	228	189	209	186	258	3,050	1,300	1,680	543	304
13	258	231	198	189	216	189	280	2,760	1,320	1,610	511	304
14	244	235	183	202	209	183	296	2,790	1,470	1,480	495	298
15	244	244	224	205	198	177	350	2,860	1,530	1,620	480	292
16	253	231	216	202	202	180	373	2,940	1,730	1,560	458	282
17	244	235	202	*192	205	205	450	3,190	1,690	1,480	435	282
18	244	220	174	180	209	198	683	3,330	1,720	*1,280	435	271
19	244	192	228	189	183	174	715	3,570	1,460	1,250	420	271
20	248	b190	231	b170	195	202	645	3,830	1,800	1,120	406	271
21	240	186	224	b165	209	195	556	4,300	2,360	1,100	420	271
22	*244	213	213	b160	*192	177	660	5,900	2,620	1,060	428	271
23	244	235	202	202	195	174	878	*3,750	2,720	956	393	282
24	262	216	b190	205	202	195	1,180	3,210	3,060	922	366	276
25	262	231	b180	195	209	189	1,270	3,050	3,020	854	393	261
26	271	235	b175	189	205	189	1,430	2,890	3,140	837	386	271
27	253	231	b175	195	170	198	1,440	2,440	3,810	769	*359	261
28	248	224	b175	205	163	*192	*1,510	2,100	3,120	752	352	256
29	244	231	b180	216		198	1,340	1,820	2,390	769	340	*256
30	248	224	b180	224	------	189	1,320	1,750	2,230	744	346	261
31	240	-----	183	213	-----	166	------	1,510	------	719	328	------
Total	7,835	6,825	6,244	6,031	5,494	5,877	18,146	80,204	58,890	44,732	15,020	9,002
Mean	253	228	201	195	196	190	605	2,587	1,963	1,443	485	300
Cfsm	0.449	0.404	0.356	0.346	0.348	0.337	1.07	4.59	3.48	2.56	0.858	0.532
In.	0.52	0.45	0.41	0.40	0.36	0.39	1.20	5.29	3.88	2.95	0.99	0.59
Ac-ft	15,540	13,540	12,380	11,960	10,900	11,660	35,990	159,100	116,800	88,720	29,790	17,860

Calendar year 1953: Max 4,080 Min 142 Mean 628 Cfsm 1.11 In. 15.13 Ac-ft 454,900
Water year 1953-54: Max 5,900 Min 160 Mean 724 Cfsm 1.28 In. 17.43 Ac-ft 524,200

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

Snake River above reservoir, near Alpine, Wyo.

Location.--Lat 43°11'50", long 110°53'10", on right bank a quarter of a mile downstream from Wolf Creek, 7 miles upstream from Greys River, and 9 miles upstream from Alpine, Lincoln County.

Drainage area.--3,465 sq mi.

Records available.--March 1937 to March 1939, July 1953 to September 1954. Published as Snake River above Greys River near Alpine, 1937-39.

Gage.--Water-stage recorder. Datum of gage is 5,683.90 ft above mean sea level, unadjusted. Mar. 16, 1937, to Mar. 31, 1939, at site 6½ miles downstream at different datum.

Extremes.--Maximum discharge during year, 26,800 cfs June 28 (gage height, 11.68 ft); minimum, 940 cfs Mar. 3 (gage height, 2.46 ft).
1937-39, 1953-54: Maximum discharge, that of June 28, 1954; minimum, 898 cfs Jan. 5, 1938, caused by ice jam upstream.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow partly regulated by Jackson Lake (see p. 13). Some diversions from tributaries above station.

Cooperation.--Gage-height record and five discharge measurements furnished by Bureau of Reclamation.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 28 to May 4)

Oct. 1 to Apr. 27				Apr. 28 to Sept. 30			
2.6	1,040	5.0	4,960	6.0	7,400	9.0	16,600
3.5	2,310	6.0	7,400	7.0	10,200	11.8	27,000
4.0	3,150						

Note.--Same as preceding table below 6.0 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,960	1,500	1,320	1,100	1,100	*1,110	1,090	3,640	8,780	16,000	9,900	8,080
2	1,690	1,520	1,290	1,110	1,080	1,060	1,080	3,290	8,560	15,800	9,870	8,340
3	1,630	1,500	1,250	1,120	1,060	1,030	1,110	3,220	8,130	14,600	9,170	7,990
4	1,600	1,490	1,250	1,130	1,050	1,060	1,300	3,400	8,160	14,300	9,140	7,860
5	1,560	1,490	1,170	1,140	1,050	1,100	1,670	4,000	9,030	14,500	9,230	7,830
6	1,530	1,500	1,240	1,140	1,050	1,100	1,940	4,810	10,400	14,200	6,790	7,620
7	1,520	1,490	1,240	1,140	1,050	1,110	1,880	5,420	10,200	12,600	9,110	7,370
8	1,500	1,430	1,100	1,130	1,050	1,110	1,840	5,870	9,600	*13,000	8,810	7,160
9	1,490	1,380	1,120	1,110	1,050	1,320	1,850	6,870	8,160	13,400	8,670	7,370
10	1,480	1,360	1,100	1,100	1,050	1,700	1,800	8,480	8,510	12,900	7,970	7,180
11	1,480	1,360	1,120	1,100	1,080	1,660	1,800	*10,100	8,530	12,100	7,890	7,100
12	1,480	1,370	1,150	1,100	1,100	1,410	1,910	10,200	8,160	11,700	8,240	7,370
13	*1,480	1,390	1,100	1,100	1,100	1,330	2,040	10,500	7,030	11,300	7,800	7,430
14	1,480	1,370	1,080	1,110	1,100	1,260	2,230	10,700	6,690	11,400	7,260	*6,840
15	1,520	1,370	1,100	1,120	1,100	1,200	2,440	11,100	*6,840	12,400	6,970	6,160
16	1,590	*1,360	1,150	1,130	1,120	1,210	2,370	11,800	7,450	12,400	6,710	5,970
17	1,570	1,370	1,150	1,120	1,120	1,240	2,560	12,800	7,940	11,500	6,540	5,940
18	1,530	1,370	1,150	1,100	1,140	1,250	2,910	13,300	7,350	9,540	6,610	5,820
19	1,500	1,280	1,170	1,080	1,080	1,200	2,960	14,300	6,950	11,800	6,920	5,540
20	1,500	1,190	1,280	1,050	1,110	1,200	2,790	16,700	7,350	10,900	7,160	5,200
21	1,570	1,160	1,250	1,060	1,120	1,200	2,620	18,500	8,510	9,480	6,900	4,650
22	1,590	1,220	1,150	*1,080	1,110	1,150	2,710	20,800	9,660	7,480	6,580	4,320
23	1,560	1,430	1,090	1,100	1,120	1,120	2,950	18,500	12,300	6,900	6,260	4,380
24	1,620	1,340	1,050	1,100	1,140	1,160	3,240	18,000	16,300	9,170	6,140	4,110
25	1,640	1,290	1,000	1,070	1,170	*1,150	3,520	*17,300	19,500	10,400	6,060	3,680
26	1,590	1,330	1,000	1,060	1,210	1,140	3,780	16,700	21,000	10,600	*6,310	3,340
27	1,560	1,410	1,000	1,060	1,080	1,140	3,860	15,300	22,900	*9,750	6,410	3,150
28	1,530	1,420	1,080	*1,100	1,080	1,150	*4,380	13,600	25,400	10,200	6,440	2,710
29	1,520	1,370	1,150	1,110	-	1,140	4,400	11,500	*20,100	9,930	6,900	2,260
30	1,520	1,340	1,100	1,140	--	1,090	4,090	10,400	16,000	10,100	7,290	1,910
31	1,530	------	1,100	1,140	------	1,050	------	9,430	------	9,900	7,510	------
Total	48,320	41,400	35,500	34,250	30,670	37,150	75,120	340,530	335,490	360,250	233,560	174,680
Mean	1,559	1,380	1,145	1,105	1,095	1,198	2,504	10,980	11,180	11,620	7,534	5,823
Ac-ft	95,840	82,120	70,410	67,930	60,830	73,690	149,000	675,400	665,400	714,500	463,300	346,500

Calendar year 1953: Max - Min - Mean - Ac-ft -
Water year 1953-54: Max 25,400 Min 1,000 Mean 4,786 Ac-ft 3,465,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 10-17, Dec. 24 to Jan. 9, Jan. 11 to Feb. 15.

Greys River above reservoir, near Alpine, Wyo.

Location.--Lat 43°08'50", long 110°09'20", in SW¼ sec. 33, T. 37 N., R. 118 W., on left bank 2½ miles upstream from mouth and 3½ miles southeast of Alpine.

Drainage area.--451 sq mi.

Records available.--July 1917 to September 1918, March 1937 to March 1939, October 1953 to September 1954. Published as Greys River near Alpine, Idaho, 1917-18 and as Greys River near Alpine, Wyo., 1937-39.

Gage.--Water-stage recorder. Datum of gage is 5,620.33 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. July 6 to Sept. 30, 1917, and June 4 to Sept. 30, 1918, staff gage and Mar. 17, 1937, to Mar. 31, 1939, water stage recorder, at site three-quarters of a mile downstream at different datum.

Extremes.--Maximum discharge during year, 4,210 cfs May 22 (gage height, 7.13 ft); minimum, 153 cfs Mar. 3 (gage height, 2.84 ft).
1917-18, 1937-39, 1953-54: Maximum discharge observed, 5,200 cfs June 14, 1918 (gage height, 4.85 ft, former site and datum); minimum, that of Mar. 3, 1954.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Less than 500 acres irrigated by diversions from Greys River and tributaries above station.

Cooperation.--Gage-height record and 11 discharge measurements furnished by Bureau of Reclamation.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 2-6)

2.8	145	4.5	1,010
3.0	190	5.0	1,500
3.5	350	6.0	2,690
4.0	625	7.2	4,320

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		269	246	215		193	204	1,090	1,330	1,460	542	350
2		*269	226	232		188	207	986	1,210	1,430	530	370
3		269	229	224		175	212	994	1,160	1,360	518	385
4		266	218	235		182	240	1,170	1,210	1,300	518	380
5		263	198			188	278	*1,590	1,400	1,230	536	390
6		269	224			190	310	1,900	1,400	1,180	530	260
7		260	224			204	278	1,950	1,350	1,140	512	350
8		240	204			198	272	1,950	1,240	1,100	490	346
9		243	b200			240	278	2,200	1,220	1,060	480	342
10		255	b195			260	258	2,640	1,310	1,010	470	338
11		258	180			258	266	2,830	1,270	978	475	334
12		255	b195		a205	243	306	2,680	1,210	946	465	346
13		258	b200			224	365	2,520	1,220	*922	460	342
14		255	204			229	405	*2,550	1,290	914	450	334
15		255	b210			221	460	2,610	1,330	922	430	330
16	a280	252	b220			229	490	2,620	1,520	890	420	326
17		255	*b225			238	639	2,810	1,470	842	415	322
18		246	226	a210		235	898	2,850	1,360	810	415	318
19		215	b235			218	786	3,020	1,350	794	410	318
20		196	b240			226	653	3,170	1,510	732	405	314
21		226	b230			229	*618	3,560	1,760	718	425	*310
22		243	212			221	748	3,720	*1,900	681	425	310
23		269	190			221	938	2,850	1,980	660	410	314
24		240	190			229	1,060	2,520	2,140	639	395	318
25		235	188	(*)	*207	224	1,260	2,440	2,040	618	*385	310
26		255	193		207	215	1,400	*2,330	2,100	612	390	306
27		260	207		178	218	1,340	1,980	2,280	612	385	306
28		252	210		188	218	1,600	1,710	1,960	592	375	303
29		246	221		-	218	1,450	1,510	1,630	*580	370	303
30		232	218		------	*210	1,280	1,440	1,490	560	365	303
31		-----	207		------	188	------	1,300	------	548	355	------
Total	8,680	7,506	6,565	6,576	5,700	6,730	19,499	69,490	45,640	27,840	13,751	9,978
Mean	280	250	212	212	204	217	650	2,242	1,521	898	444	333
Cfsm	0.621	0.554	0.470	0.470	0.452	0.481	1.44	4.97	3.37	1.99	0.984	0.738
In.	0.72	0.62	0.54	0.54	0.47	0.55	1.61	5.73	3.76	2.29	1.13	0.82
Ac-ft	17,220	14,890	13,020	13,040	11,310	13,350	38,680	137,800	90,530	55,220	27,270	19,790

Calendar year 1953: Max - Min - Mean - Cfsm - In. - Ac-ft -
Water year 1953-54: Max 3,720 Min 175 Mean 625 Cfsm 1.39 In. 18.78 Ac-ft 452,100

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for nearby stations.
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, 1¼ miles upstream from Salt River, and 2 miles downstream from Greys River.

Drainage area.--3,940 sq mi.

Records available.--October 1944 to June 1954 (discontinued).

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.--9 years (1944-53), 5,477 cfs (3,965,000 acre-ft per year).

Extremes.--Maximum discharge during period, 28,200 cfs June 28 (gage height, 10.4 ft) from graph based on gage readings); minimum observed, 1,260 cfs Mar. 31, Apr. 1 (gage height, 2.65 ft).

1944-54: Maximum discharge, that of June 28, 1954; minimum daily, 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 doubtful 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, Oct. 1, 1953, to June 30, 1954, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 20 to June 30)

2.6	1,190	6.0	9,630
3.0	1,860	8.0	17,500
4.0	4,000	10.5	28,200
5.0	6,510		

Discharge, in cubic feet per second, October 1953 to June 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,170	1,810	1,700	1,350	1,420	1,310	1,280	4,760	10,100			
2	2,170	1,880	1,630	1,350	1,340	1,320	1,310	4,280	10,100			
3	2,150	1,840	1,630	1,400	1,310	1,320	1,310	4,020	9,900			
4	2,110	1,840	1,610	1,400	1,340	1,310	1,420	4,880	9,870			
5	1,920	1,820	*1,540	1,400	1,370	1,320	1,750	5,780	10,600			
6	1,940	1,820	1,550	1,400	1,360	1,320	a2,300	6,760	11,800			
7	1,900	1,790	1,550	1,400	1,340	1,360	a2,200	7,440	11,900			
8	1,900	1,750	1,400	1,400	1,340	1,440	a2,150	8,320	11,400			
9	1,920	1,700	1,400	1,400	1,360	1,570	2,150	9,330	*9,700			
10	1,880	1,700	1,400	1,350	1,360	1,820	2,030	11,400	10,200			
11	1,880	1,720	1,400	1,300	1,400	1,790	2,050	12,900	10,300			
12	1,860	1,750	1,450	1,360	1,440	1,640	a2,300	12,900	9,900			
13	a1,860	1,790	1,400	1,370	1,440	1,590	a2,400	13,100	8,900			
14	a1,860	1,770	1,400	1,450	1,450	1,520	a2,700	13,500	8,580			
15	1,900	1,750	1,400	1,440	1,440	1,420	a2,900	13,900	8,710			
16	1,900	1,720	1,450	1,450	1,390	1,400	2,780	15,300	9,500			
17	1,880	1,730	1,450	*1,390	1,390	1,400	a3,200	16,200	9,630			
18	1,880	1,700	1,450	1,400	1,400	1,420	a3,700	17,300	9,200			
19	1,860	1,630	1,450	1,400	1,400	1,400	a3,350	17,900	8,800			
20	1,820	1,500	1,500	1,390	1,390	1,420	a3,450	20,200	9,560			
21	1,920	1,500	1,500	1,360	1,390	1,400	a3,300	23,000	10,000			
22	*1,860	1,610	1,450	1,400	1,370	1,370	3,390	25,200	10,800			
23	1,840	1,840	1,400	1,440	*1,340	1,400	3,680	*21,700	12,900			
24	1,940	1,680	1,350	1,440	1,390	1,450	4,370	20,900	18,800			
25	1,900	1,720	1,300	1,400	1,440	1,440	4,980	19,500	20,600			
26	1,840	1,730	1,300	1,360	1,400	1,390	5,280	18,800	23,300			
27	1,820	1,810	1,300	1,370	1,360	1,370	*5,350	17,700	25,100			
28	1,840	1,770	1,350	1,420	1,300	*1,400	6,040	16,000	26,700			
29	1,840	1,750	1,400	1,440	-	1,370	5,990	13,500	21,800			
30	1,840	1,720	1,400	1,470	--	1,310	5,350	12,300	17,400			
31	1,880	------	1,350	1,440	-----	1,260	------	10,700	------			------
Total	59,280	52,140	44,860	43,340	38,670	44,250	94,460	419,470	386,050			
Mean	1,912	1,738	1,447	1,398	1,381	1,427	3,149	13,530	13,870			
Ac-ft	117,600	103,400	88,980	85,960	76,700	87,770	187,400	832,000	765,700			

Calendar year 1953: Max 22,100 Min 1,300 Mean 4,890 Ac-ft 3,541,000
Water year 1953-54: Max - Min - Mean - Ac-ft -

* Discharge measurement made on this day.
a Doubtful or no gage-height record; discharge estimated on basis of weather records and records for stations upstream and downstream.
Note.--Stage-discharge relation affected by ice Dec. 6 to Jan. 10.

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 1954 (no winter records 1933-35, 1937).

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.--18 years (1935-36, 1937-54), 37.6 cfs (27,240 acre-ft per year).

Extremes.--Maximum discharge during year, 265 cfs May 22 (gage height, 2.66 ft); maximum gage height, 3.65 ft Feb. 4 (backwater from ice); minimum daily discharge, 3.2 cfs Mar. 31.

1932-54: Maximum discharge, 430 cfs May 15, 1936 (gage height, 3.15 ft), from rating curve extended above 200 cfs; maximum gage height, 3.76 ft June 9, 1944 (backwater from tree); no flow Jan. 25-28, 1949.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation of about 4,000 acres (for details on adjudication of diversions, see Remarks for this station in WSP 1217).

Revisions.--WSP 1123: Drainage area.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 12-21)

1.2	2	1.8	47
1.3	4	2.0	88
1.4	8	2.8	280
1.6	21		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	9.8	10	4.5	*5.7	6.0	3.6	64	90	68	18	12
2	11	9.8	9.7	4.5	5.8	6.0	4.0	56	88	64	17	13
3	12	9.8	8.5	4.5	5.8	5.9	4.0	58	84	60	16	13
4	12	9.8	9.0	4.5	5.6	5.8	5.6	68	81	56	16	13
5	12	10	9.5	4.5	5.4	5.8	8.6	92	79	55	15	13
6	12	10	9.5	4.5	5.4	5.8	8.6	132	79	51	12	12
7	12	9.8	9.5	4.6	5.4	5.8	7.2	165	79	49	12	12
8	12	10	9.4	4.6	5.4	5.9	7.2	153	75	46	12	12
9	12	11	9.3	4.6	5.4	6.2	6.8	130	70	43	12	12
10	12	*9.8	9.0	4.6	5.5	6.6	6.4	158	70	41	12	11
11	12	9.8	7.0	4.6	5.6	7.1	7.2	212	64	39	12	11
12	12	9.2	7.2	4.6	5.8	7.8	7.6	192	58	36	*11	12
13	12	9.2	7.6	4.6	5.9	7.8	8.0	188	56	34	11	12
14	12	9.2	8.0	*4.6	6.0	7.8	8.0	182	55	34	11	11
15	13	9.2	*8.1	4.7	6.0	7.9	8.6	188	*56	*32	10	11
16	13	9.2	8.2	4.8	6.0	8.0	10	182	60	29	10	11
17	12	9.2	8.4	4.8	6.0	8.1	15	*190	60	28	10	11
18	12	8.8	8.4	4.8	6.0	8.2	20	188	58	28	9.8	11
19	12	8.1	8.4	4.8	6.0	8.3	19	195	58	27	9.8	11
20	*11	7.2	8.4	4.7	6.0	8.4	22	200	60	25	9.2	11
21	11	6.5	8.2	4.6	6.0	8.4	26	230	73	23	10	10
22	10	6.6	7.8	4.5	6.0	8.4	36	235	81	23	10	10
23	10	7.3	6.9	4.6	6.0	8.4	49	185	84	22	9.8	10
24	11	8.2	5.7	4.8	6.0	8.4	66	153	90	22	9.2	10
25	10	9.0	4.5	4.8	6.0	8.4	79	141	84	22	8.6	9.8
26	9.8	9.3	4.5	4.7	6.0	*8.3	*81	134	86	22	8.6	9.8
27	9.8	9.7	4.5	4.6	6.0	8.0	81	123	108	21	8.6	9.8
28	9.8	10	4.5	4.8	6.0	8.0	112	110	92	19	9.2	*9.8
29	9.8	10	4.5	5.0	-	8.0	90	*101	79	19	9.2	9.8
30	9.8	10	4.5	5.3	-	7.2	77	99	70	18	8.0	9.8
31	9.8	-	4.5	5.6	----	3.2	------	95	------	18	9.8	------
Total	349.8	275.5	233.2	145.7	162.7	223.9	884.4	4,599	2,227	1,074	346.8	333.8
Mean	11.3	9.18	7.52	4.70	5.81	7.22	29.5	148	74.2	34.6	11.2	11.1
Ac-ft	694	546	463	289	323	444	1,750	9,120	4,420	2,130	688	662

Calendar year 1953: Max 260 Min 4.5 Mean 33.9 Ac-ft 24,530
Water year 1953-54: Max 235 Min 3.2 Mean 29.7 Ac-ft 21,530

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 18-27, 30, Dec. 2 to Jan. 17. No gage-height record Jan. 18 to Mar. 26 (stage-discharge relation affected by ice during most of period); 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.--May 1933 to September 1954.

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.--21 years, 44.2 cfs (32,020 acre-ft per year).

Extremes.--Maximum discharge during year, 225 cfs May 21 (gage height, 2.37 ft); minimum daily, 12 cfs Jan. 25 to Apr. 3.

1933-54: Maximum discharge, 399 cfs June 18, 1951 (gage height, 3.07 ft), from rating curve extended above 250 cfs; minimum, 6.4 cfs Mar. 11, 1948; minimum gage height, 0.95 ft Jan. 19, 1950.

Remarks.--Records good except those for periods of no gage-height record, which are fair. No diversions above station. Flow regulated by Cottonwood Lake.

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

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.1	10	1.7	61
1.3	19	2.0	116
1.5	35	2.4	222

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	20	19	16	*12	12	12	31	96	129	57	32
2	28	20	19	16	12	12	12	30	90	121	55	33
3	27	20	19	15	12	12	12	30	89	119	55	33
4	27	20	19	15	12	12	13	31	87	112	54	33
5	27	20	19	15	12	12	13	36	92	109	54	33
6	27	20	19	15	12	12	13	45	96	109	51	33
7	27	19	19	15	12	12	13	53	92	105	50	32
8	26	19	19	15	12	12	13	58	87	101	50	31
9	26	19	19	15	12	12	13	66	85	98	48	31
10	26	*19	19	14	12	12	13	85	85	96	47	30
11	25	19	19	14	12	12	13	94	83	92	47	30
12	25	19	19	14	12	12	13	98	81	89	*47	30
13	25	18	19	14	12	12	13	105	81	89	45	30
14	25	18	19	*14	12	12	14	109	83	85	43	30
15	26	18	*19	14	12	12	15	112	*83	*81	43	29
16	25	18	19	14	12	12	16	121	89	80	42	29
17	25	18	18	14	12	12	17	*142	90	78	41	29
18	25	18	18	13	12	12	18	152	90	76	40	29
19	25	18	18	13	12	12	18	171	90	76	39	29
20	*25	18	18	13	12	12	18	191	101	73	40	28
21	24	18	18	13	12	12	19	205	112	72	41	28
22	23	18	17	13	12	12	21	211	129	68	39	28
23	23	18	17	13	12	12	23	178	137	67	37	28
24	22	19	17	13	12	12	25	158	152	67	36	27
25	22	19	17	12	12	12	28	150	160	66	36	27
26	21	19	17	12	12	*12	*30	150	173	64	35	27
27	21	19	16	12	12	12	30	*145	181	62	35	26
28	21	19	16	12	12	12	32	134	171	61	35	*26
29	20	19	16	12	-	12	32	116	158	60	34	26
30	20	19	16	12	-	12	31	109	139	58	33	25
31	21		16	12	- -	12	------	101	------	58	33	------
Total	758	565	559	424	336	372	553	3,417	3,282	2,621	1,342	882
Mean	24.5	18.8	18.0	13.7	12.0	12.0	18.4	110	109	84.5	43.3	29.4
Ac-ft	1,500	1,120	1,110	841	666	738	1,100	6,780	6,510	5,200	2,660	1,750

Calendar year 1953: Max 314 Min 13 Mean 46.4 Ac-ft 33,620
Water year 1953-54: Max 211 Min 12 Mean 41.4 Ac-ft 29,980

Peak discharge (base, 140 cfs).--May 21 (6:30 p.m.) 225 cfs (2.37 ft); June 26 (10 p.m.) 184 cfs (2.24 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Nov. 2-9, Nov. 16 to Jan. 13, Jan. 18-31, Feb. 11 to Mar. 25, Apr. 5-25; discharge estimated on basis of 1 discharge measurement, weather records, recorded range in stage, and records for nearby stations.

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, 1½ miles east of Afton, and 4½ miles upstream from mouth.

Drainage area.--27.4 sq mi.

Records available.--May 1943 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 6,420 ft (from topographic map).

Average discharge.--11 years, 89.4 cfs (64,770 acre-ft per year).

Extremes.--Maximum discharge during year, 426 cfs June 27 (gage height, 3.02 ft), from rating curve extended above 360 cfs; minimum daily, 32 cfs Mar. 28.
1943-54: Maximum discharge, 560 cfs June 10, 1948, from rating curve extended above 360 cfs; maximum gage height, 3.41 ft May 28, 1951; minimum daily discharge, 28 cfs Apr. 3, 4, 1945.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Diversions above station for powerplant above station and municipal use below (for details on adjudication of diversions, see Remarks for this station in WSP 1217).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 21 to July 24)

1.8	32	2.5	161
1.9	41	3.0	346
2.2	93	3.5	590

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	44	40	35	35	35	35	48	150	264	102	66
2	51	49	40	35	35	35	36	47	150	260	93	66
3	51	45	40	35	35	35	36	47	140	260	93	64
4	51	45	40	35	*35	35	34	45	150	260	91	62
5	49	45	40	35	35	35	36	51	150	260	91	60
6	49	47	40	35	35	35	35	60	160	256	89	60
7	49	44	40	35	35	35	34	69	160	253	87	60
8	48	45	40	35	35	35	36	79	150	253	81	60
9	47	42	40	35	35	35	35	85	150	253	81	59
10	48	*44	40	35	35	35	35	122	140	246	79	59
11	47	45	40	35	35	35	33	149	140	242	79	57
12	51	45	40	35	35	35	36	159	140	235	*75	57
13	47	45	40	35	35	35	36	164	140	221	75	57
14	45	44	40	*35	35	35	37	184	140	*207	73	57
15	48	45	*40	35	35	35	36	204	*156	207	73	55
16	48	45	40	35	35	35	36	231	176	204	73	55
17	48	45	40	35	35	35	39	*249	173	184	73	55
18	45	44	40	35	35	35	39	253	161	167	71	55
19	47	43	40	35	35	35	41	264	170	156	71	54
20	*45	41	40	35	35	35	39	294	221	147	71	53
21	47	40	40	35	35	35	39	355	264	139	71	53
22	47	40	40	35	35	35	39	351	285	130	71	53
23	47	40	39	35	35	35	41	290	306	124	69	53
24	47	40	38	35	35	35	44	270	342	119	69	52
25	47	40	37	35	35	35	45	240	342	115	69	51
26	47	40	36	35	35	*36	*48	230	369	113	69	51
27	47	40	35	35	35	35	49	*220	392	115	68	51
28	47	40	35	35	35	32	52	210	294	108	68	*52
29	47	40	35	35		36	51	190	256	106	68	52
30	45	40	35	35	-	36	49	170	256	102	66	52
31	47	-	35	35	----	36	------	160	------	102	66	------
Total	1,480	1,292	1,205	1,085	980	1,086	1,181	5,490	6,223	5,808	2,375	1,691
Mean	47.7	43.1	38.9	35.0	35.0	35.0	39.4	177	207	187	76.6	56.4
Ac-ft	2,940	2,560	2,390	2,150	1,940	2,150	2,340	10,890	12,340	11,520	4,710	3,350

Calendar year 1953: Max 475 Min 31 Mean 82.1 Ac-ft 59,420
Water year 1953-54: Max 392 Min 32 Mean 81.9 Ac-ft 59,280

Peak discharge (base, 390 cfs).--May 21 (4:30 p.m.) 397 cfs (3.01 ft); June 27 (2 a.m.) 426 cfs (3.02 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Nov. 19 to Mar. 25, May 23 to June 14, Sept. 13-27; discharge estimated on basis of 5 discharge measurements, weather records, recorded range in stage, and records for nearby stations.

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Salt River above reservoir, near Etna, Wyo.

Location.--Lat 43°04'50", long 111°02'15", in NE¼ sec. 28, T. 36 N., R. 119 W., on right bank 3½ miles northwest of Etna and 8 miles upstream from mouth.

Drainage area.--829 sq mi.

Records available.--July 1917 to September 1918, October 1953 to September 1954. Published as Salt River near Alpine, Idaho, 1917-18.

Gage.--Water-stage recorder. Datum of gage is 5,675.78 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. July 1 to Sept. 30, 1917, and June 5 to Sept. 30, 1918, staff gage at site 5 miles downstream.

Extremes.--Maximum discharge during year, 1,560 cfs May 11 (gage height, 3.70 ft); minimum, 384 cfs Mar. 5 (gage height, 2.12 ft).
1917-18, 1953-54: Maximum discharge observed, 2,380 cfs June 17, 18, 1918; minimum, that of Mar. 5, 1954.

Remarks.--Records excellent. Water rights totaling 960.63 cfs (priorities 1886 to 1942) for irrigation of about 65,840 acres, 470.10 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 diversions above station. Two small reservoirs above station in Wyoming for power and fish culture (total adjudication, 52.22 acre-ft per year).

Cooperation.--Gage-height record and 10 discharge measurements furnished by Bureau of Reclamation.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 28 to Apr. 2		Apr. 3 to Sept. 30			
2.1	378	2.2	406	3.0	950
2.3	443	2.4	500	3.7	1,560
2.6	590	2.6	630		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		559	553	465	443	417	413	1,060	745	690	602	574
2		a558	548	465	443	413	410	967	737	682	*602	574
3		a560	542	465	436	403	415	899	698	682	574	574
4		a560	537	465	428	400	432	924	652	690	574	581
5		a562	537	461	424	400	480	*1,040	652	698	602	595
6		a562	537	461	428	400	542	1,200	675	721	623	588
7		a564	537	461	424	410	548	1,290	713	705	616	602
8		a564	532	461	417	406	548	1,330	729	682	609	616
9		*564	532	461	413	436	548	1,390	729	675	609	609
10		558	537	456	413	465	548	1,490	801	737	602	*602
11		553	507	447	424	465	574	1,520	817	753	595	609
12		548	527	452	424	447	609	1,450	809	*668	609	602
13		548	527	456	428	436	690	1,380	793	645	616	602
14	a530	548	527	456	428	436	761	1,230	841	630	623	595
15		542	527	456	421	428	865	1,170	809	638	630	595
16		542	527	452	421	428	890	1,130	857	675	630	588
17		548	*522	452	424	432	1,000	*1,090	849	675	616	581
18		548	507	452	*428	432	1,280	1,020	841	682	602	581
19		542	522	452	417	421	1,300	899	*801	713	588	574
20		527	527	447	421	424	1,130	849	769	721	574	567
21		522	517	428	421	428	1,040	908	721	753	581	567
22		537	512	*456	417	421	1,050	1,230	675	761	595	567
23		558	478	447	417	*421	1,120	1,160	623	698	595	574
24		558	474	447	417	417	1,200	1,040	616	675	588	574
25		553	478	443	417	413	1,170	984	616	660	581	574
26		558	469	413	421	413	*1,200	*882	623	645	588	588
27		579	469	443	410	417	1,180	841	682	638	595	588
28	558	579	469	447	413	421	1,250	825	729	638	588	588
29	564	569	469	447	-	421	1,260	785	729	623	574	581
30	564	558	465	447	-	413	1,120	761	705	609	574	574
31	558	--	465	443	-----	410	------	737	------	602	574	------
Total	16,554	16,627	15,877	14,004	11,838	13,094	25,573	33,481	22,036	21,064	18,529	17,584
Mean	534	554	512	452	423	422	852	1,080	735	679	598	586
Ac-ft	32,830	32,980	31,490	27,780	23,480	25,970	50,720	66,410	43,710	41,780	36,750	34,880

Calendar year 1953: Max - Min - Mean - Ac-ft -
Water year 1953-54: Max 1,520 Min 400 Mean 620 Ac-ft 448,800

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of record for Salt River at Wyoming-Idaho State line.

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 1954.

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

Average discharge.--20 years, 726 cfs (526,000 acre-ft per year).

Extremes.--Maximum discharge during year, 1,620 cfs May 11 (gage height, 3.26 ft); minimum daily, 410 cfs Mar. 3-6, 8.
1934-54: 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 good. Some diurnal fluctuation at low flow caused by many small power-plants on tributaries. Diversions above station for power developments, industry, municipal supply, and irrigation of about 66,000 acres (for details on adjudication of diversions, see Remarks for this station in WSP 1217).

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 27		Nov. 28 to Sept. 30	
1.9	515	1.6	385
2.0	575	2.0	560
2.1	640	3.0	1,350
		4.0	2,520

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	569	608	586	460	450	423	423	1,150	780	720	599	566
2	563	608	580	468	450	415	419	1,050	760	712	592	573
3	563	614	573	451	440	410	423	976	740	705	580	580
4	563	614	566	447	*435	410	447	992	690	712	566	592
5	557	614	548	455	443	410	496	1,110	690	720	599	606
6	557	627	548	451	443	410	580	1,260	710	742	618	599
7	557	620	554	455	439	420	599	1,350	740	720	612	612
8	557	614	548	455	431	410	606	1,390	760	705	606	625
9	563	*614	548	451	427	460	612	1,440	790	698	606	625
10	563	608	554	451	427	470	618	1,530	840	742	606	625
11	557	601	518	443	431	470	644	1,580	840	765	*599	625
12	569	594	524	443	427	460	684	1,510	830	690	612	625
13	563	588	536	455	435	450	772	1,460	850	658	618	612
14	563	588	*536	464	431	450	864	1,310	*890	*651	625	612
15	569	582	530	464	427	440	976	1,260	856	651	632	606
16	594	582	530	460	427	440	1,010	1,220	912	677	625	606
17	575	588	518	455	431	440	1,160	1,170	904	677	612	592
18	594	588	506	451	427	440	1,430	*1,110	896	684	599	592
19	*594	575	530	455	423	440	1,460	992	864	705	586	592
20	594	557	536	451	431	440	1,300	928	825	712	573	580
21	601	557	518	*443	427	440	1,200	984	788	742	573	580
22	601	569	518	468	427	430	1,150	1,300	720	765	592	586
23	601	594	b500	468	427	430	1,200	1,250	670	698	586	580
24	620	588	b480	464	423	430	1,250	1,120	664	670	580	599
25	614	582	b480	464	427	*427	1,250	1,060	664	658	573	599
26	608	582	b480	440	427	427	1,300	968	658	651	592	612
27	614	608	b470	450	415	435	*1,250	904	705	644	592	*612
28	627	618	b470	450	423	435	1,370	880	772	638	592	612
29	620	606	b470	450	-	435	1,380	850	758	632	573	606
30	614	586	464	450	-	427	1,230	810	735	612	573	599
31	614	-	443	450	-----	419	------	770	------	580	573	------
Total	18,118	17,874	16,162	14,082	12,071	13,443	28,103	35,684	23,301	21,336	18,464	18,030
Mean	584	596	521	454	431	434	937	1,151	777	688	596	601
Ac-ft	35,940	35,450	32,060	27,930	23,940	26,660	55,740	70,780	46,220	42,320	36,620	35,760

Calendar year 1953: Max 1,370 Min 414 Mean 649 Ac-ft 469,800
Water year 1953-54: Max 1,580 Min 410 Mean 648 Ac-ft 469,400

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 26 to Feb. 3, Mar. 3-24, Apr. 21-27, May 1, 2, May 28 to June 14; discharge estimated on basis of 2 discharge measurements, weather records, recorded range in stage, and records for station above reservoir, near Etna, Wyo.

McCoy Creek above reservoir, near Alpine, Idaho

Location.--Lat 43°10'50", long 111°06'55", in SW¼ sec. 6, T. 3 S., R. 46 E., on left bank 1½ miles upstream from mouth and 3½ miles west of Alpine.
Drainage area.--108 sq mi.
Records available.--July 1917 to September 1918, May to July 1934, and September 1953 to September 1954. Published as McCoy Creek near Alpine, Idaho, 1917-18, and as McCoy Creek near Alpine, Wyo., 1934.
Gage.--Water-stage recorder. Datum of gage is 5,635.4 ft above mean sea level, datum of 1929, supplementary adjustment of 1947 (levels partly by Bureau of Reclamation). July 15 to Sept. 30, 1917, staff gage, June 25 to Sept. 30, 1918, water-stage recorder, and May 1 to July 31, 1934, staff gage, at sites about a mile downstream.
Extremes.--Maximum discharge during year, 813 cfs Apr. 28 (gage height, 4.82 ft); minimum, 10 cfs Feb. 24 (gage height, 1.36 ft).
1917-18, 1934, 1953-54: Maximum discharge, that of Apr. 28, 1954; minimum, 1 cfs on many days during 1934.
Remarks.--Records good except those for periods of ice-effect or no gage-height record, which are fair. No diversion above station.
Cooperation.--Gage-height record and 13 discharge measurements furnished by Bureau of Reclamation.

Rating table, Sept. 11, 1953, to Sept. 30, 1954, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 13-19)

1.3	9.5	3.0	175
1.5	13	3.5	305
1.7	17	4.0	476
2.0	35	4.9	842
2.5	90		

Discharge, in cubic feet per second, 1953

Date	Discharge	Date	Discharge	Date	Discharge
Sept.11	17	Sept.18	17	Sept.25	16
12	17	19	17	26	16
13	17	20	16	27	16
14	17	21	16	28	16
15	17	22	16	29	16
16	17	23	16	30	16
17	17	24	16		

Note.--Result of discharge measurement made Aug. 11, 1953, 32 cfs.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	16	16	b14	16	16	17	299	157	106	36	18
2	15	17	15	b14	b16	b15	17	248	143	100	34	21
3	15	*17	15	14	b16	b15	19	270	135	96	33	23
4	15	17	15	14	b15	b15	27	302	132	93	*33	22
5	15	17	b15	14	b15	b16	48	*404	132	90	40	26
6	a15	20	b15	14	b15	b16	63	472	135	89	40	22
7	a15	17	15	15	b15	16	57	469	139	84	35	20
8	a15	16	b15	14	b15	16	57	465	133	80	32	*19
9	a15	16	b14	14	b15	20	61	514	133	*76	29	19
10	a14	16	b14	14	b16	b30	58	552	167	73	28	19
11	a14	16	b14	b14	b16	b26	70	525	211	70	28	19
12	a14	16	b14	14	16	b24	96	465	179	66	32	20
13	*14	16	b15	14	16	b23	116	436	175	65	31	20
14	14	16	*15	14	16	b24	159	404	171	72	28	19
15	14	16	15	13	16	b26	214	387	161	77	27	18
16	16	16	15	14	*16	27	234	373	193	65	25	18
17	15	16	b15	14	16	24	370	*380	165	62	25	17
18	15	15	b15	b13	16	20	510	337	*155	62	24	17
19	14	15	15	b12	b15	b22	462	318	147	67	24	17
20	15	b13	15	b11	16	21	404	302	143	58	23	17
21	15	b14	15	*b11	16	19	380	337	137	56	28	17
22	16	15	b15	b13	b16	19	*433	337	137	53	30	17
23	16	17	b14	15	16	b20	465	268	135	50	26	18
24	17	16	b14	15	b16	19	458	240	133	49	23	19
25	17	16	b14	15	16	18	484	226	128	46	22	18
26	16	17	b14	b14	16	18	503	*221	128	47	22	17
27	16	20	14	b14	b16	18	480	202	147	50	22	17
28	16	18	b14	15	b16	18	657	179	135	45	21	17
29	16	16	b14	15	-	18	495	169	118	42	20	17
30	16	*15	b14	15	------	17	377	163	110	40	20	17
31	16	-----	b14	16	------	*17	------	147	------	37	19	------
Total	471	488	453	432	441	613	7,791	10,391	4,414	2,066	860	565
Mean	15.2	16.3	14.6	13.9	15.8	19.8	260	335	147	66.6	27.7	18.8
Cfsm	0.141	0.151	0.135	0.129	0.146	0.183	2.41	3.10	1.36	0.617	0.256	0.174
In.	0.16	0.17	0.16	0.15	0.15	0.21	2.69	3.57	1.52	0.71	0.30	0.19
Ac-ft	934	968	899	857	875	1,220	15,450	20,610	8,760	4,100	1,710	1,120

Calendar year 1953: Max - Min - Mean - Cfsm - In. - Ac-ft -
Water year 1953-54: Max 657 Min 11 Mean 79.4 Cfsm 0.735 In. 9.98 Ac-ft 57,500

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

Indian Creek above reservoir, near Alpine, Idaho

Location.--Lat 43°15'35", long 111°04'00", near center of sec. 9, T. 2 S., R. 46 E., on right bank a quarter of a mile downstream from forks of creek, 3 miles upstream from mouth, and 5½ miles north of Alpine.

Drainage area.--36.8 sq mi.

Records available.--July 1917 to September 1918, August 1953 to September 1954. Published as Indian Creek near Blowout 1917-18.

Gage.--Water-stage recorder. Altitude of gage 5,820 ft (from topographic map). July 14 to Sept. 30, 1917, and June 4 to Sept. 21, 1918, staff gages at site 3 miles downstream.

Extremes.--Maximum discharge during year, 174 cfs May 21 (gage height, 3.34 ft); no flow for many days.
1917-18, 1953-54: Maximum daily discharge, 350 cfs June 14, 1918; no flow for many days.

Remarks.--Records fair. No flow Aug. 1 to Sept. 30, 1953. One small diversion from North Fork for irrigation.

Cooperation.--Gage-height record and four discharge measurements furnished by Bureau of Reclamation.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 26 to May 22, July 8-10)

1.0	0	2.0	27
1.1	.4	2.4	50
1.2	1.5	2.8	82
1.3	3	3.2	130
1.5	7	3.5	178
1.7	13		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	a12	a42	113	a18	
2							0	a 11	a40	107	a16	
3							0	a 11	a40	103	a14	
4							0	a12	*39	98	a13	
5							0	a12	54	90	a12	
6							0	*13	51	89	*10	
7							0	24	47	89	10	
8							0	26	*43	*75	9	
9							0	32	43	60	8	
10							0	42	45	55	8	
11							0	58	47	51	2	
12							0	53	49	47	2	
13							0	54	54	42	2	
14							0	55	56	39	6	
15							0	62	*58	47	1	
16							0	71	68	47	1	
17							0	102	68	45	0	
18							0	107	66	44	0	
19							0	124	68	a42	0	
20							0	136	83	a38	0	
21							0	*144	110	*36	0	
22							0	147	110	a32	0	
23							0	a140	129	a30	0	
24							0	a130	*145	a27	0	
25							0	a120	127	a24	0	
26							13	*112	125	a22	0	
27							27	a98	130	*21	0	
28							19	a85	114	20	0	
29							28	a65	*118	20	0	
30							a17	a50	117	a20	0	
31							------	a45	------	19		------
Total	0	0	0	0	0	0	104	2,153	2,286	1,592	132	0
Mean	0	0	0	0	0	0	3.4	69.5	76.2	51.4	4.3	0
Ac-ft	0	0	0	0	0	0	206	4,270	4,530	3,160	262	0

Calendar year 1953: Max - Min - Mean - Ac-ft -
Water year 1953-54: Max 147 Min 0 Mean 17.2 Ac-ft 12,430

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for nearby stations.
Note.--No flow Aug. 1 to Sept. 30, 1953.

Elk Creek above reservoir, near Irwin, Idaho

Location.--Lat 43°19'25", long 111°06'40", in NW¼ sec. 19, T. 1 S., R. 46 E., on right bank 2½ miles upstream from mouth and 11 miles southeast of Irwin.
Drainage area.--59.2 sq mi.
Records available.--July 1917 to September 1918, April to July 1934, September 1953 to September 1954. Published as Big Elk Creek near Blowout 1917-18 and as Elk Creek near Irwin 1934.
Gage.--Water-stage recorder. Altitude of gage is 5,640 ft (from topographic map). July to September 1917, June to September 1918, staff gage at site 2¼ miles downstream.
Extremes.--Maximum discharge during period September 1953 to September 1954, 505 cfs May 21 (gage height, 4.89 ft); minimum, 5 cfs Dec. 15 (gage height, 1.46 ft).
1917-18, 1934, 1953-54: Maximum discharge observed, 870 cfs June 15, 1918; minimum, that of Dec. 15, 1953.
Remarks.--Records good except those for periods of ice effect, which are fair.
Cooperation.--Gage-height record and 13 discharge measurements furnished by Bureau of Reclamation.

Rating table, Sept. 24, 1953, to Sept. 30, 1954, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 21-31, Sept. 14-30)

2.0	18	3.5	197
2.3	32	4.0	296
2.6	57	4.5	406
3.0	107		

Discharge, in cubic feet per second, 1953

Sept. 24	44	Sept. 28	44
25	44	29	44
26	45	30	44
27	45		

Note.--Result of discharge measurement made Aug. 28, 1953, 54 cfs.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	35	33	25	28	22	22	74	161	199	84	49
2	44	36	32	25	28	*21	22	67	146	189	79	52
3	44	35	32	25	28	20	22	68	148	182	74	50
4	44	34	30	25	28	21	22	88	165	176	71	53
5	43	35	28	25	28	22	23	121	184	170	75	54
6	*41	36	28	25	28	23	23	*161	174	165	74	49
7	40	34	28	25	27	24	22	174	163	*155	74	49
8	40	34	30	25	27	26	23	182	161	148	65	48
9	40	34	30	25	26	28	23	231	*167	138	64	*47
10	40	34	25	25	25	26	23	275	178	128	68	46
11	40	33	23	25	28	24	23	271	186	121	74	46
12	40	33	25	25	27	22	26	259	178	120	73	47
13	40	33	28	25	28	21	29	263	182	115	70	48
14	39	33	25	25	26	22	30	269	182	113	70	*49
15	39	34	19	25	26	22	29	279	186	112	69	48
16	39	33	*32	25	26	22	30	296	220	109	67	48
17	37	33	34	25	26	22	35	325	205	107	65	47
18	37	33	35	25	26	22	40	325	197	107	64	47
19	37	*26	33	25	26	23	39	353	201	107	63	47
20	37	25	32	25	26	22	35	399	224	109	62	46
21	39	26	32	25	26	21	34	402	251	107	62	46
22	37	28	29	26	26	22	38	395	261	*103	62	45
23	37	32	28	26	26	22	*71	355	273	100	59	44
24	38	34	27	26	26	*22	79	322	277	98	57	44
25	37	33	26	25	26	22	85	309	265	97	56	44
26	37	33	25	26	26	22	86	*283	*277	95	56	44
27	*37	33	25	*27	24	22	98	239	286	94	55	42
28	36	32	25	28	23	23	120	205	251	91	54	41
29	36	31	25	29	-	22	102	184	216	90	54	42
30	36	31	25	28	------	22	86	172	201	88	53	42
31	35	-----	25	28	------	22	------	155	------	85	52	------
Total	1,210	976	874	794	741	697	1,340	7,501	6,166	3,818	2,025	1,404
Mean	39.0	32.5	28.2	25.6	26.5	22.5	44.7	242	206	123	65.3	46.8
Cfsm	0.659	0.549	0.476	0.432	0.448	0.380	0.755	4.09	3.48	2.08	1.10	0.791
In.	0.76	0.61	0.55	0.50	0.47	0.44	0.84	4.72	3.88	2.40	1.27	0.88
Ac-ft	2,400	1,940	1,730	1,570	1,470	1,380	2,660	14,880	12,230	7,570	4,020	2,780

Calendar year 1953: Max - Min - Mean - Cfsm - In. - Ac-ft -
Water year 1953-54: Max 402 Min 19 Mean 75.5 Cfsm 1.28 In. 17.32 Ac-ft 54,630

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 19-23, Dec. 4-7, 10-14, 16-18, Dec. 23 to Feb. 10, Feb. 19-21, Feb. 27 to Mar. 7, Mar. 13.

Bear Creek above reservoir, near Irwin, Idaho

Location.--Lat 43°16'45", long 111°13'15", in SE¼ sec. 31, T. 1 S., R. 45 E., on left bank a quarter of a mile downstream from Elk Creek, 4 miles upstream from mouth, and 9 miles southeast of Irwin.

Drainage area.--77.1 sq mi.

Records available.--July 1917 to September 1918, May 1934 to October 1936 (no winter records), August 1953 to September 1954. Published as Bear Creek near Irwin 1917-18, 1934-36.

Gage.--Water-stage recorder. Altitude of gage is 5,640 ft (from topographic map). July 23 to Sept. 30, 1917, June 9 to Sept. 30, 1918, May 1 to July 31, 1934, Apr. 3 to Oct. 31, 1935, Apr. 7 to Oct. 31, 1936, staff gage at site 4 miles downstream.

Extremes.--Maximum discharge during period August 1953 to September 1954, 487 cfs May 9 (gage height, 4.22 ft); minimum, about 1.0 cfs Jan. 20 (gage height, 1.08 ft).
1917-18, 1934-36, 1953-54: Maximum discharge observed, 784 cfs May 5, 1936; minimum, that of Jan. 20, 1954.

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

Cooperation.--Gage-height record and 15 discharge measurements furnished by Bureau of Reclamation.

Rating table, Aug. 28, 1953, to Sept. 30, 1954, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 6 to Sept. 15)

1.9	8	3.0	104
2.0	10	3.5	230
2.3	24	4.0	399
2.6	46	4.1	437

Discharge, in cubic feet per second, 1953

Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.	Day	Aug.	Sept.
1	-	29	7	-	28	13	-	29	19	-	29	25	-	28
2	-	31	8	-	28	14	-	28	20	-	28	26	-	28
3	-	30	9	-	29	15	-	28	21	-	28	27	-	28
4	-	30	10	-	29	16	-	28	22	-	28	28	28	28
5	-	29	11	-	28	17	-	28	23	-	28	29	28	28
6	-	29	12	-	28	18	-	28	24	†41	28	30	28	27
												31	28	-
Total												-		853
Mean												-		28.4
Runoff in acre-feet												-		1,690
Cubic feet per second per square mile												-		0.368
Runoff in inches												-		0.41

† Result of discharge measurement.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	26	20	20	19	21	*24	221	152	102	44	36
2	26	26	20	20	14	14	24	199	148	101	44	36
3	26	26	20	19	15	b21	25	199	145	96	43	36
4	26	25	20	19	13	b22	28	214	*148	96	45	36
5	26	25	20	18	13	22	36	271	145	92	47	36
6	*26	26	20	18	16	24	42	*344	138	*89	50	34
7	26	25	20	18	15	22	40	355	134	84	47	34
8	26	24	20	18	13	22	42	352	127	82	47	34
9	26	24	20	18	16	32	44	395	123	80	46	*34
10	26	24	*18	13	10	37	46	414	141	76	*45	34
11	26	24	b16	14	21	36	53	399	162	76	45	34
12	26	24	b18	18	20	32	68	388	152	75	47	34
13	26	24	20	18	22	26	80	388	155	72	45	34
14	26	22	20	18	22	29	94	*362	152	80	44	34
15	28	23	20	18	21	28	101	344	*158	76	42	34
16	28	22	20	18	20	28	106	327	168	69	42	34
17	28	22	20	18	*20	28	143	304	155	64	41	34
18	28	22	12	16	20	28	184	284	145	64	41	34
19	28	*16	20	18	19	24	182	264	143	61	40	33
20	27	b15	21	9	20	26	176	242	145	58	40	32
21	28	b18	20	b18	20	27	176	239	143	57	41	32
22	28	21	14	19	20	26	205	246	138	56	41	32
23	28	22	b16	18	20	26	*264	190	136	54	39	32
24	29	22	b16	18	20	26	284	162	*132	52	37	32
25	29	21	b16	12	20	26	307	158	127	50	37	31
26	28	22	b16	b17	20	26	*297	160	127	52	37	31
27	*28	22	b16	b18	13	25	297	152	136	50	37	30
28	28	22	b16	*18	16	25	366	143	127	48	36	29
29	27	21	b16	20	-	25	304	143	115	46	36	29
30	27	20	b16	20	------	25	261	145	110	45	36	29
31	26	-----	14	20	-----	24	-----	143	------	45	34	------
Total	837	676	561	544	498	803	4,299	8,147	4,227	2,148	1,296	994
Mean	27.0	22.5	18.1	17.5	17.8	25.9	143	263	141	69.3	41.8	33.1
Cfsm	0.350	0.292	0.235	0.227	0.231	0.336	1.85	3.41	1.83	0.899	0.542	0.429
In.	0.40	0.33	0.27	0.26	0.24	0.39	2.06	3.93	2.04	1.04	0.62	0.48
Ac-ft	1,660	1,340	1,110	1,080	988	1,590	8,530	16,160	8,380	4,260	2,570	1,970

Calendar year 1953: Max - Min - Mean - Cfsm - In. - Ac-ft -
Water year 1953-54: Max 414 Min 9 Mean 68.6 Cfsm 0.890 In. 12.06 Ac-ft 49,640

* Discharge measurement made on this day.
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 at Bureau of Reclamation headquarters, 1½ miles downstream from Palisades Dam, 2 miles upstream from Palisades Creek, and 5 miles southeast of Irwin.

Drainage area.--5,225 sq mi.

Records available.--April 1934 to October 1936, March 1939 to September 1941, May 1949 to September 1954. 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 at site 1,100 ft downstream at datum 1.9 ft higher.

Extremes.--Maximum discharge during year, 31,200 cfs June 28 (gage height, 13.18 ft); minimum, 1,760 cfs Mar. 4 (gage height, 4.93 ft).
1934-36, 1939-41, 1949-54: Maximum discharge, that of June 28, 1954; minimum daily determined, 1,520 cfs Jan. 3, Mar. 15, 1941.
Flood during early June 1894 was probably much higher than that of June 28, 1954.

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 and six discharge measurements furnished by Bureau of Reclamation.

Revisions.--WSP 1217: Drainage area.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,000	2,610	2,370	b1,950	2,080	1,870	1,920	6,970	11,700	19,100	11,400	8,930
2	2,680	*2,610	2,310	b2,000	2,030	1,880	1,900	6,180	11,400	19,000	11,500	9,410
3	2,630	2,610	2,290	b2,050	2,000	1,830	1,920	5,950	10,800	17,400	11,000	9,310
4	2,590	2,570	2,260	2,070	2,000	1,790	1,980	6,160	10,800	16,900	10,600	9,060
5	2,560	2,570	2,170	2,120	2,000	1,820	2,310	7,340	11,500	16,900	11,000	9,180
6	2,560	2,610	2,180	2,120	1,980	1,830	2,750	*8,960	13,400	16,700	8,200	8,840
7	2,520	2,570	2,230	2,100	1,970	1,850	2,860	9,950	13,200	15,000	10,800	8,650
8	2,500	2,490	2,110	2,120	1,960	1,890	2,850	10,400	12,600	*15,000	10,400	8,380
9	2,490	2,470	2,040	2,100	1,940	1,980	2,850	11,400	11,200	15,400	10,200	8,470
10	2,490	2,450	2,160	2,070	1,970	2,280	2,850	13,700	11,400	15,200	9,700	8,500
11	2,490	2,450	2,040	2,000	2,070	2,450	2,850	15,900	11,600	14,300	9,310	8,230
12	2,490	2,450	2,180	2,080	2,010	2,320	2,940	15,800	11,100	13,900	9,570	8,470
13	2,470	2,450	2,170	2,080	2,050	2,160	3,260	15,900	10,200	13,400	9,500	8,530
14	2,450	2,440	2,080	2,050	2,100	2,100	3,640	16,000	9,760	13,400	8,840	8,200
15	2,470	2,440	2,120	2,080	*2,040	2,040	*4,120	16,400	9,820	14,300	8,560	7,580
16	2,560	2,420	2,170	2,080	2,010	2,030	4,170	17,000	10,600	14,600	8,260	7,090
17	2,540	2,420	2,120	2,050	2,010	2,040	4,660	18,400	11,000	13,700	7,990	7,110
18	2,520	2,420	2,120	2,030	2,030	2,080	5,820	19,000	10,500	11,400	8,020	6,950
19	2,500	2,310	2,170	*2,010	1,970	2,000	6,000	20,100	9,980	13,600	8,170	6,780
20	2,490	2,200	2,260	1,980	1,930	1,980	5,480	23,200	10,300	13,100	8,440	6,390
21	2,570	2,180	2,230	1,930	1,960	2,010	5,010	26,000	11,400	11,700	8,350	6,030
22	2,610	2,280	2,120	2,100	1,960	*2,010	5,350	29,100	12,800	10,000	8,020	5,530
23	2,590	2,450	2,030	2,100	1,960	1,970	6,080	25,600	15,200	8,410	7,720	5,510
24	2,640	2,420	b1,900	2,110	1,930	1,980	6,810	23,500	*19,400	10,900	7,460	5,460
25	2,680	2,290	b1,900	2,050	1,960	2,010	7,110	*22,500	23,800	11,800	7,370	4,960
26	2,640	2,340	b1,900	1,940	1,970	1,980	7,720	21,600	25,600	12,500	*7,460	4,530
27	2,630	2,490	b1,900	2,030	1,940	1,980	7,750	19,900	27,800	*11,700	7,690	4,290
28	2,630	2,490	b2,000	2,070	1,870	2,000	8,650	17,500	30,100	11,700	7,690	3,910
29	2,630	2,440	b2,020	2,110	-	2,000	8,710	14,900	24,600	11,600	7,990	3,460
30	2,610	*2,370	2,030	2,160		1,960	7,840	13,400	19,400	11,800	8,350	3,120
31	2,610	-------	1,950	2,120		1,900	------	12,400	------	11,500	8,650	------
Total	79,840	73,310	65,530	63,860	55,700	62,020	138,160	491,110	432,960	425,910	278,210	210,860
Mean	2,575	2,444	2,114	2,060	1,989	2,001	4,605	15,840	14,430	13,740	8,975	7,029
Ac-ft	158,400	145,400	130,000	126,700	110,500	123,000	274,000	974,100	858,800	844,800	551,800	418,200

Calendar year 1953: Max 25,500 Min 1,820 Mean 5,942 Ac-ft 4,301,000
Water year 1953-54: Max 30,100 Min 1,790 Mean 6,514 Ac-ft 4,716,000

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

Snake River near Heise, Idaho

Location.--Lat 43°36'45", long 111°39'05", in SW¼ 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.

Records available.--September 1910 to September 1954. Prior to 1911, published as South Fork Snake River near Heise.

Gage.--Water-stage recorder. Datum of gage is 5,015.3 ft above mean sea level, datum of 1929. Prior to July 9, 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.--44 years, 6,868 cfs (4,972,000 acre-ft per year).

Extremes.--Maximum discharge during year, 30,800 cfs June 28 (gage height, 9.07 ft); minimum, 1,930 cfs Mar. 4 (gage height, 1.54 ft).

1910-54: 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 was 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 (6,080 acre-ft diverted during year), which diverts 1½ miles upstream from station. About 107,000 acres in Wyoming and Idaho irrigated by diversions from tributaries above station. Records of chemical analyses and water temperatures for the water year 1954 are given in WSP 1353.

Revisions.--WSP 1217: Drainage area. Revised figures of discharge, in cubic feet per second, for the water year 1912, superseding those published in WSP 332, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1912		1912-Con.		1912-Con.		1912-Con.	
Jan. 30	3,250	Feb. 7	3,100	Feb. 15	2,950	Feb. 23	2,900
31	3,250	8	3,100	16	2,950	24	2,900
Feb. 1	3,200	9	3,100	17	2,900	25	2,900
2	3,200	10	3,050	18	2,900	26	2,900
3	3,200	11	3,050	19	2,900	27	2,900
4	3,150	12	3,050	20	2,900	28	2,900
5	3,150	13	3,000	21	2,900		
6	3,150	14	3,000	22	2,900		

Month	Maximum	Minimum	Mean	Runoff in acre-feet
December 1911.....	-	-	e3,680	226,000
Calendar year 1911.....	36,000	-	8,050	5,831,000
January 1912.....	-	-	3,750	231,000
February.....	3,200	2,860	3,000	173,000
Water year 1911-12.....	34,600	-	8,340	6,049,000
Calendar year 1912.....	34,600	-	8,620	6,253,000

e Monthly discharge only revised; daily discharge not published.

Snake River near Heise, Idaho--Continued

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 1 to Apr. 16, July 16 to Aug. 2)

1.4	1,930	5.0	11,000
1.7	2,340	6.0	14,800
2.0	2,830	7.0	19,300
2.5	3,880	8.0	24,500
3.0	5,110	9.0	30,100
4.0	7,920		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,950	2,890	2,700	b2,250	2,360	2,140	2,190	8,060	12,500	19,100	11,600	8,880
2	3,290	2,890	2,670	b2,300	2,300	2,130	2,200	7,170	12,100	19,600	11,600	9,430
3	3,090	2,910	2,630	2,340	2,260	2,090	2,210	6,700	11,500	18,100	11,300	9,490
4	3,070	2,910	2,620	2,330	2,210	2,050	2,280	6,790	11,200	17,500	10,700	9,170
5	3,030	2,890	2,570	2,380	2,210	2,060	2,540	7,890	11,600	17,300	11,100	9,280
6	2,990	2,910	2,520	2,400	2,230	2,060	2,990	9,520	13,800	17,200	9,110	9,050
7	2,950	2,890	2,590	2,370	2,210	2,100	3,210	10,700	13,800	16,000	10,300	8,880
8	2,950	2,850	2,550	2,370	2,230	2,190	3,110	11,000	13,300	15,200	10,500	8,620
9	2,930	2,780	2,440	2,370	2,240	2,310	3,110	12,100	12,200	15,900	10,300	8,530
10	2,910	2,780	b2,440	2,340	2,270	2,630	3,110	14,300	11,900	15,800	10,000	8,760
11	2,910	2,780	b2,440	2,260	2,210	2,850	3,110	16,700	12,500	14,700	9,430	8,440
12	2,930	2,780	2,490	2,300	2,280	2,670	3,230	16,900	12,100	14,200	9,670	8,560
13	2,910	2,780	2,490	2,340	2,300	2,460	3,620	16,800	11,500	13,800	9,860	8,730
14	2,890	2,760	2,430	2,380	2,360	2,420	4,020	16,800	10,500	13,400	9,170	8,560
15	2,890	2,760	2,460	2,360	2,310	2,380	4,520	17,000	10,500	14,100	8,850	8,010
16	2,950	2,740	2,490	2,340	2,240	2,340	4,650	17,500	11,100	14,900	8,620	7,430
17	2,950	2,740	2,490	2,330	2,230	2,360	5,010	18,800	11,800	14,300	8,360	7,430
18	2,930	2,740	2,440	2,300	2,240	2,420	6,190	19,500	11,400	12,200	8,300	7,280
19	2,930	2,700	2,480	2,280	2,210	2,330	6,760	20,200	10,600	13,400	8,300	7,170
20	2,910	2,540	2,570	2,260	2,170	2,300	6,270	23,300	10,700	14,000	8,670	6,790
21	2,930	2,480	b2,550	2,200	2,200	2,340	5,780	25,700	11,600	12,400	8,700	6,500
22	2,990	2,550	b2,450	2,260	2,190	2,310	5,800	29,500	12,900	11,200	8,380	5,910
23	2,970	2,690	b2,300	2,360	2,170	2,270	6,560	27,500	14,900	8,560	8,060	5,800
24	2,990	2,830	*b2,110	2,360	2,170	2,280	7,400	25,200	18,500	10,700	*7,780	5,860
25	3,010	2,700	b2,110	*2,330	2,200	*2,300	7,780	*23,700	23,200	11,700	7,720	5,450
26	2,990	2,690	b2,150	2,330	*2,240	2,260	*8,470	22,800	24,800	12,800	7,690	5,030
27	2,950	*2,740	b2,150	2,260	2,230	2,240	8,620	21,400	26,800	12,300	7,950	4,780
28	2,930	2,790	b2,200	2,360	2,120	2,260	9,280	19,000	29,700	*11,700	7,920	*4,520
29	*2,930	2,780	b2,300	2,400	-	2,280	10,000	16,700	*26,800	12,000	8,090	4,130
30	2,910	2,720	b2,350	2,430		2,270	8,960	14,600	20,600	12,100	8,440	3,750
31	2,890		b2,250	2,400		2,200	------	13,500	------	11,800	8,790	------
Total	92,850	82,990	75,430	72,290	62,590	71,300	152,980	517,330	446,400	437,960	285,260	220,220
Mean	2,995	2,766	2,433	2,332	2,235	2,300	5,099	16,690	14,880	14,130	9,202	7,341
Ac-ft	184,200	164,600	149,600	143,400	124,100	141,400	303,400	‡1,026	885,400	868,700	565,800	436,800

Calendar year 1953: Max 25,700 Min 2,110 Mean 6,369 Ac-ft 4,612,000
Water year 1953-54: Max 29,700 Min 2,050 Mean 6,898 Ac-ft 4,993,000

* Discharge measurement made on this day.
‡ Expressed in thousands.
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 1954. 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 1½ miles above Heise gaging station. Records good.

Discharge, in cubic feet per second, May to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								1,920	7,460	7,000	9,320	7,370
2								2,180	7,870	7,570	9,130	7,260
3								2,820	8,140	7,750	8,940	7,660
4								3,080	8,420	8,130	8.860	7,690
5								3,890	8,290	8,400	8,750	7,490
6								4,440	7,630	9,080	8,590	7,620
7								5,240	7,390	9,590	8,110	7,680
8								5,700	7,230	9,940	7,580	7,690
9								6,050	7,550	9,880	7,700	7,650
10								7,110	7,170	9,880	7,690	7,780
11								7,670	6,200	9,750	7,820	7,740
12								8,110	5,810	9,690	7,700	7,470
13								8,350	5,850	9,820	7,690	7,560
14								8,650	6,440	9,980	7,280	7,480
15								8,440	7,240	9,400	7,060	7,280
16								8,330	7,540	9,370	7,140	7,180
17								8,820	7,470	9,200	7,180	7,130
18								8,840	7,750	8,880	7,340	6,950
19								8,880	7,760	9,110	7,400	6,760
20								8,890	8,100	9,270	7,340	6,350
21								8,100	8,650	9,170	7,380	6,280
22								6,530	9,510	9,020	7,160	6,080
23								6,180	10,200	7,980	7.120	5,830
24								6,380	10,300	8,200	7,050	5,770
25								6,380	9,990	8,660	7,060	5,320
26								6,270	9,320	9,050	7,170	5,040
27								6,270	8,260	9,470	7,310	4,850
28								6,230	7,330	9,430	7,320	4,810
29								6,500	6,700	9,670	7,230	4,550
30								6,770	6,740	9,750	7,540	4,120
31					----		------	7,400	------	9,670	7,690	------
Total								200,420	234,310	281,760	238,650	200,440
Mean								6,465	7,810	9,089	7,698	6,681
Ac-ft								397,500	464,700	558,900	473,400	397,600

Calendar year	: Max	Min	Mean	Ac-ft
The season	: Max -	Min -	Mean -	Ac-ft 2,292,000

Henrys 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 1954.

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.--34 years, 48.9 cfs (35,400 acre-ft per year).

Extremes.--Maximum discharge during year, 168 cfs June 29 (gage height, 1.90 ft); minimum, 11 cfs Oct. 2, 9, 12, 14.

1920-54: Maximum discharge, 907 cfs June 13, 1926 (gage height, 5.40 ft); no flow for part of each day Sept. 17, 18, 1952.

Outflow from Henrys Lake was reported to have ceased entirely late in summer of 1889.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Henrys Lake (see p. 51). Since 1923, floodwaters by Dry Creek have been diverted at times into Henrys Lake (some diverted during 1954).

Revisions.--WSP 1217: Drainage area.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	13	13	15	18	21	21	22	24	154	94	80
2	12	13	13	15	18	21	21	21	24	150	93	79
3	12	13	13	15	*18	21	21	20	22	147	*93	79
4	12	13	13	15	18	21	21	20	22	143	93	*77
5	12	*13	13	15	18	21	21	20	23	140	93	77
6	12	13	13	15	18	21	21	20	24	140	85	77
7	12	13	13	15	19	21	21	20	27	136	84	77
8	12	13	13	15	19	21	21	19	28	131	84	77
9	12	13	13	15	19	*21	21	19	28	130	84	77
10	12	13	13	15	19	21	21	18	32	110	84	77
11	12	13	13	16	20	21	21	16	38	90	86	77
12	*12	13	*13	16	20	21	21	16	41	90	86	77
13	12	13	13	16	20	21	21	16	41	93	86	77
14	12	13	13	16	20	21	21	16	76	91	86	77
15	13	13	13	16	20	21	*21	16	89	*94	85	77
16	12	13	13	16	20	21	21	16	93	95	*85	77
17	13	13	13	16	20	21	21	16	91	96	85	77
18	13	13	13	16	20	21	21	16	91	95	86	77
19	13	13	13	17	20	21	21	17	106	96	86	77
20	13	13	13	17	20	21	21	16	113	96	85	44
21	13	13	13	17	20	21	21	16	*111	96	85	19
22	13	13	14	17	20	21	22	17	110	95	85	19
23	13	13	14	17	20	21	22	16	111	94	84	19
24	13	13	14	17	20	21	22	*16	112	94	83	19
25	13	13	14	17	21	21	22	16	113	95	84	19
26	13	13	14	18	21	21	22	17	112	*102	84	19
27	13	13	14	18	21	21	22	19	117	110	*84	19
28	13	13	14	18	21	21	22	19	126	107	84	19
29	13	13	14	18	-	21	22	18	150	104	83	19
30	13	13	14	18	-	21	22	18	162	100	83	19
31	13	------	14	18	------	21	------	19	------	98	82	------
Total	388	390	413	505	548	651	639	551	2,257	3,412	2,664	1,704
Mean	12.5	13.0	13.3	16.3	19.6	21.0	21.3	17.8	75.2	110	85.9	56.8
Ac-ft	770	774	819	1,000	1,090	1,290	1,270	1,090	4,480	6,770	5,280	3,380

Calendar year 1953: Max 223 Min 12 Mean 47.4 Ac-ft 34,340
Water year 1953-54: Max 162 Min 12 Mean 38.7 Ac-ft 28,010

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 19-21, 23, Dec. 9-11, Dec. 13 to Feb. 2; discharge estimated on basis of 2 discharge measurements.

Island Park Reservoir near Island Park, Idaho

Location.--Lat 44°25'11", long 111°23'52", 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, three-eighths of a mile upstream from Buffalo River and 2 miles west of Island Park.

Drainage area.--481 sq mi.

Records available.--November 1938 to September 1954.

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, 137,885 acre-ft Apr. 29 (elevation, 6,303.33 ft), minimum 33,970 acre-ft Oct. 1, 30, 31 (elevation, 6,283.66 ft).
1938-54: Maximum contents, 138,050 acre-ft May 21, 1952 (elevation, 6,303.35 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.

Revisions.--WSP 1217: Drainage area.

Contents at 8 a.m., in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33,970	33,995	48,950	66,440	94,585	118,115	132,710	136,665	135,125	135,690	107,810	75,575
2	34,045	34,020	49,810	67,445	95,435	118,785	132,710	136,175	134,880	135,285	105,565	73,750
3	34,045	34,045	50,960	68,255	96,290	119,460	132,710	136,095	134,800	135,205	103,625	72,020
4	34,095	34,070	51,930	69,025	97,145	120,140	132,710	135,610	134,555	135,125	101,710	70,220
5	34,170	34,095	52,845	70,115	98,140	120,820	132,790	135,365	133,910	134,960	99,680	68,715
6	34,170	34,195	53,770	70,905	98,875	121,500	132,950	135,530	133,270	135,125	97,145	68,000
7	34,170	34,195	54,715	71,860	99,615	122,185	133,110	135,935	132,630	135,045	95,365	66,540
8	34 095	34,170	55,595	72,770	100,355	122,870	133,110	136,260	132,630	135,045	94,585	64,965
9	34,095	34,145	56,520	73,695	101,300	124,010	133,190	136,260	133,430	134,800	93,290	63,900
10	34,095	34,120	57,380	74,520	102,185	124,780	133,270	136,260	133,670	134,640	92,000	62,570
11	34,045	34,145	58,210	75,350	103,005	126,020	133,270	136,420	134,155	134,395	90,540	61,220
12	34,045	34,145	58,385	76,190	103,835	126,875	133,270	136,420	134,800	134,315	89,215	59,900
13	34,020	34,145	58,475	77,090	105,010	127,575	133,270	136,420	135,205	134,155	88,465	58,560
14	34,020	34,145	58,740	78,115	106,055	128,360	133,670	136,420	135,125	133,270	87,040	57,205
15	34,045	34,145	59,230	78,975	106,825	129,065	133,750	136,340	135,530	132,150	85,930	55,845
16	34,095	35,050	59,630	79,845	107,670	129,850	133,910	136,340	136,175	131,115	84,840	54,590
17	34,170	35,960	59,945	80,720	108,375	130,405	133,990	136,340	136,175	130,245	83,810	53,165
18	34,170	37,030	60,355	81,605	109,155	131,035	134,235	136,420	136,420	129,775	82,970	51,970
19	34,170	37,960	60,900	82,555	109,940	131,355	134,235	136,665	136,175	128,435	82,140	51,115
20	34,145	38,765	61,640	83,390	110,800	131,670	134,395	136,340	136,175	127,185	81,430	50,155
21	34,120	39,705	61,920	84,235	111,735	132,150	134,475	136,500	135,855	126,405	80,545	49,135
22	34,095	40,740	62,290	85,080	112,600	132,470	134,640	137,230	135,690	125,400	79,675	48,105
23	34,070	41,825	62,525	86,360	113,550	132,470	134,960	137,230	135,450	124,780	79,035	47,525
24	34,070	42,845	62,855	87,470	114,135	132,550	135,285	136,665	135,450	124,090	78,285	46,670
25	34,070	43,665	63,185	88,280	114,865	132,550	135,690	136,500	135,450	123,170	78,000	45,970
26	34,070	44,600	63,565	89,030	115,670	132,550	135,855	136,420	135,365	121,880	78,115	45,385
27	34,045	45,350	64,000	89,785	116,410	132,630	136,175	136,340	135,365	120,515	77,770	45,350
28	34,020	46,320	64,335	90,730	117,220	132,630	137,230	135,530	135,935	118,560	77,655	45,245
29	34,020	47,240	64,725	92,065	-	132,630	137,885	135,450	135,770	115,230	77,430	45,315
30	33,970	48,070	65,110	92,900	-------	132,630	137,475	135,205	135,450	112,025	77,145	45,350
31	33,970	-------	65,550	93,740	-------	132,710	-------	135,125	-------	109,515	76,525	-------

Monthly elevations and contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	6,283.65	33,940	-
Oct. 31	6,283.66	33,970	+30
Nov. 30	6,288.27	48,070	+14,100
Dec. 31	6,292.38	65,550	+17,480
Calendar year 1953	-	-	-37,800
Jan. 31	6,297.30	93,740	+28,190
Feb. 28	6,300.68	117,220	+23,480
Mar. 31	6,302.69	132,710	+15,490
Apr. 30	6,303.28	137,475	+4,765
May 31	6,302.99	135,125	-2,350
June 30	6,303.03	135,450	+325
July 31	6,299.62	109,515	-25,935
Aug. 31	6,294.46	78,525	-32,990
Sept.30	6,287.50	45,350	-31,175
Water year 1953-54	-	-	+11,410

† Elevation at 8 a.m.

Henrys Fork near Island Park, Idaho

Location.--Lat 44°24'59", long 111°23'41", in SW¼ sec. 28, T. 13 N., R. 43 E., on left bank an eighth of a mile downstream from Island Park Dam, a quarter of a mile upstream from Buffalo River, and 1 mile west of Island Park.

Drainage area.--481 sq mi.

Records available.--January 1933 to September 1954.

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

Average discharge.--21 years, 541 cfs (391,700 acre-ft per year).

Extremes.--Maximum discharge during year, 2,170 cfs July 28 (gage height, 5.45 ft); minimum daily, 8 cfs Nov. 21 to Dec. 7.
1933-54: 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. 51) and Island Park Reservoir (see preceding page).

Cooperation.--Gage-height record and two discharge measurements furnished by Bureau of Reclamation.

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Jan. 8, Sept. 17-30)

1.3	3.0	2.5	400
1.4	8.9	3.0	635
1.5	21	4.0	1,140
1.6	44	5.0	1,810
1.8	112	5.5	2,200
2.0	185		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	528	543	8	10	11	14	382	981	792	816	1,640	1,220
2	514	543	8	10	11	14	382	900	748	797	*1,610	1,380
3	514	543	8	10	*11	15	382	865	733	772	1,500	1,410
4	514	543	8	10	11	15	386	816	875	753	1,500	*1,340
5	524	*548	8	10	11	15	391	811	1,060	748	1,890	1,240
6	528	538	8	10	11	15	404	836	997	762	1,640	1,250
7	528	538	8	10	11	15	427	890	811	758	1,270	1,090
8	524	538	9	10	11	15	427	915	481	748	1,060	1,320
9	519	538	9	10	11	*15	432	910	528	718	1,270	995
10	524	538	9	10	11	15	436	925	596	699	1,270	1,220
11	524	538	167	10	13	15	436	940	669	664	1,260	1,230
12	*528	538	*312	10	13	15	436	950	723	645	1,200	1,230
13	524	538	312	10	13	17	445	945	743	860	1,120	1,230
14	524	538	261	10	13	32	*500	940	787	*1,190	1,140	1,220
15	524	197	261	10	13	130	509	920	841	1,160	1,140	1,220
16	524	26	261	10	13	193	524	915	940	1,000	1,120	1,200
17	524	26	261	10	13	235	543	925	945	971	1,020	1,160
18	524	*26	261	10	13	278	567	940	945	1,150	1,020	1,040
19	528	26	261	10	13	303	581	966	920	1,210	1,010	1,040
20	528	26	261	10	14	338	596	976	905	1,060	1,010	1,030
21	533	8	261	11	14	360	610	997	*870	885	1,010	1,020
22	533	8	261	11	14	386	640	1,080	860	885	1,010	1,010
23	543	*8	261	11	14	351	689	1,050	875	885	966	875
24	548	8	261	11	14	368	753	*1,010	851	925	836	865
25	548	8	261	11	14	368	836	981	816	1,170	718	792
26	548	8	261	11	14	368	890	966	836	1,280	718	674
27	548	8	261	11	14	368	956	920	856	1,570	713	620
28	543	8	261	11	14	378	1,080	860	910	2,070	713	533
29	548	8	261	11	-	378	1,140	836	860	2,130	748	519
30	543	8	261	11	----	382	1,070	792	821	1,890	851	519
31	543	----	261	11	-----	382	------	772	------	1,550	1,090	------
Total	16,447	7,969	5,572	321	353	5,793	17,850	28,530	24,594	32,721	35,063	31,492
Mean	531	266	180	10.4	12.6	187	595	920	820	1,056	1,131	1,050
Ac-ft	32,620	15,810	11,050	637	700	11,490	35,400	56,590	48,780	64,900	69,550	62,460

Calendar year 1953: Max 1,920 Min 8 Mean 667 Ac-ft 482,600
Water year 1953-54: Max 2,130 Min 8 Mean 566 Ac-ft 410,000

* Discharge measurement made on this day.
Note.--Discharge for period Oct. 24 to Apr. 8 computed from once-daily staff-gage readings.

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.

Records available.--April 1890 to June 1891, August 1902 to June 1909, April 1920 to September 1954. Published as Henry 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.--34 years (1902-8, 1926-54), 1,350 cfs (977,400 acre-ft per year).

Extremes.--Maximum discharge during year, 3,650 cfs Aug. 29 (gage height, 8.19 ft); minimum, 75 cfs Oct. 20 (gage height, 5.20 ft); minimum daily, 545 cfs Oct. 20.
1890-91, 1902-9, 1920-54: Maximum discharge, 6,220 cfs May 7, 1925; minimum, 65 cfs Oct. 16, 1935 (gage height, 4.59 ft); minimum daily, 440 cfs Dec. 5, 1931.

Remarks.--Records good. Diurnal fluctuation caused by powerplant above station. Flow regulated by Henrys Lake (see p. 51) and Island Park Reservoir (see p. 37). About 18,000 acres irrigated by diversions above station.

Cooperation.--Gage-height record during nonirrigation season furnished by Utah Power & Light Co.

Revisions.--WSP 1217: Drainage area. Revised figures of discharge, in cubic feet per second, for the water years 1890-91, superseding figures published in 12th Annual Report, are given herein.

Discharge, in cubic feet per second, April to September 1890

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							1,120	2,580	2,690	1,830	1,440	1,440
2							1,120	3,020	2,690	1,830	1,440	1,440
3							1,120	2,910	2,690	1,830	1,440	1,440
4							1,120	5,090	2,690	1,730	1,440	1,440
5							1,120	5,610	2,690	1,630	1,440	1,440
6							1,120	5,610	2,470	1,630	1,440	1,440
7							1,270	5,870	2,360	1,630	1,440	1,270
8							1,200	6,000	2,250	1,630	1,440	1,270
9							1,120	5,220	2,250	1,630	1,440	1,270
10							1,120	4,830	2,470	1,630	1,440	1,270
11							1,270	5,090	2,360	1,630	1,440	1,270
12							1,270	4,960	2,360	1,630	1,440	1,270
13							1,270	4,330	2,360	1,440	1,440	1,270
14							1,270	4,200	2,360	1,440	1,440	1,270
15							1,270	3,960	2,250	1,440	1,440	1,270
16							1,270	3,710	2,250	1,440	1,440	1,270
17							1,270	3,590	2,140	1,440	1,440	1,270
18							1,360	3,590	2,040	1,440	1,440	1,270
19							1,440	3,590	2,040	1,440	1,440	1,270
20							1,630	3,360	2,040	1,440	1,440	1,270
21							1,630	3,360	2,040	1,440	1,440	1,270
22							1,830	3,360	2,040	1,440	1,440	1,270
23							2,140	3,240	1,940	1,440	1,440	1,270
24							2,250	3,130	1,830	1,440	1,440	1,270
25							2,250	3,130	1,830	1,440	1,440	1,270
26							2,470	3,130	1,830	1,440	1,440	1,270
27							2,690	3,020	1,830	1,440	1,440	1,270
28							2,910	3,020	1,830	1,440	1,440	1,270
29							3,480	2,910	1,830	1,440	1,440	1,270
30							4,200	2,910	1,830	1,440	1,440	1,270
31								2,800		1,440	1,440	
Total							50,600	121,130	66,280	47,620	44,640	39,120
Mean							1,690	3,910	2,210	1,540	1,440	1,300
Ac-ft							100,000	240,000	131,000	94,500	88,500	77,600

Calendar year	: Max	Min	Mean	Ac-ft	
Water year	: Max	Min	Mean	Ac-ft	

Henrys Fork near Ashton, Idaho--Continued

Discharge, in cubic feet per second, October 1890 to June 1891

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,470	1,630			
2	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,470	1,940			
3	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,470	2,140			
4	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,690	2,140			
5	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,690	2,040			
6	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,910	1,830			
7	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,910	1,830			
8	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,690	1,830			
9	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,470	1,830			
10	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,470	1,830			
11	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,250	1,830			
12	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,250	1,830			
13	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,250	1,830			
14	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,250	1,830			
15							1,270	2,250	1,830			
16	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,250	1,830			
17	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,040	1,830			
18	1,270	1,270	1,270	1,270	1,270	1,270	1,270	2,040	1,630			
19	1,270	1,270	1,270	1,270	1,270	1,270	1,360	2,040	1,630			
20	1,270	1,270	1,270	1,270	1,270	1,270	1,440	2,040	1,730			
21	1,270	1,270	1,270	1,270	1,270	1,270	1,440	1,830	1,830			
22	1,270	1,270	1,270	1,270	1,270	1,270	1,440	1,830	1,830			
23	1,270	1,270	1,270	1,270	1,270	1,270	1,630	1,830	1,630			
24	1,270	1,270	1,270	1,270	1,270	1,270	1,730	1,830	1,630			
25	1,270	1,270	1,270	1,270	1,270	1,270	1,830	1,830	1,630			
26	1,270	1,270	1,270	1,270	1,270	1,270	1,830	1,830	1,630			
27	1,270	1,270	1,270	1,270	1,270	1,270	2,040	1,730	1,630			
28	1,270	1,270	1,270	1,270	1,270	1,270	2,250	1,630	1,630			
29	1,270	1,270	1,270	1,270	-	1,270	2,470	1,630	1,540			
30	1,270	1,270	1,270	1,270	-	1,270	2,470	1,630	1,440			
31	1,270	--	1,270	1,270	---	1,270	------	1,630	------			------
Total	39,370	38,100	39,370	39,370	35,560	39,370	44,790	67,130	53,260			
Mean	1,270	1,270	1,270	1,270	1,270	1,270	1,490	2,170	1,780			
Ac-ft	78,100	75,600	78,100	78,100	70,500	78,100	88,800	133,000	106,000			

Calendar year : Max Min Mean Ac-ft
Water year : Max Min Mean Ac-ft

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,080	1,240	770	952	760	792	1,130	2,400	1,840	1,660	2,120	1,920
2	1,140	1,260	728	738	770	656	1,140	2,140	1,840	1,630	2,530	2,160
3	1,060	1,230	*686	707	696	686	1,100	2,080	1,680	1,580	2,200	2,280
4	1,060	1,260	728	656	707	728	1,170	2,040	1,680	1,550	2,200	2,320
5	1,120	1,030	656	728	*728	*728	1,200	2,180	2,020	1,480	2,380	2,080
6	1,100	1,240	718	760	728	686	1,210	2,320	2,160	1,560	2,700	2,060
7	1,170	1,260	676	707	728	792	*1,210	2,380	2,040	1,530	2,220	1,700
8	1,190	1,200	728	707	728	738	1,200	2,400	*1,660	1,520	1,940	2,240
9	1,140	1,210	738	*707	728	836	1,210	2,440	1,420	1,480	1,960	1,810
10	1,160	1,230	676	707	718	847	1,330	*2,510	1,610	1,450	1,980	1,960
11	1,190	1,240	728	656	718	792	1,050	2,530	1,900	1,440	1,980	2,000
12	1,210	1,230	892	636	728	728	1,210	2,510	1,880	1,360	2,040	1,980
13	1,210	1,230	1,090	707	781	686	1,280	2,470	1,790	1,380	1,860	*1,960
14	1,230	1,240	964	707	781	770	1,470	2,380	1,810	1,900	1,790	1,940
15	1,210	1,230	940	707	718	728	1,520	2,300	1,900	2,140	1,860	1,900
16	1,630	803	940	665	738	825	1,470	2,300	2,180	1,790	1,840	1,900
17	1,730	676	940	718	738	869	1,650	2,280	2,220	1,700	1,770	1,940
18	1,210	728	916	718	738	928	1,860	2,280	2,120	1,790	1,660	1,730
19	1,320	665	940	728	665	928	1,790	2,280	2,020	1,960	1,660	1,750
20	545	580	964	718	728	988	1,700	2,260	1,960	1,980	1,720	1,750
21	928	749	940	636	738	1,090	1,810	2,320	1,860	1,550	1,700	1,700
22	1,210	738	880	728	707	1,050	1,960	2,570	1,900	1,550	1,770	1,750
23	1,170	707	847	738	718	1,050	2,180	2,380	1,830	1,530	*1,680	1,610
24	1,240	749	803	718	738	1,060	2,300	2,220	1,750	1,500	1,600	1,580
25	1,260	728	880	676	738	1,120	2,200	2,180	1,750	1,680	1,360	1,560
26	1,240	718	904	696	728	1,060	2,380	2,160	1,730	1,940	1,340	1,450
27	1,240	749	858	718	676	1,090	2,360	2,100	1,860	2,100	1,320	1,360
28	1,210	749	928	728	738	1,120	2,970	2,000	*1,900	2,630	1,320	1,280
29	*1,230	718	952	792	-	1,160	2,990	1,880	1,790	*2,930	1,300	1,210
30	1,230	676	952	749	-	1,010	2,630	1,830	1,700	2,860	1,390	*1,230
31	1,230	--	964	760	---	1,120	------	1,750	------	2,420	1,650	------
Total	36,893	29,083	26,326	22,268	20,405	27,661	50,680	69,870	55,800	55,570	56,840	54,110
Mean	1,190	969	849	718	729	892	1,689	2,254	1,860	1,793	1,834	1,804
Ac-ft	73,180	57,690	52,220	44,170	40,470	54,860	100,500	138,600	110,700	110,200	112,700	107,300

Calendar year 1953: Max 2,950 Min 545 Mean 1,517 Ac-ft 1,098,000
Water year 1953-54: Max 2,990 Min 545 Mean 1,385 Ac-ft 1,003,000

* 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 1954. 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 1954

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	682	1,140	792	1,220	713	16	1,320	965	1,210	1,070	858
2	782	1,140	800	1,320	738	17	1,330	981	1,270	1,060	792
3	795	1,190	852	1,280	663	18	1,470	940	1,300	977	685
4	830	1,380	912	1,240	697	19	1,480	959	1,280	975	684
5	923	1,500	951	1,240	742	20	1,490	978	1,280	956	677
6	866	1,530	831	1,230	720	21	1,440	1,140	1,290	910	675
7	930	1,480	782	1,120	827	22	1,370	1,180	1,210	933	672
8	970	1,310	1,050	1,100	852	23	1,410	1,320	1,280	871	554
9	1,010	1,070	1,100	1,140	849	24	1,270	1,440	1,200	873	488
10	1,170	1,080	1,090	1,180	876	25	1,400	1,430	1,270	840	489
11	1,270	1,110	1,180	1,210	856	26	1,190	1,300	1,320	819	479
12	1,270	1,070	1,330	1,160	914	27	1,060	1,200	1,430	803	392
13	1,200	1,020	1,380	1,090	932	28	1,090	752	1,370	803	381
14	1,210	960	1,300	1,080	946	29	1,160	853	1,320	817	337
15	1,220	961	1,260	1,100	897	30	1,140	787	1,300	822	337
						31	1,140	-	1,300	705	-
Total							35,888	34,166	36,240	31,944	20,722
Mean							1,158	1,139	1,169	1,030	691
Runoff in acre-feet							71,180	67,770	71,880	63,360	41,100

The season: Max - Min - Mean - Ac-ft 315,300

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 1954. Discharge of canal 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 1954

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	0	156	240	255	144	16	0	138	238	214	87
2	0	156	240	253	146	17	100	136	228	242	86
3	0	156	240	259	146	18	100	136	228	229	84
4	0	156	240	258	139	19	100	136	200	229	86
5	0	156	240	259	126	20	110	136	206	219	86
6	0	179	240	287	114	21	110	166	214	208	86
7	0	179	239	259	113	22	110	195	210	206	72
8	0	179	239	252	113	23	128	222	216	196	72
9	0	179	239	251	111	24	128	246	230	178	72
10	0	179	239	234	112	25	141	256	226	177	75
11	0	179	239	245	111	26	141	256	225	174	75
12	0	139	253	248	102	27	141	256	231	159	75
13	0	139	257	211	101	28	141	256	237	156	75
14	0	139	257	212	98	29	141	232	235	148	74
15	0	139	263	209	89	30	140	230	250	148	75
						31	146	-	261	145	-
Total							1,877	5,407	7,300	6,720	2,945
Mean							60.5	180	235	217	98.2
Runoff in acre-feet							3,720	10,720	14,480	13,330	5,840

The season: Max - Min - Mean - Ac-ft 48,090

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Fall River near Squirrel, Idaho

Location.--Lat 44°04'15", long 111°14'25", 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.

Records available.--August 1902 to June 1909 (gage heights only, prior to October 1904), May 1918 to September 1954. Published as "at Wilson's Mill, near Marysville" 1902, as "near Marysville" 1903, and as "at Fremont" 1904-9.

Gage.--Water-stage recorder. Datum of gage is 5,589 ft above mean sea level, datum of 1929. 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.--40 years (1904-8, 1918-54), 752 cfs (544,000 acre-ft per year).

Extremes.--1904-5: Maximum discharge observed, 2,710 cfs (revised) June 10 (gage height, 4.05 ft); minimum (revised) not determined, occurred during period of doubtful gage-height record.

1953-54: Maximum discharge, 3,450 cfs May 22 (gage height, 4.80 ft); minimum, 276 cfs Mar. 3 (gage height, 0.87 ft).

1904-9, 1918-54: Maximum discharge observed, 6,440 cfs June 27, 1927; minimum observed, 72 cfs Feb. 9, 1930.

Remarks.--Records good. Flow since October 1939 partly regulated by Grassy Lake (see p. 51). About 16,000 acres irrigated from two diversions above station.

Revisions.--WSP 1217: Drainage area. Revised figures of discharge, in cubic feet per second for the entire water year 1905, superseding those published in WSP 178 are given herewith:

Discharge, in cubic feet per second, water year October 1904 to September 1905

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	530	493	424	424			365	1,220	1,970	2,280	430	430
2	493	493	424	424			380	1,220	2,150	1,560	430	430
3	493	493	424	424			400	1,220	2,280	1,440	398	430
4	530	458	424	424			400	1,010	2,460	1,560	430	430
5	530	458	424	424			400	1,060	2,650	1,440	430	430
6	552	458	424	424			430	1,160	2,400	1,500	430	398
7	568	458	424	424			430	1,160	2,340	1,610	398	398
8	568	458	424	424			430	1,320	2,520	1,320	398	430
9	568	458	424	424			430	1,220	2,650	1,220	398	430
10	568	458	424	424			430	1,110	2,710	1,500	398	430
11	568	458	458	424			430	*1,110	2,340	1,110	398	430
12	530	458	458	424			*465	1,060	2,150	1,220	398	430
13	530	458	458	424			475	1,060	2,340	1,160	398	430
14	493	458	458	424			475	1,160	2,460	1,060	398	430
15	493	458	458	424			475	1,160	2,340	782	398	430
16	493	458	458	424	365	365	475	1,220	2,150	698	398	430
17	493	458	458	365			500	1,320	2,030	615	398	430
18	493	458	458	365			500	1,670	2,150	575	398	430
19	493	458	424	365			575	1,730	1,560	575	398	430
20	493	458	424	365			655	1,670	1,320	575	398	430
21	493	458	424	365			698	1,670	1,270	538	398	398
22	493	458	424	365			740	1,730	1,560	500	398	398
23	493	424	424	365			825	2,030	1,610	465	398	398
24	493	424	424	365			915	1,270	1,670	430	398	430
25	493	424	424	365			1,380	1,320	1,790	430	398	465
26	493	424	424	365			2,030	1,440	2,030	430	430	465
27	493	424	424	365			1,320	1,670	2,520	430	430	465
28	*493	424	424	365			1,110	1,850	*2,650	430	430	430
29	493	424	424	365	-		1,160	2,150	2,400	365	*430	430
30	493	424	424	365	------		1,220	2,030	2,150	430	430	500
31	493	------	424	365	------		------	1,970	------	430	430	------
Total	15,902	13,573	13,416	12,259	10,220	11,315	20,518	43,990	64,620	28,678	12,690	12,915
Mean	513	452	433	395	365	365	684	1,419	2,154	925	409	430
Ac-ft	31,540	26,920	26,610	24,320	20,270	22,440	40,700	87,250	128,200	56,880	25,170	25,620

Calendar year 1904: Max - Min - Mean - Ac-ft -
Water year 1904-5: Max 2,710 Min - Mean 713 Ac-ft 515,900

* Discharge measurement made on this day.

Note.--Doubtful or no gage-height record Feb. 1 to Apr. 11, Apr. 13-16; discharge estimated on basis of discharge measurement and records for Teton River near St. Anthony.

Fall River near Squirrel, Idaho--Continued

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-5, Nov. 2 to Dec. 22, Mar. 9-11)

Oct. 1 to Apr. 6		Apr. 7 to Sept. 30			
1.0	375	1.0	355	3.0	1,800
1.4	615	1.5	620	4.0	2,690
		2.0	970	4.7	3,350

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	512	474	493	b445	420	380	405	1,290	1,370	1,750	626	550
2	519	512	474	436	420	380	405	1,190	1,300	1,780	620	544
3	526	526	*464	452	410	b385	405	1,240	1,160	1,730	620	555
4	519	486	474	442	405	b390	410	1,370	1,180	1,710	614	574
5	512	*474	452	442	*405	*b390	442	1,770	1,410	1,610	640	620
6	512	519	458	430	400	b395	480	2,040	1,440	1,480	646	594
7	512	480	b452	425	400	400	*455	2,130	1,370	1,410	633	574
8	512	458	452	*430	400	420	446	2,110	1,330	1,390	633	568
9	506	458	452	420	400	480	446	2,280	1,260	1,340	620	562
10	506	452	b450	420	400	480	441	*2,610	1,480	1,190	626	555
11	506	458	b440	b410	400	458	455	2,690	1,880	1,140	626	562
12	*500	464	452	b405	420	425	485	2,540	1,790	1,100	*659	574
13	500	469	447	b400	425	420	544	2,520	1,610	992	659	*555
14	500	469	436	b400	430	425	718	2,300	1,610	*955	652	550
15	506	480	442	405	405	420	737	2,320	1,690	1,100	626	550
16	566	474	442	420	400	420	698	2,420	2,230	985	600	544
17	532	474	442	420	400	420	785	2,490	2,310	910	581	538
18	506	452	436	b420	410	420	842	2,490	1,920	813	581	528
19	500	425	452	b415	390	420	785	2,580	1,760	744	581	528
20	500	436	458	b410	405	410	744	2,760	1,770	737	594	528
21	506	480	442	b420	405	425	757	2,910	*1,940	730	626	538
22	493	480	436	442	395	405	850	3,320	2,080	685	659	538
23	493	480	b415	436	395	395	1,050	2,760	2,210	652	626	544
24	519	469	b420	425	395	415	1,220	*2,370	2,440	646	620	544
25	519	469	b420	415	395	405	1,290	2,300	2,480	633	620	544
26	512	486	b420	410	395	410	1,540	2,280	2,500	646	626	544
27	506	512	b420	425	385	420	1,570	1,950	2,730	652	633	544
28	506	506	b435	430	380	436	1,960	1,640	2,690	626	620	538
29	500	480	b450	436	-	410	1,770	1,410	2,110	620	626	544
30	493	474	b450	420	------	395	1,510	1,310	1,810	640	620	538
31	493	------	b450	420	------	390	------	1,180	------	633	581	------
Total	15,792	14,276	13,826	13,126	11,290	12,844	24,645	66,570	54,860	32,029	19,294	16,569
Mean	509	476	446	423	403	414	822	2,147	1,829	1,033	622	552
Ac-ft	31,320	28,320	27,420	26,040	22,390	25,480	48,880	132,000	108,800	63,530	38,270	32,860

Calendar year 1953: Max 3,260 Min 390 Mean 749 Ac-ft 542,000
Water year 1953-54: Max 3,320 Min 380 Mean 809 Ac-ft 585,300

* 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, nine canals divert water from Fall River for irrigation. Records available for part of each irrigation season from 1919 to 1954. 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 1954

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	130	651	767	507	451	16	593	538	545	511	474
2	129	690	763	516	457	17	681	532	522	513	454
3	128	693	758	516	472	18	668	524	495	496	450
4	128	695	750	506	469	19	703	537	488	494	450
5	129	704	732	526	471	20	734	585	499	483	448
6	289	698	721	533	463	21	740	759	495	466	451
7	302	696	719	535	457	22	739	786	490	458	446
8	314	699	445	540	462	23	737	826	486	433	454
9	341	712	724	531	462	24	748	853	489	409	446
10	351	714	716	537	468	25	705	869	486	399	437
11	396	727	709	536	460	26	653	857	484	391	426
12	419	697	707	530	471	27	660	806	488	365	425
13	408	574	576	531	470	28	643	761	506	356	423
14	466	539	576	517	471	29	616	748	501	357	423
15	505	536	584	508	472	30	606	748	512	411	423
						31	611	-	507	473	-
Total							15,272	20,754	18,231	14,884	13,606
Mean							493	692	588	480	454
Runoff in acre-feet							30,290	41,160	36,160	29,520	26,990

The season: Max - Min - Mean - Ac-ft 164,100

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.

Records available.--April 1920 to September 1954 (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 season, 3,440 cfs May 22 (gage height, 4.94 ft); minimum, 122 cfs Aug. 6 (gage height, 1.63 ft).

1920-54: 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 except those for Aug. 27 to Sept. 30, which are good. Flow since October 1939 partly regulated by Grassy Lake (see p. 51). About 42,000 acres of land irrigated by diversions above station. Station is below all diversions from Fall River.

Revisions.--WSP 1217: Drainage area.

Rating table, Apr. 29 to Sept. 30, 1954 (gage height, in feet, and discharge, in cubic feet per second)

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

Discharge, in cubic feet per second, April to September 1954

Day	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	1,410	*837	1,170	165	195	16	-	2,090	1,870	580	172	168
2	1,240	855	1,200	152	203	17	-	2,120	2,140	504	158	181
3	1,310	690	1,140	144	195	18	-	2,190	1,670	438	175	188
4	1,370	658	1,110	141	203	19	-	2,260	1,360	370	192	181
5	1,780	846	1,030	147	292	20	-	2,370	1,300	346	206	178
6	2,000	963	891	149	229	21	-	2,480	1,400	337	233	192
7	2,160	883	855	135	214	22	-	3,240	1,470	296	292	192
8	2,160	855	1,050	138	199	23	-	2,690	1,540	257	*274	206
9	2,260	778	754	130	192	24	-	2,120	1,730	245	288	206
10	2,610	909	636	135	185	25	-	1,960	1,820	233	296	206
11	2,720	1,350	587	135	178	26	-	1,960	1,820	292	296	214
12	2,530	1,410	580	158	192	27	-	1,670	2,170	253	324	206
13	2,440	1,200	548	192	172	28	-	1,320	*2,370	210	324	206
14	2,150	1,250	515	199	168	29	*2,020	1,000	1,720	*178	332	206
15	2,090	1,350	622	199	175	30	1,670	909	1,300	192	288	*210
						31	-	778	-	172	221	-
Total							-	61,397	40,513	17,591	6,390	5,932
Mean							-	1,981	1,350	567	206	198
Runoff in acre-feet							-	121,800	80,360	34,890	12,670	11,770

The period May to September: Max - Min - Mean - Ac-ft 261,500

* Discharge measurement made on this day.

Henrys Fork at St. Anthony, Idaho

Location.--Lat 43°58'00", long 111°40'20", in NW¼ sec. 6, T. 7 N., R. 41 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.
Records available.--March 1919 to September 1954 (irrigation seasons only).
Gage.--Water-stage recorder. Datum of gage is 4,950.7 ft above mean sea level, datum of 1929. March 1919 to May 7, 1922, staff gages and May 8, 1922, to Aug. 14, 1931, water-stage recorder, at site 150 ft downstream at datum 0.075 ft lower.
Extremes.--Maximum discharge recorded during season, 4,840 cfs May 22 (gage height, 5.32 ft); minimum recorded, 242 cfs Aug. 9 (gage height, 2.32 ft).
1919-54: 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. 51), Island Park Reservoir (see p. 37), and Grassy Lake (see p. 51).
Revisions.--WSP 1217: Drainage area.

Rating table, Apr. 29 to Sept. 30, 1954 (gage height, in feet, and discharge, in cubic feet per second)

3.0	580	5.0	3,870
3.5	1,040	5.5	5,210
4.0	1,760		

Discharge, in cubic feet per second, April to September 1954

Day	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	3,160	*1,460	2,170	1,220	1,400	16	-	3,210	2,980	1,420	1,090	1,320
2	2,750	1,650	2,170	1,520	1,400	17	-	3,120	3,460	1,140	1,080	1,430
3	2,730	1,300	1,980	1,260	1,650	18	-	3,120	3,010	1,080	1,030	1,400
4	2,710	1,170	1,860	1,200	1,790	19	-	3,180	2,520	1,220	1,030	1,350
5	3,160	1,400	1,740	1,300	1,710	20	-	3,250	2,310	1,220	1,110	1,320
6	3,410	1,730	1,740	1,810	1,600	21	-	3,340	2,210	920	1,160	1,320
7	3,530	1,650	1,660	1,360	1,300	22	-	4,570	2,170	860	1,260	1,350
8	3,530	1,410	1,570	985	1,460	23	-	4,040	2,060	821	*1,220	1,290
9	3,650	1,120	1,220	1,030	1,440	24	-	3,340	2,150	785	1,210	*1,320
10	4,020	1,500	1,080	1,080	1,200	25	-	3,120	2,350	840	1,060	1,350
11	4,020	2,290	952	1,060	1,400	26	-	3,050	2,540	1,110	1,020	1,260
12	3,770	2,480	830	1,120	1,380	27	--	2,810	3,140	1,170	1,030	1,170
13	3,730	2,190	785	1,150	1,350	28	-	2,370	*3,680	1,540	1,040	1,170
14	3,370	2,210	1,060	1,080	1,300	29	*4,410	1,840	3,050	*1,930	1,000	1,140
15	3,210	2,420	1,630	1,110	1,300	30	3,650	1,680	2,460	1,910	1,000	1,120
						31	-	1,500	-	1,570	1,150	-
Total							-	98,290	66,070	41,983	35,775	40,980
Mean							-	3,171	2,202	1,354	1,154	1,366
Runoff in acre-feet							-	195,000	131,000	83,270	70,960	81,280

The season May to September: Max - Min - Mean - Ac-ft 561,500

* 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 1954. 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 1954

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	838	967	585	722	657	16	1,180	668	713	656	573
2	870	1,050	610	814	672	17	1,200	710	696	678	573
3	884	1,040	645	763	677	18	1,240	759	765	661	449
4	850	1,040	673	768	675	19	1,250	779	826	672	399
5	908	1,020	721	762	648	20	1,250	880	842	693	379
6	950	1,000	736	716	661	21	1,200	935	804	653	297
7	997	955	751	691	623	22	1,040	1,120	765	585	271
8	1,020	966	779	677	622	23	994	1,110	766	531	270
9	1,060	968	782	661	618	24	986	1,060	801	567	278
10	1,090	843	780	706	583	25	975	989	714	535	247
11	1,110	773	879	719	604	26	984	946	909	516	250
12	1,120	790	776	725	603	27	983	760	905	557	244
13	1,130	726	758	697	595	28	984	604	812	573	272
14	1,130	679	1,030	646	575	29	974	571	797	566	264
15	1,140	651	619	642	569	30	975	558	756	620	267
						31	965	-	795	613	-
Total							32,277	25,917	23,790	20,385	14,415
Mean							1,041	864	767	658	480
Runoff in acre-feet							64,020	51,410	47,190	40,430	28,590

The season: Max - Min - Mean - Ac-ft 231,600

Teton River near Tetonia, Idaho

Location.--Lat 43°51', long 111°15', in sec. 15, T. 6 N., R. 44 E., on right bank 1¾ miles downstream from highway bridge, 4 miles downstream from Packsaddle Creek, and 6 miles northwest of Tetonia.

Drainage area.--471 sq mi.

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 1954 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 5,910.3 ft (revised) above mean sea level, unadjusted. Since November 1941, supplementary staff gage at site 1¾ miles upstream.

Average discharge.--16 years (1929-32, 1941-54), 391 cfs (283,100 acre-ft per year).

Extremes.--Maximum discharge during year, 1,160 cfs June 28 (gage height, 2.17 ft); minimum, 128 cfs Dec. 7 (gage height, 0.30 ft).
1929-32, 1934-35, 1940-54: 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 gage height record, which are fair. Many diversions from tributaries above station for irrigation.

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	168	1.5	668
.7	230	2.0	1,030
1.0	364	2.5	1,450

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	270	262	246	205	205	190	197	324	386	689	460	349
2	270	266	238	210	200	190	204	310	431	668	460	349
3	270	266	235	215	195	185	230	305	*392	648	454	354
4	274	262	220	215	190	185	354	300	370	642	449	370
5	274	266	210	215	185	190	533	320	364	635	472	397
6	270	270	190	215	180	195	596	340	414	622	502	370
7	270	270	177	215	175	200	502	360	448	*596	484	349
8	*270	262	185	215	*172	210	502	390	466	570	466	349
9	266	258	205	210	170	240	521	420	437	545	*454	*339
10	266	258	200	205	170	400	425	440	478	533	448	334
11	262	262	190	200	180	380	413	470	533	508	448	339
12	266	258	195	195	190	340	*425	*502	484	490	454	339
13	262	*262	200	190	195	310	425	539	448	484	466	339
14	262	254	215	195	200	290	490	545	466	484	472	329
15	266	250	225	190	205	280	448	558	472	502	448	319
16	288	250	225	180	205	270	324	615	558	539	419	314
17	279	246	*223	190	205	*262	314	675	558	570	419	305
18	266	238	220	200	205	250	305	703	515	558	408	301
19	262	230	225	*212	200	234	301	696	472	558	402	301
20	258	230	225	210	200	234	270	696	448	558	397	296
21	270	260	220	210	205	238	254	773	437	570	402	296
22	274	266	220	215	210	230	242	1,040	460	545	419	301
23	270	254	210	220	210	230	242	977	490	527	413	305
24	274	250	200	210	210	230	242	689	628	521	397	319
25	296	238	195	200	210	220	258	577	752	508	386	305
26	279	250	190	200	210	217	266	558	759	496	386	305
27	270	274	190	205	200	210	258	508	932	515	380	301
28	266	270	190	205	190	210	319	454	1,130	496	364	296
29	266	250	195	205	-	217	466	408	1,010	484	359	292
30	266	246	195	210	--	207	339	380	780	484	359	296
31	262	-----	200	210	-----	204	-----	375	-----	466	354	-----
Total	8,364	7,678	6,454	6,372	5,472	7,448	10,665	16,247	16,518	17,011	13,201	9,758
Mean	270	256	208	206	195	240	356	524	551	549	426	325
Ac-ft	16,590	15,230	12,800	12,640	10,850	14,770	21,150	32,230	32,760	33,740	26,180	19,350

Calendar year 1953: Max 1,360 Min 177 Mean 338 Ac-ft 244,700
Water year 1953-54: Max 1,130 Min 170 Mean 343 Ac-ft 248,300

* Discharge measurement made on this day.
Note.- No gage-height record Dec. 18 to Feb. 7, Feb. 22 to Mar. 16, and May 3-11 (stage-discharge relation affected by ice Nov. 19-21, Dec. 3-6, Dec. 8 to Feb. 21); discharge computed on basis of 5 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°55'40", long 111°36'55", in SW¼ 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.
Records available.--January 1890 to September 1893, April 1903 to June 1909, April 1920 to September 1954 (no winter records 1903, 1920-21, 1923-33). Published as "near Wilford" or "at Chasis 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.--21 years (1933-53), 755 cfs (546,600 acre-ft per year).
Extremes.--Maximum discharge during year, 2,950 cfs May 22 (gage height, 5.31 ft); minimum, 217 cfs Dec. 8 (gage height, 1.60 ft).
1890-93, 1903-9, 1920-54: Maximum discharge observed, 5,830 cfs June 13, 1893 (gage height, 6.90 ft, site and datum then in use); minimum, 215 cfs (revised) Mar. 12, 1906 (gage height, 1.00 ft, site and datum then in use).
Revisions.--The maximum discharge observed for the water year 1909 has been revised to 5,230 cfs June 5, 6, 1909 (gage height, 6.8 ft, site and datum then in use) and the minimum discharge for the water year 1906 has been revised to 215 cfs Mar. 12, 1906 (gage height, 1.00 ft, site and datum then in use), superseding figures published in previous water-supply papers.
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 three-quarters of a mile above station (11,750 acre-ft diverted into river during 1954 irrigation season).
Revisions.--WSP 1217: Drainage area. Revised figures of discharge, in cubic feet per second, for the water years 1903-6, 1908-9, superseding those published in WSP 100, 135, 178, 214, 252 and 272 are given herewith. Figures of daily discharge for the periods Nov. 12, 1903, to Feb. 25, 1904, Dec. 1-13, 1904, Jan. 1 to Feb. 28, 1909, published in WSP 100, 135 and 272 are considered to be in error due to failure to consider backwater effect from ice. These records should not be used.

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1903		1904-Con.		1906-Con.		1908-Con.	
Apr. 23	518	May 17	1,780	Mar. 13	260	June 29	2,060
24	518	18	1,960	14	293	30	2,160
25	518	19	2,550	15	330	July 1	2,250
26	579	20	2,750	16	260	2	2,300
27	642	21	2,750	17	260	3	2,350
28	642	22	3,150	18	235	4	2,500
29	579	23	3,550	19	235	5	2,650
30	579	24	3,950	20	235	6	2,600
May 1	518	25	3,650	21	235	7	2,450
2	457	26	2,950	22	260	8	2,350
3	400	27	2,450	23	276	9	2,300
4	400	28	2,350	24	293	10	2,200
5	518	29	2,350	25	293	11	2,110
6	642	30	2,450	26	312		
7	774	31	2,350	27	312	1909	
8	914			28	330	May 23	2,110
9	914	1905		29	371	24	2,200
10	988	Mar. 1	293	30	428	25	2,250
11	843	2	293	31	458	26	2,550
12	774	3	293	June 4	2,250	27	3,200
13	1,140	4	293	5	2,450	28	3,550
14	1,730	5	312	6	2,600	29	3,350
15	2,110	6	312	7	2,450	30	2,750
16	1,380	7	330	11	2,250	31	3,500
17	1,300	8	330	12	2,600	June 1	2,550
18	1,140	9	330	13	3,250	2	3,450
19	1,060	10	330	14	3,300	3	4,050
20	914	11	330	15	2,700	4	5,120
21	843	12	330	16	2,550	5	5,230
22	843	13	371	17	2,500	6	5,230
23	774			18	2,250	7	5,120
24	774	1906				8	4,100
25	843	Feb.1-18	†b290	1908		9	3,350
26	914	19	293	June 7	2,200	10	2,950
27	988	20	293	8	2,450	11	2,350
28	1,220	21	276	9	2,750	12	2,250
29	1,380	22	293	10	2,500	13	2,300
30	1,550	23	293	11	2,700	14	2,450
31	2,010	24	293	12	2,850	15	2,700
		25	293	13	2,850	16	3,400
1904		26	293	14	2,900	17	3,750
May 3	1,100	27	312	15	3,200	18	4,350
4	1,260	28	312	16	3,600	19	4,350
5	1,420	Mar. 1	293	17	4,250	20	4,250
6	1,420	2	312	18	4,050	21	4,150
7	1,340	3	312	19	3,450	22	3,900
8	1,180	4	293	20	2,800	23	3,750
9	1,020	5	312	21	2,650	24	3,550
10	1,180	6	312	22	2,500	25	3,450
11	1,260	7	293	23	2,350	26	3,950
12	1,420	8	293	24	2,060	27	3,800
13	1,420	9	293	25	2,060	28	3,850
14	1,500	10	293	26	2,110	29	3,900
15	1,780	11	235	27	2,550	30	3,700
16	1,680	12	215	28	2,450		

† Average for period indicated.
b Stage-discharge relation affected by ice.

Teton River near St. Anthony, Idaho--Continued

Revised figures of monthly discharge, in cubic feet per second, 1903-6, 1908-9

Month	Maximum	Minimum	Mean	Runoff in acre-feet
April 1903.....	642	-	a506	30,100
May.....	2,110	400	1,000	61,600
November.....	-	-	a580	34,500
December.....	-	-	a480	29,500
January 1904.....	-	-	a420	25,800
February.....	-	-	a420	24,200
May.....	3,950	835	1,990	122,000
Water year 1903-4..	3,950	-	845	613,000
December 1904.....	-	-	a350	21,500
Calendar year 1904.	3,950	-	811	587,000
March 1905.....	808	293	449	27,600
Water year 1904-5..	1,760	-	548	397,000
Calendar year 1905.	1,760	-	526	381,000
February 1906.....	-	-	a292	16,200
March.....	458	215	295	18,100
June.....	3,300	1,140	1,950	116,000
Water year 1905-6..	3,300	215	700	507,000
Calendar year 1906.	3,300	215	726	525,000
June 1908.....	4,250	1,500	2,510	149,000
July.....	2,650	1,020	1,830	112,000
Water year 1907-8..	4,250	427	931	675,000
Calendar year 1908.	4,250	427	920	667,000
January 1909.....	-	-	a400	24,600
February.....	-	-	a380	21,100
May.....	3,550	740	1,620	99,600
June.....	5,230	2,550	3,710	221,000

a Partly estimated.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	453	448	430	b375	416	384	350	839	888	1,400	806	550
2	458	453	430	b380	402	354	371	773	909	1,360	806	545
3	458	472	416	b385	384	b345	376	695	860	1,310	799	545
4	458	463	425	b385	376	b345	477	635	825	1,290	792	550
5	463	463	384	b390	371	346	677	665	993	1,280	806	584
6	463	477	b384	b385	367	358	806	846	1,180	1,270	867	572
7	458	472	b380	b380	354	363	754	1,050	1,190	1,210	839	578
8	*453	448	330	371	*354	376	734	1,140	*1,140	1,160	806	624
9	458	444	b370	363	350	425	747	1,280	1,060	1,130	*786	*618
10	453	439	b380	350	341	653	689	1,710	1,060	1,070	799	612
11	453	448	b390	341	350	641	653	1,940	1,250	1,040	799	624
12	453	448	b395	b360	354	550	*653	1,890	1,290	*1,080	806	665
13	458	*444	b400	*b375	363	472	671	1,920	1,210	951	780	671
14	458	448	407	b355	394	467	677	*1,830	1,210	986	799	677
15	463	439	416	326	376	430	806	1,830	1,220	1,040	780	665
16	487	434	394	286	367	425	635	2,000	1,340	1,110	747	659
17	477	430	*394	354	371	*439	606	2,170	1,540	1,100	714	635
18	467	430	384	367	380	444	612	2,120	1,360	1,080	677	606
19	458	384	416	367	358	416	612	2,130	1,200	1,060	665	606
20	448	398	412	b350	358	402	584	2,180	1,160	1,080	653	601
21	448	439	402	b355	380	416	556	2,220	1,200	1,050	635	601
22	453	430	407	b360	371	402	550	2,790	1,320	979	653	595
23	458	434	371	371	367	398	589	2,550	1,370	881	647	601
24	472	439	b360	358	384	402	653	1,890	1,650	867	635	606
25	477	425	b360	350	402	389	671	1,620	1,760	846	624	578
26	477	420	b355	367	402	384	806	1,520	1,740	839	612	556
27	453	453	b350	376	346	376	832	1,360	2,060	867	606	545
28	453	463	b355	367	358	376	888	1,160	2,190	881	589	503
29	458	439	b360	367	-	380	1,140	1,050	1,960	860	578	487
30	467	430	b365	389	-	376	958	958	1,560	860	578	492
31	448	-	b370	402	---	367	------	902	------	832	567	------
Total	14,261	13,254	11,992	11,307	10,396	12,901	20,133	47,663	39,695	32,769	22,250	17,751
Mean	460	442	387	365	371	416	671	1,538	1,323	1,057	718	592
Ac-ft	28,290	26,290	23,790	22,430	20,620	25,590	39,930	94,540	78,730	65.000	44,130	35,210

Calendar year 1953: Max 3,040 Min 330 Mean 692 Ac-ft 500,300
Water year 1953-54: Max 2,790 Min 286 Mean 697 Ac-ft 504,600

* 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, 19 canals divert water from Teton River for irrigation of 30,000 acres of land. Records available for part of each irrigation season from 1919 to 1954. 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 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								320	906	866	843	566
2								315	968	870	735	529
3								321	958	843	806	541
4								293	1,030	895	752	532
5								326	1,080	1,000	808	558
6								455	1,150	1,060	843	558
7								603	1,140	1,050	845	570
8								667	1,080	948	787	611
9								802	1,220	1,100	773	608
10								999	1,060	1,100	753	610
11								1,030	1,160	1,110	752	621
12								1,030	1,030	1,150	727	683
13								1,040	1,110	942	706	679
14								1,100	1,100	936	724	655
15								1,130	1,160	1,100	697	643
16								1,250	1,180	1,100	630	648
17								1,310	1,120	1,120	639	672
18								1,350	1,140	1,110	620	623
19								1,310	1,080	1,060	611	591
20								1,340	1,110	974	607	581
21								1,340	1,180	968	599	585
22								1,310	1,360	919	596	597
23								1,160	1,440	903	607	588
24								1,080	1,530	861	609	594
25								928	1,480	881	600	553
26								861	1,290	849	605	539
27								823	1,070	851	591	516
28								791	931	901	591	506
29								723	935	863	596	481
30					--			849	890	824	612	484
31		---- -			-----		------	820	------	838	618	----
Total								27,676	33,888	29,992	21,282	17,522
Mean								893	1,130	967	687	584
Ac-ft								54,890	67,220	59,490	42,210	34,750

Calendar year	: Max	Min	Mean	Ac-ft	
The season	: Max -	Min -	Mean -	Ac-ft	258,600

Henrys Fork near Rexburg, Idaho

Location.--Lat 43°49'34", long 111°54'15", 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, approximately.

Records available.--April 1909 to September 1954. Prior to 1911, published as North Fork 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.--45 years (1909-54), 1,910 cfs (1,383,000 acre-ft per year).

Extremes.--Maximum discharge during year, 5,100 cfs May 23 (gage height, 8.14 ft); minimum, 620 cfs July 14 (gage height, 2.96 ft).
1909-54: Maximum daily discharge, 9,490 cfs June 29, 1927; maximum gage height, 9.97 ft May 19, 1927; minimum discharge, 183 cfs Mar. 24-28, 1934 (gage height, 1.45 ft).

Remarks.--Records good except those for period 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. 37), and Grassy Lake Reservoir (see following page). About 172,000 acres irrigated by diversions above station. Part of return flow escapes westward beneath the Snake River plains above gaging station.

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 1-10, May 27 to July 31)

2.8	620	6.0	2,920
3.0	720	7.0	3,850
4.0	1,340	8.0	5,000
5.0	2,080		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,320	1,780	1,560	1,680	1,570	1,390	1,470	3,700	*1,190	*3,540	1,360	1,080
2	1,260	1,770	1,590	1,500	1,610	1,280	1,490	3,080	1,240	3,140	1,220	*1,200
3	1,320	*1,800	1,520	1,440	1,570	*1,130	1,480	2,640	1,050	2,860	1,250	1,390
4	1,290	1,820	*1,460	1,380	*1,470	1,240	1,470	*2,480	802	2,480	*1,090	1,510
5	1,400	1,930	1,460	*1,420	1,490	1,300	*1,580	2,470	715	2,210	1,130	1,550
6	1,440	1,770	1,400	1,500	1,490	1,350	1,750	2,780	1,100	2,090	1,420	1,470
7	1,440	1,900	1,470	1,500	1,470	1,300	1,890	3,060	1,360	1,950	1,610	1,430
8	1,470	1,870	1,420	1,450	1,440	1,350	1,780	3,180	1,440	1,680	1,440	1,270
9	1,440	1,790	1,420	1,450	1,440	1,440	1,750	3,190	1,210	1,400	1,200	1,440
10	1,390	1,840	1,450	1,430	1,440	1,610	1,770	3,280	1,280	1,150	1,170	1,220
11	1,380	1,850	1,490	1,420	1,430	1,720	1,810	3,650	1,860	938	1,170	1,310
12	1,350	1,840	1,610	1,380	1,480	1,630	1,540	3,860	2,610	758	1,140	1,330
13	1,340	1,820	1,870	1,400	1,560	1,440	1,680	3,710	2,710	660	1,300	1,330
14	1,320	1,830	1,990	1,450	1,650	1,400	1,730	3,600	2,480	645	1,260	1,310
15	1,330	1,860	1,790	1,450	1,600	1,430	1,980	3,240	2,440	1,140	1,310	1,340
16	1,370	1,820	1,740	1,400	1,540	1,370	2,050	3,060	2,530	1,520	1,320	1,380
17	1,720	1,570	1,730	1,350	1,540	1,420	1,860	3,060	3,160	1,310	1,240	1,400
18	1,710	1,480	1,700	1,450	1,560	1,520	2,060	2,980	3,540	1,100	1,160	1,480
19	1,500	1,470	1,710	1,470	1,540	1,500	2,130	2,970	3,040	1,160	1,110	1,470
20	1,520	1,280	1,800	1,470	1,400	1,490	2,040	3,030	2,380	1,220	1,140	1,530
21	1,090	1,380	1,800	1,400	1,540	1,560	1,890	3,140	2,060	1,200	1,270	1,610
22	1,430	1,640	1,690	1,380	1,540	1,660	1,910	3,700	1,670	944	1,410	1,620
23	1,650	1,720	1,680	1,500	1,470	1,580	2,020	4,820	1,490	848	1,520	1,630
24	1,720	1,640	1,610	1,500	1,500	1,560	2,350	4,870	1,500	726	1,490	1,600
25	1,820	1,630	1,400	1,420	1,490	1,580	2,590	4,100	1,860	660	1,390	1,630
26	1,820	1,630	1,510	1,410	1,470	1,560	2,640	3,610	2,320	695	1,210	1,620
27	1,810	1,610	1,570	1,480	1,430	1,530	2,930	3,310	3,000	926	1,140	1,490
28	1,780	1,640	1,650	1,520	1,330	1,520	3,050	2,960	4,000	1,100	1,120	1,450
29	1,760	1,630	1,680	1,550	-	1,580	3,860	2,250	4,730	1,520	1,060	1,400
30	1,750	1,560	1,680	1,550	--	1,540	4,270	1,700	4,330	1,700	968	1,410
31	1,770	------	1,680	1,540	----	1,470	------	1,490	------	1,630	944	------
Total	46,710	51,170	50,130	45,240	42,060	45,450	62,820	98,970	65,097	44,900	38,562	42,900
Mean	1,507	1,706	1,617	1,459	1,502	1,466	2,094	3,193	2,170	1,448	1,244	1,430
Ac-ft	92,650	101,500	99,430	89,730	83,420	90,150	124,600	196,300	129,100	89,060	76,490	85,090

Calendar year 1953: Max 5,850 Min 764 Mean 1,854 Ac-ft 1,343,000
Water year 1953-54: Max 4,870 Min 645 Mean 1,737 Ac-ft 1,258,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 9, 10, Dec. 27 to Feb. 1.

Smaller reservoirs in Henrys Fork basin

Henrys Lake.--Lat 44°36', long 111°21', in NW¼ sec. 26, T. 15 N., R. 43 E., at dam on Henrys Fork, 4 miles south of Lake, Idaho. Drainage area, 98 sq mi, approximately including 6 sq mi of Dry Creek basin. Records available, June 1923 to September 1954 (fragmentary). Staff gage. Datum of gage is 6,457.16 ft above mean sea level (levels by Bureau of Reclamation). Maximum contents observed during year, 81,300 acre-ft June 14 (gage height, 15.30 ft); minimum observed, 65,000 acre-ft Oct. 12, Nov. 5 (gage height, 12.70 ft). Maximum contents observed during period 1923-54, 84,500 acre-ft June 24, 1953; 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 (some diverted during water year 1954). Water used for irrigation near St. Anthony. Gage read occasionally. Records given herein represent usable contents, except an allowance is usually made of 3,000 acre-ft for loss and dead storage from maximum contents. Capacity table furnished by North Fork Reservoir Co.

Grassy Lake.--Lat 44°08', long 110°49', approximately in sec. 7, T. 48 N., R. 116 W. (unsurveyed), in gatehouse at dam on Grassy Creek, half a mile upstream from mouth and 24 miles northwest of Moran, Wyo. 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 1954. Mercury pressure gage. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Maximum contents observed during year, 15,300 acre-ft, June 4, 18, 22 (elevation, 7,210.35 ft); minimum observed, 11,300 acre-ft, Oct. 1, 14, 25, Nov. 5, 13; minimum elevation observed, 7,196.80 ft, Oct. 1. Maximum contents during period 1939-54, 15,446 acre-ft June 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 about twice monthly. Records given herein represent usable contents. Gage-height record and capacity table furnished by Bureau of Reclamation.

Monthly elevation and contents, water year October 1953 to September 1954

Date	Henrys Lake		Grassy Lake		
	Contents (acre-feet)	Change in contents during month (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	a65,000	-	-	a11,300	-
Oct. 31	a65,000	0	-	a11,300	0
Nov. 30	a66,700	+1,700	-	a11,600	+300
Dec. 31	a68,800	+2,100	7,199.40	12,000	+400
Calendar year 1953	-	+400	-	-	-300
Jan. 31	a70,500	+1,700	-	a12,600	+600
Feb. 28	a71,700	+1,200	-	a13,000	+400
Mar. 31	a72,800	+1,100	-	a13,200	+200
Apr. 30	a74,500	+1,700	-	a13,400	+200
May 31	a79,500	+5,000	-	a15,200	+1,800
June 30	a80,500	+1,000	-	a15,300	+100
July 31	a76,500	-4,000	-	a15,000	-300
Aug. 31	a71,600	-4,900	-	a11,700	-3,300
Sept.30	a67,700	-3,900	-	a11,600	-100
Water year 1953-54	-	+2,700	-	-	+300

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, excluding nontributary area on Snake River plains.

Records available.--March 1915 to September 1954 (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.--23 years (1931-54), 5,201 cfs (3,765,000 acre-ft per year).

Extremes.--Maximum discharge during year, 27,700 cfs June 29 (gage height, 12.45 ft); minimum, 1,440 cfs Oct. 15 (gage height, 4.65 ft).
1915-54: 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, 72,000 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 good. Some regulation by Jackson Lake (see p. 13), Island Park Reservoir (see p. 37), Henrys Lake and Grassy Lake (see preceding page). Many diversions above station for irrigation.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

4.9	1,700	9.0	13,500
5.5	2,540	10.0	17,500
6.0	3,500	11.0	21,600
7.0	6,370	12.2	26,800
8.0	9,790		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,810	3,370	*3,460	b3,350	*3,660	2,760	2,880	11,700	8,350	19,900	5,350	3,500
2	*2,290	3,480	3,460	b3,300	b3,600	*2,790	3,000	a11,200	8,280	17,600	5,190	4,000
3	1,910	3,440	3,500	b3,150	b3,400	2,680	2,940	a10,000	7,030	16,600	5,000	4,270
4	1,860	*3,370	3,480	b3,400	b3,250	2,650	2,980	a8,500	5,190	14,500	4,690	4,410
5	1,870	a3,450	3,420	3,230	b3,100	2,650	2,920	a7,600	4,640	13,300	4,360	4,440
6	2,050	a3,490	3,400	*b3,350	3,090	2,720	3,400	a7,300	6,110	12,200	5,090	4,580
7	2,060	3,570	b3,400	b3,350	3,050	2,770	4,020	a8,350	9,220	11,000	3,950	4,100
8	2,060	3,660	b3,380	b3,400	3,010	2,740	4,250	8,840	9,260	8,900	5,860	3,800
9	2,060	3,620	b3,240	b3,350	3,000	3,000	4,120	9,150	8,760	8,110	5,830	3,440
10	2,060	3,550	b3,230	b3,200	2,960	3,210	4,140	9,900	7,730	8,010	5,190	3,520
11	1,970	3,620	b3,240	b3,050	2,960	3,750	4,070	11,200	9,010	7,730	4,750	3,480
12	1,970	3,660	b2,860	b2,900	2,940	3,970	4,070	13,300	10,500	6,770	4,490	3,640
13	2,000	3,590	b3,000	b2,950	3,070	3,660	3,970	13,200	10,800	5,830	4,900	3,730
14	2,020	3,620	b3,400	b3,000	3,230	3,420	*4,490	13,000	9,720	5,150	5,440	3,870
15	1,980	3,640	b3,840	b3,100	3,310	3,350	4,870	12,500	7,800	6,020	4,970	3,750
16	2,030	3,660	b3,730	3,150	3,210	3,330	5,630	12,500	7,460	7,560	*4,690	3,420
17	2,150	3,570	b3,720	b3,050	3,110	3,270	5,790	12,900	8,350	8,210	4,170	*3,050
18	2,510	3,440	b3,750	b3,000	3,090	3,350	6,080	13,800	*9,430	7,700	3,750	3,110
19	2,610	3,290	3,780	b3,050	3,090	3,480	7,390	14,300	8,730	5,670	3,680	3,310
20	2,490	3,310	3,850	b3,050	3,010	3,400	7,730	*15,100	7,500	6,800	3,710	3,520
21	2,560	3,110	b3,840	b2,950	2,880	3,400	7,130	18,400	6,500	*6,700	4,070	3,370
22	2,370	3,190	b3,780	2,880	3,030	3,480	6,600	22,200	5,950	5,410	4,460	3,230
23	2,700	3,550	b3,650	b2,850	3,010	3,500	6,670	26,100	6,080	3,710	4,440	3,030
24	3,030	3,710	b3,000	b2,900	2,920	3,310	7,330	26,400	7,900	3,000	4,140	3,110
25	3,330	3,730	b2,530	b3,100	2,900	3,250	8,350	24,600	12,400	4,380	3,850	3,210
26	3,480	3,570	b2,410	b3,100	2,940	3,190	8,560	22,600	16,900	4,840	3,570	3,270
27	3,500	3,550	b2,100	b2,900	2,880	3,030	9,150	21,400	20,100	4,940	3,350	3,010
28	3,440	3,590	b1,900	2,960	2,830	2,960	9,430	19,300	23,400	4,360	3,310	2,700
29	3,420	3,640	b2,450	3,330	-	3,090	10,700	16,400	26,800	4,360	3,440	2,670
30	3,420	3,570	b2,800	3,520	--	3,110	11,700	13,000	25,900	4,640	3,350	2,650
31	3,420	------	b3,250	3,730	-----	3,000	------	10,700	------	5,150	3,250	------
Total	77,430	105,610	100,850	97,600	86,530	98,270	174,360	445,440	315,800	249,050	136,290	105,190
Mean	2,498	3,520	3,253	3,148	3,090	3,170	5,812	14,370	10,530	8,034	4,396	3,506
Ac-ft	153,600	209,500	200,000	193,600	171,600	194,900	345,800	883,500	626,400	494,000	270,300	208,600

Calendar year 1953: Max 21,900 Min 1,860 Mean 5,148 Ac-ft 3,727,000
Water year 1953-54: Max 26,800 Min 1,860 Mean 5,459 Ac-ft 3,952,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for station near 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 of 158,000 acres of land. Records available during each irrigation season from 1919 to 1954. 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 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								1,790	3,350	2,940	4,010	2,860
2								1,770	3,440	3,150	3,950	3,120
3								1,840	3,570	3,180	3,870	3,340
4								2,180	3,380	3,300	3,910	3,070
5								2,470	3,100	3,580	3,770	2,720
6								2,660	3,470	3,870	3,820	2,760
7								2,820	3,500	4,080	3,690	2,720
8								3,380	3,300	3,980	3,440	2,600
9								3,570	3,240	3,900	3,380	2,590
10								3,770	2,960	4,130	3,490	2,570
11								3,850	2,820	4,190	3,490	2,490
12								3,880	2,610	4,000	3,460	2,410
13								3,920	2,440	4,050	3,420	2,420
14								3,940	2,640	3,920	3,340	2,390
15								3,890	2,900	3,260	3,080	2,280
16								3,920	3,070	3,890	3,130	2,170
17								3,960	2,980	4,160	3,030	2,120
18								3,970	2,700	4,020	3,120	2,000
19								4,010	2,920	3,970	3,060	1,930
20								4,060	3,030	3,980	3,140	1,910
21								3,460	3,340	3,950	3,160	1,970
22								3,180	3,740	3,970	3,130	2,040
23								3,120	4,010	3,730	2,910	1,990
24								3,270	4,090	2,380	2,960	1,940
25								3,320	4,160	2,900	2,980	1,910
26								3,060	3,890	3,510	2,950	1,810
27								2,910	3,300	3,960	2,860	1,730
28								2,920	2,980	3,970	2,920	1,690
29								2,950	2,870	3,720	2,960	1,670
30								3,120	2,890	3,990	2,920	1,550
31								3,400		4,060	2,890	
Total								100,360	96,690	115,690	102,240	68,770
Mean								3,237	3,223	3,732	3,298	2,292
Ac-ft								199,100	191,800	229,500	202,800	136,400

Calendar year : Max Min Mean Ac-ft
The season : Max - Min - Mean - Ac-ft 959,600

Blackfoot River near Blackfoot, Idaho

Location.--Lat 43°07'50", long 112°28'35", 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, including that of Sand Creek whose flow is diverted to Blackfoot River through the Idaho canal.

Records available.--July 1913 to September 1954 (summer months only for many years).

Gage.--Water-stage recorder. Altitude of gage is 4,420 ft (from river-profile map). Prior to May 8, 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.--23 years (1931-54), 154 cfs (111,500 acre-ft per year).

Extremes.--Maximum discharge during year, 466 cfs Oct. 24 (gage height, 4.75 ft); minimum, 4 cfs July 15, Aug. 19, 31.
1913-54: Maximum discharge, 868 cfs May 21, 1921; no flow for many days.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Blackfoot-Marsh Reservoir (capacity at spillway crest, 312,000 acre-ft, and maximum capacity with flashboards, 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.

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

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 12-21, July 16-25, Aug. 9 to Sept. 30)

1.0	2	2.0	86
1.1	5.5	2.5	151
1.2	10	3.0	220
1.4	23	4.0	359
1.7	52	5.0	502

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	a330	*332	b125	*146	154	92	391	14	134	15	5
2	84	a290	328	b125	142	*144	89	216	15	111	*26	9
3	81	a270	316	b125	130	135	98	*122	36	94	16	10
4	80	*300	b300	*b124	130	142	90	73	*13	49	28	6
5	*85	373	b250	b130	138	148	23	56	10	22	28	8
6	90	393	b230	b140	155	148	6	49	6	16	28	21
7	84	422	b210	b145	148	132	151	66	34	*15	32	22
8	78	370	b190	b140	139	a145	196	29	25	8	22	22
9	62	198	b170	139	151	a160	193	16	29	7	*144	13
10	51	110	b150	137	141	a160	188	20	44	10	64	19
11	56	351	b130	b130	142	161	189	14	64	9	24	29
12	56	a340	b120	b120	154	103	192	7	99	17	18	34
13	45	a330	b100	b115	158	142	198	a10	134	10	16	45
14	29	a320	b140	b115	a160	138	219	a15	118	9	30	36
15	40	a310	b140	b115	a165	a130	247	*19	55	9	35	38
16	91	303	b140	118	a165	a120	267	a26	59	5	30	32
17	121	a300	b140	120	a160	a105	a266	a34	72	6	21	46
18	142	a295	b140	121	159	94	a264	41	203	14	*5	28
19	192	a290	b140	b120	142	76	a263	10	134	18	4	32
20	161	286	b140	b115	143	113	a260	8	111	*12	15	41
21	159	339	b140	b115	159	113	258	18	104	10	38	35
22	295	356	b125	120	a165	118	303	129	48	15	62	*29
23	405	355	b125	113	a165	106	332	89	*38	12	55	44
24	458	341	b125	95	a165	103	212	92	48	7	37	80
25	457	331	b125	117	160	*99	126	79	60	19	52	98
26	457	317	b125	96	156	85	96	121	56	22	53	95
27	440	a320	b125	a100	152	90	103	146	63	16	42	95
28	405	a320	b125	a110	152	100	85	128	80	45	*29	85
29	a390	a325	b125	a125	-	106	85	82	95	45	23	87
30	a380	a328	b125	a140	------	106	139	40	133	10	20	87
31	a360	------	b125	a145	------	98	------	35	------	9	4	------
Total	5,908	9,513	5,196	3,795	4,242	3,774	5,230	2,181	2,000	785	1,016	1,231
Mean	191	317	168	122	152	122	174	70.4	66.7	25.3	32.8	41.0
Ac-ft	11,720	18,870	10,310	7,530	8,410	7,490	10,370	4,330	3,970	1,560	2,020	2,440

Calendar year 1953: Max 717 Min 5 Mean 168 Ac-ft 121,900
Water year 1953-54: Max 458 Min 4 Mean 123 Ac-ft 89,020

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

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, excluding nontributary area on Snake River plains.

Records available.--June 1910 to September 1954. Published as "at Clough ranch, near Blackfoot" 1924-45.

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

Average discharge.--28 years (1926-54), 4,000 cfs (2,896,000 acre-ft per year).

Extremes.--Maximum discharge during year, 25,200 cfs June 30 (gage height, 10.44 ft); minimum daily, 359 cfs Aug. 31, Sept. 1 (gage height, 0.60 ft).
1910-54: 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 was 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. 51), Island Park Reservoir (see p. 37), Grassy Lake (see p. 51), 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.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-18, June 4-11, June 29 to July 4)

Oct. 1 to Jan. 3		Jan. 4 to Sept. 30			
1.5	840	0.6	315	4.0	4,050
2.0	1,250	1.0	540	5.0	5,900
2.5	1,780	1.5	900	7.0	11,300
3.0	2,410	2.0	1,340	9.0	18,400
4.0	4,040	3.0	2,500	11.0	26,800

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,400	3,370	*3,570	3,380	*3,670	2,880	*2,820	9,790	6,340	20,900	1,390	359
2	1,410	3,330	3,520	3,280	3,640	*2,790	2,790	8,800	4,720	*15,600	*1,550	492
3	1,160	3,440	3,550	3,300	3,530	2,820	2,800	*7,010	4,850	14,300	1,290	852
4	1,050	*3,370	3,550	*3,020	3,320	2,700	2,730	5,340	*2,850	12,200	1,300	1,040
5	*904	3,470	3,400	3,380	3,150	2,670	2,630	4,440	2,110	10,300	988	1,740
6	1,080	3,520	3,400	3,180	3,090	2,780	2,780	4,120	2,290	8,800	1,100	1,880
7	1,150	3,660	3,400	3,320	3,080	2,790	3,350	4,650	4,630	*7,500	1,480	1,810
8	1,130	3,660	3,380	3,300	3,080	2,840	3,820	5,150	5,800	5,780	1,190	1,430
9	1,100	3,550	3,250	3,430	3,020	2,960	3,850	5,300	5,530	4,200	*2,860	1,240
10	1,060	3,300	3,230	3,200	2,980	3,100	3,850	5,510	5,210	3,950	2,280	1,000
11	1,080	3,550	3,250	3,140	2,980	3,450	3,900	6,240	5,360	3,750	1,660	1,200
12	1,020	3,710	2,860	3,040	2,970	3,820	3,900	8,150	7,220	3,320	1,360	1,280
13	896	3,720	2,960	2,850	3,100	3,780	3,800	9,100	8,210	2,680	1,420	1,510
14	864	3,690	3,350	2,940	3,270	3,560	3,980	8,910	7,920	2,020	2,040	1,610
15	880	3,550	3,830	3,040	3,350	3,400	4,310	*8,690	5,400	2,250	2,250	1,770
16	968	3,540	3,720	3,090	3,320	3,340	4,540	8,370	4,380	2,780	2,080	1,650
17	1,200	3,520	3,710	3,120	3,200	3,210	4,940	8,670	4,620	3,930	1,580	1,380
18	1,450	3,420	3,740	2,920	3,120	3,260	4,920	9,340	6,080	3,800	*1,180	1,240
19	2,090	3,200	3,900	3,060	3,140	3,300	5,660	9,990	6,080	2,850	852	1,500
20	2,260	3,200	3,810	3,100	3,120	3,340	6,620	10,300	4,960	*2,000	756	1,830
21	2,350	3,180	3,830	3,020	3,040	3,270	6,290	12,300	3,900	3,160	884	1,840
22	2,520	3,150	3,780	2,960	3,030	3,320	5,700	16,800	2,660	2,610	1,380	*1,530
23	2,680	3,350	3,640	2,800	3,140	3,350	5,340	20,100	*2,200	1,500	1,700	1,450
24	3,130	3,590	2,990	2,960	3,060	3,270	5,470	23,100	2,510	740	1,490	1,600
25	3,370	3,710	2,520	3,180	3,030	3,090	6,010	22,300	5,210	980	1,210	1,720
26	3,540	3,600	2,400	3,100	2,980	3,040	6,590	20,600	10,700	1,200	948	1,920
27	3,600	3,540	2,100	2,920	3,040	2,970	6,700	*19,200	14,400	1,280	748	1,890
28	3,550	3,520	1,890	2,900	2,980	2,900	6,850	17,800	18,400	1,060	*534	1,680
29	3,420	3,590	2,420	3,140	-	2,980	7,630	15,000	22,100	702	469	1,430
30	3,420	3,640	2,760	3,430	-	2,980	9,040	11,600	24,800	812	498	1,500
31	3,400	--	3,210	3,620	------	2,960	------	8,940	------	1,010	359	------
Total	59,132	104,640	100,920	97,120	88,430	96,920	143,610	335,610	211,440	147,964	40,826	43,373
Mean	1,907	3,488	3,255	3,133	3,158	3,126	4,787	10,830	7,048	4,773	1,317	1,446
Ac-ft	117,300	207,600	200,200	192,600	175,400	192,200	284,800	665,700	419,400	293,500	80,980	86,030

Calendar year 1953: Max 18,500 Min 270 Mean 3,935 Ac-ft 2,848,000
Water year 1953-54: Max 24,800 Min 359 Mean 4,027 Ac-ft 2,916,000

* Discharge measurement made on this day.

Portneuf River at Topaz, Idaho

Location.--Lat 42°37', long 112°05', in sec. 23, T. 9 S., R. 37 E., on right bank 200 ft upstream from Bob Smith Creek, 800 ft downstream from Topaz, 1½ miles upstream from diversion dam of Portneuf-Marsh Valley Canal Co., and 4 miles west of Lava Hot Springs. Prior to June 23, 1954, at site a third of a mile downstream.

Drainage area.--420 sq mi, approximately (includes that of Bob Smith Creek).

Records available.--January 1913 to September 1915, July 1919 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 4,918.00 ft above mean sea level, preliminary, unadjusted. Prior to July 20, 1919, staff gage at site three-eighths of a mile downstream at datum 3.0 ft lower. July 20, 1919, to June 22, 1954, staff gage at site a third of a mile downstream at datum 2.00 ft lower than present datum.

Average discharge.--35 years (1913-14, 1919-22, 1923-54), 196 cfs (141,900 acre-ft per year).

Extremes.--Maximum discharge observed during year, 332 cfs Apr. 28 (gage height, 2.20 ft, site and datum then in use); minimum, 88 cfs Sept. 6 (gage height, 2.11 ft).

1913-15, 1919-54: 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, site and datum then in use).

Revisions.--The figures of maximum discharge for some water years have been revised, as shown in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
513	1920	May 25, 1920	709	4.20
533	1921	May 9, 1921	757	4.35
553	1922	May 21, 1922	757	4.36
593	1924	July 8, 1924	595	3.40
613	1925	July 5, 1925	595	3.40

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.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1920-22, superseding those published in WSP 513, 533, and 553, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1920		1921		1921-Con.		1922	
May 2	303	May 1	454	June 1	677	May 1	400
3	283	2	472	2	645	2	333
4	303	3	508	3	612	3	372
5	323	4	595	4	595	4	427
6	343	5	612	5	595	5	561
7	390	6	629	6	561	6	629
8	418	7	709	7	561	7	629
9	472	8	725	8	526	8	725
10	472	9	757	9	526	9	661
11	490	10	725	10	472	10	595
12	526	11	709	11	454	11	508
13	561	12	709	12	454	12	418
14	595	13	693	13	418	13	436
15	595	14	709	14	400	14	436
16	595	15	725	15	372	15	472
17	595	16	741	16	362	16	490
18	629	17	741	17	343	17	561
19	629	18	741	18	333	18	612
20	595	19	725	19	343	19	661
21	612	20	693	20	352	20	725
22	645	21	661	21	323	21	757
23	677	22	629	22	323	22	741
24	709	23	578	23	303	23	677
25	709	24	629	24	283	24	709
26	693	25	645	25	273	25	709
27	661	26	677	26	263	26	693
28	561	27	677	27	252	27	693
29	561	28	677	28	233	28	629
30	526	29	693	29	224	29	578
31	472	30	661	30	224	30	561
		31	677			31	526

Portneuf River at Topaz, Idaho--Continued

Revised figures of monthly discharge, in cubic feet per second, 1920-22

Month	Maximum	Minimum	Mean	Runoff in acre-feet
May 1920.....	709	283	525	32,300
Water year 1919-20.....	709	152	223	162,000
Calendar year 1920.....	709	152	228	165,000
May 1921.....	757	454	664	40,800
June.....	677	224	410	24,400
Water year 1920-21.....	757	160	276	200,000
Calendar year 1921.....	757	160	276	200,000
May 1922.....	757	333	578	35,600
Water year 1921-22.....	757	168	259	187,000
Calendar year 1922.....	757	-	264	192,000

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	147	166	170	157	153	192	204	190	220	190	162	93
2	149	166	178	160	151	188	200	186	218	186	162	102
3	147	162	174	168	151	192	208	180	218	186	162	97
4	149	166	170	172	147	196	170	172	223	188	162	95
5	155	170	170	168	143	200	a180	170	216	186	164	95
6	151	166	159	164	143	204	a190	186	265	184	164	90
7	149	166	155	168	143	212	a195	192	253	182	160	93
8	149	166	*162	172	151	233	a193	196	251	182	158	93
9	149	162	170	172	151	249	a190	210	263	180	160	91
10	149	164	166	168	151	294	a190	214	263	172	a159	93
11	147	170	174	168	166	305	190	216	269	184	a158	95
12	147	166	162	164	194	286	186	218	208	192	158	95
13	143	166	166	168	198	251	180	218	196	192	158	93
14	145	166	170	172	186	235	196	223	190	196	152	95
15	142	166	166	*159	182	231	184	220	186	190	a150	93
16	142	166	164	160	170	231	202	225	*184	196	a150	93
17	143	166	162	168	162	227	206	227	180	206	a148	93
18	143	166	162	164	166	210	218	202	168	210	a140	91
19	143	164	166	162	143	206	220	188	166	208	a138	93
20	145	166	162	159	151	206	229	180	162	*198	a136	93
21	149	166	162	159	*159	204	233	227	157	188	a135	93
22	153	166	160	157	170	200	235	259	153	186	*135	95
23	159	170	159	157	182	208	*210	204	*196	184	115	99
24	162	170	159	159	190	212	218	196	196	180	110	106
25	162	166	162	157	198	208	225	180	200	178	106	100
26	160	170	159	155	186	*202	227	178	192	188	104	102
27	164	170	159	153	192	204	231	*170	196	186	102	102
28	162	174	160	157	192	204	290	184	202	176	100	*102
29	162	170	168	160	-	198	301	233	200	170	99	102
30	162	174	164	160		210	223	257	198	166	95	106
31	*164	---	160	157	------	206	------	237	------	164	95	------
Total	4,693	5,012	5,100	5,044	4,671	6,804	6,324	6,338	6,189	5,774	4,297	2,883
Mean	151	167	165	163	167	219	211	204	206	186	139	96.1
Ac-ft	9,310	9,940	10,120	10,000	9,260	13,500	12,540	12,570	12,280	11,450	8,520	5,720

Calendar year 1953: Max 469 Min 142 Mean 208 Ac-ft 150,900
Water year 1953-54: Max 305 Min 90 Mean 173 Ac-ft 125,200

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, records for Portneuf River at Pocatello, during August, and staff-gage readings at former site.

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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 Fremont Street Bridge at Pocatello and 2.5 miles upstream from Pocatello Creek.

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

Records available.--May 1897 to October 1899, August 1911 to September 1954.

Gage (revised).--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 to Oct. 13, 1927, water-stage recorder at site 1.1 miles downstream at different datum. June 14, 1928, to Sept. 22, 1950, water-stage recorder at sites near Carson Street Bridge 0.8 mile downstream at same datum as former staff gage at this site.

Average discharge.--41 years (1912-16, 1917-54), 258 cfs (186,800 acre-ft per year).

Extremes.--Maximum discharge during year, 508 cfs Mar. 11 (gage height, 5.66 ft); minimum, 18 cfs July 19 (gage height, 3.61 ft).
1897-99, 1911-54: 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 excellent 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.7	22	4.6	155
3.9	40	5.0	256
4.2	78	5.7	500

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	98	236	306	277	286	330	350	330	60	80	44	42
2	98	236	306	302	283	316	347	299	64	83	44	38
3	99	236	306	302	277	302	347	262	59	68	43	36
4	101	234	309	296	274	299	354	236	52	64	44	39
5	105	223	309	277	265	299	365	212	52	68	42	38
6	107	231	306	277	268	302	386	190	60	71	44	39
7	108	242	306	280	265	309	383	176	64	64	44	47
8	114	242	a304	280	259	322	376	140	65	58	46	50
9	137	242	*302	280	262	383	376	137	68	33	41	50
10	127	245	302	274	259	485	368	122	71	28	38	50
11	112	245	299	268	262	493	365	131	75	28	42	51
12	107	250	289	268	268	444	368	120	67	28	44	56
13	112	248	289	274	299	401	379	105	77	29	44	56
14	114	239	289	274	379	383	397	96	72	28	43	56
15	116	228	289	*277	404	379	408	77	68	30	50	59
16	127	228	293	277	379	379	404	67	77	34	50	61
17	142	228	296	277	340	379	408	60	*81	22	60	55
18	142	234	293	277	358	379	422	55	68	28	56	58
19	142	265	296	277	340	365	426	51	65	24	60	64
20	151	283	309	b270	312	361	419	50	63	*41	42	64
21	160	283	322	b255	*306	365	401	70	51	36	46	78
22	173	293	312	268	319	365	390	110	48	37	*50	84
23	200	299	293	280	336	361	*386	88	50	37	55	89
24	212	322	b275	280	344	361	394	80	40	38	47	80
25	239	330	b265	b270	365	372	401	70	35	46	47	77
26	236	322	b270	b255	368	372	344	61	42	33	42	*80
27	234	322	b260	b260	358	*368	330	*55	59	38	41	86
28	234	316	b260	283	336	376	347	58	91	59	41	80
29	225	309	b270	289		386	426	52	89	55	42	80
30	225	306	b260	293	------	379	394	58	80	54	43	80
31	*236	------	b265	289		361	------	59	------	50	43	------
Total	4,733	7,917	9,050	8,606	8,771	11,376	11,461	3,677	1,913	1,392	1,418	1,823
Mean	153	264	292	278	313	367	382	119	63.8	44.9	45.7	60.8
Ac-ft	9,390	15,700	17,950	17,070	17,400	22,560	22,730	7,290	3,790	2,760	2,810	3,620

Calendar year 1953: Max 596 Min 44 Mean 256 Ac-ft 185,400
Water year 1953-54: Max 493 Min 22 Mean 198 Ac-ft 143,100

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

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, excluding nontributary area on Snake River plains.

Records available.--March 1926 to September 1954.

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

Extremes.--Maximum contents during year, 1,721,000 acre-ft July 5 (elevation, 4,354.88 ft); minimum, 477,000 acre-ft Oct. 5, 6, 7 (elevation, 4,325.29 ft).
1926-54: Maximum contents, 1,729,000 acre-ft June 26, 1951 (elevation, 4,355.02 ft); 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 herein 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	486	643	974	1,206	1,412	1,583	1,696	1,705	1,685	1,687	1,352	875
2	482	654	984	1,211	1,419	1,588	1,704	1,708	1,685	1,707	1,338	858
3	482	666	995	1,218	1,426	1,589	1,702	1,710	1,679	1,717	1,317	842
4	481	678	1,002	1,227	1,433	1,591	1,700	1,708	1,668	1,719	1,303	827
5	479	689	1,010	1,233	1,438	1,595	1,697	1,702	1,653	1,718	1,287	810
6	478	697	1,021	1,239	1,444	1,599	1,694	1,697	1,639	1,718	1,269	800
7	479	712	1,033	1,245	1,451	1,602	1,701	1,691	1,628	1,715	1,252	787
8	482	725	1,043	1,251	1,460	1,609	1,701	1,685	1,628	1,712	1,237	773
9	485	737	1,049	1,257	1,466	1,616	1,693	1,678	1,625	1,704	1,220	763
10	487	748	1,056	1,265	1,471	1,618	1,695	1,668	1,621	1,696	1,206	751
11	486	760	1,063	1,274	1,477	1,620	1,694	1,665	1,619	1,684	1,193	739
12	491	772	1,068	1,280	1,482	1,631	1,693	1,659	1,620	1,672	1,179	728
13	495	784	1,077	1,285	1,488	1,637	1,692	1,657	1,619	1,659	1,162	720
14	498	794	1,088	1,290	1,494	1,644	1,689	1,658	1,622	1,642	1,146	711
15	499	807	1,094	1,295	1,505	1,655	1,697	1,658	1,624	1,623	1,132	699
16	503	819	1,102	1,302	1,513	1,659	1,698	1,655	1,621	1,607	1,116	693
17	506	826	1,109	1,309	1,519	1,660	1,701	1,653	1,621	1,593	1,102	682
18	510	842	1,115	1,318	1,519	1,662	1,703	1,652	1,622	1,580	1,087	675
19	516	853	1,122	1,324	1,528	1,674	1,707	1,650	1,625	1,567	1,070	667
20	521	864	1,126	1,330	1,531	1,677	1,712	1,650	1,624	1,551	1,051	661
21	532	873	1,141	1,336	1,537	1,681	1,717	1,648	1,624	1,526	1,037	657
22	544	883	1,150	1,342	1,546	1,686	1,709	1,655	1,620	1,519	1,023	651
23	550	893	1,158	1,346	1,553	1,690	1,704	1,670	1,609	1,504	1,008	646
24	556	903	1,164	1,353	1,553	1,691	1,704	1,688	1,598	1,488	993	643
25	567	916	1,169	1,362	1,556	1,693	1,701	1,702	1,587	1,469	979	639
26	579	926	1,173	1,370	1,560	1,688	1,701	1,703	1,585	1,450	963	635
27	589	935	1,179	1,376	1,565	1,689	1,701	1,707	1,594	1,434	950	631
28	601	944	1,187	1,381	1,568	1,690	1,694	1,712	1,607	1,419	935	622
29	610	956	1,190	1,387	-	1,693	1,694	1,710	1,633	1,403	920	624
30	619	967	1,195	1,393	-------	1,698	1,699	1,701	1,659	1,385	904	627
31	631	-------	1,201	1,402	-------	1,696	-------	1,696	-------	1,369	887	-------

Monthly elevation and contents, water year October 1953 to September 1954

Date	Elevation (feet)	Contents (thousands of acre-feet)	Change in contents during month (thousands of acre-feet)
Sept.30.....	4,325.68	488	-
Oct. 31.....	4,330.47	631	+143
Nov. 30.....	4,339.60	967	+336
Dec. 31.....	4,344.83	1,201	+234
Calendar year 1953....	-	-	-59
Jan. 31.....	4,348.93	1,402	+201
Feb. 28.....	4,352.11	1,568	+166
Mar. 31.....	4,354.42	1,696	+128
Apr. 30.....	4,354.49	1,699	+3
May 31.....	4,354.43	1,696	-3
June 30.....	4,353.77	1,659	-37
July 31.....	4,348.27	1,369	-290
Aug. 31.....	4,337.63	887	-482
Sept.30.....	4,330.33	627	-260
Water year 1953-54....	-	-	+139

Snake River at Neeley, Idaho

Location.--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 nontributary area on Snake River plains.

Records available.--March 1906 to September 1954.

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.--28 years (1926-54), 6,731 cfs (4,873,000 acre-ft per year).

Extremes.--Maximum discharge during year, 22,300 cfs May 25 (gage height, 8.59 ft); minimum, 95 cfs Dec. 6 (gage height, 1.16 ft).
1906-54: 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 4 to Aug. 8)

1.4	121	4.0	2,070
1.7	165	5.0	4,920
2.0	240	6.0	9,070
2.3	360	7.0	14,100
2.6	530	8.0	19,400
3.0	830	9.0	25,300
3.5	1,350		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,270	141	1,680	3,010	2,880	3,560	3,300	10,100	12,000	9,980	11,600	11,100
2	6,000	844	1,700	3,040	2,930	3,560	4,950	10,100	11,600	10,800	*11,900	11,000
3	5,000	803	1,710	382	2,940	4,510	7,250	10,100	11,400	13,900	12,100	11,300
4	5,070	803	1,680	2,950	2,960	3,060	6,570	10,100	*11,300	14,700	12,000	11,400
5	4,710	811	1,710	2,960	2,960	3,460	6,070	10,000	11,400	13,200	12,000	11,300
6	3,880	810	134	2,960	2,970	3,540	3,970	10,200	11,300	*11,600	12,100	11,000
7	3,080	803	1,700	2,990	637	729	5,090	10,800	10,800	11,100	12,100	10,700
8	2,760	133	2,410	3,000	2,910	3,550	7,560	11,100	10,400	11,300	12,200	10,600
9	2,800	501	2,950	2,980	2,910	3,530	7,560	11,100	10,300	11,500	*12,300	10,100
10	*3,370	533	2,930	482	2,960	3,510	7,560	11,300	9,840	11,600	12,100	9,410
11	2,240	525	2,930	3,020	2,920	3,540	7,600	11,500	9,260	11,800	12,000	*9,120
12	2,790	533	2,950	2,990	2,960	3,560	6,910	11,700	9,170	12,000	11,900	9,120
13	2,790	540	142	2,970	2,950	3,510	5,930	11,900	9,120	12,300	11,900	9,070
14	2,750	540	2,920	2,980	681	737	5,590	12,000	9,740	12,500	11,800	8,840
15	2,630	126	2,930	2,790	2,910	3,570	5,630	*12,000	9,070	12,400	11,800	8,740
16	2,550	553	2,950	2,860	2,910	3,580	5,340	12,000	8,000	12,400	12,500	8,690
17	2,570	548	2,930	470	2,930	3,600	5,240	12,200	7,560	12,400	12,400	8,370
18	135	527	2,930	2,860	3,380	3,540	5,270	12,200	7,290	12,400	*12,200	7,780
19	2,560	548	*2,950	2,870	3,500	3,830	6,690	12,300	7,160	12,400	11,900	7,560
20	2,330	560	135	3,050	*3,590	*3,520	7,690	12,700	7,780	*12,300	11,800	7,470
21	1,380	*562	2,970	2,890	697	3,560	11,300	13,200	8,370	12,300	11,800	7,040
22	1,650	142	2,930	2,920	2,910	5,630	*11,900	13,200	9,600	12,200	11,700	6,820
23	1,680	1,550	2,940	2,910	4,170	4,920	9,740	13,200	*10,300	12,300	11,500	6,820
24	*1,680	1,680	2,960	512	3,540	4,920	9,210	14,200	10,500	12,300	11,400	6,740
25	147	1,710	2,980	2,920	3,540	4,980	9,170	19,100	10,700	12,300	11,400	*6,690
26	1,440	1,700	3,010	2,970	3,540	4,950	9,410	20,500	10,400	12,300	11,400	6,690
27	1,440	1,710	275	2,950	3,550	5,290	10,300	19,700	9,600	11,800	11,300	6,650
28	1,440	1,700	2,950	2,970	713	5,060	10,800	19,700	10,500	11,500	*11,300	5,670
29	1,460	129	2,960	2,920	-	6,370	10,700	19,700	10,100	11,700	11,200	5,010
30	817	1,690	2,960	*2,940		4,560	10,300	18,100	9,790	11,700	11,100	2,910
31	818	------	2,970	576	------	4,330	------	14,100	------	11,700	11,100	------
Total	79,237	23,755	72,276	79,092	78,448	120,556	224,600	410,100	294,350	374,680	365,800	253,710
Mean	2,556	792	2,331	2,551	2,802	3,889	7,487	13,230	9,812	12,090	11,800	8,457
Ac-ft	157,200	47,120	143,400	156,900	155,600	239,100	445,500	813,400	583,800	743,200	725,600	503,200

Calendar year 1953: Max 23,000 Min 126 Mean 6,768 Ac-ft 4,900,000
Water year 1953-54: Max 20,500 Min 126 Mean 6,511 Ac-ft 4,714,000

* Discharge measurement made on this day.

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 1954.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,840 ft (by barometer). Prior to November 1944, 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.--10 years (1944-54), 9.78 cfs (7,080 acre-ft per year).

Extremes.--Maximum discharge during year, 47 cfs May 21 (gage height, 1.67 ft); minimum, 0.1 cfs July 9 (gage height, 0.97 ft).
1910-11, 1944-54: Maximum discharge observed, 180 cfs May 13, 1910; minimum, 0.1 cfs several times during summers 1952-54.

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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	0.8	1.5	23
1.2	2.6	1.6	36
1.3	7.2	1.7	52
1.4	14		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	*1.6	1.8			0.8	*1.6	4.1	a13	7.2	1.3	
2	.9	1.8	1.4				1.8	4.1	12	6.6	1.1	
3	1.0	1.8	1.6	a1.0		a1.5	2.1	4.1	12	6.6	1.1	
4	1.0	1.8	*1.4		(*)		2.3	3.7	12	6.1	1.1	
5	1.0	1.8	1.6			*2.3	2.3	6.1	13	6.1	1.3	a0.4
6	.9	2.1	1.6			2.3	2.1	8.5	12	5.6	1.3	
7	.9	1.6	1.4			1.8	2.1	11	*12	5.1	1.1	
8	.9	1.6				1.8	1.8	14	11	4.1	1.1	*.4
9	.9	1.6				3.7	2.1	16	11	1.1	1.0	.4
10	1.0	1.8				2.9		20	8.5	2.9	1.0	.3
11	1.0	1.8	b1.3			1.8		20	6.1	4.1	1.0	.3
12	1.3	1.8		(*)		2.1		20	7.8	3.7	1.0	.3
13	1.3	1.8				2.1		24	9.8	3.7	.9	
14	1.3	1.6			a1.5	2.3	a2.7	*28	10	3.3	.9	a.3
15	1.4	1.6				2.3		27	9.1	3.7	.7	
16	1.4	1.6	1.6					31	9.1	4.1	.7	
17	1.4	1.8	1.6					33	7.8	2.3	.8	
18	1.3	1.3	1.4	a1.5				33	7.2	4.1	.7	
19	1.3	1.0	1.4				3.3	32	7.2	5.6	.6	
20	1.4	1.3	1.4				3.3	*33	9.1	3.7	.7	
21	1.4	1.6	1.1			a2.0	2.9	38	9.8	2.9	.9	a.4
22	1.8	1.6	.9				2.9	31	9.8	2.9	.8	
23	1.8	1.6					3.3	23	9.8	2.6	.6	
24	1.8	1.6					4.1	21	9.8	2.3	.5	
25	1.6	1.8					5.6	20	9.1	1.3	.5	
26	1.6	1.8	b.9			1.4	*5.6	20	12	*1.4	.5	
27	1.8	1.8			1.0	1.6	6.1	17	12	2.1		
28	1.8	1.8			1.4	1.6	6.6	16	*9.8	1.8		a.5
29	1.8	1.8				1.6	4.1	14	8.5	1.8	a.5	
30	1.8	1.8				1.8	4.1	a13	7.2	1.8		
31	1.6		a.9			1.1		a13		1.6		
Total	41.2	50.3	38.7	44.0	41.4	59.8	94.4	598.6	297.5	112.2	25.7	11.9
Mean	1.33	1.68	1.25	1.42	1.48	1.93	3.15	19.3	9.92	3.62	0.83	0.40
Ac-ft	82	100	77	87	82	119	187	1,190	590	223	51	24

Calendar year 1953: Max 99 Min - Mean 8.27 Ac-ft 5,980
Water year 1953-54: Max 38 Min - Mean 3.88 Ac-ft 2,810

Peak discharge (base, 70 cfs).--No peak above base.
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of discharge measurements, weather records, and available recorder trace.
b Stage-discharge relation affected by ice.

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, 6 miles southeast of Minidoka.

Drainage area.--15,700 sq mi approximately, excluding nontributary area on Snake River plains.

Records available.--April 1909 to September 1954.

Gage.--Staff-gage and glass tubes connected to lake thru 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, 101,690 acre-ft July 5, 6 (gage height, 45.54 ft); minimum, 64,690 acre-ft Feb. 1 (gage height, 42.31 ft).
1909-54: 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90,060	96,150	67,650	70,950	64,800	67,980	95,430	97,960	96,510	93,550	94,950	94,020
2	91,570	94,490	68,970	70,840	65,780	68,860	94,490	98,680	98,560	94,140	94,490	93,550
3	92,620	94,720	69,740	71,170	66,440	70,290	99,040	99,040	97,840	96,390	94,720	92,860
4	93,670	94,600	68,750	67,650	67,100	70,950	98,800	99,040	96,750	101,090	95,180	94,020
5	94,490	93,900	70,290	69,080	67,980	70,950	98,320	98,080	96,510	101,570	95,670	94,490
6	94,490	92,740	70,730	69,850	68,640	71,390	92,970	98,320	95,310	101,450	96,150	95,670
7	95,180	93,550	67,760	70,730	68,750	71,720	90,990	98,560	96,150	100,610	96,870	95,670
8	94,720	93,550	68,640	71,060	65,670	68,200	93,090	98,560	96,870	99,040	97,350	95,430
9	94,600	91,690	69,190	71,170	66,000	69,740	95,310	98,560	96,150	96,390	97,840	96,270
10	94,950	90,990	68,090	71,500	66,440	70,070	98,800	96,750	96,390	95,180	97,110	96,030
11	93,320	89,830	69,630	68,090	67,430	70,290	99,760	97,840	96,150	94,250	97,350	95,180
12	91,110	89,130	69,190	68,860	68,090	70,840	99,280	97,110	96,750	94,370	97,110	94,020
13	91,920	88,430	69,630	69,410	68,530	71,830	98,560	97,110	96,390	94,020	96,270	94,950
14	93,090	87,850	65,670	69,850	68,310	71,940	97,110	97,110	95,430	94,250	95,670	95,430
15	93,790	87,030	66,330	70,510	65,670	69,080	98,440	97,110	97,110	95,180	94,250	93,550
16	95,180	85,520	67,650	70,950	66,440	69,630	97,590	96,750	96,390	95,670	93,790	94,950
17	96,630	83,310	68,750	70,730	66,990	69,630	95,910	96,630	96,630	95,790	95,430	93,670
18	97,230	82,300	69,190	67,210	64,900	70,290	94,720	96,510	96,030	96,150	96,390	94,370
19	94,250	81,740	70,620	67,430	68,090	71,830	93,440	96,270	95,670	96,030	96,750	94,140
20	94,600	79,260	67,980	67,430	68,750	74,070	93,090	96,390	94,720	96,390	95,670	94,720
21	97,840	75,650	66,330	68,090	68,970	75,200	93,440	95,670	95,310	93,670	95,430	95,180
22	98,920	72,490	67,430	68,640	65,780	77,110	93,090	95,670	95,430	95,910	95,430	94,370
23	98,080	68,090	68,970	68,750	66,550	80,720	92,860	96,510	95,310	96,390	95,430	94,140
24	98,080	68,860	69,190	68,970	67,650	83,770	93,200	96,750	95,070	96,750	94,720	94,250
25	97,590	69,850	70,070	65,450	69,410	87,270	92,620	96,750	94,490	96,630	94,950	94,370
26	95,790	70,400	71,060	66,110	69,300	89,360	92,970	98,680	93,790	97,350	94,370	94,490
27	95,550	70,510	71,170	66,330	71,060	92,620	92,740	99,280	93,090	97,590	95,180	94,490
28	96,150	70,950	67,650	67,100	69,630	98,080	92,160	100,490	91,690	96,990	95,670	93,090
29	96,390	70,730	68,530	67,650	-	100,490	95,180	99,520	94,020	95,910	95,790	91,920
30	96,390	66,330	69,410	68,310	-------	99,760	96,750	98,320	94,490	95,180	95,430	89,130
31	96,510	-------	70,290	68,090	-------	97,110	-------	99,040	-------	95,180	93,790	-------

Monthly gage height and contents, water year October 1953 to September 1954

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	44.66	91,230	-
Oct. 31	45.11	96,510	+5,280
Nov. 30	42.46	66,330	-30,180
Dec. 31	42.82	70,290	+3,960
Calendar year 1953	-	-	-8,060
Jan. 31	42.62	68,090	-2,200
Feb. 28	42.76	69,630	+1,540
Mar. 31	45.16	97,110	+27,480
Apr. 30	45.13	96,750	-360
May 31	45.32	99,040	+2,290
June 30	44.94	94,490	-4,550
July 31	45.00	95,180	+690
Aug. 31	44.88	93,790	-1,390
Sept.30	44.48	89,130	-4,660
Water year 1953-54	-	-	-2,100

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 1954.

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.

Average discharge.--13 years (1941-54), 613 cfs (443,800 acre-ft per year).

Extremes.--Maximum discharge during year, 1,750 cfs July 15 (gage height, 10.15 ft); no flow Oct. 22 to Dec. 20, Jan. 20 to Apr. 12.
1909-54: Maximum discharge, 1,810 cfs July 9, 1953 (gage height, 10.19 ft); no flow during most winters.

Remarks.--Records excellent. Flow controlled by headgates. Canal diverts water from Snake River for irrigation of 64,000 acres under North Side Minidoka project. Diversion began in June 1907.

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

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 1 to Aug. 7)

0.8	31	4.0	394
1.0	43	6.0	780
1.5	79	8.0	1,240
2.0	125	10.0	1,760
3.0	241		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	742		0	36			0	1,110	1,310	1,020	1,440	1,390
2	748		0	36			0	1,050	1,310	1,110	1,440	1,370
3	750		0	36			0	1,050	*1,360	1,270	1,440	1,350
4	754		0	36			0	1,090	1,380	1,430	1,470	1,310
5	756		0	36			0	1,210	1,300	*1,560	*1,540	1,290
6	754		0	36			0	1,260	1,200	1,650	1,570	1,230
7	*754		0	36			0	*1,330	1,170	1,680	1,580	1,240
8	754		0	36			0	1,410	1,170	1,670	1,580	1,190
9	754		0	36			0	1,460	*1,100	1,680	1,590	1,120
10	754		0	36			0	1,540	946	1,710	*1,620	1,040
11	750		0	36			0	1,580	848	1,740	1,630	997
12	744		0	36			0	1,580	730	1,740	1,630	997
13	690		0	36			38	1,580	710	1,740	1,630	940
14	608		0	36			170	1,640	710	1,740	1,630	842
15	548		0	37			272	1,680	778	*1,740	1,590	801
16	497		0	37			347	1,680	772	1,740	1,570	778
17	470		0	36			369	1,680	700	1,730	*1,580	*756
18	450		0	36			441	1,680	672	1,720	1,580	758
19	407		0	22			540	1,680	670	1,690	1,550	758
20	361		0	0			672	1,690	668	1,660	1,530	760
21	178		53	0			*799	1,690	730	1,650	1,530	762
22	0		68	0			914	*1,690	921	1,660	1,500	760
23	0		36	0			1,080	1,690	1,100	1,670	1,480	758
24	0		36	0			1,290	1,690	1,270	1,620	1,480	758
25	0		36	0			1,370	1,620	*1,410	1,600	1,480	758
26	0		36	0			1,440	1,590	1,450	1,600	*1,420	758
27	0		36	0			1,510	1,530	1,350	*1,570	1,350	758
28	0		36	0			1,400	1,530	1,140	1,550	1,300	758
29	0		36	0			1,350	1,540	937	1,510	1,290	754
30	0		36	0			1,270	1,460	917	1,460	1,330	714
31	0	--	36	0	---		------	1,360	------	1,440	1,350	------
Total	13,223	0	445	672	0	0	15,272	46,370	30,729	49,350	46,700	28,455
Mean	427	0	14.4	21.7	0	0	509	1,496	1,024	1,592	1,506	948
Ac-ft	26,230	0	883	1,330	0	0	30,290	91,970	60,950	97,880	92,630	56,440

Calendar year 1953: Max 1,790 Min 0 Mean 599 Ac-ft 433,900
Water year 1953-54: Max 1,740 Min 0 Mean 633 Ac-ft 458,600

* Discharge measurement made on this day.
Note.--Diversion Dec. 21 to Jan. 19 for sugar factory at Paul.

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 1954.

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.

Average discharge.--13 years (1941-54), 478 cfs (346,100 acre-ft per year).

Extremes.--Maximum discharge during year, 1,320 cfs May 21; maximum gage height, 6.10 ft July 24; no flow Oct. 28 to Apr. 15.
1909-54: Maximum discharge, 1,410 cfs July 12, 1953; no flow for long periods during non-irrigation seasons.

Remarks.--Records good. Flow controlled by headgates. Canal diverts water from Snake River for irrigation of 54,000 acres under South Side Minidoka project. Diversion began in April 1908.

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

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1910, superseding those published in WSP 292, are given herewith:

1910		1910-Con.	
Sept.19	218	Sept.22	205
20	209	23	205
21	205	24	205

Month	Maximum	Minimum	Mean	Runoff in acre-feet
September 1910	248	0	180	10,700
Water year 1909-10	486	0	147	106,000

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	693						0	886	1,220	998	1,240	1,230
2	698						0	774	1,220	1,060	1,270	1,230
3	693						0	*692	*1,160	1,170	1,270	1,230
4	695						0	699	1,110	1,200	*1,260	1,220
5	690						0	771	1,110	*1,180	1,260	1,130
6	684						0	833	1,070	1,200	1,260	1,100
7	698						0	955	998	1,240	1,280	1,070
8	721						0	1,040	967	1,250	1,280	1,060
9	704						0	1,060	*1,020	1,260	1,270	1,030
10	*676						0	1,170	868	1,270	*1,270	977
11	659						0	1,240	715	1,280	1,270	919
12	616						0	1,240	673	1,300	1,250	877
13	542						0	1,240	710	1,300	1,250	859
14	458						0	1,240	645	1,290	1,230	824
15	451						0	1,260	569	*1,290	1,180	799
16	461						181	1,250	569	1,290	1,180	*752
17	415						296	1,240	520	1,290	*1,200	725
18	349						294	1,240	485	1,290	1,230	707
19	344						353	1,280	523	1,280	1,240	612
20	353						487	1,280	632	1,280	1,240	612
21	334						*480	1,310	836	1,280	1,220	614
22	*272						527	*1,300	1,000	1,280	1,220	616
23	239						663	1,270	1,180	1,290	1,200	650
24	241						822	1,250	*1,220	1,290	1,190	640
25	284						880	1,250	1,220	1,280	1,200	637
26	437						989	1,240	1,220	1,280	1,150	650
27	242						1,120	1,240	1,120	*1,220	1,100	676
28	0						1,200	1,230	1,010	1,250	1,090	710
29	0						1,160	1,210	961	1,240	1,100	*715
30	0				-		1,050	1,200	961	1,220	1,210	702
31	0	--			---		------	1,200	------	1,230	*1,240	------
Total	13,649	0	0	0	0	0	10,502	35,070	27,512	38,578	37,850	25,573
Mean	440	0	0	0	0	0	350	1,131	917	1,244	1,221	852
Ac-ft	27,070	0	0	0	0	0	20,830	69,560	54,570	76,520	75,070	50,720

Calendar year 1953: Max 1,390 Min 0 Mean 488 Ac-ft 353,200
Water year 1953-54: Max 1,310 Min 0 Mean 517 Ac-ft 374,300

* 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 approximately, excluding nontributary area on Snake River plains.
Records available.--August 1895 to December 1899, May 1901 to September 1954. 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.--28 years (1926-54), 5,702 cfs (4,128,000 acre-ft per year).
Extremes.--Maximum discharge during year, 18,000 cfs May 26 (gage height, 10.32 ft); minimum, 105 cfs Nov. 16 (gage height, 1.70 ft).
1895-99, 1901-54: Maximum discharge, 47,500 cfs May 29, 30, 1897 (gage height, 12.6 ft, former site and datum); minimum, 58 cfs Dec. 2, 1951.
Remarks.--Records good. Flow regulated by American Falls Reservoir (see p. 59), Lake Walcott (see p. 62), 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.
Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1911, superseding those published in WSP 292, are given herewith:

1910		1910-Con.	
Dec. 11	5,700	Dec. 15	5,600
12	5,600	16	5,600
13	6,100	17	5,300
14	5,800	18	5,100

Month	Maximum	Minimum	Mean	Runoff in acre-feet
December 1910	6,580	5,100	5,920	364,000
Water year 1910-11	33,800	2,270	8,940	7,534,000

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-11, June 13 to Sept. 30)

3.3	820	7.0	7,480
4.0	1,440	8.0	10,500
5.0	2,820	9.0	13,700
6.0	4,880	10.0	17,100

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,590	1,060	1,580	2,820	2,830	3,160	*5,410	7,900	9,800	7,650	9,140	8,580
2	3,750	1,100	1,730	2,940	2,740	3,340	4,160	8,100	9,610	7,930	9,050	8,410
3	3,310	1,130	1,730	3,310	2,790	3,350	6,210	8,150	*8,990	8,610	9,290	8,320
4	2,860	1,070	1,760	2,720	2,790	3,140	6,830	8,240	8,900	10,600	9,170	8,180
5	3,040	1,070	1,750	2,730	2,790	3,140	6,670	8,150	9,200	*10,400	*9,200	8,460
6	2,060	1,120	1,770	2,720	2,770	3,200	6,240	8,180	9,020	8,610	9,260	8,350
7	*1,920	1,100	1,770	2,850	2,680	2,780	5,840	*8,460	8,930	8,180	9,170	8,240
8	1,470	1,150	2,370	2,850	2,780	3,120	5,840	8,640	8,780	9,170	9,140	8,260
9	1,090	1,080	2,790	2,870	2,740	3,080	6,180	8,520	*8,490	9,360	9,140	7,980
10	1,650	1,070	2,950	2,810	2,820	3,360	6,590	8,520	8,410	9,260	*9,080	7,680
11	3,120	1,050	2,910	2,750	2,800	3,590	7,260	8,900	8,010	9,200	9,080	7,450
12	1,170	1,030	2,950	2,800	2,800	3,470	7,340	8,780	7,930	9,230	9,020	7,430
13	1,190	1,030	2,900	2,810	2,790	3,310	6,180	9,140	7,820	9,390	9,050	7,290
14	1,190	1,030	2,760	2,950	2,700	2,900	5,610	9,170	8,100	9,170	9,170	7,130
15	1,040	1,040	2,600	2,940	2,790	3,140	5,510	9,020	8,120	*9,290	9,260	7,320
16	1,020	1,180	*2,640	2,870	2,750	3,150	5,190	9,020	7,260	9,360	9,360	7,130
17	886	1,370	2,650	2,910	2,770	3,350	4,930	9,230	6,910	9,510	9,200	*6,910
18	882	1,570	2,680	2,820	3,330	3,250	4,580	9,390	6,590	9,670	9,020	6,350
19	966	*1,570	2,700	2,950	3,230	3,220	5,690	9,480	6,400	9,830	*9,140	6,210
20	1,030	2,040	2,850	2,910	3,180	3,200	6,540	9,770	6,480	9,730	9,230	6,130
21	948	2,600	2,680	2,950	2,780	2,860	*9,120	10,100	6,940	9,930	9,260	5,870
22	1,450	2,570	2,660	2,950	3,120	3,160	10,600	10,200	7,290	9,200	9,200	5,690
23	1,450	2,200	2,660	3,060	*2,990	3,200	8,070	10,100	7,700	9,230	8,810	5,740
24	1,380	1,680	2,670	2,850	2,940	3,090	7,180	10,500	8,180	9,140	8,930	5,610
25	1,340	1,640	2,650	2,890	3,000	3,140	7,050	14,200	*8,240	9,110	8,810	5,480
26	*1,340	1,640	2,740	2,960	3,200	3,300	7,180	17,000	7,930	9,080	8,670	5,360
27	1,220	1,680	2,690	*2,920	3,220	3,430	7,340	16,100	7,260	*8,700	8,490	5,290
28	1,300	1,860	2,710	2,860	2,910	3,410	7,900	16,900	7,820	9,080	8,460	5,660
29	1,210	1,690	2,710	2,890	-	3,570	7,820	*16,700	7,900	9,110	8,550	5,190
30	1,040	1,740	2,690	2,820	-	5,260	7,760	15,700	7,700	9,110	8,670	*3,730
31	989	---	2,700	2,770	---	5,950	------	12,100	------	9,110	*8,840	------
Total	50,901	43,160	77,400	89,190	81,030	104,620	198,820	324,360	240,710	284,950	279,860	205,430
Mean	1,642	1,439	2,497	2,877	2,894	3,375	6,627	10,460	8,024	9,192	9,028	6,848
Ac-ft	101,000	85,610	153,500	176,900	160,700	207,500	394,400	643,400	477,400	565,200	555,100	407,500

Calendar year 1953: Max 20,600 Min 882 Mean 5,869 Ac-ft 4,249,000
Water year 1953-54: Max 17,000 Min 882 Mean 5,426 Ac-ft 3,928,000

* Discharge measurement made on this day.

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 1954.

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.--31 years (1911-14, 1925-54), 42.1 cfs (30,480 acre-ft per year).

Extremes.--Maximum discharge during year, 165 cfs Sept. 2 (gage height, 3.08 ft); minimum, 1.1 cfs Sept. 2 (gage height, 1.05 ft).
1911-16, 1919-54: 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, 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	1.3	2.0	32
1.3	3.6	2.3	55
1.5	8.4	2.6	91
1.7	16		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	20	24	18	29	32	37	67	10	9.1	5.1	1.4
2	11	20	22	18	29	29	38	51	9.8	6.8	4.2	18
3	12	20	20	17	28	28	38	44	9.8	6.2	3.5	7.8
4	13	20	21	19	28	32	38	41	9.4	5.1	3.1	7.6
5	14	21	*20	20	28	33	41	40	9.8	4.4	2.6	6.0
6	14	23	21	20	28	34	42	36	11	4.0	2.6	4.4
7	14	25	22	20	28	34	44	35	12	3.8	2.2	3.3
8	15	23	21	20	28	36	46	36	12	3.5	2.2	3.2
9	15	21	21	20	28	44	48	38	13	3.0	2.2	3.5
10	15	21	22	17	29	52	48	37	15	2.8	2.2	3.2
11	15	21	21	20	30	60	48	38	15	2.7	2.4	3.0
12	15	21	21	21	32	47	46	36	15	2.7	2.7	3.0
13	16	21	22	22	35	38	45	36	16	2.6	2.2	2.8
14	16	21	21	*23	40	50	47	32	16	2.4	2.3	3.1
15	16	21	21	24	42	48	54	30	*16	2.4	3.2	3.3
16	17	21	22	25	40	49	60	29	17	2.4	3.5	3.3
17	17	21	22	25	38	47	59	28	15	2.4	3.1	3.6
18	18	22	22	25	38	44	63	21	14	2.3	2.3	4.4
19	18	17	23	25	*35	40	65	20	13	*2.7	2.2	4.9
20	18	16	25	22	34	42	64	19	11	3.0	2.3	5.1
21	18	18	23	24	36	44	62	19	8.7	3.3	2.4	5.3
22	19	24	20	25	36	42	59	18	7.3	4.6	3.6	5.7
23	19	29	16	26	35	41	56	16	6.2	4.0	3.2	5.7
24	20	28	16	26	35	42	*56	15	5.7	3.5	*2.6	*5.7
25	21	28	15	20	35	*44	56	14	5.7	5.5	2.6	5.7
26	20	27	18	18	36	45	58	*13	5.5	7.9	2.3	6.2
27	20	26	22	20	34	43	58	9.1	6.5	6.5	2.6	7.3
28	20	25	21	25	32	42	70	9.8	7.6	6.2	2.3	8.1
29	*20	24	21	30	-	42	79	9.8	11	5.5	2.0	8.4
30	20	24	16	30	-	42	71	9.8	10	5.7	1.7	9.4
31	20		17	29	-	40	------	10	------	5.5	1.6	------
Total	518	669	639	694	926	1,286	1,596	857.5	334.0	132.5	83.0	162.4
Mean	16.7	22.3	20.6	22.4	33.1	41.5	53.2	27.7	11.1	4.27	2.68	5.41
Ac-ft	1,030	1,330	1,270	1,380	1,840	2,550	3,170	1,700	662	263	165	322

Calendar year 1953: Max 186 Min 8.1 Mean 45.6 Ac-ft 33,000
Water year 1953-54: Max 79 Min 1.4 Mean 21.6 Ac-ft 15,680

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 19-21, Dec. 5, Dec. 8 to Jan. 1, Jan. 4 to Feb. 13.

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 1954.

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.--30 years (1911-12, 1913-14, 1926-54), 14.2 cfs (10,280 acre-ft per year).

Extremes.--Maximum discharge during year, 62 cfs Sept. 2 (gage height, 5.38 ft); minimum, 4.0 cfs Mar. 2 (gage height, 4.67 ft), caused by temporary storage behind ice jam upstream.

1911-16, 1919-54: 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 excellent except those for period of no gage-height record, which are fair. 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).--WSP 1063: 1941, 1943.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

4.7	4.8
4.8	8.3
4.9	14
5.1	28

2

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	11	13	14	12	11	13	18	16	8.8	8.0	8.5
2	11	11	12	12	12	10	12	18	15	9.3	8.0	14
3	11	11	13	12	12	12	12	18	14	8.8	8.0	10
4	11	11	13	12	12	12	13	18	14	8.0	8.3	9
5	11	11	*13	12	12	12	14	17	14	8.0	8.3	9
6	10	12	13	11	12	12	14	18	15	8.8	8.3	9
7	9.9	11	13	11	12	12	14	18	14	8.3	8.3	9
8	9.9	11	12	11	12	14	14	18	13	8.3	8.0	9
9	9.9	11	12	11	12	19	14	18	14	9.3	8.0	9
10	10	11	12	10	12	17	14	18	14	8.8	8.3	9
11	11	11	11	11	12	14	14	18	13	8.8	8.3	8.5
12	11	12	12	12	12	14	14	18	12	9.3	8.3	8.5
13	11	12	12	11	12	15	14	18	12	8.8	8.0	8.5
14	11	12	12	*12	14	14	16	18	12	9.3	8.0	8.5
15	12	12	12	12	13	14	17	18	*12	9.9	8.0	8.5
16	12	12	12	11	12	14	16	18	13	9.9	8.3	9
17	12	12	12	11	12	14	16	17	12	9.3	8.3	9
18	11	12	12	11	13	12	17	16	11	9.3	8.3	9
19	11	11	12	11	*12	13	18	16	11	*9.9	8.0	9
20	11	11	13	11	13	13	17	16	10	9.3	8.8	9
21	12	12	12	10	12	14	17	17	10	9.3	*9.9	9
22	12	12	11	11	12	13	16	18	10	9.3	9.3	9
23	12	13	9.9	11	12	14	17	17	10	9.3	9.0	9
24	12	13	9.9	11	12	14	*18	16	10	8.8	8.5	9
25	12	13	9.3	10	12	*14	19	16	10	8.8	8.5	*8.8
26	12	13	13	8.8	12	13	18	*16	11	9.3	8.5	8.8
27	12	13	14	12	11	13	18	16	12	9.3	8.5	8.8
28	11	13	12	12	11	14	23	15	11	8.8	8.5	8.8
29	*11	13	12	12	-	14	20	14	11	8.8	8.5	9.9
30	11	13	8.3	12	--	14	19	14	9.9	8.3	8.5	9.9
31	11	------	12	12	------	14	------	14	------	8.0	8.5	------
Total	345.7	356	369.4	350.8	339	419	478	525	365.9	278.2	260.0	274.0
Mean	11.2	11.9	11.9	11.3	12.1	13.5	15.9	16.9	12.2	8.97	8.39	9.13
Ac-ft	686	706	733	696	672	831	948	1,040	726	552	516	543

Calendar year 1953 : Max 41 Min 8.3 Mean 16.6 Ac-ft 11,990
Water year 1953-54 : Max 23 Min 8.0 Mean 11.9 Ac-ft 8,650

* Discharge measurement made on this day.

Note.--No gage-height record Aug. 23 to Sept. 24; discharge estimated on basis of recorded range in stage, weather records, and records for Goose Creek above Trapper Creek and Oakley Reservoir.

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 1954.

Gage.--Staff gage read about once a week. Altitude of gage is 4,630 ft (by barometer).

Extremes.--Maximum contents observed during year, 30,100 acre-ft Apr. 24 (gage height, 87.23 ft); minimum observed, 1,330 acre-ft Sept. 30 (gage height, 19.2 ft).
1912-54: Maximum contents observed, 74,600 acre-ft June 15, 1921 (gage height, 136.2 ft); reservoir drained at close of seasons in 1915, 1919-20, 1926, 1933, 1949-50.

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.

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

Contents, in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17,000	-	e20,200	-	23,400	e25,300	28,400	29,500	-	-	-	-
2	-	18,500	-	-	-	-	-	-	-	-	-	-
3	-	-	-	21,800	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	19,100	-	-
5	-	-	20,400	-	-	-	-	-	-		-	-
6	-	-	-	-	-	-	-	-	21,600	-	-	-
7	-	-	-	-	-	-	-	-	-	-	9,330	-
8	-	-	-	-	-	-	-	-	-	-	-	4,110
9	-	-	-	-	-	e25,800	-	-	-	-	-	-
10	-	-	-	-	-	-	-	28,000	-	-	-	-
11	-	-	-	-	-	-	29,400	-		16,800	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	20,800	-	-	-
14	-	-	-	22,400	24,300	-	-	-	-	-	-	-
15	17,500	-	e20,800	-	-	e26,300	29,600	26,600	20,900	15,200	7,850	3,400
16	-	19,100	-	-	-	-	-	-	-	-	-	3,150
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	25,600	-	14,200	-	-
19	-	-	-	-	e24,600	-	-	-	-	13,800	-	-
20	-	-	-	-	-	-	29,900	-	-	-	-	-
21	-	-	-	-	-	-	-	-	20,600	-	6,860	-
22	-	-	-	-	-	e27,000	-	-	-	12,800	-	-
23	-	-	-	-	-	-	-	-	-	-	6,350	-
24	-	-	-	-	-	-	30,100	24,100	-	-	-	-
25	-	-	-	-	-	27,700	-	-	-	-	-	2,190
26	18,200	-	-	-	-	-	29,900	23,700	-	-	-	-
27	-	-	-	-	-	-	-	-	19,600	-	-	2,180
28	-	-	-	-	a25,200	28,200	-	-	-	-	-	-
29	18,300	-	-	-	-	-	-	-	-	-	-	-
30	-	a20,100	-	-	-------	-	a29,600	22,800	a19,400	11,200	-	1,330
31	a18,400	-------	a21,600	a23,300	-------	a28,400	-------	a22,600	-------	a11,000	5,070	-------

a No gage-height record; contents interpolated.
e Gage height believed to be 1 ft in error; contents from gage height corrected on basis of adjacent readings and inflow to reservoir.

Monthly gage height and usable contents, water year October 1953 to September 1954

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	a17,200	-
Oct. 31	-	a18,400	+1,200
Nov. 30	-	a20,100	+1,700
Dec. 31	-	a21,600	+1,500
Calendar year 1953	-	-	-5,600
Jan. 31	-	a23,300	+1,700
Feb. 28	-	a25,200	+1,900
Mar. 31	-	a28,400	+3,200
Apr. 30	-	a29,600	+1,200
May 31	-	a22,600	-7,000
June 30	-	a19,400	-3,200
July 31	-	a11,000	-8,400
Aug. 31	35.9	5,070	-5,930
Sept.30	19.2	1,330	-3,740
Water year 1953-54	-	-	-15,870

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 1916 to September 1954. Records collected by North Side Canal Co. 1916-18 (yearly summaries only published in WSP 883).

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

Extremes.--Maximum discharge during year, 74 cfs May 26-28 (maximum gage height, 1.52 ft Aug. 26); no flow for many days.
1919-54: Maximum discharge, 75 cfs Aug. 24-31, 1953; no flow for many days.

Remarks.--Records excellent. Flow regulated by pumping plant which lifts water 65.3 ft 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.7	12	1.0	28
.8	16	1.2	44
.9	22	1.5	75

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	61	72	*59	72	59
2							0	61	72	59	72	59
3							0	61	70	59	73	59
4							0	61	70	59	73	59
5							0	61	70	59	73	59
6							0	61	70	59	73	59
7							0	61	*58	59	*73	*59
8							0	61	59	59	73	59
9							0	61	59	67	73	59
10							0	61	59	67	73	59
11							0	61	59	67	73	59
12							0	61	59	67	73	59
13							0	61	59	67	73	59
14							0	61	59	67	73	59
15							0	59	59	67	73	59
16							0	67	59	67	73	59
17							0	67	*59	67	73	59
18							0	65	59	67	73	59
19							0	65	59	67	73	59
20							0	65	59	67	73	59
21							0	65	59	67	73	59
22							0	65	59	*67	73	56
23							0	65	59	67	73	58
24							0	70	59	72	73	58
25							27	70	59	73	73	0
26							32	74	59	73	*73	0
27							32	74	59	73	73	0
28							32	74	59	73	60	0
29							45	72	59	72	60	0
30							*61	72	59	72	60	0
31							------	72	------	72	59	------
Total	0	0	0	0	0	0	229	2,015	1,839	2,057	2,208	1,411
Mean	0	0	0	0	0	0	7.6	65.0	61.3	66.4	71.2	47.0
Ac-ft	0	0	0	0	0	0	454	4,000	3,650	4,080	4,380	2,800

Calendar year 1953: Max 75 Min 0 Mean 26.5 Ac-ft 19,220
Water year 1953-54: Max 74 Min 0 Mean 26.7 Ac-ft 19,360

* 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, 1 mile south of Milner.

Records available.--June 1921 to September 1954. 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.

Average discharge.--10 years (1944-54), 74.6 cfs.

Extremes.--Maximum discharge during year, 256 cfs July 25-31; no flow for many days.
1921-54: Maximum discharge, that of July 25-31, 1954; 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 11,700 acres of land in Milner low-lift irrigation district. Pumps rated by current-meter measurements.

Cooperation.--Record of pump operation furnished by Milner low-lift irrigation district.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	155	237	*202	245	172
2							0	155	*237	202	230	172
3							0	174	237	202	240	180
4							0	182	237	202	253	*189
5							0	182	237	202	253	181
6							0	182	230	225	253	181
7							0	191	222	225	253	181
8							0	200	*222	255	253	181
9							0	200	222	255	253	181
10							0	200	212	255	253	181
11							0	200	200	255	*253	181
12							0	200	200	255	250	156
13							0	200	200	170	250	156
14							0	213	188	115	250	156
15							0	220	179	255	253	156
16							0	220	*179	255	253	156
17							0	220	179	255	253	153
18							0	220	179	255	253	130
19							0	220	179	*255	253	130
20							0	220	179	255	253	130
21							0	220	179	255	253	130
22							14	238	195	255	253	130
23							40	250	200	255	253	130
24							5	250	200	255	243	*130
25							43	250	200	256	232	130
26							77	250	222	256	222	130
27							77	250	222	256	222	130
28							*84	250	210	256	222	130
29							112	250	202	256	222	130
30					---		146	241	202	*256	222	82
31		---			------		------	237	------	256	220	------
Total	0	0	0	0	0	0	598	6,640	6,187	7,362	7,571	4,555
Mean	0	0	0	0	0	0	19.9	214	206	237	244	152
Ac-ft	0	0	0	0	0	0	1,190	13,170	12,270	14,600	15,020	9,030

Calendar year 1953: Max 216 Min 0 Mean 77.4 Ac-ft 56,010
Water year 1953-54: Max 256 Min 0 Mean 90.2 Ac-ft 65,280

* 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 1954.

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

Average discharge.--19 years (1935-54), total 975 cfs; Milner-Gooding project, 560 cfs; North Side Canal Co. project, 415 cfs.

Extremes.--Maximum daily discharge during year, 2,610 cfs July 14, 15, 20; no flow for many days.
1930-54: Maximum daily discharge, 2,740 cfs Aug. 2, 1953; no flow for many days.

Remarks.--Records 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	2,200	2,510	2,360	2,540	2,420
2							0	2,210	2,520	2,330	2,550	2,420
3							0	2,280	2,490	2,330	2,520	2,390
4							0	2,340	2,460	2,380	2,540	2,430
5							0	2,350	2,460	2,380	2,520	2,430
6							0	2,410	2,470	2,370	2,520	2,470
7							0	2,460	2,510	2,360	2,490	2,460
8							0	2,530	2,530	2,430	2,460	2,440
9							0	2,560	2,440	2,490	2,460	2,470
10							0	2,490	2,410	2,550	2,460	2,460
11							0	2,450	2,400	2,550	2,460	2,390
12							0	2,470	2,380	2,550	2,450	2,340
13							470	2,480	2,360	2,560	2,450	2,340
14							700	2,410	2,330	2,610	2,430	2,340
15							720	2,380	2,360	2,610	2,420	2,300
16							720	2,350	2,350	2,590	2,420	2,350
17							730	2,350	2,300	2,570	2,440	2,310
18							1,140	2,360	2,300	2,570	2,440	2,310
19							1,350	2,360	2,270	2,600	2,420	2,250
20							1,360	2,440	2,240	2,610	2,400	2,200
21							1,370	2,480	2,230	2,550	2,410	2,230
22							1,660	2,490	2,260	2,590	2,430	2,180
23							1,650	2,560	2,340	2,580	2,430	2,120
24							1,740	2,560	2,390	2,570	2,440	2,160
25							1,790	2,540	2,450	2,560	2,470	2,150
26							1,910	2,550	2,500	2,570	2,440	2,130
27							1,990	2,560	2,490	2,580	2,450	2,110
28							2,060	2,570	2,410	2,560	2,400	2,040
29							2,230	2,540	2,460	2,550	2,380	2,060
30					------		2,210	2,510	2,420	2,550	2,380	710
31		-----			------		------	2,520	------	2,550	2,360	------
Total	0	0	0	0	0	0	25,800	75,760	72,040	78,010	75,980	67,410
Mean	0	0	0	0	0	0	860	2,444	2,401	2,516	2,451	2,247
Ac-ft	0	0	0	0	0	0	51,170	150,300	142,900	154,700	150,700	133,700

Distribution to projects in acre-feet

(†)	0	0	0	0	0	0	32,150	87,570	86,060	94,790	94,080	80,510
(‡)	0	0	0	0	0	0	19,020	62,700	56,830	59,940	56,630	53,200

Calendar year 1953: Max 2,740 Min 0 Mean 1,019 Ac-ft 737,900
Water year 1953-54: Max 2,610 Min 0 Mean 1,082 Ac-ft 783,500

† To Milner-Gooding project, total for water year, 475,200 acre-ft.
‡ To North Side Canal Co. project, total for water year, 308,300 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 1954.

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.

Average discharge.--19 years (1935-54), 1,253 cfs (907,100 acre-ft per year).

Extremes.--Maximum discharge during year, 2,820 cfs July 14 (gage height, 8.78 ft); no flow for several days.

1909-54: Maximum daily discharge, 3,200 cfs for several days in 1921, 1928-29; no flow at times when headgates were closed.

Remarks.--Records excellent. 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 April 1908.

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

Revisions.--Revised figures of discharge in cubic feet per second, for periods in the water years 1912 and 1917, superseding those published in WSP 272 and 463, are given herewith:

Jan. 3-13, 1912..... †b820
Jan. 21-25, 1917..... †b760

† Average discharge for period indicated.
b Stage-discharge relation affected by ice.

Month	Maximum	Minimum	Mean	Runoff in inches
January 1912.....	905	799	840	51,600
Water year 1911-12.....	2,710	15	1,650	1,196,000
Calendar year 1912.....	2,710	21	1,650	1,195,000
January 1917.....	924	682	825	50,700
Water year 1916-17.....	2,830	0	1,500	1,088,000
Calendar year 1917.....	2,830	0	1,270	919,000

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,800	692	536	452	434	434	584	2,030	2,660	2,400	2,760	2,630
2	1,690	696	545	458	431	446	588	2,040	*2,670	*2,400	2,780	2,580
3	1,680	692	545	464	431	449	646	2,120	2,650	2,420	2,740	2,550
4	1,660	696	539	473	431	449	729	2,190	2,620	2,530	2,760	*2,560
5	1,270	700	558	464	434	446	707	2,180	2,580	2,680	2,760	2,550
6	*1,060	696	548	455	434	443	682	2,180	2,520	2,720	*2,760	2,580
7	1,040	689	489	455	434	437	685	2,180	2,460	2,620	2,760	2,580
8	*1,030	685	449	455	434	416	685	2,200	*2,460	*2,620	2,760	2,530
9	1,020	682	458	461	434	416	752	2,190	2,460	2,700	2,760	2,490
10	331	678	473	464	434	425	919	2,190	2,330	2,800	2,740	2,440
11	0	678	492	464	437	437	1,010	2,290	2,210	2,790	*2,740	2,350
12	0	674	486	467	437	464	1,130	2,280	2,150	2,760	2,740	2,330
13	0	636	486	464	437	263	1,250	2,390	2,160	2,760	2,760	*2,310
14	0	625	486	458	437	157	1,260	2,450	2,130	2,800	2,750	2,230
15	0	615	480	449	437	174	1,290	2,410	2,120	2,770	2,750	2,160
16	0	618	470	440	434	165	1,280	2,390	*2,070	*2,750	2,760	2,100
17	0	608	464	434	434	159	1,290	2,410	1,940	2,730	2,780	1,970
18	0	625	483	437	422	265	1,160	2,620	1,830	2,740	2,780	1,920
19	314	656	486	437	437	334	1,070	*2,700	1,850	2,770	2,760	1,900
20	682	646	470	437	428	416	1,090	2,680	1,870	2,800	*2,750	1,760
21	777	581	464	440	422	461	1,080	2,740	1,890	2,710	2,740	1,640
22	877	555	461	443	425	461	*1,080	2,720	2,000	2,760	2,740	1,530
23	938	548	458	434	434	470	1,300	2,750	2,180	*2,720	2,680	*1,510
24	927	552	455	449	422	498	1,410	2,740	2,360	2,720	2,660	1,510
25	822	548	458	437	*422	514	1,620	2,750	2,440	2,720	2,680	1,430
26	781	542	*461	431	431	504	1,730	2,740	2,380	2,740	2,580	1,400
27	822	542	461	437	452	510	1,810	2,760	2,190	2,780	2,570	1,360
28	726	552	458	*443	446	517	1,810	2,700	2,200	2,750	2,560	1,310
29	696	552	458	440	-	*588	1,930	2,630	2,370	2,740	2,550	1,350
30	*696	*545	458	437	- -	625	2,010	2,630	2,390	*2,760	2,560	1,540
31	696	- - - - -	455	437	- - - - -	601	- - - - - -	2,660	- - - - - -	2,780	2,580	- - - - - -
Total	22,335	18,804	14,990	13,916	12,125	12,944	34,587	75,940	68,140	83,740	84,050	61,100
Mean	720	627	484	449	433	418	1,153	2,450	2,271	2,701	2,711	2,037
Ac-ft	44,300	37,300	29,730	27,600	24,050	25,670	68,600	150,600	135,200	166,100	166,700	121,200

Calendar year 1953: Max 2,920 Min 0 Mean 1,372 Ac-ft 993,400
Water year 1953-54: Max 2,800 Min 0 Mean 1,377 Ac-ft 997,000

* Discharge measurement made on this day.

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 1954.

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.

Average discharge.--28 years (1926-54), 1,759 cfs (1,273,000 acre-ft per year).

Extremes.--Maximum discharge during year, 3,790 cfs May 20 (gage height, 10.49 ft); maximum gage height, 10.65 ft Aug. 23; minimum discharge, 28 cfs Mar. 17 (gage height, 1.08 ft).

1909-54: Maximum daily discharge, 4,600 cfs Aug. 12, 1918, including about 1,200 cfs wasted through spillway below station and returned to river; maximum discharge for irrigation use, 3,810 cfs July 21, 1952, July 24, 1953; no flow Sept. 20, 1920.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow controlled by headgates. Diversions 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 the irrigated area has been reported as 202,000 acres.

Revisions.--Revised figures of discharge in cubic feet per second for periods in the water years 1910-16 superseding those published in WSP 292, 312, 332, 362, 393, 413, and 443, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1909		1911-Con.		1913-Con.		1915	
Dec. 3-31	†b320	Dec. 24-31	†b650	Feb. 1-28	†b560	Jan. 1-27	†b750
				Mar. 1-3	†b560	Dec. 10-17	†b740
1910		1912		Dec. 20-31	†b700	29-31	†b680
Jan. 1-31	†b320	Jan. 1-11	†b650				
Feb. 1-24	†b320	18-31	†b560	1914		1916	
		Feb. 1-4	†b560	Jan. 1-7	†b700	Jan. 1-31	†b670
1911		Dec. 22-31	†b590	29-31	†b400	Feb. 1-5	†b650
Jan. 1-7	†b550			Feb. 1-12	†b500	13-16	†b750
17-24	†b560	1913		Dec. 10-31	†b750		
		Jan. 1-31	†b580				

† Average discharge for period indicated.
b Stage discharge relation affected by ice.

Month	Maximum	Minimum	Mean	Runoff in acre-feet
September 1909	1,240	861	1,020	60,900
December 1909	-	-	320	19,700
January 1910	-	-	320	19,700
February	-	-	320	17,800
Water year 1909-10	3,040	105	1,160	841,000
Calendar year 1910	3,040	105	1,190	864,000
January 1911	690	195	534	32,900
Water year 1910-11	3,240	85	1,330	961,000
December 1911	708	600	637	39,200
Calendar year 1911	3,240	85	1,360	987,000
January 1912	650	80	585	36,000
February	681	452	540	31,000
Water year 1911-12	3,120	30	1,330	969,000
December 1912	620	533	585	36,000
Calendar year 1912	3,120	30	1,320	957,000
January 1913	-	-	580	35,700
February	-	-	560	31,100
March	620	150	520	32,000
Water year 1912-13	3,250	11	1,420	1,030,000
December 1913	826	-	733	45,100
Calendar year 1913	3,250	11	1,430	1,040,000
January 1914	760	169	538	33,100
February	590	450	527	29,300
Water year 1913-14	3,190	87	1,520	1,100,000
December 1914	-	-	746	45,900
Calendar year 1914	3,190	87	1,520	1,100,000
January 1915	-	-	752	46,300
Water year 1914-15	3,250	94	1,450	1,050,000
December 1915	744	398	668	41,100
Calendar year 1915	3,250	94	1,450	1,050,000
January 1916	-	-	670	41,200
February	809	94	575	33,100
Water year 1915-16	3,670	94	1,840	1,330,000

South Side Twin Falls Canal at Milner, Idaho--Continued

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-9, Nov. 20-22, and June 6 to Sept. 30)

1.0	27	3.0	338
1.3	37	4.0	604
1.5	49	5.0	907
1.7	72	7.0	1,730
2.0	117	9.0	2,800
2.5	216	10.5	3,760

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,920	654	470	518	505	489	508	3,400	3,460	3,400	3,540	3,530
2	1,920	548	462	516	513	489	508	3,370	3,440	*3,430	3,520	3,540
3	1,950	462	462	526	513	489	499	3,400	3,400	3,500	3,550	3,500
4	1,850	462	b460	529	510	491	516	3,190	3,370	3,550	3,590	*3,480
5	1,790	508	b460	526	508	489	568	3,290	3,380	3,570	3,590	3,470
6	1,680	652	b460	524	502	489	598	3,430	3,360	3,610	*3,630	3,440
7	*1,560	660	b460	513	499	483	663	3,480	3,290	3,600	3,640	3,360
8	*1,540	601	b460	508	494	467	753	3,490	*3,290	*3,600	3,630	3,340
9	1,540	598	b460	510	494	470	856	3,470	3,200	3,580	3,610	3,290
10	1,570	593	b460	508	494	449	957	3,490	3,040	3,560	3,600	3,170
11	1,670	587	b460	510	491	278	1,040	3,640	3,040	3,570	3,570	3,060
12	1,640	584	b470	510	491	65	1,050	3,630	3,080	3,580	3,570	3,030
13	1,640	610	b475	510	497	41	1,210	3,650	3,070	3,620	3,580	*2,990
14	1,550	621	475	510	497	42	1,420	3,660	3,030	3,620	3,580	2,940
15	612	632	486	510	480	29	1,650	3,650	2,990	3,600	3,590	2,930
16	750	646	494	510	451	29	1,680	3,610	2,840	*3,580	3,590	2,960
17	467	640	508	516	449	767	1,670	3,600	2,730	3,590	3,610	2,730
18	102	593	513	518	454	1,140	1,880	3,630	*2,560	3,590	3,610	2,560
19	201	573	510	518	444	901	2,130	3,670	2,570	3,580	3,630	2,590
20	750	*551	516	518	441	784	2,470	*3,700	2,720	3,580	*3,660	2,560
21	713	551	516	518	436	649	2,770	3,700	2,880	3,580	3,660	2,220
22	722	559	518	518	431	540	2,870	3,700	3,040	3,580	3,670	2,110
23	719	534	516	521	446	516	2,840	3,690	3,200	*3,590	3,660	*2,100
24	719	494	516	518	470	516	3,020	3,650	3,290	3,600	3,650	2,010
25	781	494	516	518	*467	518	3,240	3,570	*3,300	3,570	3,620	2,050
26	859	491	*516	521	475	524	*3,450	3,510	3,300	3,540	3,580	2,010
27	*885	489	b515	516	475	518	3,480	3,520	3,290	3,520	3,560	1,920
28	875	483	b515	*518	480	521	3,290	*3,520	3,330	3,530	3,540	1,900
29	796	480	b515	521	-	*526	3,250	3,520	3,440	3,560	3,540	1,850
30	741	472	b515	524	- --	559	3,340	3,530	3,390	*3,560	3,540	1,770
31	725	------	518	513	------	548	------	3,540	------	3,560	3,540	------
Total	35,237	16,822	15,197	16,014	13,407	14,816	54,176	109,900	94,320	110,500	111,450	82,410
Mean	1,137	561	490	517	479	478	1,806	3,545	3,144	3,565	3,595	2,747
Ac-ft	69,890	33,370	30,140	31,760	26,590	29,390	107,500	218,000	187,100	219,200	221,100	163,500

Calendar year 1953 : Max 3,780 Min 39 Mean 1,835 Ac-ft 1,328,000
Water year 1953-54 : Max 3,700 Min 29 Mean 1,847 Ac-ft 1,338,000

* 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 third of a mile downstream from Milner Dam.

Drainage area.--17,180 sq mi approximately, excluding nontributary area on Snake River plains.

Records available.--May 1909 to September 1954.

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.--28 years (1926-54), 2,060 cfs (1,491,000 acre-ft per year).

Extremes.--Maximum and minimum discharges for the water years 1909-12, 1915, 1943-44, 1946-48, and 1954, some of which have been revised, are contained in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Maximum			Minimum	
		Date	Discharge (cfs)	Gage height (feet)	Date	Discharge (cfs)
292	1909	June 12, 1909	*35,900	20.1	-	-
292	1910	May 1,2,1910	*26,900	18.2	Aug. 22-24,1910	†38
312	1911	June 22,25,26,1911	*30,200	18.6	Aug. 20, 1911	†39
332	1912	June 19, 1912	*30,200	18.6	Aug. 16, 1912	†71
413	1915	Nov. 15, 1914	*21,100	16.4	-	-
983	1943	June 6, 1943	*22,100	20.1	July 28-30,1943	12
1013	1944	June 15, 1944	*19,100	18.84	July 13, 1944	6
1063	1946	Apr. 27, 1946	*19,100	18.67	-	-
1093	1947	June 13, 1947	*21,000	19.62	-	-
1123	1948	June 24, 1948	*16,900	17.72	-	-
-	1954	May 28, 1954	9,680	13.40	June 20-24,1954	‡35

* Revised.
† Minimum daily.
‡ Gage height, 2.18 ft.

1909-54: Maximum discharge, 40,000 cfs June 21, 1918 (gage height, 19.9 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. 59), Lake Walcott (see p. 62) 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.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1909-12, 1915-16, 1942-44, 1946-48, superseding those published in WSP 292, 312, 332, 413, 443, 933, 963, 983, 1013, 1043, 1063, 1093 and 1123 are given herein. Complete tables of daily discharges are given for the water years 1909-12, 1943-44, but only revised discharges are given for the other water years.

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1914		1914-Con.		1915-Con.		1915-Con.		1942-Con.	
Oct. 1	4,340	Nov. 12	6,600	Oct. 16	5,380	Nov. 27	5,630	Apr. 25	12,700
2	5,010	13	5,760	17	5,380	28	6,200		
3	6,600	14	5,250	18	5,380	29	5,700	1946	
4	6,310	15	21,100	19	5,380	30	4,500	Mar. 19	4,430
5	6,310	16	9,000	20	5,380	Dec. 1	4,900	20	5,900
6	6,310	17	8,860	21	5,380	2	4,900	21	6,430
7	6,600	18	8,510	22	5,380	3	4,900	22	6,310
8	7,520	19	7,520	23	5,380	4	4,500	23	6,440
9	8,170	20	7,840	24	5,380	5	4,500	24	6,340
10	8,170	21	7,840	25	5,380	6	4,500	25	6,430
11	7,840	22	8,170	26	5,380	7	4,240	26	7,270
12	7,520	23	7,520	27	5,380	8	5,380	27	8,430
13	6,900	24	6,310	28	5,380	9	5,130	28	9,140
14	6,600	25	8,860	29	5,380	10	6,750	29	9,620
15	5,250	26	7,840	30	5,380	11	5,900	30	9,690
16	12,000	27	6,310	31	5,130	12	5,630	31	9,660
17	11,100	28	6,900	Nov. 1	4,900	13	5,380	Apr. 1	9,970
18	11,100	29	6,900	2	5,380	14	4,450	2	9,900
19	9,590	30	6,900	3	5,380	15	4,450	3	10,000
20	8,860	Dec. 1	12,400	4	5,630	16	4,670	4	10,400
21	9,590	2	11,300	5	5,900	17	4,670	5	9,370
22	9,960	3	7,520	6	5,900	18	4,670	6	9,240
23	8,860	4	6,310	7	5,630	19	4,670	7	9,620
24	8,860	5	6,900	8	5,900	20	4,450	8	9,250
25	8,860	6-31	‡4,850	9	5,900	21	4,450	9	8,950
26	8,170			10	5,380	22	4,450	10	8,950
27	7,520	1915		11	5,630	23	4,240	11	9,130
28	7,520	Oct. 1	2,060	12	5,630	24	4,450	12	8,980
29	8,170	2	1,030	13	5,630	25	4,670	13	8,600
30	7,840	3	4,030	14	5,900	26	4,200	14	8,570
31	6,310	4	8,000	15	5,900	27	3,480	15	8,620
Nov. 1	7,000	5	6,750	16	5,380	28	5,130	16	6,970
2	7,600	6	4,240	17	5,900	29	5,130	17	4,000
3	8,170	7	4,670	18	6,600	30	4,900	18	4,030
4	8,170	8	4,900	19	5,100	31	3,900	19	4,820
5	8,860	9	5,380	20	4,600			20	7,320
6	8,860	10	6,750	21	5,800	1942		21	7,580
7	8,500	11	6,750	22	5,900	Apr. 16	3,500	22	7,320
8	7,700	12	6,750	23	5,900	17	6,400	23	4,680
9	6,700	13	5,380	24	5,600	18	6,800	24	10,400
10	5,760	14	5,380	25	5,630	23	6,400	25	14,800
11	7,520	15	5,380	26	5,630	24	11,600	26	17,300

‡ Not previously published.

Snake River at Milner, Idaho--Continued

Revised figures of discharge, in cubic feet per second, 1915-16, 1942, 1946-48--Continued

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1946-Con.		1946-Con.		1947-Con.		1948-Con.		1948-Con.	
Apr. 27	18,500	June 19	2,370	June 24	6,090	May 18	1,010	June 5	14,300
28	18,700	20	3,470	25	5,260	19	3,740	6	14,500
29	17,000	21	6,340			20	4,800	7	14,300
30	5,480	22	5,840	1948		21	5,580	8	14,200
June 3	10,500			May 1	3,850	22	8,130	9	12,400
4	9,480	1947		2	4,170	23	9,340	10	11,600
5	4,930	June 5	9,470	3	3,800	24	11,400	11	8,460
8	7,810	10	5,920	4	4,650	25	13,400	12	8,660
9	8,400	12	19,800	5	5,350	26	13,200	13	11,700
10	8,240	13	20,900	6	5,420	27	9,170	14	10,100
11	7,580	14	20,400	7	3,700	28	7,570	15	5,170
12	4,230	17	7,940	11	8,000	29	5,640	23	3,780
13	3,830	18	7,290	12	8,050	30	6,360	24	13,800
14	3,680	19	6,840	13	4,840	31	8,870	25	13,100
15	3,710	20	8,090	14	2,380	June 1	11,100	26	12,200
16	3,730	21	8,470	15	2,890	2	12,400	27	11,800
17	3,360	22	8,700	16	2,200	3	13,600	28	10,700
18	2,100	23	7,580	17	1,550	4	14,000	29	8,500
								30	4,970

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
October 1914	-	12,000	4,340	7,860	483,000
November	-	21,100	5,250	7,960	474,000
Calendar year 1914	-	31,500	13	‡6,910	‡5,007,000
Water year 1914-15	-	21,100	9	‡3,940	‡2,848,000
October 1915	-	8,000	1,030	5,270	324,000
November	-	6,600	4,500	5,620	335,000
December	-	6,750	3,480	4,760	293,000
Calendar year 1915	-	21,100	9	‡3,460	‡2,505,000
Water year 1915-16	-	19,000	15	‡5,820	‡4,225,000
April 1942	112,836	12,700	449	3,760	224,000
Water year 1941-42	334,873	12,700	8	917	664,400
March 1946	167,050	9,690	3,010	5,389	331,300
April	288,450	18,700	4,000	9,615	572,100
June	108,848	10,500	142	3,628	215,900
Water year 1945-46	1,331,004	18,700	10	3,647	2,640,000
Calendar year 1946	1,233,881	18,700	10	3,380	2,447,000
June 1947	243,321	20,900	54	8,111	482,600
Water year 1946-47	932,883	20,900	10	2,556	1,850,000
Calendar year 1947	888,408	20,900	10	2,434	1,762,000
May 1948	172,854	13,400	618	5,576	342,900
June	260,523	14,500	120	8,684	516,700
Water year 1947-48	1,086,548	14,500	10	2,969	2,155,000
Calendar year 1948	1,043,539	14,500	10	2,851	2,070,000

‡ Partly estimated.

Discharge, in cubic feet per second, 1909

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	a9,800	27,600	28,700	5,270	7,960	16	11,500	24,100	10,800	5,560	a9,100
2	a9,700	25,100	29,200	4,420	6,610	17	12,900	24,600	10,300	5,460	a9,100
3	a9,000	23,600	29,200	3,940	a6,610	18	12,800	24,600	8,760	5,370	a9,100
4	a8,400	23,100	30,200	3,420	a7,200	19	13,200	25,600	9,200	5,100	a9,000
5	a8,800	24,100	30,200	3,580	a7,600	20	13,000	27,100	7,650	4,940	a8,500
6	a9,300	26,600	28,700	5,220	7,650	21	11,900	30,200	8,280	4,060	a8,120
7	a10,800	28,700	29,200	5,590	a7,700	22	11,700	31,200	7,650	4,100	8,120
8	a12,300	30,200	30,200	5,620	a7,900	23	13,400	32,300	6,980	3,980	8,120
9	a11,800	31,800	29,700	5,540	a8,500	24	13,800	32,800	6,550	4,140	8,120
10	11,500	32,800	25,100	5,390	a8,500	25	16,300	33,100	6,200	4,290	7,960
11	11,900	35,400	18,400	5,200	a8,600	26	17,700	32,800	6,340	3,860	6,900
12	13,600	35,900	17,700	5,200	8,600	27	18,200	31,800	6,070	6,500	6,200
13	14,400	35,400	14,600	4,960	a8,800	28	18,200	30,700	5,690	7,650	5,890
14	14,200	30,200	13,400	5,010	a8,900	29	18,600	29,700	5,560	5,200	5,560
15	13,800	27,100	12,600	6,530	a9,100	30	23,600	28,700	5,760	3,480	5,820
						31	25,100	-	6,200	3,290	-
Total							421,200	876,900	485,090	151,870	235,840
Mean							13,600	29,200	15,600	4,900	7,860
Runoff in acre-feet							835,000	‡1,740	962,000	301,000	468,000

‡ Expressed in thousands.
a No gage-height record; discharge estimated on basis of records for Snake River near Minidoka.

Snake River at Milner, Idaho--Continued

Discharge, in cubic feet per second, water year October 1909 to September 1910

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,190	6,470	8,930	5,440	5,690	12,100	11,400	26,900	12,100	55	50	43
2	5,820	6,610	8,930	5,440	5,440	12,800	11,000	26,900	12,100	45	47	44
3	4,960	6,610	9,270	5,690	5,200	12,800	11,200	25,900	13,600	43	47	43
4	5,080	6,750	8,280	5,690	5,080	11,900	11,200	24,800	14,000	43	47	44
5	5,200	6,900	8,600	5,940	4,960	10,800	11,200	21,300	14,800	40	47	47
6	7,960	8,280	8,280	6,200	4,960	10,100	11,200	19,900	14,800	45	47	46
7	7,800	8,280	7,650	6,200	4,960	9,960	11,200	18,900	13,200	61	45	46
8	7,650	8,280	7,190	6,200	4,840	9,780	11,000	18,400	12,100	2,660	47	48
9	7,190	8,280	7,190	5,200	4,730	10,500	10,500	17,900	10,500	2,270	43	46
10	6,750	8,280	6,750	4,960	4,730	10,800	10,500	16,600	10,500	3,480	45	48
11	6,750	8,280	7,800	5,440	4,730	10,500	10,500	17,900	5,560	1,000	43	46
12	6,610	8,120	7,650	5,940	5,320	10,100	11,000	18,900	5,560	172	43	49
13	6,610	7,960	7,650	6,200	5,440	9,960	10,500	20,300	4,400	175	43	49
14	6,900	7,650	7,650	5,940	5,440	9,960	12,900	20,300	3,020	100	42	51
15	7,190	7,190	7,650	5,940	5,200	9,960	14,600	25,900	3,290	108	41	49
16	7,650	7,340	7,650	5,940	5,440	9,960	15,300	23,300	2,860	128	41	52
17	9,270	7,040	7,650	5,940	5,440	9,780	16,100	22,300	2,660	89	41	54
18	8,600	7,190	7,040	5,940	5,200	9,780	16,100	20,800	2,170	73	42	57
19	8,380	7,340	6,470	5,200	5,440	9,610	15,200	17,500	2,030	71	41	1,430
20	8,120	7,960	6,200	5,200	5,200	9,440	13,000	16,600	1,520	65	40	1,430
21	7,960	7,650	6,200	5,440	5,080	9,440	15,700	14,000	1,140	63	40	1,430
22	7,800	7,340	5,690	5,560	4,960	9,440	16,100	14,000	3,200	63	38	1,430
23	7,650	7,340	5,440	5,560	5,200	10,800	17,900	12,400	2,270	61	38	1,430
24	7,340	7,650	5,440	5,690	5,320	11,900	18,900	11,000	2,170	60	38	1,430
25	7,190	8,930	5,440	5,940	6,200	12,800	18,900	10,100	1,630	59	40	1,430
26	7,190	9,270	5,690	5,690	6,200	13,200	19,300	10,500	1,270	59	42	1,430
27	7,190	10,100	5,690	5,690	6,470	13,800	19,600	11,000	950	60	42	1,430
28	7,190	9,960	5,690	5,820	7,960	11,700	21,400	12,400	120	56	41	1,400
29	6,610	9,960	5,440	5,940	-	12,400	21,800	13,200	90	57	43	1,370
30	5,560	8,760	5,440	5,560	- --	12,400	24,400	13,200	75	52	43	1,370
31	6,340	- -- -	5,690	5,820	- - - -	11,700	- - - - - -	12,400	- - - - - -	51	43	- - - - - -
Total	219,700	237,770	216,330	177,350	150,830	340,170	439,600	555,500	173,685	11,364	1,330	17,872
Mean	7,090	7,930	6,980	5,720	5,390	11,000	14,700	17,900	5,790	367	43	596
Ac-ft	436,000	472,000	429,000	352,000	299,000	675,000	872,000	‡1,102	344,000	22,500	2,640	35,400

Calendar year 1909: Max - Min - Mean - Ac-ft -
Water year 1909-10: Max 26,900 Min 38 Mean 6,960 Ac-ft 5,042,000

‡ Expressed in thousands.

Discharge, in cubic feet per second, water year October 1910 to September 1911

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,550	3,480	6,170	4,900	10,300	4,240	4,560	7,680	11,700	17,500	61	45
2	1,550	2,850	5,900	4,450	9,780	4,560	3,650	7,680	11,700	18,000	52	45
3	1,490	2,590	5,010	4,670	13,000	4,030	4,670	7,840	13,000	18,500	51	49
4	1,930	3,840	5,130	4,670	11,700	6,170	3,840	7,840	14,800	18,000	46	57
5	4,240	5,900	200	4,240	11,300	5,500	4,340	6,460	17,500	17,500	52	54
6	3,480	6,750	9,960	4,030	9,780	5,630	5,130	10,200	18,000	14,300	56	57
7	3,000	5,500	7,060	3,310	8,510	5,900	8,340	10,200	18,500	10,200	61	57
8	2,720	4,900	6,310	3,310	6,600	6,750	8,000	12,200	19,900	10,500	64	55
9	2,250	4,670	5,630	3,480	6,170	7,680	7,360	12,000	20,800	9,780	53	55
10	2,250	4,670	5,500	3,840	6,170	8,000	5,380	14,300	21,600	8,680	45	54
11	2,590	4,560	5,380	5,380	5,630	7,460	5,500	13,400	22,300	9,400	43	55
12	2,850	4,560	5,130	5,130	5,500	7,680	4,560	13,400	22,300	6,900	45	52
13	3,390	4,900	5,380	4,780	5,250	8,000	6,170	12,200	21,300	4,900	61	53
14	3,150	150	5,500	4,670	4,670	7,430	5,900	12,200	20,800	4,680	76	58
15	3,480	4,340	5,500	3,840	5,010	7,060	5,010	11,300	21,800	4,450	66	63
16	1,610	7,210	4,240	4,030	5,300	5,380	4,670	12,600	22,800	1,490	61	65
17	1,890	7,210	4,560	3,650	5,250	5,900	3,390	15,200	23,800	1,610	57	415
18	1,820	5,500	4,560	3,150	5,130	5,980	2,850	12,000	25,700	1,610	50	1,200
19	2,470	3,930	4,030	3,150	4,900	6,460	2,720	16,200	26,700	1,680	42	1,270
20	4,450	5,900	4,240	4,780	4,670	6,230	3,310	15,200	28,000	1,490	39	1,240
21	4,030	2,850	4,030	4,560	4,130	5,900	3,840	17,100	28,700	125	41	1,210
22	3,840	4,240	4,900	4,190	4,030	5,810	4,410	15,200	30,200	110	41	1,180
23	3,840	5,630	5,130	3,650	4,030	5,630	4,670	13,900	27,700	95	54	1,160
24	3,560	7,680	4,900	3,650	4,030	5,630	4,710	12,600	29,700	83	47	1,030
25	3,650	6,310	4,900	5,900	4,030	5,900	3,310	12,200	30,200	95	43	1,070
26	3,480	6,900	5,010	10,500	4,090	5,630	3,310	11,700	30,200	59	47	1,110
27	3,840	6,900	5,250	11,300	3,970	5,900	3,150	13,400	27,700	59	45	1,150
28	3,840	6,750	4,670	9,040	3,650	5,900	3,740	15,200	24,700	67	42	1,190
29	3,650	6,750	4,670	8,000	-	5,250	4,450	16,200	17,500	63	44	1,220
30	3,740	6,460	4,900	6,600		4,850	7,060	16,200	16,600	59	42	900
31	3,480	-	4,900	7,680	- - - -	4,670	- - - - - -	12,200	- - - - - -	59	47	- - - - - -
Total	93,110	153,880	158,650	158,530	176,580	187,110	142,000	386,000	666,200	182,044	1,565	16,219
Mean	3,000	5,130	5,120	5,110	6,310	6,040	4,730	12,500	22,200	5,870	50	541
Ac-ft	185,000	305,000	315,000	314,000	350,000	371,000	282,000	766,000	‡1,321	361,000	3,110	32,200

Calendar year 1910: Max 26,900 Min 38 Mean 6,230 Ac-ft 4,510,000
Water year 1910-11: Max 30,200 Min 39 Mean 6,360 Ac-ft 4,605,000

‡ Expressed in thousands.

Snake River at Milner, Idaho--Continued

Discharge, in cubic feet per second, water year October 1911 to September 1912

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	475	2,720	3,320		5,540	5,180	3,740	4,140	18,100	21,600	200	7,210
2	484	2,850	3,090		5,540	5,180	3,940	4,800	18,900	22,100	200	7,840
3	1,030	2,920	1,970		5,540	5,180	3,940	5,820	20,300	21,800	200	7,210
4	1,370	3,650	3,000		5,540	5,420	4,140	6,100	21,600	20,500	1,410	7,840
5	1,090	6,600	3,720		6,720	5,180	2,700	6,400	21,000	19,500	6,400	7,840
6	1,200	6,510	5,320		7,720	5,420	3,560	5,820	21,400	17,600	7,720	8,510
7	3,650	10,200	5,400		6,400	5,420	4,360	5,820	22,800	14,900	12,300	7,840
8	3,710	5,950	3,910		5,280	4,940	4,140	5,280	22,300	13,100	8,080	8,510
9	3,210	4,630	4,280		5,540	5,950	4,360	5,540	23,800	11,800	3,740	8,510
10	3,520	5,840	3,840		5,040	4,940	4,140	5,280	23,300	11,000	4,360	9,220
11	6,880	5,680	5,060		5,820	6,230	4,140	6,100	25,200	9,850	5,540	9,590
12	8,840	5,680	5,600		6,100	4,710	4,140	5,040	26,200	8,760	4,140	9,220
13	6,220	4,560	6,690		6,400	4,710	4,140	10,400	27,200	5,420	3,940	11,500
14	7,240	3,480	7,970		6,100	4,280	5,540	11,300	28,200	8,760	3,020	10,700
15	7,880	3,690	8,040		5,540	3,340	5,820	11,800	28,200	7,430	1,730	9,960
16	7,610	3,650	8,040		5,040	3,870	5,280	11,800	28,700	7,740	71	9,960
17	11,300	5,500	8,510		5,040	4,070	5,280	10,900	29,700	7,740	198	12,000
18	8,120	5,530	7,430		4,140	3,180	4,800	11,300	29,200	7,430	656	10,700
19	6,070	4,280	7,430		5,280	4,490	4,580	12,300	30,200	5,680	1,170	9,960
20	5,080	5,030	6,430		5,540	4,490	4,580	13,600	28,200	4,940	715	7,210
21	4,590	4,490	5,200		4,580	4,280	4,580	15,500	22,800	3,180	775	6,600
22	4,610	4,630	4,470		4,580	4,280	4,800	18,000	18,900	3,870	910	6,600
23	4,660	5,110	4,210		5,040	3,180	4,360	20,500	16,600	3,510	679	6,030
24	3,980	4,470	3,560		5,040	3,180	4,140	22,500	15,200	5,180	3,740	6,310
25	6,380	4,360	3,510		5,290	3,020	3,020	21,000	15,200	4,490	5,010	7,520
26	5,210	4,170	3,510		5,540	3,180	4,800	18,000	16,200	4,280	6,030	8,510
27	3,110	4,260	3,480		4,580	3,180	3,940	15,500	18,000	3,870	5,760	7,840
28	1,400	3,690	3,420		5,040	3,180	4,360	16,000	20,400	2,380	5,500	7,520
29	2,240	3,310	3,600		5,040	2,610	4,580	16,500	20,800	1,320	5,500	8,860
30	5,160	3,340	4,170		-	2,380	4,360	17,500	21,800	1,320	8,170	6,600
31	3,850		4,280		- --	3,020	------	20,000	------	200	7,520	------
Total	140,169	140,780	152,470	-	158,590	131,670	130,260	360,540	680,400	281,250	115,384	253,720
Mean	4,520	4,690	4,920	e5,500	5,470	4,250	4,340	11,600	22,700	9,070	3,720	8,460
Ac-ft	278,000	279,000	302,000	338,000	315,000	261,000	258,000	713,000	‡1,350	558,000	229,000	503,000

Calendar year 1911: Max 30,200 Min 39 Mean 6,440 Ac-ft 4,659,000
Water year 1911-12: Max 30,200 Min 71 Mean 7,420 Ac-ft 5,384,000

‡ Expressed in thousands.
e Estimated.

Discharge, in cubic feet per second, water year October 1942 to September 1943

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	368	3,780	368	2,050	3,070	6,220	5,310	8,690	2,370	16,900	16	316
2	362	3,860	368	1,600	3,070	6,210	5,470	5,380	6,900	16,900	17	319
3	371	3,750	371	1,600	2,960	6,200	5,880	5,010	10,800	15,000	158	319
4	374	3,790	395	1,990	3,010	6,190	5,660	4,000	20,400	10,800	185	319
5	371	3,780	398	1,500	3,020	5,940	5,310	3,470	*21,600	10,400	94	316
6	368	3,860	398	1,830	3,140	6,300	*4,060	3,140	22,000	10,700	31	319
7	371	3,870	600	2,040	3,140	6,210	3,220	4,050	20,900	12,600	*22	319
8	410	3,700	4,750	2,040	3,120	6,280	2,400	3,020	11,600	13,000	19	319
9	420	3,520	6,490	2,030	2,960	6,230	2,390	7,270	9,750	10,200	18	426
10	420	1,950	6,030	2,000	2,540	6,380	3,140	9,410	6,420	7,020	16	459
11	423	744	6,260	1,850	2,980	6,180	3,830	3,630	5,810	1,890	16	459
12	429	420	5,410	1,720	3,260	6,250	3,650	973	4,920	353	16	459
13	426	480	4,450	1,780	3,290	6,280	6,040	1,330	4,620	292	16	459
14	420	579	1,710	1,920	3,270	6,140	6,790	482	*5,760	1,370	*15	459
15	420	576	1,350	1,690	3,230	6,100	6,240	209	7,860	3,420	15	*462
16	426	363	1,670	1,530	3,290	6,410	6,160	322	12,000	*858	17	470
17	426	240	1,800	1,490	5,720	6,410	7,650	840	13,300	242	18	476
18	420	242	*2,240	1,470	6,310	6,420	7,720	740	13,500	255	14	480
19	417	263	2,120	1,740	6,330	5,750	7,650	650	12,500	187	68	480
20	417	294	1,920	2,040	6,330	5,640	10,000	654	12,400	18	336	480
21	414	311	1,200	2,320	6,310	5,630	12,600	359	11,800	15	336	480
22	642	294	1,800	4,210	6,360	5,510	18,300	359	10,300	13	328	484
23	2,470	281	2,090	2,160	6,530	4,480	19,400	359	13,500	15	356	487
24	3,520	276	1,950	2,040	6,720	4,240	19,200	464	16,800	13	365	487
25	4,280	271	2,000	2,010	6,730	4,340	19,200	*356	16,200	14	345	487
26	4,330	*273	1,780	2,460	*6,650	4,410	18,900	353	15,300	13	*345	487
27	3,880	273	1,340	2,670	6,440	4,410	18,500	356	18,000	*12	342	487
28	3,940	273	1,580	2,800	6,170	4,180	17,400	353	16,500	12	342	487
29	4,400	273	2,270	*3,120	-	1,830	*15,900	401	15,500	12	314	480
30	*4,890	314	2,180	3,200	-	3,120	10,800	638	*16,300	12	314	476
31	3,840	-	2,050	3,120	--- -	6,240	------	550	------	13	316	------
Total	44,665	42,900	69,338	66,020	125,950	172,130	278,770	67,818	375,610	132,549	4,810	12,957
Mean	1,441	1,430	2,237	2,130	4,498	5,553	9,292	2,188	12,520	4,276	155	432
Ac-ft	88,590	85,090	137,500	130,900	249,800	341,400	552,900	134,500	745,000	262,900	9,540	25,700

Calendar year 1942: Max 12,700 Min 8 Mean 1,181 Ac-ft 855,600
Water year 1942-43: Max 22,000 Min 12 Mean 3,818 Ac-ft 2,764,000

* Discharge measurement made on this day.

Snake River at Milner, Idaho--Continued

Discharge, in cubic feet per second, water year October 1943 to September 1944

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	480	4,730	3,450	3,570	587	744	4,700	3,870	9	2,830	9	125
2	2,590	4,630	3,750	3,470	667	665	4,690	4,190	121	3,000	9	125
3	2,800	4,100	3,580	3,040	553	721	4,530	4,850	9	553	9	122
4	2,860	3,680	3,500	3,100	531	898	*3,500	5,330	9	109	9	124
5	2,870	3,180	3,460	3,660	775	766	3,250	4,250	*9	*10	9	125
6	2,890	4,040	3,380	3,750	937	798	2,940	3,850	8	9	9	125
7	2,890	3,830	3,350	3,690	925	1,220	2,920	1,750	8	8	9	124
8	2,910	3,740	3,360	3,500	840	1,400	3,930	531	1,050	8	8	122
9	*2,890	3,780	3,400	3,200	559	1,360	6,040	103	9,910	8	8	122
10	2,890	3,840	3,430	3,180	510	*1,990	6,340	60	11,100	8	8	*124
11	5,730	3,770	3,430	3,250	820	2,820	8,240	93	12,000	7	29	124
12	4,230	3,800	3,400	3,700	705	3,840	8,200	449	15,200	7	*122	122
13	3,250	3,810	3,420	3,700	697	3,180	4,630	61	16,600	*6	122	122
14	3,470	3,800	3,420	3,700	688	3,520	3,810	12	17,500	7	121	122
15	3,580	4,160	3,460	3,700	688	3,340	40,00	11	*18,400	7	120	122
16	3,470	4,000	3,490	3,660	701	4,710	5,900	10	17,200	7	120	122
17	3,590	3,750	3,470	3,650	705	4,310	8,300	9	12,800	7	129	121
18	3,760	3,920	3,470	3,650	710	5,190	8,600	9	10,500	7	128	122
19	3,720	3,980	3,470	3,810	*710	3,640	5,330	11	10,300	7	127	132
20	4,430	3,930	3,460	3,680	622	4,680	2,000	13	10,200	7	125	131
21	3,890	3.940	3,470	*3,740	516	4,980	3,230	12	9,690	7	124	121
22	4,100	3,820	3,490	3,830	663	4,430	*3,870	10	7,880	7	121	118
23	3,930	3,870	3,510	3,380	705	3,920	4,270	9	*892	8	120	121
24	3,630	4,230	3,520	1,260	659	4,480	4,220	8	102	9	121	121
25	3,470	*4,070	3 480	898	538	4,820	5,210	8	14	9	125	121
26	*3,660	3,860	3,500	985	568	4,860	5,080	*8	14	9	125	122
27	3,670	3,890	3,550	1,160	626	4,890	5,010	10	22	*10	125	122
28	4,010	3,890	3,210	1,030	680	5,520	4,430	10	283	9	124	124
29	4,380	3,880	*2,770	587	654	5,380	4,430	9	12	8	125	192
30	3,540	3,870	3,580	456		5,220	3,930	8	9	8	125	230
31	4,950	-	3,610	410	---	4,990	------	8	------	8	125	------
Total	108,530	117,790	106,840	88,376	19,539	103,282	145,530	29,562	181,851	6,704	2,590	3,870
Mean	3,501	3,926	3,446	2,851	674	3,332	4,851	954	6,062	216	84	129
Ac-ft	215,300	233,600	211,900	175,300	38,760	204,900	288,700	58,640	360,700	13,300	5,140	7,680

Calendar year 1943: Max 22,000 Min 12 Mean 4,301 Ac-ft 3,113,000
Water year 1943-44: Max 18,400 Min 6 Mean 2,499 Ac-ft 1,814,000
Calendar year 1944: Max 18,400 Min 6 Mean 1,738 Ac-ft 1,262,000

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85	227	1,000	1,920	2,060	2,390	4,720	579	646	39	330	148
2	201	246	1,010	1,930	2,040	2,560	4,330	844	*1,620	39	322	154
3	203	267	1,000	1,950	2,040	2,630	3,740	646	799	39	319	147
4	195	272	960	2,010	2,040	2,640	5,300	610	595	1,060	322	*155
5	195	272	984	2,000	2,030	2,630	5,430	361	606	2,640	322	150
6	197	267	972	1,980	2,020	2,580	5,270	264	630	650	*322	152
7	*195	264	954	1,960	2,000	3,100	5,280	296	766	53	325	152
8	190	262	1,440	1,960	1,980	3,250	4,690	269	824	*113	328	150
9	*190	259	*1,810	1,960	1,970	2,970	4,050	262	602	264	330	157
10	195	262	1,800	1,990	1,960	2,720	4,080	244	762	249	328	155
11	197	269	2,180	2,010	2,000	2,720	4,700	319	900	249	333	150
12	220	275	2,170	1,990	2,000	3,040	5,890	351	622	246	333	150
13	227	269	2,200	1,980	1,980	3,260	4,210	348	599	285	336	150
14	479	269	2,180	1,950	1,980	3,320	1,990	351	591	322	330	150
15	696	272	2,140	1,980	1,990	3,250	2,020	354	602	319	325	148
16	717	275	2,060	2,030	2,000	3,250	2,000	354	250	316	325	148
17	717	264	1,920	2,010	1,980	2,190	1,060	354	*42	319	328	150
18	726	277	1,840	2,030	1,910	1,330	97	354	342	319	328	152
19	713	288	1,860	2,030	2,460	1,320	174	354	149	328	325	148
20	675	666	1,820	2,040	2,690	1,800	1,170	354	36	336	*325	145
21	348	1,080	1,860	2,050	2,590	2,050	3,220	438	35	313	325	144
22	234	1,120	1,900	2,060	2,460	2,070	6,410	599	35	322	333	152
23	234	1,120	1,900	2,040	2,440	2,130	2,730	766	35	*316	342	148
24	234	1,140	1,880	2,120	2,320	2,160	1,450	912	36	316	333	*148
25	234	1,130	1,900	2,090	2,330	2,270	313	3,250	39	328	333	150
26	234	1,100	*1,910	2,070	2,190	2,400	222	8,480	42	325	328	148
27	*234	1,080	1,910	2,060	*2,390	2,440	140	7,020	43	579	330	154
28	234	1,070	1,910	2,090	2,450	2,460	*139	8,590	39	435	325	154
29	234	1,060	1,910	*2,090	-	2,540	244	8,480	42	428	325	154
30	232	1,030	1,920	2,080		3,980	670	7,990	45	322	325	155
31	229		1,930	2,070	---	*4,980	------	4,870	------	330	212	------
Total	9,894	16,852	53,230	62,530	60,300	82,430	85,739	59,263	12,374	12,199	10,047	4,518
Mean	319	555	1,717	2,017	2,154	2,659	2,858	1,912	412	394	324	151
Ac-ft	19,620	33,030	105,600	124,000	119,600	163,500	170,100	117,500	24,540	24,200	19,930	8,960

Calendar year 1953: Max 15,900 Min 3 Mean 1,810 Ac-ft 1,311,000
Water year 1953-54: Max 8,590 Min 35 Mean 1,285 Ac-ft 930,600

* 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.

Records available.--April 1950 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 3,540 ft (from river-profile map). Prior to May 16, 1953, at datum 0.83 ft lower.

Extremes.--1950-54: Maximum daily discharge, 27.5 cfs Oct. 3, 4, 1951; minimum daily, 18.5 cfs May 15, 1950.

Remarks.--Records excellent except those for period of no gage-height record, which are good. No regulation or diversion above station. Flow at station is from principal outlet only (see p. 287 for miscellaneous measurement of total spring flow).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.0	17
1.1	21
1.2	26

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	24	24.5	23	23	22.5	22	21.5	21.5	22.5	22.5	23.5
2	26	24.5	24.5	23	23	22.5	22	21.5	21.5	22	22.5	23.5
3	26	24.5	24.5	23	23	22.5	22	21.5	21	22.5	23	23.5
4	26	24.5	24.5	23	23	22.5	22	21	21.5	22	23	23.5
5	25.5	24.5	24	23	23	23	22	21	21.5	22	23	23.5
6	25.5	25	24.5	23	23	23	22	21	21.5	22	23	22.5
7	25.5	25	24	23	23	22.5	22	21	21.5	21.5	23	22.5
8	25.5	25	24	23	23	22	22	21	22	21.5	23	22.5
9	25.5	25	*23.5	23	23	22	22	21	22	21.5	23	23
10	25.5	25	23.5	23	23.5	22	22	21	22.5	21.5	23	23.5
11	25.5	25.5	23.5	23	23.5	22	21.5	21	22.5	21.5	23	23.5
12	25.5	25.5	23.5	23	24	22	21.5	21	22.5	21.5	23.5	23
13	25.5	25.5	23.5	*23	24	22	21.5	21	22.5	21.5	23.5	23
14	25.5	25.5	23.5	23	23	22	21.5	21	22.5	22	23.5	24
15	25.5	25.5	23.5	23	23	22	21.5	21	22.5	22	23.5	24
16	25.5	25.5	23.5	23	22.5	22	21.5	20	22.5	*21.5	23.5	24.5
17	25	25	23.5	23	22.5	22	21.5	20	*23	21.5	23.5	25
18	25	25	23.5	23	*22.5	22	21.5	20	23	22	23.5	24
19	25	25	23.5	23	22	22	21.5	20.5	23	22	23.5	24
20	25	25	23.5	23	22.5	22	21.5	20.5	22.5	22	*24.5	24
21	25.5	25	23.5	23	22	22	22	20.5	23	22	24.5	24
22	25	25	23.5	23	22	22	22	20.5	23	22	24.5	24.5
23	25	25	23.5	23	22.5	22	22	20	22.5	22	25	*24.5
24	25	24.5	23.5	23	22.5	22	22.5	20.5	22.5	22	24.5	24.5
25	25	24.5	23.5	23	22.5	*22	21.5	20.5	22.5	22.5	24.5	24.5
26	25	24.5	23.5	23	22.5	22	21.5	20.5	23	22	24.5	24.5
27	25	24.5	23.5	23	22.5	22	21.5	20.5	23.5	22.5	24.5	24
28	*24.5	24.5	23.5	23	22.5	22	21.5	20.5	24	22.5	24	24
29	24.5	24	23	23	-	22	21.5	20.5	23.5	23	24	25
30	24	24.5	23	23		22	*21.5	*20.5	23	22.5	24	25
31	24		23	23	---	22	------	20.5	------	23	23.5	------
Total	782.5	746.0	733.5	713	639.0	686.5	652.5	642.5	673.5	682.5	732.0	715.0
Mean	25.2	24.9	23.7	23.0	22.8	22.1	21.8	20.7	22.4	22.0	23.6	23.8
Ac-ft	1,550	1,480	1,450	1,410	1,270	1,360	1,290	1,270	1,340	1,350	1,450	1,420

Calendar year 1953: Max 26 Min 20 Mean 22.8 Ac-ft 16,470
Water year 1953-54: Max 26 Min 20 Mean 23.0 Ac-ft 16,640

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 15 to Jan. 12; discharge interpolated on basis of records for adjacent periods and records for Blue Lakes Spring near Twin Falls and Box Canyon Spring near Wendell.

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, 2½ miles upstream from Shoshone Falls, and 4 miles north of Kimberly.

Records available.--July 1923 to September 1954.

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.

Average discharge.--28 years (1926-54), 2,470 cfs (1,788,000 acre-ft per year).

Extremes.--Maximum and minimum discharges for the water years 1924-26, 1928-30, 1942-44, 1946-48, and 1954, some of which have been revised, superseding figures published in water-supply papers indicated, are given in the following table.

WSP	Water year	Maximum			Minimum		
		Date	Discharge (cfs)	Gage height (feet)	Date	Discharge (cfs)	Gage height (feet)
593	1924	Oct. 24, 1923	*7,110	9.30	May 16-20, 1924	378	-
613	1925	May 12, 1925	*19,800	13.30	Oct. 22-27, 1924	428	1.15
633	1926	Nov. 2, 1925	*8,160	9.76	May 11-30, 1926	405	1.00
673	1928	May 20,28, 1928	22,100	13.80	July 24, 1928	391	.91
693	1929	Apr. 8, 1929	14,700	12.00	July 6, 1929	462	1.35
708	1930	Nov. 2-3, 1929	*8,600	10.00	May 28, 1930	436	1.19
963	1942	Apr. 26, 1942	*14,000	16.56	-	-	-
983	1943	June 6, 1943	*22,800	20.00	July 24, 1943	18	1.34
1013	1944	June 15, 1944	*19,200	18.65	May 17, 1944	12	1.15
1063	1946	Apr. 28, 1946	*19,100	18.60	July 21, Aug. 13-15, 1946	20	1.41
1093	1947	June 13, 1947	*21,500	19.50	-	-	-
1123	1948	June 25, 1948	*16,700	17.70	-	-	-
-	1954	May 29, 1954	9,660	14.47	June 25, 1954	19	1.38

* Revised.

1923-54: 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 excellent. 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.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1924-26, 1928-30, 1942-44, 1946-48, superseding those published in WSP 593, 613, 633, 673, 693, 708, 963, 983, 1013, 1063, 1093, and 1123, are given herein. Complete tables of daily discharge are given for the water years 1924-26, 1928-30, 1943-44, 1946, but only revised discharges are given for other water years.

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1942		1947-Con.		1948-Con.		1948-Con.	
Apr. 17	7,100	June 11	14,000	May 26	13,300	June 14	11,500
18	7,240	12	19,900	27	10,100	15	6,780
19	11,200	13	21,300	28	8,490	16	3,180
20	9,250	14	20,900	29	6,230	17	1,530
21	6,690	15	19,100	30	6,270	18	896
22	5,190	16	16,200	31	9,120	19	722
23	6,570	17	8,850	June 1	10,700	20	505
24	12,000	18	8,040	2	12,200	21	917
25	13,200	19	7,300	3	13,400	22	869
26	13,100	20	8,340	4	13,700	23	2,750
27	7,420	21	8,890	5	14,000	24	12,800
28	2,480	22	9,250	6	14,300	25	13,700
		23	8,320	7	14,200	26	12,400
1947				8	14,000	27	12,000
June 6	12,300	1948		9	12,500	28	11,600
7	12,300	May 22	8,260	10	11,900	29	9,440
8	15,400	23	9,530	11	9,340		
9	8,600	24	11,300	12	8,890		
10	6,030	25	13,100	13	11,500		

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
April 1942	124,085	13,200	747	4,136	246,100
Water year 1941-42	481,143	13,200	174	1,318	954,300
June 1947	254,328	21,300	570	8,478	504,500
Water year 1946-47	1,071,550	21,300	247	2,936	2,126,000
Calendar year 1947	1,030,164	21,300	247	2,822	2,043,000
May 1948	182,438	13,300	998	5,885	361,900
June	268,729	14,200	505	8,958	533,800
Water year 1947-48	1,217,159	14,200	316	3,326	2,414,000
Calendar year 1948	1,176,147	14,200	316	3,214	2,333,000

Snake River near Kimberly, Idaho--Continued

Discharge, in cubic feet per second, water year October 1923 to September 1924

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*542	*6,140	5,950	4,560	5,410	5,770	3,370	420	391	391	405	420
2	531	6,520	6,140	3,790	5,410	5,590	2,860	412	391	391	405	420
3	520	6,330	5,950	4,090	6,520	4,890	2,860	405	391	391	405	420
4	520	6,520	5,770	4,400	5,770	4,890	2,530	391	391	391	405	420
5	1,320	6,520	6,140	4,560	5,770	5,230	2,740	391	*391	391	405	420
6	1,860	6,520	6,330	3,790	5,770	5,060	2,740	384	391	391	405	420
7	2,280	6,140	5,410	3,370	5,770	4,890	2,220	391	391	391	405	420
8	4,560	6,140	4,890	3,650	5,590	5,230	1,530	391	398	391	405	428
9	5,060	6,140	5,950	4,240	5,950	4,720	2,360	391	398	391	405	428
10	6,140	6,140	6,520	4,400	5,410	4,090	a1,200	398	398	398	405	428
11	5,950	5,770	5,950	4,240	5,950	4,240		405	398	398	405	428
12	5,950	5,770	5,410	4,400	6,710	4,240		391	398	405	405	*420
13	5,410	6,140	5,230	4,560	6,710	4,240	a480	384	398	405	405	420
14	5,590	6,140	5,060	4,720	6,330	4,400		384	398	398	412	428
15	5,590	6,140	*4,400	5,060	5,950	4,090		384	398	398	412	428
16	5,410	6,140	4,560	4,890	5,950	4,890	a1,300	*378	405	a398	412	428
17	5,590	6,140	4,720	4,890	5,770	4,400	*1,530	378	398	a398	412	428
18	5,950	5,950	4,720	4,890	5,950	4,400	1,710	378	398	a398	420	428
19	6,330	5,410			6,140	3,510	1,120	378	398	a398	*420	436
20	6,140	5,230	a5,600		6,330	2,440	1,280	378	398	a398	420	436
21	6,520	5,410			6,140	4,720	676	384	398	398	420	436
22	5,950	5,590	5,590	a4,700	6,140	4,720	480	384	398	398	420	436
23	5,950	5,950	5,230		6,330	4,720	453	391	398	*398	420	436
24	6,910	5,950	5,230		5,950	4,400	436	384	398	398	420	444
25	6,910	5,950	5,410		5,770	4,400	436	384	398	405	412	453
26	6,330	5,950	5,060	4,560	5,410	4,560	436	384	398	405	412	444
27	6,330	5,950	5,060	4,400	5,950	3,940	428	384	398	405	412	444
28	6,330	5,950	4,890	4,400	5,410	2,220	428	384	391	405	412	444
29	6,910	5,950	5,410	4,720	*5,410	3,510	420	391	391	405	412	444
30	6,910	5,950	5,950	5,060	-	3,370	420	391	391	398	412	444
31	6,520	-	5,590	4,720	-	*3,940	------	391	------	398	420	------
Total	152,813	180,540	169,320	139,260	171,670	135,71[illegible]	38,363	12,064	11,877	12,324	12,745	12,929
Mean	4,929	6,018	5,462	4,492	5,920	4,378	1,279	389	396	398	411	431
Ac-ft	303,000	358,000	336,000	276,000	341,000	269,000	76,100	23,900	23,600	24,500	25,300	25,600

Calendar year 1923: Max - Min - Mean - Ac-ft -
Water year 1923-24: Max 6,910 Min 378 Mean 2,868 Ac-ft 2,080,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations at Milner and near Twin Falls.

Discharge, in cubic feet per second, water year October 1924 to September 1925

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	453	436	4,400	4,090	5,770	4,560	3,790	4,400	12,400	8,380	553	520
2	444	1,530	4,400	4,240	5,410	4,890	4,240	4,890	12,700	8,830	510	520
3	444	*3,240	4,240	4,090	5,410	4,560	5,590	*4,400	14,700	10,600	500	520
4	444	3,240	5,230		5,770	4,720	5,410	5,770	14,300	13,100	500	526
5	444	3,370	4,560		5,770	*4,240	*5,230	5,590	10,100	11,800	490	531
6	444	3,510	4,720		5,950	4,090	5,410	6,520	9,060	10,900	490	531
7	444	3,650	4,560	a4,400	6,710	4,400	5,950	8,600	8,380	10,600	510	531
8	444	4,090	4,560		6,520	4,560	6,910	8,600	8,600	10,600	1,280	542
9	444	4,720	4,720		6,330	4,240	7,310	9,300	8,160	10,600	638	531
10	453	4,400	4,400		6,710	5,060	7,110	10,900	a6,700	11,500		531
11	453	4,400	3,940		6,520	4,720	6,140	13,900	a6,000	10,100	a530	531
12	436	5,230	3,940		5,770	5,060	5,590	17,000	a5,100	5,770		542
13	436	5,230	4,240		5,060	4,400	6,520	11,200	4,720	5,770		542
14	436	5,230	4,240		4,890	5,060	6,520	10,300	5,590	3,370		542
15	436	4,400	4,400		5,060	4,400	7,730	12,400	4,720	*2,220		553
16	436	3,510	4,560		5,060	3,650	8,830	11,800	2,630	985	a490	638
17	436	4,090	4,090	a4,200	5,230	3,370	9,060	*11,800	2,860	600		638
18	444	4,400			5,060	3,370	10,900	12,700	2,980	490		576
19	444	4,560			4,890	3,790	11,200	13,900	4,090	471		576
20	444	5,410	a4,100		4,890	3,370	13,100	14,300	3,790	480	a1,700	2,140
21	436	5,230			4,890	3,940	13,900	14,300	1,760	510		2,980
22	428	4,890			5,060	3,790	13,900	14,300	1,160	490	*553	4,400
23	428	3,650		4,400	4,890	3,240	10,600	16,300	1,220	612	531	5,410
24	428	4,890		4,400	4,720	4,090	10,600	18,200	6,520	1,860	510	5,770
25	428	5,770	a2,500	4,560	4,720	5,060	9,550	19,000	7,310	1,160	510	5,770
26	428	4,240		4,400	4,720	5,060	9,060	19,000	a10,800	1,660	520	5,770
27	428	4,560		4,560	4,560	5,770	8,160	16,700	a9,600	2,210	520	4,890
28	436	3,790		4,890	4,240	5,230	7,520	14,700	7,520	1,280	531	4,720
29	453	*4,240	a3,940	5,230	-	5,060	6,710	11,500	6,520	805	520	2,630
30	444	4,240	3,650	6,140		3,940	*5,060	10,300	8,830	638	*520	4,240
31	436	-	3,790	5,770	-	4,400	------	12,100	------	625	520	------
Total	13,632	124,146	120,480	137,970	150,580	136,090	237,600	364,670	208,820	149,016	21,546	59,141
Mean	440	4,138	3,886	4,451	5,378	4,390	7,920	11,760	6,961	4,807	695	1,971
Ac-ft	27,100	246,000	239,000	274,000	299,000	270,000	471,000	723,000	414,000	296,000	42,700	117,000

Calendar year 1924: Max 6,710 Min 378 Mean 2,200 Ac-ft 1,600,000
Water year 1924-25: Max 19,000 Min 428 Mean 4,722 Ac-ft 3,420,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for station near Twin Falls.

Snake River near Kimberly, Idaho--Continued

Discharge, in cubic feet per second, water year October 1925 to September 1926

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,400	6,330	6,710	5,230	5,230	5,950	5,590	a420	436	428	453	462
2	5,060	6,910	6,710	4,560	5,060	5,950	3,790	420	420	436	453	471
3	5,590	7,110	6,330	4,720	5,230	*5,950	3,790	420	412	436	453	471
4	5,590	5,950	6,520	4,560	5,410	5,950	3,510	625	412	436	453	471
5	5,410	4,890	6,520	4,560	5,770	5,590	3,790	453	420	436	462	471
6	5,060	5,950	6,910	4,400	5,770	6,330	4,090	420	428	436	462	471
7	4,890	7,310	6,710	4,890	5,770	5,950	4,240	420	420	444	462	471
8	4,400	7,520	6,710	5,060	5,770	5,590	3,940	625	420	444	462	471
9	4,560	7,520	6,520	5,410	6,330	5,410	3,940	436	428	453	462	471
10	5,410	7,310	6,330	5,230	6,330	4,560	3,650	412	428	444	462	471
11	5,950	7,110	6,330	5,230	6,140	4,890	4,560	405	428	444	462	471
12	6,140	7,110	6,330	5,410	7,310	4,890	4,560	405	428	462	462	471
13	6,140	7,110	5,950	5,410	7,110	5,060	5,060	405	428	453	462	471
14	6,140	6,710	6,330	5,230	7,110	5,230	4,400	405	428	453	453	480
15	6,520	6,330	6,520	5,060	6,520	5,230	4,240	405	428	453	453	500
16	6,710	6,330	6,520	5,230	5,950	5,060	3,790	405	428	453	453	510
17	6,140	6,520	6,330	5,060	6,330	4,890	a3,650	405	428	444	453	510
18	5,950	6,710	5,950	4,890	6,140	4,560	3,790	405	428	444	453	510
19	6,330	6,710	5,770	5,060	5,410	4,240	2,980	405	436	453	462	
20	6,520	6,520	6,140	6,140	5,410	4,400	3,240	405	436	444	462	
21	6,140	6,330	6,520	5,410	5,950	4,240	3,510	405	436	436	462	
22	a5,860	6,330	6,520	5,590	6,140	5,410	1,180	405	436	436	462	
23	*5,590	6,330	6,140	5,590	5,590	5,230	564	405	436	436	453	
24	6,330	6,330	6,140	5,410	5,770	4,720	480	405	436	444	453	
25	5,770	6,140	6,520	5,410	5,230	5,410	520	405	436	444	453	a510
26	6,520	5,950	6,140	5,410	6,330	4,240	760	405	428	444	453	
27	4,240	6,140	6,140	5,060	6,140	4,400	588	405	428	453	462	
28	1,710	6,520	6,140	4,890	5,950	5,410	490	405	428	444	462	
29	5,950	6,140	6,140	5,230	-	5,410	428	405	428	444	462	
30	6,710	6,140	6,140	5,410	-	5,590	420	405	428	453	462	
31	6,330	-	5,950	5,590	------	5,950	------	412	------	453	462	------
Total	174,060	196,310	196,630	160,340	167,200	161,690	89,540	13,163	12,840	13,783	14,205	14,744
Mean	5,615	6,544	6,343	5,172	5,971	5,216	2,985	425	428	445	458	491
Ac-ft	345,000	389,000	390,000	318,000	332,000	321,000	178,000	26,100	25,500	27,400	28,200	29,200

Calendar year 1925: Max 19,000 Min 471 Mean 5,568 Ac-ft 4,030,000
Water year 1925-26: Max 7,520 Min 405 Mean 3,327 Ac-ft 2,410,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of record for station near Twin Falls.

Discharge, in cubic feet per second, water year October 1927 to September 1928

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,280	2,530	9,550	6,140	7,520	7,520	6,520	6,710	12,100	1,580	480	
2	1,620	2,630	9,550	8,160	7,520	7,520	6,140	a10,000	10,600	2,020	490	
3	805	1,970	9,550	8,830	7,520	7,310	6,140	a11,600	11,500	1,810	564	
4	915	2,150	9,800	8,160	7,520	7,110	6,140	*11,800	11,200	1,860	760	
5	703	880	9,800	7,730	7,110	7,110	6,140	12,700	10,100	1,860	612	
6	985	1,400	9,300	7,730	6,910	7,310	5,950	14,300	9,300	1,180	820	a650
7	1,180	7,940	9,800	7,730	7,520	7,310	6,910	14,700	6,710	650	932	
8	1,400	8,830	9,800	7,730	7,520	7,110	6,520	14,300	6,520	1,120	*850	
9	1,400	5,770	9,800	7,730	7,520	6,910	5,770	14,300	3,240	1,580	865	
10	1,400	3,790	10,100	7,730	7,520	6,910	6,330	14,300	1,860	1,530	638	
11	1,220	1,710	10,300	7,730	7,520	6,710	5,590	13,100	1,620	805	663	760
12	1,660	2,220	9,800	7,730	7,110	6,710	5,230	12,700		650	553	790
13	1,580	2,090	9,550	7,730	7,310	6,910	5,410	13,900		625	531	676
14	1,400	2,530		7,730	7,310	6,910	5,230	13,900		638	520	650
15	1,020	6,710		8,160	7,520	6,910	5,950	16,300		588	510	950
16	1,360	8,160		8,160	7,310	6,710	a5,200	19,400	a2,600	576	520	717
17	1,200	10,100		8,160	7,310	6,330	a5,200	20,200		542	520	588
18	1,400	9,060		7,940	7,310	5,950	a5,200	20,600		663	576	576
19	1,480	9,800	a9,200	7,940	7,310	6,520	a5,200	20,200		542	663	576
20	2,140	10,300		7,940	7,310	7,110	5,590	21,100		490	553	1,530
21	2,080	9,550			7,310	6,910	5,060	19,800		462	650	1,760
22	1,530	9,550			6,910	7,110	4,890	19,400		471	600	1,660
23	2 140	9,800		a7,800	7,310	*6,710	4,890	19,400	a9,000	471	553	1,760
24	2,210	9,550			7,730	5,950	4,890	19,400		420	553	1,860
25	2,080	9,550	a7,700	7,730	7,520	6,330	4,560	19,400	14,300	462	612	1,970
26	2,550	9,800		7,730	7,110	6,520	4,560	*19,800	*13,500	471	690	1,970
27	2,450	9,550		7,730	7,310	7,310	4,560	19,400	13,900	490	600	1,920
28	2,450	9,060	7,520	7,730	7,310	6,520	4,560	20,300	7,730		805	2,140
29	2,280	9,300	7,730	7,730	7,310	6,910	4,720	20,300	2,860		717	1,920
30	2,280	9,800	7,310	7,520		7,520	5,770	19,400	1,810	a500	650	2,080
31	2,450	-	6,520	7,520	------	7,730	------	19,400	------		663	------
Total	51,648	196,080	278,580	241,780	213,320	214,410	164,820	512,110	198,250	26,556	19,713	33,353
Mean	1,670	6,536	8,986	7,799	7,356	6,916	5,494	16,520	6,608	857	636	1,110
Ac-ft	103,000	389,000	553,000	480,000	423,000	425,000	327,000	‡1,020	393,000	52,700	39,100	66,000

Calendar year 1927: Max 25,600 Min 471 Mean 4,094 Ac-ft 2,960,000
Water year 1927-28: Max 21,100 Min 420 Mean 5,876 Ac-ft 4,270,000

* Discharge measurement made on this day.
‡ Expressed in thousands.
a No gage-height record; discharge estimated on basis of record for station near Twin Falls.

Snake River near Kimberly, Idaho--Continued

Discharge, in cubic feet per second, water year October 1928 to September 1929

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,440	7,310	1,200	5,410	a1,700	5,410	6,140	5,410	1,580	490	625	731
2	2,980	7,940	820	4,560	a1,700	5,950	7,110	4,890	1,480	490	650	717
3	2,090	8,380	1,920	4,720	a1,450	6,140	8,600	a2,000	*1,970	880	820	576
4	2,220	5,950	3,240	4,400	a1,400	6,520	10,100	a4,200	2,020	731	588	717
5	1,580	5,230	2,280	4,720	a1,500	9,550	12,100	a2,900	985	510	600	850
6	1,760	6,520	2,630	3,790	a1,400	10,300	12,700	a5,000	760	471	576	638
7	4,090	8,160	2,980	4,090	a1,400	11,200	13,500	3,240	690	663	576	690
8	5,950	7,730	2,980	4,560	a1,800	7,940	13,900	2,360	932	1,040	576	731
9	5,770	7,520	3,240	5,060	a1,800	6,520	12,700	1,660	746	1,020	553	a750
10	5,410	7,520	3,240	5,060	a1,700	6,330	13,100	1,240	835	650	542	a750
11	6,910	7,940	3,240	4,720	a1,600	5,410	13,100	968	805	612	542	a750
12	6,520	7,730	4,560	4,560	a1,700	5,590	12,700	968	932	638	588	a800
13	6,330	3,650	5,060	4,560	a2,700	5,590	12,100	1,400	2,360	531	588	a800
14	6,710	2,530	3,510	4,560	a3,100	4,720	a12,200	1,280	760	564	612	a700
15	7,310	1,860	5,950	4,560	a3,300	4,560	a12,100	1,320	531	588	612	588
16	6,910	1,480	6,520	4,560	a3,600	4,400	9,550	1,120	663	576	553	588
17	6,330	932	2,280	3,110	a3,700	4,090	a8,700	1,000	1,480	520	531	1,240
18	6,910	650	4,890	1,920	3,790	3,940	a8,000	932	950	500	553	1,810
19	7,520	1,220	5,060	2,020	3,650	4,090	a7,000	1,000	985	564	576	1,810
20	7,310	1,660	5,060	1,920	3,650	3,790	*6,140	1,620	746	564	564	2,210
21	6,330	1,440	5,230	a1,500	3,790	3,510	6,910	1,480	880	520	564	2,020
22	6,330	1,400	a5,100	a1,400	3,790	4,400	7,520	1,620	717	500	564	2,550
23	6,710	1,620	a5,000	a1,400	3,790	4,090	6,910	1,480	731	510	553	3,160
24	6,910	1,530	a5,200	a1,500	3,790	4,090	6,910	1,480	746	510	553	4,010
25	6,910	1,530	5,410	a1,300	3,790	4,400	7,110	1,220	805	531	553	4,160
26	6,710	1,200	4,560	a1,350	3,790	4,720	6,330	1,400	650	531	576	4,640
27	6,520	1,200	4,090	a1,400	3,790	4,890	6,140	1,760	663	520	588	3,710
28	6,520	1,240	5,060	a1,600	3,790	4,890	6,330	1,760	690	520	865	1,860
29	6,520	1,280	5,770	a1,700	-	4,720	6,520	1,710	717	553	790	1,400
30	6,710	1,320	5,590	a1,600	-	5,060	4,890	1,810	542	564	775	1,530
31	6,520	-	5,590	a1,600	-	5,410	-	1,860	-	638	717	-
Total	175,740	115,672	127,260	99,210	76,960	172,220	277,110	62,088	29,351	18,499	18,923	47,486
Mean	5,669	3,856	4,105	3,200	2,749	5,555	9,237	2,003	978	597	610	1,580
Ac-ft	349,000	229,000	252,000	197,000	153,000	342,000	550,000	123,000	58,200	36,700	37,500	94,200

Calendar year 1928: Max 21,200 Min 420 Mean 5,582 Ac-ft 4,060,000
Water year 1928-29: Max 13,900 Min 471 Mean 3,344 Ac-ft 2,420,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations at Milner and near Twin Falls.

Discharge, in cubic feet per second, water year October 1929 to September 1930

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,580	3,790	5,950	5,060	5,950	510	520	553	453	462	*500	553
2	2,080	7,520	6,140	5,410	5,950	531	542	490	462	462	510	703
3	1,920	8,160	6,140	6,520	6,140	a600	520	471	453	462	510	805
4	1,810	8,380	6,710	6,330	6,140	a500	480	520	500	480	510	638
5	1,280	7,520	6,710	5,950	6,140	a700	490	880	520	480	500	717
6	950	5,770	6,710	4,890	6,140	a1,100	490	717	850	490	510	746
7	1,180	7,940	6,910	5,230	6,140	1,240	490	564	531	480	510	835
8	1,060	7,730	6,910	5,230	6,140	1,240	500	531	480	462	510	731
9	950	7,730	6,910	6,330	5,230	1,200	553	510	462	453	510	968
10	968	7,520	6,910	6,330	3,790	1,160	542	490	453	480	531	638
11	1,120	7,310	6,710	6,710	2,140	1,160	500	471	462	542	542	625
12	1,660	7,520	6,140	6,520	1,620	1,140	500	462	453	564	520	625
13	1,710	7,520	7,110	6,330	1,400	932	490	453	453	625	703	625
14	1,810	7,520	6,910	6,330	1,530	835	510	480	462	510	1,970	625
15	1,920	7,520	5,410	a6,100	1,580	790	510	564	638	531	775	625
16	2,080	7,520	4,400	a6,000	1,440	703	510	625	690	510	717	625
17	1,860	7,520	4,240	a6,000	1,920	676	510	542	510	490	650	717
18	1,860	7,520	4,400	a6,000	1,440	542	500	500	471	490	564	1,200
19	2,020	7,730	4,720	a6,000	1,400	490	500	480	500	490	553	1,620
20	2,020	7,940	4,560	a6,100	1,400	490	480	480	663	490	553	1,810
21	1,970	7,730	4,560	a6,200	1,180	500	480	471	564	490	553	1,760
22	898	7,520	4,090	a6,200	1,440	500	480	480	490	490	531	1,400
23	1,110	7,520	4,090	a6,000	1,120	564	520	500	480	510	531	1,070
24	2,140	7,310	4,090	a6,000	717	775	531	564	471	500	600	1,060
25	1,320	5,230	2,530	a5,900	542	731	471	471	471	500	576	1,070
26	1,920	4,560	2,030	a6,000	638	690	600	453	462	500	542	1,060
27	2,360	4,560	1,440	6,140	760	588	520	444	462	500	542	760
28	4,400	4,720	1,480	6,050	531	500	500	444	453	531	553	650
29	5,060	3,650	3,940	5,959	-	510	500	444	453	531	638	650
30	2,740	2,630	3,940	5,950	-	510	510	453	462	500	676	820
31	2,440	-	4,400	5,950	-	520	-	453	-	490	564	-
Total	58,196	203,110	157,190	185,710	80,558	22,927	15,249	15,960	15,234	15,495	18,954	26,731
Mean	1,877	6,770	5,071	5,991	2,877	740	508	515	508	500	611	891
Ac-ft	115,000	403,000	312,000	368,000	160,000	45,500	30,200	31,700	30,200	30,700	37,600	53,000

Calendar year 1929: Max 13,900 Min 471 Mean 3,343 Ac-ft 2,420,000
Water year 1929-30: Max 8,380 Min 444 Mean 2,234 Ac-ft 1,620,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations at Milner and near Twin Falls.

Snake River near Kimberly, Idaho--Continued

Discharge, in cubic feet per second, water year October 1942 to September 1943

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	840	3,890	671	2,440	*3,340	6,450	5,850	9,340	1,170	16,900	420	759
2	819	4,100	694	2,280	3,380	6,550	5,670	6,090	6,710	17,200	410	700
3	774	3,970	714	1,910	3,260	6,470	6,260	5,320	9,890	15,100	552	
4	794	3,970	776	2,370	3,300	6,470	5,980	4,480	19,400	11,700	459	
5	816	3,980	765	2,110	3,260	6,220	5,850	3,920	22,000	10,900	571	a750
6	808	4,050	782	2,090	3,400	6,440	4,540	2,930	22,500	11,000	625	
7	794	4,070	940	2,380	3,440	6,570	3,730	4,340	22,100	12,700	428	
8	794	4,000	3,500	2,440	3,410	6,620	2,980	3,200	12,600	13,200	436	822
9	872	3,710	6,680	2,410	3,270	6,570	2,580	6,320	10,900	11,200	456	798
10	854	3,060	6,360	2,380	3,000	6,740	3,130	10,000	*6,620	8,530	432	858
11	850	1,500	6,480	2,340	3,160	6,540	3,940	4,760	6,500	3,320	460	830
12	882	1,020	5,890	2,100	3,540	6,540	3,940	2,000	5,200	1,560	437	a860
13	900	910	5,020	2,110	3,540	6,610	5,600	1,690	5,110	781	420	a900
14	850	954	*2,740	2,260	3,520	6,540	7,160	1,300	6,020	789	430	*938
15	900	966	1,760	2,190	3,510	6,400	6,610	930	7,670	3,580	447	918
16	868	1,020	1,970	1,920	3,490	6,710	6,410	510	12,100	2,010	410	942
17	903	868	2,170	1,920	5,320	*6,740	7,620	714	13,100	978	418	958
18	853	680	2,490	1,870	6,520	6,720	8,090	1,330	13,700	659	442	958
19	868	688	2,580	2,000	6,660	6,310	7,910	1,100	12,900	684	430	950
20	882	653	2,490	2,370	6,660	5,940	9,990	1,080	12,500	544	467	950
21	889	669	1,770	2,520	6,660	5,920	12,000	1,010	12,400	446	595	966
22	950	718	2,030	3,990	6,660	5,850	17,600	740	10,800	376	722	954
23	1,810	719	2,440	3,140	6,810	5,040	19,200	652	13,100	342	810	962
24	3,530	700	2,470	2,340	6,960	4,560	18,800	709	16,400	361	778	974
25	4,490	710	2,390	2,350	7,060	4,660	18,900	832	17,100	438	780	982
26	4,690	666	2,270	2,610	6,980	4,780	18,500	682	14,900	344	720	978
27	4,240	698	2,020	2,900	6,800	4,760	18,200	687	18,100	414	780	974
28	4,130	704	1,750	2,970	6,540	4,750	17,200	741	16,800	*392	728	970
29	4,540	688	2,520	3,260	-	2,620	*16,000	707	15,500	404	740	918
30	*5,180	678	2,720	3,410	-	2,580	11,400	776	16,000	408	769	990
31	4,420	---	2,450	3,310	---	6,380	------	1,050	------	394	700	------
Total	55,790	55,009	80,302	76,690	133,450	182,050	281,640	79,940	379,690	147,654	17,272	26,559
Mean	1,800	1,834	2,590	2,474	4,766	5,873	9,388	2,579	12,660	4,763	557	885
Ac-ft	110,700	109,100	159,300	152,100	264,700	361,100	558,600	158,600	753,100	292,900	34,260	52,680

Calendar year 1942: Max 13,200 Min 174 Mean 1,567 Ac-ft 1,134,000
Water year 1942-43: Max 22,500 Min 342 Mean 4,154 Ac-ft 3,007,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for station near Twin Falls.

Discharge, in cubic feet per second, water year October 1943 to September 1944

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	990	5,180	3,910	3,790	840	1,040	5,080	4,180	387	1,060	364	566
2	1,930	*5,010	3,900	3,770	908	1,290	5,130	4,440	534	3,470	404	592
3	3,120	4,640	3,930	3,450	1,030	1,030	5,150	5,110	376	1,850	*422	564
4	3,230	4,050	3,770	3,320	974	1,330	4,030	6,060	403	934	398	597
5	3,210	3,510	3,740	3,810	982	1,180	3,640	4,790	482	655	430	599
6	3,210	4,160	3,710	4,080	1,420	1,140	3,370	4,430	366	498	374	593
7	3,220	4,160	3,660	3,930	1,410	1,340	3,120	2,540	264	422	462	602
8	3,270	3,990	3,640	3,800	1,360	1,760	3,980	1,540	591	488	412	590
9	3,250	3,990	3,690	3,480	1,230	1,640	6,370	845	8,150	310	428	636
10	3,250	4,120	3,690	3,510	934	2,040	6,650	507	11,600	476	424	530
11	5,300	4,010	3,690	3,550	990	2,660	8,510	458	11,900	366	438	590
12	5,120	4,070	3,690	4,030	1,150	4,120	8,870	535	15,200	391	616	596
13	3,700	4,080	3,680	4,020	1,080	3,480	5,560	620	16,600	412	388	603
14	3,730	4,080	3,680	3,990	1,080	3,770	4,340	504	17,700	422	550	584
15	3,900	4,380	3,690	4,010	1,080	3,530	3,610	384	18,700	418	537	*601
16	3,830	4,490	3,730	3,960	1,080	4,760	6,340	*468	*18,000	395	540	648
17	3,950	4,000	3,720	3,950	1,080	4,660	8,120	175	13,200	430	572	550
18	3,980	4,120	3,720	3,950	1,080	*5,530	9,160	443	11,700	418	576	662
19	4,050	4,320	3,730	4,120	1,070	4,380	7,050	372	10,900	405	582	627
20	4,750	4,210	3,730	*4,000	1,070	4,680	2,980	380	10,900	454	524	630
21	4,360	4,270	3,730	3,900	974	5,230	2,680	366	10,500	392	554	640
22	4,490	4,100	3,740	4,070	891	4,910	4,130	368	9,350	384	570	628
23	4,360	4,120	3,750	4,000	1,050	4,360	4,800	370	2,970	348	529	620
24	a4,100	4,400	3,750	2,070	1,090	4,600	4,490	380	841	463	576	552
25	a3,700	4,540	3,740	1,590	1,010	5,420	5,630	365	502	438	560	586
26	a4,000	4,120	3,730	1,330	942	5,130	5,530	401	438	426	600	602
27	4,030	4,140	3,760	1,620	938	5,260	5,530	360	474	378	529	627
28	4,180	4,140	3,620	1,620	974	5,830	5,020	338	414	404	587	598
29	4,860	4,160	3,140	1,380	1,050	5,830	4,820	386	646	341	586	630
30	4,140	4,150	3,650	982	-	5,620	4,440	352	498	*392	566	656
31	4,810	---	3,890	784	---	5,570	------	366	------	411	586	------
Total	118,020	126,710	115,200	99,866	30,767	113,120	158,130	42,833	194,586	18,651	15,684	18,099
Mean	3,807	4,224	3,716	3,211	1,061	3,649	5,271	1,382	6,486	602	506	603
Ac-ft	234,100	251,300	228,500	198,100	61,030	224,400	313,600	84,960	386,000	36,990	31,110	35,900

Calendar year 1943: Max 22,500 Min 342 Mean 4,616 Ac-ft 3,342,000
Water year 1943-44: Max 18,700 Min 175 Mean 2,873 Ac-ft 2,086,000
Calendar year 1944: Max 18,700 Min 174 Mean 2.150 Ac-ft 1,561,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for station near Twin Falls.

Snake River near Kimberly, Idaho--Continued

Discharge, in cubic feet per second, water year October 1945 to September 1946

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	646	3,740	6,660	6,160	5,880	7,800	10,300	5,460	646	726	415	543
2	990	3,640	6,410	6,360	5,790	7,200	10,300	*2,310	422	554	443	570
3	1,710	3,930	6,470	6,580	5,490	5,540	10,300	977	9,130	467	442	543
4	2,150	3,800	6,470	7,170	5,410	3,940	10,800	1,880	10,500	313	430	587
5	1,940	3,790	6,020	8,050	5,360	3,540	9,830	3,700	6,160	466	465	a700
6	1,830	3,780	6,030	8,180	5,820	3,790	9,680	5,410	1,970	409	*446	a1,100
7	1,790	3,790	5,910	8,550	5,670	3,630	9,950	5,620	1,600	241	447	a1,150
8	1,740	3,800	5,960	7,970	5,800	3,860	9,760	3,340	6,930	454	442	a750
9	1,730	4,050	6,120	8,100	6,020	3,900	9,450	2,700	8,730	406	455	a650
10	2,120	4,260	6,220	7,810	5,950	3,720	9,380	2,180	8,490	432	462	a630
11	2,270	4,600	6,240	7,670	5,790	3,400	9,550	1,280	8,490	419	421	620
12	2,190	4,900	6,300	7,440	5,570	3,650	9,380	1,050	4,930	417	429	613
13	2,130	4,880	6,020	7,140	6,020	3,960	9,120	1,830	4,190	449	470	593
14	2,200	5,460	5,500	6,900	6,300	3,520	8,980	2,360	3,990	373	428	591
15	2,210	5,630	6,100	6,720	6,240	4,400	9,000	2,310	3,900	436	510	575
16	2,220	5,090	5,750	6,620	6,290	3,790	8,180	1,450	4,010	381	471	504
17	2,220	5,390	5,960	6,550	6,300	4,000	4,380	866	4,140	416	508	627
18	2,190	6,230	5,360	6,020	5,950	4,040	4,300	728	2,470	410	492	*a750
19	2,310	6,410	5,140	6,020	6,580	4,400	4,860	638	2,790	432	554	a1,000
20	2,460	6,400	3,970	5,950	6,100	6,160	7,320	943	*3,170	422	550	a1,050
21	2,480	6,840	5,100	5,650	6,300	6,840	8,040	614	6,590	257	529	a900
22	2,460	7,170	5,420	5,520	6,190	6,720	7,900	605	6,900	440	575	a700
23	2,480	7,540	5,420	5,570	6,090	6,780	4,840	606	2,290	417	532	a650
24	2,540	7,040	5,230	5,990	2,420	6,720	9,950	565	973	404	571	a650
25	2,560	6,880	5,200	5,820	970	6,710	14,100	591	1,100	412	558	a600
26	3,410	6,400	5,300	5,230	5,870	7,800	17,200	529	1,120	425	563	a625
27	3,760	5,740	5,570	6,120	7,940	8,720	18,500	568	1,160	445	690	a625
28	3,670	5,960	5,570	5,880	7,200	9,300	18,900	614	1,050	414	624	622
29	3,800	5,940	5,650	5,490	-	9,870	18,200	878	1,030	434	558	548
30	4,990	*6,620	5,940	*5,330		9,950	7,980	2,210	807	490	571	568
31	5,230	-	6,160	5,420	-	9,950	------	1,050	------	423	574	------
Total	76,426	159,700	179,170	203,980	161,310	177,600	300,430	55,862	119,678	13,184	15,625	20,634
Mean	2,465	5,323	5,780	6,580	5,761	5,729	10,140	1,802	3,989	425	504	688
Ac-ft	151,600	316,800	355,400	404,600	320,000	352,300	595,900	110,800	237,400	26,150	30,990	40,930

Calendar year 1945: Max 15,600 Min 266 Mean 2,805 Ac-ft 2,031,000
Water year 1945-46: Max 18,900 Min 241 Mean 4,065 Ac-ft 2,943,000

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

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	548	680	1,570	2,350	2,490	2,670	5,040	1,100	1,670	456	761	707
2	563	674	1,580	2,350	2,480	2,770	4,790	1,040	1,500	459	803	688
3	611	674	1,560	2,390	2,430	2,850	3,900	1,240	1,740	460	750	628
4	708	726	1,560	2,420	2,420	2,870	5,240	1,020	1,170	673	772	660
5	708	736	1,520	2,420	2,380	2,860	5,630	993	1,030	2,700	*733	647
6	694	750	1,550	2,420	2,370	2,850	5,490	768	1,050	2,030	761	647
7	708	730	1,540	2,390	2,350	3,010	5,490	578	1,110	973	761	626
8	722	730	1,640	2,370	2,340	3,660	5,040	606	1,280	566	761	681
9	674	736	2,290	2,380	2,330	3,290	4,320	639	1,260	497	733	618
10	610	733	2,250	2,420	2,320	3,030	4,220	622	1,120	619	789	661
11	736	736	*2,460	2,420	2,320	2,880	4,720	624	1,340	657	782	643
12	716	758	2,620	2,420	2,340	3,110	6,080	607	*1,350	663	789	657
13	688	764	2,640	*2,420	2,330	3,390	4,880	734	1,120	628	786	633
14	712	758	2,630	2,400	2,340	3,520	2,680	732	1,090	632	796	679
15	1,100	764	2,610	2,360	2,340	3,480	2,270	731	1,080	747	810	680
16	1,260	764	2,550	2,420	2,340	3,460	2,300	730	1,080	740	786	652
17	1,260	772	2,440	2,420	2,340	3,060	2,070	727	853	744	768	662
18	1,270	752	2,270	2,390	2,270	1,970	881	696	435	758	803	674
19	1,280	761	2,280	2,420	*2,500	1,670	669	702	578	*719	803	676
20	1,250	798	2,260	2,410	2,920	1,910	849	721	669	768	803	668
21	1,170	1,480	2,260	2,430	2,870	2,390	2,260	720	481	740	796	669
22	820	1,640	2,320	2,450	2,760	2,410	6,410	905	444	726	796	676
23	736	1,650	2,330	2,420	2,720	2,460	3,620	897	453	747	803	653
24	730	1,660	2,310	2,470	2,680	2,510	2,760	1,300	428	747	789	*668
25	726	1,660	2,300	2,490	2,590	*2,540	1,150	2,020	454	763	865	656
26	719	1,650	2,330	2,460	2,550	2,690	782	8,340	433	764	835	630
27	716	1,640	2,350	2,420	2,620	2,710	692	7,180	433	792	838	651
28	*708	1,620	2,360	2,500	2,740	2,740	571	8,480	485	1,100	831	654
29	726	1,620	2,320	2,500	-	2,760	558	8,930	471	973	831	657
30	702	1,620	2,340	2,500		3,600	*754	8,140	494	853	821	676
31	694		2,350	2,500	--	5,220	------	6,010	-----	778	816	------
Total	25,265	31,036	67,390	75,130	69,480	90,340	96,116	68,532	27,101	25,472	24,571	19,777
Mean	815	1,035	2,174	2,424	2,481	2,914	3,204	2,211	903	822	793	659
Ac-ft	50,110	61,560	133,700	149,000	137,800	179,200	190,600	135,900	53,750	50,520	48,740	39,230

Calendar year 1953: Max 15,600 Min 278 Mean 2,231 Ac-ft 1,616,000
Water year 1953-54: Max 8,930 Min 428 Mean 1,699 Ac-ft 1,230,000

* 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., on left bank 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 1954.

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

Extremes.--1950-54: Maximum daily discharge, 256 cfs Nov. 10, 11, 1951, Oct. 24 to Nov. 13, 1952, Sept. 29, 30, 1953; minimum daily, 208 cfs June 5, 8-23, 25-28, 1950.

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

Rating table, water year 1953-54 (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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	252	248	244	236	228	224	228	*224	224	232	232	236
2	252	248	244	236	228	224	228	224	228	228	232	236
3	252	248	244	236	228	224	228	224	228	228	232	236
4	252	248	*248	236	228	224	228	224	228	228	232	236
5	252	248	248	236	228	224	228	224	228	228	232	236
6	252	248	248	232	228	224	228	224	228	228	232	236
7	252	248	244	232	228	228	228	224	228	228	232	236
8	252	248	244	232	228	228	228	224	232	232	232	236
9	252	248	244	232	228	228	224	224	228	232	232	236
10	248	248	244	232	228	228	224	224	228	232	232	236
11	248	248	244	232	228	228	224	224	228	232	232	236
12	248	248	244	232	228	228	224	224	228	232	232	236
13	248	248	240	232	228	228	224	224	228	232	232	236
14	252	248	240	232	228	228	224	224	228	232	232	236
15	252	248	240	232	228	228	224	224	228	232	232	236
16	252	248	240	232	228	228	224	228	228	*232	232	236
17	252	248	240	232	*228	228	224	228	228	232	232	236
18	252	248	240	*236	228	228	224	224	*228	232	232	240
19	248	248	240	236	228	228	224	224	228	232	*232	240
20	248	248	240	232	228	228	224	228	228	232	232	240
21	248	248	240	232	228	228	224	228	228	232	236	240
22	248	248	240	232	224	228	224	228	228	232	236	240
23	248	248	240	232	224	*228	224	228	228	232	236	*240
24	248	248	240	232	224	228	224	228	228	232	236	240
25	248	248	236	232	224	228	224	228	232	232	236	240
26	248	248	236	228	224	228	224	228	232	232	236	240
27	248	248	236	228	224	228	224	228	232	232	236	240
28	*248	248	236	228	224	228	224	228	232	232	236	240
29	248	248	236	228	-	228	224	228	232	232	236	240
30	248	244	236	228	--	228	224	*228	232	232	236	240
31	248	------	236	228	------	228	------	228	------	232	236	------
Total	7,744	7,436	7,472	7,196	6,356	7,044	6,752	7,000	6,864	7,168	7,236	7,132
Mean	250	248	241	232	227	227	225	226	229	231	233	238
Ac-ft	15,360	14,750	14,820	14,270	12,610	13,970	13,390	13,880	13,610	14,220	14,350	14,150

Calendar year 1953: Max 256 Min 220 Mean 236 Ac-ft 171,200
Water year 1953-54: Max 252 Min 224 Mean 234 Ac-ft 169,400

* Discharge measurement made on this day.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 4,340 ft (by barometer). Nov. 28, 1909, to Aug. 16, 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 than present datum.

Average discharge.--10 years (1944-54), 35.4 cfs (25,630 acre-ft per year).

Extremes.--Maximum discharge during year, 80 cfs Apr. 28 (gage height, 1.36 ft); minimum, 5.2 cfs Aug. 9 (gage height, 0.35 ft).
1909-13, 1938-39, 1943-54: 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 excellent. Small ranch diversions above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.3	3.9	0.9	32
.4	6.4	1.2	62
.6	14	1.4	85

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.3	10	12	12	13	12	17	61	24	12	6.4	6.2
2	8.6	10	12	12	13	11	17	55	22	12	6.2	5.9
3	9.0	10	12	12	13	13	18	51	21	11	6.2	5.9
4	9.0	10	*12	12	12	12	19	49	20	10	6.2	6.4
5	8.6	11	12	12	12	13	22	48	20	10	6.2	6.4
6	8.6	11	12	12	12	13	24	48	22	10	6.2	6.2
7	8.3	11	12	12	12	13	24	49	21	9.6	6.2	6.2
8	8.3	11	11	12	12	16	24	50	19	9.3	5.9	6.2
9	8.3	11	12	11	12	30	26	50	19	9.3	5.9	6.2
10	8.3	11	12	11	12	31	25	50	20	9.3	5.6	5.9
11	8.6	11	11	*12	12	26	25	49	20	9.0	5.9	5.9
12	9.0	11	12	11	12	24	26	46	18	8.6	6.2	6.2
13	9.0	11	12	11	13	24	29	45	17	8.3	6.2	6.4
14	9.0	11	12	11	13	22	37	43	17	8.6	5.9	6.4
15	9.6	11	12	12	13	22	41	41	*17	9.3	5.9	6.4
16	9.6	11	12	11	12	20	42	39	20	*9.3	6.2	6.7
17	9.3	12	11	11	12	20	47	37	17	8.3	6.2	6.7
18	9.3	11	12	11	*13	19	55	35	16	8.0	6.4	7.0
19	9.6	10	12	11	12	19	60	32	15	8.0	6.2	7.0
20	9.6	10	13	11	13	19	60	31	14	7.7	*6.7	7.0
21	11	11	12	10	12	18	59	32	14	7.7	8.0	6.7
22	11	12	12	12	13	18	58	30	13	7.7	7.7	6.4
23	11	14	9.3	12	12	18	59	29	12	7.7	6.7	7.0
24	11	13	9.3	12	13	*18	*61	27	12	7.0	6.4	*7.0
25	10	13	9.0	9.3	13	18	62	25	12	7.0	6.7	6.7
26	10	12	11	9.0	13	17	62	*26	14	7.4	6.7	6.7
27	10	12	12	13	12	17	62	25	15	7.7	6.4	6.4
28	*10	12	12	14	13	18	74	24	14	7.0	6.2	6.4
29	10	12	12	15	-	18	69	23	13	7.0	6.2	7.0
30	10	12	9.6	15	--	17	65	23	12	6.7	5.9	7.4
31	10	------	11	13	------	17	------	23	------	6.4	5.9	------
Total	291.9	338	357.2	364.3	349	573	1,269	1,196	510	266.9	195.6	194.9
Mean	9.42	11.3	11.5	11.8	12.5	18.5	42.3	38.6	17.0	8.61	6.31	6.50
Ac-ft	579	670	708	723	692	1,140	2,520	2,370	1,010	529	388	387

Calendar year 1953: Max 194 Min 8.0 Mean 36.6 Ac-ft 26,460
Water year 1953-54: Max 74 Min 5.6 Mean 16.2 Ac-ft 11,720

Peak discharge (base, 130 cfs).--No peak above base.
* Discharge measurement made on this day.

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 1954.

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.

Average discharge.--7 years (1947-54), 5,302 cfs (3,838,000 acre-ft per year).

Extremes.--Maximum discharge during year, 11,400 cfs May 29 (gage height, 6.23 ft); minimum, 2,200 cfs May 9 (gage height, 0.76 ft).
1946-54: 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 excellent. 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.8	2,240	4.0	6,450
1.0	2,400	5.0	8,550
2.0	3,450	6.0	10,900
3.0	4,750		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,700	2,660	*3,410	4,040	4,040	4,160	6,560	*2,680	4,700	2,560	2,720	2,790
2	2,700	2,640	3,360	4,030	4,040	4,230	6,320	3,030	3,140	2,480	2,710	2,630
3	2,740	2,620	3,370	4,020	3,990	4,300	5,520	3,130	3,770	2,420	2,710	2,600
4	2,820	2,630	3,410	4,030	3,970	4,340	6,540	2,990	3,260	2,340	*2,700	2,640
5	2,880	2,690	3,290	4,070	3,940	4,330	7,130	2,700	3,030	3,510	2,690	2,680
6	2,880	2,660	3,330	4,040	3,930	4,320	7,030	2,600	3,030	4,140	2,660	2,700
7	2,860	2,710	3,320	4,030	3,910	4,490	7,010	2,390	3,080	3,140	2,880	2,710
8	2,840	2,660	3,230	3,980	3,900	5,170	6,600	2,280	3,180	2,530	2,700	2,730
9	2,810	2,620	3,890	3,990	3,900	4,810	5,880	2,290	3,420	2,340	2,700	2,770
10	2,810	2,620	4,040	3,990	3,890	4,530	5,760	2,300	3,510	2,350	2,690	2,730
11	2,790	2,590	4,060	4,030	3,890	4,380	6,620	2,260	3,460	2,420	2,700	2,750
12	2,820	2,590	4,370	4,030	3,900	4,570	7,690	2,280	*3,630	2,450	2,720	2,770
13	2,810	2,630	4,360	4,000	3,900	4,890	6,450	2,320	3,560	2,440	2,710	2,800
14	2,790	2,690	4,370	4,000	3,930	5,020	4,320	2,340	3,510	2,460	2,670	2,810
15	3,080	2,660	4,370	3,940	3,880	4,970	3,890	2,340	3,470	*2,530	2,670	2,840
16	3,360	2,620	4,300	4,000	*3,860	4,880	3,950	2,330	3,520	2,610	2,670	2,870
17	a3,350	2,680	4,190	4,070	3,860	4,660	3,740	2,360	3,420	2,620	2,680	2,900
18	a3,350	2,780	4,000	*3,990	3,840	3,560	2,930	2,330	3,090	2,620	2,710	2,940
19	a3,350	2,710	4,030	4,030	3,810	3,130	2,400	2,300	2,800	2,620	2,690	2,930
20	a3,350	2,740	3,990	4,020	4,410	3,280	2,440	2,310	2,850	2,600	2,690	2,890
21	a3,250	2,880	3,940	4,020	4,400	4,020	3,230	2,340	2,710	2,590	2,710	2,900
22	a2,850	3,450	3,980	4,070	4,260	4,060	8,050	2,460	2,460	2,630	2,730	*2,880
23	a2,750	3,520	3,980	4,110	4,200	*3,950	5,850	2,540	2,410	2,640	2,720	2,850
24	a2,740	3,500	3,950	4,030	4,210	4,020	4,520	2,660	2,370	2,650	2,720	2,850
25	a2,730	3,490	3,930	4,060	4,110	4,030	3,420	3,030	2,360	2,660	2,760	2,820
26	a2,720	3,470	3,970	4,020	4,070	4,140	2,630	8,540	2,440	2,670	2,800	2,840
27	*2,720	3,450	4,020	3,980	4,070	4,190	2,410	9,470	2,550	2,670	2,780	2,860
28	2,710	3,430	4,030	4,100	4,210	4,240	2,410	10,000	2,550	2,780	2,760	2,860
29	2,700	3,410	4,020	4,170	-	4,250	2,360	10,900	2,530	2,900	2,750	2,870
30	2,690	3,420	4,030	4,100	-	4,720	2,480	10,100	2,560	2,880	2,780	2,870
31	2,670		4,020	4,070	- --	6,640	------	8,710	------	2,760	2,780	------
Total	89,620	87,220	120,560	125,060	112,320	136,280	146,140	120,310	92,370	83,010	84,160	84,080
Mean	2,891	2,907	3,889	4,034	4,011	4,396	4,871	3,881	3,079	2,678	2,715	2,803
Ac-ft	177,800	173,000	239,100	248,100	222,800	270,300	289,900	238,600	183,200	164,600	166,900	166,800

Calendar year 1953: Max 17,800 Min 2,050 Mean 4,064 Ac-ft 2,942,000
Water year 1953-54: Max 10,900 Min 2,260 Mean 3,510 Ac-ft 2,541,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for station near Kimberly.

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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, about half a mile upstream from mouth, three-quarters of a mile below source, and 7½ miles southwest of Wendell.

Records available.--April 1950 to September 1954.

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

Extremes.--1950-54: Maximum daily discharge, 480 cfs Sept. 29, 1950; minimum daily, 372 cfs Apr. 12, 1951.

Remarks.--Records excellent. No regulation or surface diversion above station. Discharge affected by variable surface waste from irrigation canals over rimrocks into springs above station. This waste was reported not flowing Dec. 11, Feb. 16, Mar. 23, July 14, Sept. 21, and estimated on Oct. 27 (0.2 cfs), Jan. 19 (5 cfs), May 1 (2.5 cfs), May 30 (1 cfs), June 18 (0.5 cfs), and Aug. 17 (0.3 cfs).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 14)

1.5	377
1.7	427
1.9	480

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	456	435	432	435	420	407	394	*397	414	420	437	453
2	453	437	432	432	412	404	394	392	412	420	437	456
3	450	435	432	437	412	404	394	394	412	420	437	456
4	450	437	435	435	410	402	394	392	414	422	437	458
5	450	440	435	435	410	402	394	392	414	422	437	458
6	450	440	435	435	410	402	394	392	414	422	437	458
7	450	437	435	435	407	402	392	392	412	422	437	458
8	450	432	432	435	407	402	392	394	412	422	437	461
9	450	432	432	435	407	402	392	397	414	422	437	461
10	453	432	432	432	407	404	392	397	414	424	440	464
11	453	435	*427	435	407	404	392	397	412	424	440	464
12	450	435	427	435	407	402	392	397	412	424	440	464
13	450	435	424	435	407	402	394	397	412	424	440	464
14	453	435	424	434	407	400	394	400	414	*424	443	466
15	453	435	424	434	407	400	392	397	412	427	443	469
16	448	435	424	433	*407	400	392	397	412	427	443	469
17	448	435	427	433	410	402	392	397	414	427	*433	469
18	448	435	427	432	410	402	394	397	*414	427	443	466
19	445	435	427	*432	407	400	397	397	417	430	445	466
20	445	435	427	430	407	400	394	400	417	430	448	466
21	443	435	424	430	407	400	392	402	417	432	448	*466
22	443	445	424	432	407	397	392	400	417	430	445	466
23	443	445	424	435	404	*397	392	400	417	432	448	466
24	443	435	424	432	407	397	392	402	417	435	448	466
25	443	432	424	427	407	397	392	404	417	437	450	466
26	440	435	424	427	410	397	390	407	420	437	450	466
27	*437	435	430	427	407	397	390	407	420	437	450	466
28	437	432	435	427	407	397	392	407	420	437	450	469
29	437	432	437	427	-	397	394	407	420	437	450	472
30	437	432	432	424	--	394	400	*410	422	437	453	472
31	435	------	432	422	------	394	------	412	------	437	453	------
Total	13,843	13,065	13,300	13,389	11,434	12,407	11,791	12,373	12,455	13,268	13,746	13,921
Mean	447	436	429	432	408	400	393	399	415	428	443	464
Ac-ft	27,460	25,910	26,380	26,560	22,680	24,610	23,390	24,540	24,700	26,320	27,260	27,610

Calendar year 1953: Max 456 Min 393 Mean 422 Ac-ft 305,400
Water year 1953-54: Max 472 Min 390 Mean 425 Ac-ft 307,400

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 13-18; discharge interpolated 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', long 114°53' (revised), 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 1954.

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

Average discharge.--6 years (1948-54), 98.5 cfs (71,310 acre-ft per year).

Extremes.--Maximum discharge during year, 191 cfs May 12 (gage height, 2.53 ft); minimum, 15 cfs Sept. 5 (gage height, 1.13 ft).
1914-15, 1948-54: Maximum discharge, 1,170 cfs May 4, 1952 (gage height, 4.82 ft); minimum, that of Sept. 5, 1954.

Remarks.--Records excellent except those below about 20 cfs, which are good, and those for periods of ice effect, which are fair. Many diversions above and below station for irrigation.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	14	1.7	58
1.2	18	2.1	108
1.4	30	2.5	184

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	27	31	b25	32	34	46	108	59	30	16	16
2	18	27	30	27	30	32	46	104	59	29	17	16
3	19	27	*29	27	29	34	47	100	54	26	17	16
4	20	25	30	27	29	34	48	93	48	24	17	16
5	20	25	28	28	29	34	54	91	52	23	17	15
6	21	28	29	28	30	35	61	101	54	22	17	16
7	21	25	32	28	30	38	64	121	56	21	17	16
8	21	25	30	28	29	40	64	135	54	20	17	16
9	21	25	30	26	29	54	64	152	68	19	17	16
10	22	26	32	b23	30	90	64	164	90	18	17	16
11	22	26	29	25	31	68	62	180	85	17	18	16
12	22	27	b29	*26	34	b51	62	184	70	17	18	16
13	22	28	30	25	38	56	68	173	66	18	19	16
14	22	28	29	27	39	58	80	164	*68	19	19	17
15	23	28	29	28	36	62	91	154	61	*21	18	17
16	24	28	29	28	35	59	*91	142	56	21	18	17
17	24	29	30	30	*35	58	98	138	56	22	18	17
18	24	28	30	28	38	48	114	140	54	23	*18	17
19	25	24	31	29	31	50	126	135	50	23	17	17
20	25	25	34	b25	32	54	128	122	48	21	17	17
21	25	26	32	b27	34	50	118	121	46	19	18	17
22	26	27	29	28	36	47	110	118	41	18	18	*17
23	27	30	b27	31	36	50	113	107	34	18	18	18
24	29	31	b26	31	37	*48	116	98	32	21	17	18
25	27	33	b27	b25	39	50	128	*91	30	19	17	17
26	27	32	b32	b20	43	48	*135	89	30	19	18	17
27	*27	32	28	b23	40	46	124	81	44	21	17	18
28	27	30	b28	30	36	48	150	74	45	19	16	18
29	27	30	28	34	-	50	146	69	37	19	16	18
30	27	30	b24	35	-	48	126	62	34	17	16	18
31	27		b22	32	---	46	------	60	------	16	16	------
Total	730	832	904	854	947	1,520	2,744	3,671	1,581	640	536	502
Mean	23.5	27.7	29.2	27.5	33.8	49.0	91.5	118	52.7	20.6	17.3	16.7
Ac-ft	1,450	1,650	1,790	1,690	1,880	3,010	5,440	7,280	3,140	1,270	1,060	996

Calendar year 1953: Max 417 Min 18 Mean 71.4 Ac-ft 51,660
Water year 1953-54: Max 184 Min 15 Mean 42.4 Ac-ft 30,660

* 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 1954.

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

Average discharge.--40 years (1910-16, 1919-20, 1921-54), 131 cfs (94,840 acre-ft per year).

Extremes.--Maximum discharge during year, 200 cfs Apr. 29 (gage height, 4.44 ft); minimum, 7.1 cfs Aug. 18 (gage height, 3.12 ft).
1909-16, 1918-54: 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 excellent except those below about 20 cfs, which are good, and those for Dec. 1-20 and for period of indefinite stage-discharge relation, 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.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	40	50	43	64	68	87	156	58	35	17	10
2	28	40	51	46	64	64	85	138	58	33	17	11
3	29	41	*52	45	61	65	85	136	58	31	15	13
4	30	41	60	49	61	66	87	126	53	30	14	14
5	31	41	61	51	61	66	90	117	50	28	13	12
6	31	42	57	52	60	66	99	113	53	27	11	11
7	31	42	49	51	61	68	111	122	56	29	10	14
8	31	41	51	50	60	71	117	136	53	27	9.5	14
9	31	41	65	44	58	89	121	144	69	27	8.7	17
10	31	41	51	38	61	142	124	160	87	26	8.7	21
11	31	41	42	40	60	162	121	174	108	27	8.7	22
12	33	42	51	*48	60	119	115	186	94	26	8.7	25
13	33	43	53	49	66	130	115	182	87	26	8.7	21
14	33	43	55	52	71	124	126	176	*85	26	8.7	21
15	34	43	51	55	66	119	146	164	81	*27	8.7	21
16	34	43	56	57	65	121	*162	152	75	29	8.7	22
17	34	45	60	55	*64	119	162	142	66	27	8.7	23
18	33	45	62	56	66	106	172	144	62	28	*8.7	25
19	37	40	62	55	65	99	188	144	60	30	8.7	26
20	37	40	60	48	62	100	194	134	57	28	9.5	26
21	38	45	55	52	62	102	194	126	53	26	9.5	26
22	39	45	49	55	64	97	178	122	48	26	9.5	*26
23	40	46	40	56	66	93	174	117	43	26	9.5	26
24	43	49	40	53	66	*99	156	109	38	25	9.5	27
25	42	e49	45	45	69	100	154	*104	35	24	9.5	27
26	42	e50	52	37	73	95	*164	100	44	26	9.5	27
27	*41	e50	45	58	75	92	164	95	48	28	8.7	28
28	41	e48	48	69	71	93	180	81	48	26	9.5	28
29	41	e48	49	69	-	95	194	76	44	25	9.5	29
30	41	e48	37	68		95	174	69	40	23	9.5	29
31	40		36	66	-	92	- ----	60	- ------	21	10	------
Total	1,088	1,313	1,595	1,612	1,802	3,017	4,239	4,005	1,814	843	315.9	642
Mean	35.1	43.8	51.5	52.0	64.4	97.3	141	129	60.5	27.2	10.2	21.4
Ac-ft	2,160	2,600	3,160	3,200	3,570	5,980	8,410	7,940	3,600	1,670	627	1,270

Calendar year 1953: Max 475 Min 11 Mean 110 Ac-ft 79,330
Water year 1953-54: Max 194 Min 8.7 Mean 61.1 Ac-ft 44,190

* Discharge measurement made on this day.
e Stage-discharge relation indefinite; discharge estimated on basis of weather records and record for station near Contact.

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 1954.

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, 33,740 acre-ft May 9 (gage height, 22.1 ft); minimum not determined, occurred during period of doubtful gage-height record in August or September.

1922-54: 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.

Usable contents, in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-					19,420	24,560	31,880	25,410	21,500	11,490	
2	-					19,580	24,730	32,070	25,410	21,500	11,060	
3	-					19,740	24,900	32,260	25,580	21,500	10,620	
4	-					19,900	24,900	32,440	25,580	21,500	9,750	
5	-					19,900	25,070	32,810	25,580	21,500	9,320	
6	-					20,060	25,200	33,180	25,580	21,500	8,740	
7	-					20,220	25,410	33,360	25,750	21,020	8,440	
8	-					20,220	25,580	33,550	25,750	20,380	8,160	
9	-					20,380	25,750	33,740	25,920	19,900	8,160	
10	-					20,540	25,920	33,360	25,920	19,100	8,160	
11	-					20,540	26,090	33,180	26,260	18,150	8,010	
12	-					20,700	26,260	33,000	26,430	17,250	8,010	
13	-					21,020	26,430	32,810	26,090	16,500	-	
14	-					21,180	26,600	32,620	25,750	15,750	-	
15	-					21,500	26,770	32,440	25,410	15,450	-	
16	-					21,840	27,450	31,880	25,240	15,450	-	
17	-					22,010	27,620	31,530	25,070	15,300	-	
18	-					22,180	28,130	31,190	24,730	15,300	-	
19	-					22,350	28,640	30,850	24,560	15,150	-	
20	-					22,520	28,980	30,340	24,730	15,000	-	
21	-					22,690	29,320	29,830	24,900	14,550	-	
22	-					22,860	29,660	29,150	25,070	14,100	-	
23	-					23,030	30,000	28,810	25,070	13,510	-	
24	-					23,200	30,170	28,470	24,900	13,080	-	
25	-					23,370	30,340	27,960	24,390	12,350	-	
26	-					23,540	30,510	27,620	23,710	11,780	-	
27	-					23,710	30,850	27,110	23,200	11,640	-	
28	10,480				19,260	23,880	31,190	26,600	22,520	11,640	-	
29	-				-	24,050	31,360	26,260	22,010	11,640	-	
30	-	11,640				24,220	31,700	25,920	21,500	11,490	-	3,720
31	e10,620		e13,800	e16,350		24,390		25,580		11,490	e3,720	

e Doubtful gage-height record; contents computed from gage heights corrected on basis of inflow to reservoir.

Monthly gage height and usable contents, water year October 1953 to September 1954

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	7.9	10,760	-
Oct. 31	e7.8	e10,620	-140
Nov. 30	8.5	11,640	+1,020
Dec. 31	e10.0	e13,800	+2,160
Calendar year 1953	-	-	-23,640
Jan. 31	e11.7	e16,350	+2,550
Feb. 28	13.6	19,260	+2,910
Mar. 31	16.7	24,390	+5,130
Apr. 30	21.0	31,700	+7,310
May 31	17.4	25,580	-6,120
June 30	15.0	21,500	-4,080
July 31	8.4	11,490	-10,010
Aug. 31	e2.9	e3,720	-7,770
Sept.30	2.9	3,720	0
Water year 1953-54	-	-	-7,040

e Estimated on basis of records of reservoir inflow and outflow.

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 1954.

Gage.--Staff gage read once daily and after each gate change. Altitude of gage is 4,940 ft (by barometer). Prior to Oct. 1, 1953, water-stage recorder at same site and datum.

Extremes.--1937-54: Maximum daily discharge, 660 cfs July 21-24, 1944; no flow during long periods in each year.

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

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

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.0	2	2.0	93
.5	12	4.0	245
1.0	34	6.0.	435

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0							0	0	0	190	
2	0							0	0	0	254	
3	0							0	0	0	263	
4	0							0	0	0	267	
5	0							0	0	0	255	
6	0							0	0	169	223	
7	0							0	0	286	158	
8	0							0	0	332	0	
9	0							187	0	407	0	
10	0							236	0	421	0	
11	0							239	0	435	0	
12	0							245	0	427	0	
13	0							262	138	378	189	
14	0							288	*163	250	255	
15	0							290	211	*0	279	
16	0							294	220	0	260	
17	0							296	118	0	221	
18	0				(*)			298	112	0	*196	
19	0							302	86	0	170	
20	0							317	0	207	116	
21	0							312	0	276	0	
22	164							299	0	292	0	
23	164							304	0	303	0	(*)
24	0							310	225	278	0	
25	0							*308	346	241	0	
26	0							301	353	174	0	
27	0							288	348	0	0	
28	0							256	312	0	0	
29	0							241	233	0	0	
30	0							219	151	0	0	
31	0							164		0	0	
Total	328	0	0	0	0	0	0	6,256	3,016	4,876	3,296	0
Mean	10.6	0	0	0	0	0	0	202	101	157	106	0
Ac-ft	651	0	0	0	0	0	0	12,410	5,980	9,670	6,540	0

Calendar year 1953: Max 583 Min 0 Mean 108 Ac-ft 78,460
Water year 1953-54: Max 435 Min 0 Mean 48.7 Ac-ft 35,250

* Discharge measurement or observation of no flow made on this day.

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 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 4,780 ft (by barometer). Prior 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.--28 years (1926-54), 27.4 cfs (19,840 acre-ft per year).

Extremes.--Maximum discharge during year, 317 cfs Apr. 30 (gage height, 4.20 ft); minimum, 0.9 cfs Aug. 2 (gage height, 1.50 ft).
1925-54: Maximum discharge, 1,220 cfs May 2 or 3, 1952 (gage height, 6.53 ft), from rating curve extended above 510 cfs by logarithmic plotting; no flow during periods in many years.

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.--Two discharge measurements furnished and water-stage recorder inspected by employees of Water District No. 66.

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

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 31		Jan. 1 to Sept. 30			
1.8	4.9	1.6	1.8	2.3	29
1.9	7.5	1.7	3.3	2.5	46
2.1	15	1.8	5.6	3.0	102
		1.9	8.7	3.5	171
		2.1	17	4.0	270

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.9						15	150	42	30	3.2	6.2
2	5.2			11			*15	90	41	17	2.0	6.2
3	6.2					12	15	74	47	10	8.7	5.9
4	6.5						14	82	42	7.0	7.8	5.1
5	6.7		(*)				14	55	35	5.0	7.5	4.7
6	7.2					13	15	50	33	5.0	7.2	5.4
7	9.2					13	16	53	35	6.0	8.7	5.6
8	9.2		10			14	17	52	*39	8.0	11	5.6
9	9.1	11				16	19	57	47	6.0	9.5	5.4
10	9.0					16	21	58	45	4.0	11	5.6
11	8.8					15	25	64	64	3.5	9.5	5.4
12	8.6					14	28	72	112	3.3	9.1	5.1
13	9.2			(*)		13	*35	83	111	*7.2	9.5	5.1
14	8.8					14	60	82	84	7.5	8.4	4.9
15	8.6				12	16	101	80	90	12	8.7	4.7
16	8.5					16	131	75	112	8.1	10	4.4
17	8.4				(*)	16	168	70	107	8.1	10	4.2
18	8.3	8.0		12		16	238	71	106	8.7	8.7	4.0
19	8.2	5.0				16	231	71	76	9.1	8.4	4.0
20	8.1	6.0				16	188	*67	64	9.1	8.1	4.4
21	8.0	8.0				16	*134	67	51	9.1	9.1	4.2
22	8.2	9.0				16	105	78	40	12	10	4.4
23	8.5	10				17	96	101	32	13	9.5	4.7
24	*9.5	8.0	11			*20	103	102	29	14	*9.5	4.7
25		10				24	97	84	26	15	10	4.9
26						28	77	*74	24	14	10	4.9
27						20	*77	75	22	13	9.1	5.6
28	10	11				14	82	71	30	12	7.8	*5.4
29					-	13	165	65	50	12	7.5	5.4
30						12	266	56	40	8.5	7.2	3.9
31					- ---	13	------	48	------	4.0	6.4	------
Total	262.9	306.0	325	368	336	477	2,568	2,257	1,676	301.2	263.2	150.0
Mean	8.48	10.2	10.5	11.9	12.0	15.4	85.6	72.8	55.9	9.72	8.49	5.00
Ac-ft	521	607	645	730	666	946	5,090	4,480	3,320	597	522	298

Calendar year 1953: Max 429 Min 3.3 Mean 41.7 Ac-ft 30,220
Water year 1953-54: Max 266 Min 2.0 Mean 25.5 Ac-ft 18,420

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice about Nov. 18 to Mar. 27. No gage-height record Oct. 9-12, Oct. 15 to Mar. 23, Mar. 29 to Apr. 2, June 28 to July 12, except staff-gage readings Oct. 23, 24, Dec. 5, Jan. 13, Feb. 17, Apr. 2, July 2, 12; discharge estimated on basis of weather records, 6 discharge measurements, and records for other stations in Mud Lake basin and for nearby streams.

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 1954.

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.--27 years (1921-24, 1928-29, 1931-54), 17.3 cfs (12,520 acre-ft per year).

Extremes.--Maximum discharge during year, 94 cfs Apr. 18 (gage height, 1.63 ft); maximum gage height recorded, 2.20 ft Feb. 20 (ice jam); no flow for long periods.
1921-54: 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 or no gage-height record, which are poor.

Cooperation.--Three discharge measurements furnished and water-stage recorder inspected by employees of Water District No. 66.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.1	0	0.9	13
.2	.1	1.1	24
.3	.3	1.3	42
.5	1.8	1.6	88
.7	5.5		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	3.7	7.4				18	30	14	7.0		
2	0	3.5	2.8				22	30	23	4.8		
3	0	3.2	2.4			8.0	27	27	16	3.2		
4	0	3.2	2.3				35	23	11	2.8		
5	0	3.3	2.2				50	20	9.0	1.3		
6	0	4.8	3.0				45	19	17	2.0		
7	0	6.1	2.5				40	18	22	3.7		
8	0	4.4	2.5			10	45	17	*19	3.5		
9	.3	3.5	2.8				40	16	15	1.9		
10	0	4.6	*2.8	4.5			35	16	29	.2		
11	.1	4.6	2.5				35	19	50	0		
12	.1	5.1	2.5				40	23	32	*0		
13	.1	5.3	3.0	(*)		9.0	54	*19	23	0		
14	.2	5.3					54	18	18	0		
15	.3	5.3					64	16	20	0		
16	1.0	4.8			9.0		63	14	21	0		
17	1.5	4.8			(*)		74	*13	18	5.7		
18	2.0	2.0					81	11	15	2.0		
19	2.3	1.0	5.0				61	11	12	.4		
20	2.6	1.6				11	48	*10	9.8	.1		
21	2.8	1.8					*36	10	7.4	0		
22	3.0	4.8				(*)	32	27	6.1	0		
23	*3.2	6.4					30	26	5.8	0		
24	2.8	4.6		5.0		*15	28	17	4.0	0	(*)	
25	4.0	6.7				17	27	13	2.8	0		
26	3.7	7.4				21	26	13	2.6	0		
27	3.2	7.7	4.5			19	23	13	4.4	0		
28	3.2	7.7				17	44	15	25	0		(*)
29	3.3	7.7				16	61	13	21	0		
30	3.3	7.7		9.0		15	38	11	11	0		
31	4.0					16	------	10	------	0		------
Total	47.0	142.6	124.7	161.0	252.0	359.0	1,276	538	483.9	38.6	0	0
Mean	1.52	4.75	4.02	5.19	9.00	11.6	42.5	17.4	16.1	1.25	0	0
Ac-ft	93	283	247	319	500	712	2,530	1,070	960	77	0	0

Calendar year 1953: Max 199 Min 0 Mean 23.3 Ac-ft 16,850
Water year 1953-54: Max 81 Min 0 Mean 9.38 Ac-ft 6,790

* Discharge measurement or observation of no flow made on this day.

Note.--Stage-discharge relation affected by ice Nov. 18, and Dec. 3 to Apr. 11. No gage-height record Oct. 17-22, Dec. 3, 4, Dec. 13 to Feb. 16, Feb. 27 to Mar. 21, Mar. 29 to Apr. 4; discharge estimated on basis of weather records, 7 discharge measurements, records for adjacent periods, and records for Camas Creek at Camas and other nearby streams.

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 1954.

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.

Average discharge.--33 years, 4.00 cfs (2,900 acre-ft per year).

Extremes.--Maximum discharge during year, 27 cfs Apr. 18 (gage height, 1.86 ft); no flow for most of year.
1921-54: Maximum discharge, 186 cfs Apr. 28, 1952 (gage height, 3.48 ft); no flow for long periods in each year; no flow for entire water years 1929, 1931-37, 1940.

Remarks.--Records good. Flow affected by irrigation diversions above Dubois 14 miles above station, and by heavy channel losses below Dubois.

Cooperation.--One discharge measurement furnished by employees of Water District No. 66.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.0	0	1.4	4.7
1.1	.5	1.5	8.0
1.2	1.3	1.7	17
1.3	2.6	1.9	30

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0					
2							0					
3							0					
4							0					
5			(*)				0					
6							0					
7							0					
8							0		(*)			
9							0					
10							0					
11							0					
12							0					
13				(*)			0			(*)		
14							0					
15							*6.2					
16							12					
17					(*)		14					
18							22					
19							20					
20							12	(*)				
21							*5.7					
22							.1					
23	(*)						0					
24	(*)					(*)	0				(*)	
25							0					
26							0					
27							*0					
28							0					(*)
29					-		0					
30					-		0					
31					--		------		------		(*)	------
Total	0	0	0	0	0	0	92.0	0	0	0	0	0
Mean	0	0	0	0	0	0	3.07	0	0	0	0	0
Ac-ft	0	0	0	0	0	0	182	0	0	0	0	0

Calendar year 1953: Max 97 Min 0 Mean 7.53 Ac-ft 5,450
Water year 1953-54: Max 22 Min 0 Mean 0.25 Ac-ft 182

* Discharge measurement or observation of no flow 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.--1,050 sq mi, approximately, not including Medicine Lodge Creek.

Records available.--April 1921 to September 1954.

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 (now used as supplementary gage) at same datum.

Extremes.--Maximum contents during year, 33,100 acre-ft Apr. 21-23; maximum gage height, 7.10 ft Apr. 22; minimum contents, 3,200 acre-ft Sept. 3 (gage height, -0.12 ft).

1921-54: Maximum contents observed, 61,660 acre-ft May 5, 1923 (gage height, 9.20 ft); practically no contents Oct. 1 to Nov. 15, 1937, due to bypassing Camas Creek (see Remarks).

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 WSP 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 1954. 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 frequently disturb the recording of lake stages.

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

Revisions.--WSP 1247: Drainage area.

Contents at 12 p.m., in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7,990	4,520	9,150	15,000	20,300	24,900	29,700	31,000	18,700	14,500	5,460	3,430
2	7,830	4,660	9,320	15,100	20,500	24,900	29,800	30,700	18,600	14,500	5,300	3,300
3	7,710	4,770	9,500	15,300	20,600	25,100	29,800	30,600	18,300	14,600	5,080	3,250
4	7,590	4,900	9,740	15,500	20,700	25,200	30,000	30,400	18,200	14,500	4,880	4,010
5	7,440	4,970	9,920	15,700	20,800	25,300	30,100	30,100	18,100	14,500	4,710	4,350
6	7,270	5,100	10,100	15,800	20,900	25,300	30,400	29,800	18,000	14,400	4,520	4,540
7	6,940	5,230	10,300	16,100	21,000	25,400	30,600	29,300	17,800	14,200	4,310	4,730
8	6,540	5,340	10,500	16,200	21,100	25,600	30,700	28,700	17,500	13,700	4,210	4,880
9	6,130	5,510	10,700	16,500	21,300	25,700	30,900	28,000	17,600	13,400	4,090	5,050
10	5,800	5,650	10,900	16,700	21,500	25,900	31,100	27,400	17,600	13,000	4,010	5,250
11	5,390	5,830	11,000	16,900	21,900	26,100	31,400	26,700	17,700	12,800	3,930	5,440
12	5,010	5,950	11,300	17,100	22,200	26,400	31,500	25,900	17,800	12,600	3,780	5,580
13	4,600	6,130	11,500	17,300	22,500	26,500	31,600	25,200	18,000	12,200	3,650	5,750
14	4,520	6,250	11,700	17,400	22,800	26,700	31,800	24,500	18,000	11,900	3,540	5,850
15	4,500	6,410	11,800	17,500	22,900	26,800	31,900	23,900	18,000	11,500	3,500	5,830
16	4,500	6,590	12,000	17,600	23,100	27,000	32,100	23,300	18,000	11,200	3,370	5,830
17	4,410	6,750	12,100	17,800	23,200	27,200	32,400	22,600	18,000	10,700	3,300	5,750
18	4,330	6,860	12,300	18,000	23,400	27,400	32,600	22,000	18,000	10,400	3,250	5,720
19	4,170	7,020	12,500	18,100	23,600	27,600	32,700	21,300	17,800	9,990	3,230	5,720
20	4,170	7,190	12,700	18,400	23,700	27,700	33,000	20,600	17,800	9,640	3,270	5,680
21	4,170	7,330	12,800	18,600	23,800	28,100	33,100	20,200	17,600	9,320	3,280	5,650
22	4,210	7,500	13,000	18,700	23,900	28,200	33,000	19,900	17,300	8,960	3,340	5,630
23	4,210	7,620	13,200	18,900	24,000	28,500	32,900	19,700	16,800	8,560	3,340	5,700
24	4,310	7,830	13,400	19,100	24,200	28,700	32,700	19,300	16,500	8,200	3,430	5,680
25	4,430	8,020	13,600	19,300	24,400	28,800	32,600	19,100	15,800	7,770	3,590	5,510
26	4,480	8,170	13,900	19,400	24,500	29,000	32,400	19,100	15,600	7,390	3,680	5,480
27	4,430	8,400	14,100	19,600	24,600	29,100	32,100	19,100	15,300	7,050	3,800	5,460
28	4,430	8,560	14,300	19,700	24,800	29,300	31,900	19,000	15,100	6,690	3,780	5,320
29	4,410	8,720	14,400	19,900	–	29,400	31,500	19,000	14,800	6,360	3,760	5,120
30	4,410	8,920	14,600	20,000	-------	29,600	31,400	19,000	14,700	6,050	3,630	5,050
31	4,450	-------	14,800	20,200	-------	29,600	-------	19,000	-------	5,780	3,550	-------

Monthly gage height and contents, water year October 1953 to September 1954

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	1.99	8,140	-
Oct. 31	.54	4,450	-3,690
Nov. 30	2.23	8,920	+4,470
Dec. 31	3.72	14,800	+5,880
Calendar year 1953	-	-	-2,900
Jan. 31	4.84	20,200	+5,400
Feb. 28	5.71	24,800	+4,600
Mar. 31	6.54	29,600	+4,800
Apr. 30	6.82	31,400	+1,800
May 31	4.60	19,000	-12,400
June 30	3.70	14,700	-4,300
July 31	1.13	5,780	-8,920
Aug. 31	.08	3,550	-2,230
Sept.30	.82	5,050	+1,500
Water year 1953-54	-	-	-3,090

† Gage height at 12 p.m.

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 1954.

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.--13 years (1941-54), 43.8 cfs (31,710 acre-ft per year).

Extremes.--Maximum discharge during year, 66 cfs June 10; maximum gage height, 2.53 ft Feb. 9; minimum discharge, 7.1 cfs Apr. 21, 22; minimum gage height, 1.29 ft Apr. 20-23, 25-27, May 1.

1940-54: Maximum discharge, 229 cfs June 9, 1944 (gage height, 4.23 ft), from rating curve extended above 120 cfs by logarithmic plotting; minimum, 4 cfs Feb. 15, 1953 (gage height, 1.24 ft).

Remarks.--Records good. Several diversions above and below station for irrigation.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	34	35	42	39	36	33	12	52	51	37	32
2	38	34	34	36	39	24	34	34	50	50	37	33
3	38	32	28	40	38	27	34	51	48	50	37	35
4	38	28	28	40	38	29	36	49	48	48	36	33
5	38	30	20	42	40	31	38	44	49	48	38	33
6	38	29	*25	40	41	36	36	50	51	53	38	32
7	38	27	24	42	42	41	33	58	49	49	38	32
8	38	26	19	40	40	40	33	56	49	47	38	32
9	38	26	20	40	40	42	32	54	*52	46	36	30
10	38	28	22	32	42	42	31	55	62	46	36	30
11	38	28	20	30	43	40	32	58	55	45	36	30
12	37	28	21	25	43	30	31	55	49	44	36	29
13	36	28	22	*23	44	30	22	54	50	44	38	30
14	36	27	23	26	44	40	17	52	53	*44	38	30
15	37	26	27	35	42	42	13	52	52	48	34	30
16	37	23	34	44	42	40	9 7	51	52	46	34	29
17	37	22	40	44	*42	35	9.7	50	52	45	34	29
18	36	21	42	42	42	34	9.7	49	52	45	34	28
19	35	16	45	38	38	34	8.9	49	51	44	34	28
20	34	17	43	30	42	34	8.2	*49	51	44	34	28
21	34	21	42	36	42	34	*7.4	52	50	42	41	28
22	36	27	34	42	42	34	7.1	57	50	42	40	28
23	36	33	30	40	42	33	7.8	52	49	42	37	28
24	*37	36	30	38	40	*33	8.5	51	49	40	*36	27
25	37	40	24	36	40	32	8.2	51	49	39	36	26
26	37	40	24	37	40	33	8.2	51	51	40	36	26
27	38	40	26	38	38	32	8.2	51	55	40	34	26
28	38	40	29	44	40	34	8.9	51	55	39	36	*25
29	38	40	34	44	-	32	10	50	52	38	34	24
30	38	40	36	41	--------	30	11	50	51	38	33	26
31	36	--------	41	40	--------	31	--------	50	--------	38	32	--------
Total	1,148	887	922	1,167	1,145	1,065	586.5	1,548	1,538	1,375	1,118	877
Mean	37.0	29.6	29.7	37.6	40.9	34.4	19.6	49.9	51.3	44.4	36.1	29.2
Ac-ft	2,280	1,760	1,830	2,310	2,270	2,110	1,160	3,070	3,050	2,730	2,220	1,740

Calendar year 1953: Max 64 Min 6.0 Mean 39.0 Ac-ft 28,270
Water year 1953-54: Max 62 Min 7.1 Mean 36.6 Ac-ft 26,530

* 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 1954.

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.

Average discharge.--6 years (1910-11, 1921-22, 1950-54), 80.8 cfs (58,500 acre-ft per year).

Extremes.--Maximum discharge during year, 100 cfs Mar. 2 (gage height, 1.80 ft); maximum gage height, 2.04 ft Feb. 19 (backwater from ice); minimum discharge, 70 cfs Mar. 2 (gage height, 1.50 ft).

1910-12, 1921-23, 1950-54: Maximum discharge observed, 160 cfs Mar. 2, 1912 (gage height, 2.20 ft, site and datum then in use); minimum observed, 61 cfs Jan. 29, 1951 (gage height, 1.50 ft).

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

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	66	1.7	85
1.6	75	1.8	95

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73	72	80	82	81	b80	81	b82	82	81	78	76
2	73	72	80	b82	82	80	81	82	81	81	77	77
3	73	73	80	82	83	b80	80	81	81	81	77	77
4	73	73	81	81	82	b80	83	81	81	80	77	77
5	73	73	80	81	82	b80	86	81	81	82	78	77
6	73	73	*81	81	82	b80	86	80	81	82	77	76
7	73	73	81	82	83	80	87	80	82	81	77	76
8	73	73	b81	81	b83	80	87	80	*82	80	77	76
9	74	73	81	81	b83	82	87	80	87	80	76	76
10	73	73	81	b81	81	82	87	81	91	80	77	77
11	73	74	81	81	82	81	86	82	86	80	76	77
12	73	74	b80	*b81	83	82	86	81	85	80	78	77
13	73	74	80	b80	83	b80	86	80	83	*80	77	76
14	73	74	80	80	83	80	86	80	82	80	77	76
15	74	74	80	80	83	80	84	80	82	80	77	76
16	74	74	81	80	*83	80	84	80	82	80	77	76
17	74	75	81	80	83	82	83	80	82	80	76	76
18	73	b74	81	b80	82	82	83	79	81	80	76	76
19	72	b75	82	80	b82	81	82	80	81	79	76	76
20	72	76	82	b80	82	82	82	*80	81	80	77	75
21	73	76	82	80	82	82	82	82	81	79	79	75
22	73	76	82	81	83	82	81	82	81	79	78	75
23	73	76	b82	81	83	*82	82	80	81	80	*78	76
24	73	76	b82	b80	83	81	82	80	81	80	77	75
25	73	77	b82	79	83	81	81	80	81	79	77	75
26	*72	78	82	81	82	81	*81	80	84	80	77	75
27	72	78	82	80	b82	81	82	80	84	80	77	*75
28	72	78	82	79	82	81	82	80	82	79	77	74
29	72	79	82	79	-	80	82	80	82	79	77	73
30	72	79	81	80	-	b81	82	80	81	79	76	74
31	72	-	82	81	---	b81	------	80	------	78	76	------
Total	2,259	2,245	2,515	2,497	2,308	2,507	2,504	2,494	2,472	2,479	2,387	2,273
Mean	72.9	74.8	81.1	80.5	82.4	80.9	83.5	80.5	82.4	80.0	77.0	75.8
Ac-ft	4,480	4,450	4,990	4,950	4,580	4,970	4,970	4,950	4,900	4,920	4,730	4,510

Calendar year 1953:	Max 88	Min 70	Mean 76.5	Ac-ft 55,390
Water year 1953-54:	Max 91	Min 72	Mean 79.3	Ac-ft 57,400

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

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 1954 (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.

Average discharge.--7 years (1947-54), 72.3 cfs (52,340 acre-ft per year).

Extremes.--Maximum discharge during year, 234 cfs Sept. 3 (gage height, 4.16 ft); maximum gage height, 4.50 ft sometime during period Dec. 3 to Jan. 12 (ice jam); minimum discharge, 25 cfs Nov. 24 and sometime during period Dec. 4 to Jan. 11, while clock was stopped (gage height, 2.43 ft), but may have been less during period of ice effect.

1921-54: 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 discharge observed, 4.1 cfs Dec. 12, 1940.

Remarks.--Records good except those for period of 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 employees of Water District No. 9.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 6 to Sept. 30)

2.3	22	3.2	113
2.5	37	3.6	157
2.8	67		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	g66	*32	32	35	b47	79	90	103	112	67	56
2	74	g68	32	32	35	b46	78	91	100	111	65	64
3	75	g66	33	32	36	b46	79	88	94	99	66	103
4	77	g65	32	33	36	b47	85	89	90	91	67	58
5	76	g66	32	33	37	b48	85	90	91	91	66	59
6	76	g67	32	33	37	b51	88	87	104	103	68	59
7	71	g65	32	33	37	60	84	86	101	97	66	57
8	71	g64	31	33	b36	67	84	86	*101	85	65	56
9	67	68	31	33	b36	70	85	87	100	80	63	56
10	65	g71	31	33	b36	69	84	94	107	82	60	55
11	69	g76	30	33	b37	68	81	107	117	78	60	54
12	68	g79	29	*34	38	b56	82	109	109	*72	57	52
13	69	g84	29	b33	39	b56	86	111	103	68	63	53
14	68	g82	30	b33	39	58	88	107	107	70	66	55
15	69	80	31	33	39	71	87	106	112	75	66	54
16	71	78	31	34	*39	71	85	106	116	85	62	56
17	70	74	32	34	40	72	87	107	113	81	63	55
18	68	b50	32	b34	41	80	88	108	109	77	64	54
19	67	b45	32	34	b41	85	89	*112	107	78	62	55
20	66	b42	32	b33	41	81	*86	120	103	74	64	55
21	67	b33	32	b34	42	80	85	129	97	75	72	55
22	69	30	32	35	42	76	85	139	97	81	76	53
23	69	30	31	35	43	*78	82	134	101	81	*70	55
24	69	28	30	35	43	72	82	125	112	77	67	55
25	69	29	30	b34	44	68	81	120	112	71	64	54
26	*69	29	29	b34	46	66	*82	122	117	70	65	53
27	68	30	30	35	b45	67	87	122	145	76	67	*51
28	69	31	31	36	47	67	90	114	157	71	64	50
29	69	31	31	35	-	68	90	107	134	71	60	54
30	g74	31	31	35	--------	78	94	105	125	69	58	59
31	g70	--------	31	35	--------	76	--------	101	--------	66	57	--------
Total	2,168	1,656	964	1.045	1,107	2.045	2.548	3,299	3,284	2,517	2,000	1,705
Mean	69.9	55.2	31.1	33.7	39.5	66.0	84.9	106	109	81.2	64.5	56.8
Ac-ft	4,300	3,280	1,910	2,070	2,200	4,060	5,050	6,540	6,510	4,990	3,970	3,380

Calendar year 1953: Max 174 Min 28 Mean 78.7 Ac-ft 56,970
Water year 1953-54: Max 157 Min 28 Mean 66.7 Ac-ft 48,260

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
g Computed from once-daily staff-gage readings.
Note.--No gage-height record Nov. 9, Dec. 4 to Jan. 11; discharge estimated on basis of weather records and records for Medicine Lodge Creek and other 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 1954 (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.--1924-54: Maximum daily discharge, 87 cfs May 24, 25, 1928; no flow during long periods each year.

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

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.7	32	(*)			0	4.8	7.3	22	21	3.9	
2	7.7	32				0	22	7.7	22	19	1.5	
3	7.7	32				0	31	8.1	17	17	1.5	a0.3
4	7.7	32				0	28	7.8	14	14	1.2	
5	7.7	35				0	21	7.7	14	14	1.1	
6	7.7	37				0	20	7.7	17	14	1.1	
7	7.7	37				0	20	7.7	19	13	1.1	
8	7.1	37				0	20	7.7	*20	12	1.1	a.4
9	6.6	37				0	20	7.7	20	11	5.2	
10	6.6	40				0	20	7.9	24	11	7.7	
11	6.6	48				0	17	15	31	11	7.7	
12	6.6	54		(*)		0	15	22	31	*9.5	5.0	a.5
13	6.6	54				0	13	25	26	9.2	2.5	
14	6.6	54				0	12	25	28	9.3	2.1	
15	6.6	54				0	11	25	29	9.1	2.1	
16	6.8	54			(*)		9.5	25	31	9.1	2.1	a.6
17	7.0	54					9.1	25	30	9.4	2.0	
18	7.0	40					9.1	25	26	9.5	3.9	
19	7.0	0				a5.0	9.4	*26	23	9.5	5.1	
20	7.0	0					9.5	30	19	9.5	2.1	a.7
21	7.0	0					9.3	34	14	9.5	a.1	
22	10	0					9.1	42	12	8.8	a.1	
23	14	0				*5.3	9.1	45	13	7.7	**.1	
24	14	0				5.3	9.1	43	18	7.7		
25	14	0				5.3	9.1	43	21	7.5	a.1	a.8
26	*18	0				16	*8.6	42	21	7.3		
27	23	0				24	8.1	40	30	7.3		**.8
28	24	0				27	7.6	35	43	7.3		
29	27	0			-	30	7.3	30	33	7.3	a.2	a.8
30	31	0				31	7.3	28	28	7.3		
31	32	------		------	------	12	------	24	------	7.3		------
Total	356.0	763	0	0	0	190.9	406.0	726.3	698	326.1	61.5	17.1
Mean	11.5	25.4	0	0	0	6.16	13.5	23.4	23.3	10.5	1.98	0.57
Ac-ft	706	1,510	0	0	0	379	805	1,440	1,380	647	122	34

Calendar year 1953: Max 75 Min 0 Mean 17.8 Ac-ft 12,850
Water year 1953-54: Max 54 Min 0 Mean 9.71 Ac-ft 7,020

* Discharge measurement or observation of no flow made on this day.
** Field estimate made on this day.
a No gage-height record; discharge estimated.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 6,820 ft (from topographic map).

Average discharge.--10 years, 102 cfs (73,840 acre-ft per year).

Extremes.--Maximum discharge during year, 879 cfs June 26 (gage height, 4.98 ft); minimum, 9 cfs Feb. 22 (gage height, 1.14 ft).
1944-54: Maximum discharge, 1,080 cfs June 7, 1952 (gage height, 5.41 ft); minimum recorded, 8 cfs Mar. 23, 1951 (gage height, 1.11 ft).

Remarks.--Records excellent except those for periods of ice effect, which are good.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	15	3.0	227
1.5	26	3.5	362
1.7	40	4.0	530
2.0	66	4.5	720
2.5	129		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	32	27	22	21	20	21	122	194	325	76	33
2	34	32	24	b19	20	19	20	114	175	311	72	33
3	34	32	24	21	21	20	21	111	168	297	68	33
4	34	32	25	21	21	19	22	117	179	297	65	34
5	34	32	b21	22	21	18	25	159	225	305	65	34
6	34	32	b24	22	22	20	25	225	217	308	63	34
7	33	32	*b22	22	21	21	25	273	196	289	61	34
8	33	30	b18	b19	20	21	25	289	179	268	58	33
9	32	30	23	b19	21	22	26	325	179	252	54	32
10	32	30	24	b18	21	22	26	384	173	232	54	32
11	32	30	b20	b19	20	21	26	374	*166	*225	53	31
12	32	31	24	b19	23	21	29	387	170	220	54	31
13	31	32	b21	*b19	24	19	32	371	190	199	54	32
14	30	32	23	20	23	21	38	359	205	199	52	32
15	31	32	24	20	21	21	39	365	240	210	50	32
16	31	32	25	21	22	22	44	371	281	196	48	33
17	31	31	24	21	*22	22	57	419	250	185	47	32
18	31	25	25	20	22	21	64	453	230	168	47	31
19	31	b21	25	21	19	21	68	509	217	150	*46	30
20	31	b22	25	b18	23	21	75	581	232	140	46	30
21	32	27	24	21	22	21	93	*670	292	131	51	29
22	32	27	b19	21	21	20	104	565	342	116	51	*28
23	32	30	b18	22	22	20	122	440	433	106	47	28
24	31	27	b19	22	22	21	142	384	481	100	44	28
25	32	27	b20	20	21	21	160	374	464	96	43	27
26	32	28	22	21	21	20	170	336	593	99	44	26
27	32	29	22	22	20	20	175	289	673	95	44	25
28	32	28	23	22	20	20	*166	252	453	89	40	25
29	32	27	23	22	-	*20	159	230	359	84	38	26
30	32	27	b19	22	------	20	143	213	336	83	35	27
31	*32	-----	21	22	-----	20	-----	199	------	79	34	------
Total	996	879	698	640	597	635	2,142	10,260	8,492	5,854	1,604	915
Mean	32.1	29.3	22.5	20.6	21.3	20.5	71.4	331	283	189	51.7	30.5
Cfsm	0.282	0.257	0.197	0.181	0.187	0.180	0.626	2.90	2.48	1.66	0.454	0.268
In.	0.32	0.29	0.23	0.21	0.19	0.21	0.70	3.35	2.77	1.91	0.52	0.30
Ac-ft	1,980	1,740	1,380	1,270	1,180	1,260	4,250	20,350	16,840	11,610	3,180	1,810

Calendar year 1953: Max 818 Min 18 Mean 103 Cfsm 0.904 In. 12.20 Ac-ft 74,310
Water year 1953-54: Max 673 Min 18 Mean 92.4 Cfsm 0.811 In. 11.00 Ac-ft 66,850

Peak discharge (base, 300 cfs).--May 21 (7 a.m.) 712 cfs (4.55 ft); June 26 (10 p.m.) 879 cfs (4.98 ft).

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

2142
41
2101

Big Lost River at Howell Ranch, near Chilly, Idaho

Location.--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.--450 sq mi.

Records available.--April 1904 to November 1914, May 1920 to September 1954 (no winter records prior to 1949).

Gage.--Water-stage recorder. Datum of gage is 6,621.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. 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.

Average discharge.--7 years (1904-5, 1948-54), 299 cfs (216,500 acre-ft per year).

Extremes.--Maximum discharge during year, 3,960 cfs June 26 (gage height, 6.00 ft); minimum daily, 60 cfs Dec. 8, 23, Jan. 10, 20.
1904-14, 1920-54: Maximum discharge, that of June 26, 1954; minimum observed, 19 cfs (discharge measurement) Dec. 12, 1939.

Remarks.--Records excellent except those for period Nov. 19 to Apr. 4, 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 at Water District No. 27.

Revisions.--WSP 1287: Drainage area.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99	106	80	70	67	70	80	325	538	932	214	101
2	97	106	80	62	65	67	80	311	490	892	205	97
3	99	103	80	67	66	70	80	300	464	832	198	106
4	101	103	80	67	66	67	91	311	490	825	190	103
5	103	106	70	70	66	65	108	390	619	840	187	101
6	101	108	75	70	70	70	108	532	607	840	187	101
7	101	97	*70	68	66	73	103	638	538	774	185	101
8	99	95	60	62	62	74	103	745	495	724	179	103
9	99	99	70	62	64	75	106	878	495	677	171	101
10	97	101	75	60	64	76	108	1,130	495	619	168	97
11	97	101	65	64	62	73	108	1,160	*474	*613	157	95
12	97	101	70	65	75	72	118	1,160	474	613	160	89
13	97	103	65	*65	80	67	130	1,150	510	572	176	89
14	97	103	75	65	80	70	147	1,120	549	554	165	89
15	97	103	75	65	75	70	152	1,140	625	619	155	87
16	106	103	78	67	82	75	165	1,190	731	590	149	89
17	110	101	75	67	*85	75	205	1,330	645	544	139	89
18	108	91	78	65	80	72	223	1,430	584	485	137	84
19	106	70	78	67	70	72	223	1,550	554	445	*132	84
20	103	75	78	60	78	72	223	1,710	590	430	130	82
21	108	85	75	67	75	72	239	*1,870	781	390	147	*82
22	110	85	64	67	73	*74	262	1,600	964	341	157	84
23	110	90	60	70	75	72	300	1,300	1,260	307	144	84
24	112	85	64	70	75	75	337	1,130	1,410	293	132	86
25	110	85	65	65	73	75	373	1,100	1,360	286	128	86
26	108	85	67	66	72	72	381	956	1,880	286	125	86
27	110	90	68	70	70	72	407	803	2,310	296	123	84
28	110	82	72	70	-	72	*403	690	1,380	275	116	86
29	108	82	72	70	-	72	403	625	1,060	258	108	84
30	108	80	62	70	-------	72	377	590	980	249	108	87
31	*106	-------	65	70	-------	74	-------	544	-------	233	106	-------
Total	3,214	2,824	2,211	2,063	2,006	2,227	6.143	29,708	24,352	16,634	4,776	2,737
Mean	104	94.1	71.3	66.5	71.6	71.8	205	958	812	537	154	91.2
Ac-ft	6,370	5,600	4,390	4,090	3,980	4,420	12,180	58,920	48,300	32,990	9,470	5,430

Calendar year 1953: Max 2,290 Min 60 Mean 306 Ac-ft 221,600
Water year 1953-54: Max 2,310 Min 60 Mean 271 Ac-ft 196,100

Peak discharge (base, 900 cfs).--May 21 (9:30 a.m.) 1,970 cfs (4.05 ft); June 26 (9 p.m.) 3,960 cfs (6.00 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 19-27, about Nov. 30 to Mar. 20, Mar. 24 to Apr. 2. Fragmentary or no gage-height record Nov. 20 to Apr. 3; discharge estimated on basis of 4 discharge measurements, weather records, fragmentary recorder record, and records for station at Wildhorse.

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 1954.

Gage.--Water-stage recorder. 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 (datum raised 1 ft Apr. 20, 1920). Staff gage on Mackay Reservoir is used as an auxiliary gage during periods of backwater from reservoir.

Average discharge.--35 years, 70.7 cfs (51,180 acre-ft per year).

Extremes.--Maximum discharge during year, 1,110 cfs June 27 (gage height, 5.09 ft); no flow May 7-9.
1919-54: Maximum discharge, 1,360 cfs June 7, 8, 1952; maximum gage height, 5.18 ft June 8, 1952; no flow for long periods in many years.

Remarks.--Records good except those for periods of no gage-height record and those below 10 cfs, which are fair. Diversions above station for irrigation. See page 109 for combination of surface flow into Mackay Reservoir.

Cooperation.--Water-stage recorder inspected by employees of Water District No. 27.

Revisions (water years).--WSP 1287: 1919-21.

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 13-25, June 5 to July 28, Aug. 21 to Sept. 30)

1.7	0	2.8	124
1.8	2	3.1	194
2.0	12	3.5	312
2.2	28	4.0	496
2.5	67	4.6	805

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	10	5	2	2	2	2	2	135	213	42	10
2	12	*9	5	2	2	2	2	2	131	188	39	9
3	12	9	5	3	2	2	2	2	126	174	36	10
4	12	9	6	3	2	2	2	*1	122	160	35	9
5	12	9	5	3	2	2	2	1	128	155	31	9
6	12	9	5	2	2	2	2	1	135	160	30	9
7	12	9	*5	2	2	1	2	0	133	153	26	8
8	12	9	5	*2	1	1	2	0	131	142	26	8
9	11	9	5	2	1	2	2	0	128	139	25	8
10	10	9	5	b2	2	2	2	13	128	*139	24	8
11	10	9	4	2	2	2	2	107	*135	128	21	8
12	10	8	4	2	2	2	2	164	144	124	21	8
13	11	8	4	*2	2	2	2	184	148	122	20	8
14	11	8	4	2	2	3	2	197	151	124	20	8
15	11	8	4	2	1	3	2	208	153	128	19	8
16	11	8	4	2	1	3	2	233	167	144	19	8
17	11	8	4	2	2	3	2	265	160	133	18	8
18	11	8	4	2	2	3	2	306	151	124	*18	8
19	11	8	4	2	1	3	2	342	144	114	17	8
20	11	7	4	2	1	3	2	*386	137	101	18	8
21	11	7	4	2	1	2	2	471	146	92	20	*7
22	11	*7	3	2	2	2	2	427	167	84	19	7
23	11	7	3	2	1	2	2	348	199	76	18	7
24	11	7	2	2	1	2	2	293	256	69	17	7
25	11	7	2	2	*2	3	2	265	271	64	16	7
26	10	7	2	2	2	2	2	247	283	61	15	7
27	10	7	2	2	2	2	*2	218	755	56	14	7
28	10	7	2	2	2	2	2	189	488	51	13	8
29	10	6	2	2	-	*2	2	162	298	49	12	8
30	10	5	2	2		3	2	146	229	47	11	8
31	10		2	2	-	2	------	144	-----	44	11	------
Total	339	238	117	65	47	69	60	5,324	5,879	3,558	671	241
Mean	10.9	7.9	3.8	2.1	1.7	2.2	2.0	172	196	115	21.6	8.0
Ac-ft	672	472	232	129	93	137	119	10,560	11,660	7,080	1,330	478

Calendar year 1953: Max 1,000 Min 2 Mean 95.7 Ac-ft 69,270
Water year 1953-54: Max 755 Min 0 Mean 45.5 Ac-ft 32,940

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 25 to Feb. 13; except about once-weekly staff-gage readings, discharge estimated on basis of occasional staff-gage readings, weather records, 2 discharge measurements, records for nearby streams, and records for adjacent periods.

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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 1954.

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 Mackay Reservoir.

Average discharge.--35 years, 59.3 cfs (42,930 acre-ft per year).

Extremes.--Maximum discharge during year, 626 cfs June 27 (gage height, 4.90 ft); minimum, 11 cfs May 8, 9 (gage height, 1.94 ft).
1919-54: Maximum discharge, 1,200 cfs (estimated) about June 12, 1921 (gage height, 4.45 ft, from floodmark, site and datum then in use); minimum, 9 cfs May 22, 26, 1935.

Remarks.--Records good. Diversions above station for irrigation. See page 109 for combination of surface flow into Mackay Reservoir.

Cooperation.--Water-stage recorder inspected by employees of Water District No. 27.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 28, May 12 to Aug. 25)

1.9	12	2.6	110
2.0	20	3.0	189
2.1	31	3.5	307
2.3	59	4.3	516

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	28	23	20	19	18	17	17	108	266	26	18
2	24	*28	23	20	19	18	17	15	99	241	22	18
3	24	28	23	20	19	18	17	15	90	227	20	18
4	26	28	23	20	19	18	18	*15	87	202	19	18
5	26	28	23	20	18	17	18	15	92	191	18	18
6	26	28	22	21	18	17	18	14	99	200	20	18
7	26	28	*22	21	18	17	18	14	99	189	18	18
8	26	27	22	21	18	17	18	13	96	172	18	18
9	26	26	22	21	18	16	18	12	94	158	17	18
10	26	26	22	20	18	17	18	14	90	*148	16	18
11	27	26	22	20	18	17	18	46	*90	137	18	18
12	27	26	22	20	18	16	18	90	96	127	18	18
13	28	26	22	*20	18	17	18	118	101	121	18	18
14	28	24	22	20	18	17	18	133	101	127	18	18
15	29	24	22	20	18	17	18	148	108	135	17	18
16	29	23	22	20	18	17	18	160	123	152	17	18
17	29	23	22	20	18	17	18	183	121	138	17	18
18	29	22	22	20	18	17	18	222	108	123	*17	17
19	29	22	22	20	18	17	18	263	99	108	17	18
20	29	22	22	20	18	17	18	*314	92	94	18	17
21	30	22	21	20	18	17	18	383	101	84	20	*16
22	30	*22	21	20	18	17	18	409	127	77	20	16
23	30	22	20	20	18	17	18	337	176	69	19	16
24	30	22	20	19	18	17	18	258	246	61	19	16
25	29	22	21	19	*18	17	17	229	287	56	19	16
26	29	22	21	19	18	17	17	211	337	50	18	15
27	29	22	21	19	18	17	*17	183	516	48	18	15
28	29	22	21	19	17	17	17	154	489	41	18	15
29	29	23	20	19	-	*17	17	133	361	35	18	16
30	29	23	20	19	-	17	16	118	289	30	18	18
31	28	--	20	19	--	17	--	112	--	27	18	--
Total	860	735	671	616	507	529	530	4,348	4,922	3,834	574	517
Mean	27.7	24.5	21.6	19.9	18.1	17.1	17.7	140	164	124	18.5	17.2
Ac-ft	1,710	1,460	1,330	1,220	1,010	1,050	1,050	8,620	9,760	7,600	1,140	1,030

Calendar year 1953: Max 425 Min 20 Mean 53.4 Ac-ft 38,640
Water year 1953-54: Max 516 Min 12 Mean 51.1 Ac-ft 36,980

* Discharge measurement made on this day.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 6,064.60 ft above mean sea level (unadjusted). Prior to May 3, 1920, staff gage at site 100 ft downstream at different datum. May 3, 1920, to Dec. 2, 1938, staff gage at site 200 ft downstream at datum 0.26 ft lower.

Average discharge.--35 years, 30.4 cfs (22,010 acre-ft per year).

Extremes.--Maximum discharge during year, 250 cfs June 27 (gage height, 4.38 ft); minimum, 17 cfs Sept. 19 or 20 while clock was stopped; minimum gage height, 1.68 ft May 8, 9.
1919-54: Maximum discharge, that of June 27, 1954; minimum, 9 cfs May 8, 9, 13, 14, 1919, May 18-21, 1920.

Remarks.--Records excellent except those for periods of no gage-height record, which are good. Major portion of flow is return from irrigation, seepage from river channel upstream, and discharge of large spring. See page 109 for combination of surface flow into Mackay Reservoir.

Cooperation.--Water-stage recorder inspected by employees of Water District No. 27.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-31		Nov. 1 to Sept. 30			
1.9	29	1.7	18	3.0	110
2.0	36	2.0	34	4.1	217
2.1	43	2.5	70		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	35	a32	26	27	26	a26	21	63	121	33	27
2	34	34	a32	27	27	26	a25	21	58	115	33	a27
3	35	34	a32	28	27	26	a25	20	55	109	31	a27
4	36	34	a32	27	27	26	25	*20	a52	102	30	a27
5	35	34	a32	27	27	26	a25	20	a55	99	30	26
6	36	33	32	27	27	26	a25	20	58	101	32	a26
7	36	33	*32	27	27	26	a25	20	58	98	30	a25
8	36	33	31	27	27	26	a24	20	58	92	30	a24
9	37	a33	31	27	27	27	a24	20	58	89	a30	a24
10	37	a33	31	27	27	27	a24	21	56	*83	a29	a23
11	37	a33	31	27	27	27	24	38	*56	79	29	23
12	37	a33	30	27	26	26	25	58	62	76	30	23
13	37	a33	30	*27	27	27	25	65	64	75	30	a23
14	39	a33	30	27	27	26	24	71	64	77	29	a23
15	40	33	30	27	26	26	24	74	68	86	29	a23
16	40	a33	30	27	27	26	24	78	73	88	29	a22
17	40	a33	30	28	27	26	22	87	66	84	29	a21
18	39	a33	30	28	27	26	22	96	61	80	*29	a20
19	39	a33	30	28	27	26	22	106	a57	75	28	20
20	39	a32	30	27	27	26	22	*122	55	73	29	18
21	38	a32	30	a27	27	26	20	150	59	69	30	*18
22	40	*32	30	a27	26	26	20	159	72	66	30	18
23	40	a32	29	a27	26	26	20	130	88	61	29	20
24	39	a32	29	27	27	27	20	108	109	56	29	20
25	38	a32	29	a27	*27	27	20	101	121	53	29	18
26	38	a32	29	a27	26	26	20	94	129	49	29	18
27	37	a32	29	a27	26	26	*20	86	211	46	29	18
28	37	a32	29	a27	26	26	20	76	208	43	29	18
29	37	31	28	a27	-	*26	20	69	158	41	28	18
30	37	a32	28	a27	------	26	20	66	130	38	28	19
31	*36	------	28	27	------	a26	------	64	------	36	27	------
Total	1,160	984	936	842	749	812	682	2,101	2,482	2,360	916	657
Mean	37.4	32.8	30.2	27.2	26.8	26.2	22.7	67.8	82.7	76.1	29.5	21.9
Ac-ft	2,300	1,950	1,860	1,670	1,490	1,610	1,350	4,170	4,920	4,680	1,820	1,300

Calendar year 1953: Max 171 Min 18 Mean 39.0 Ac-ft 28,260
Water year 1953-54: Max 211 Min 18 Mean 40.2 Ac-ft 29,120

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of comparison with records for other stations above Mackay Reservoir.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 6,064.46 ft above mean sea level (unadjusted). Prior to May 4, 1920, at datum 0.54 ft lower. May 4, 1920, to Dec. 2, 1938, at datum 0.46 ft higher.

Average discharge.--35 years, 94.1 cfs (68,130 acre-ft per year).

Extremes.--Maximum discharge during year, 413 cfs June 27 (gage height, 3.96 ft); minimum, 69 cfs May 6; minimum gage height, 1.40 ft May 6, 8.

1919-54: Maximum discharge, 600 cfs (estimated) Aug. 11, 1936 (gage height, 4.88 ft, present datum, from floodmark); minimum, 49 cfs Apr. 27, 1935 (gage height, 1.08 ft, present datum).

Remarks.--Records good. Major portion of flow is return from irrigation, seepage from river channel upstream, and discharge of large spring. See following page for combination of surface flow into Mackay Reservoir.

Cooperation.--Water-stage recorder inspected by employees of Water District No. 27.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	107	114	110	105	104	99	74	144	222	102	92
2	94	107	114	108	105	104	99	74	137	213	99	92
3	96	106	114	108	106	104	98	73	132	204	96	90
4	98	106	116	108	105	104	98	*73	129	192	95	90
5	98	106	114	108	106	104	98	71	134	187	95	92
6	98	105	114	108	106	102	98	70	138	191	96	92
7	96	105	*114	107	106	102	96	73	140	186	96	93
8	98	105	113	107	106	104	95	73	140	177	95	94
9	98	107	114	107	106	104	94	73	138	173	93	95
10	96	108	114	107	106	105	94	76	136	*164	92	95
11	98	108	113	107	106	104	94	100	*140	158	92	96
12	99	107	113	107	106	102	94	130	158	156	93	96
13	100	107	112	*106	107	104	95	144	156	153	93	96
14	100	107	112	106	106	104	93	153	153	158	90	98
15	101	107	112	105	105	102	93	156	156	168	88	99
16	101	107	112	105	105	104	90	163	164	174	88	100
17	102	107	112	106	106	104	84	181	158	166	89	99
18	104	106	112	106	107	104	83	194	144	159	*89	99
19	102	106	112	106	107	102	81	207	136	154	88	99
20	104	108	112	108	106	104	78	*226	135	161	89	100
21	104	107	111	108	106	104	75	254	137	155	92	*101
22	106	*108	111	107	105	102	75	264	150	153	90	104
23	106	108	110	106	106	102	75	235	177	147	89	102
24	106	108	110	106	106	105	74	208	209	140	88	104
25	105	112	110	107	*105	105	75	199	225	131	90	105
26	106	113	110	106	105	104	75	191	239	123	90	105
27	106	113	110	107	104	104	*75	174	347	119	90	108
28	107	113	110	106	104	104	75	160	322	116	90	107
29	107	113	110	105	104	*104	74	150	260	110	90	107
30	107	113	110	105	------	104	74	144	237	106	92	112
31	*108	------	110	105	------	102	------	143	------	104	90	------
Total	3,143	3,240	3,475	3,308	2,959	3,211	2,601	4,506	5,171	4,920	2,849	2,962
Mean	101	108	112	107	106	104	86.7	145	172	159	91.9	98.7
Ac-ft	6,230	6,430	6,890	6,560	5,870	6,370	5,160	8,940	10,260	9,760	5,650	5,880

Calendar year 1953: Max 261 Min 60 Mean 107 Ac-ft 77,460
Water year 1953-54: Max 347 Min 70 Mean 116 Ac-ft 84,000

* Discharge measurement made on this day.

Surface inflow to Mackay Reservoir, near Mackay, Idaho

Drainage area.--766 sq mi.

Records available.--May 1919 to September 1954. Prior to October 1952, published with records of Big Lost River (west channel) above Mackay Reservoir, near Mackay.

Average discharge.--35 years, 255 cfs (184,600 acre-ft per year).

Extremes.--1919-54: Maximum daily discharge, 2,760 cfs June 12, 1921; minimum daily, 75 cfs May 10-12, 1935.

Remarks.--Records good. Records are the sum of discharges obtained at gaging stations on Big Lost River (east and west channels) and Warm Spring Creek (east and west channels) above Mackay Reservoir, near Mackay. Channels are interconnected above respective gaging stations, and combined flow represents practically the entire surface flow which enters Mackay Reservoir.

Revisions (water years).--WSP 1287: 1919-21.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	161	180	174	160	153	150	144	114	450	822	203	147
2	164	178	174	157	153	150	143	112	425	757	193	146
3	167	177	174	159	154	150	142	110	403	714	183	145
4	172	177	177	158	153	150	143	109	390	656	179	144
5	171	177	174	158	153	149	143	107	409	632	174	145
6	172	175	173	158	153	147	143	105	430	652	178	145
7	170	175	173	157	153	146	141	107	430	626	170	144
8	172	174	171	157	152	148	139	106	425	583	169	144
9	172	175	172	157	152	149	138	105	418	559	165	145
10	169	176	172	156	153	151	138	124	410	534	161	144
11	172	176	170	156	153	150	138	291	421	502	160	145
12	173	174	169	156	152	146	139	442	460	483	162	145
13	176	174	168	155	154	150	140	511	469	471	161	145
14	178	172	168	155	153	150	137	554	469	486	157	147
15	181	172	168	154	150	148	137	586	485	517	153	148
16	181	171	168	154	151	150	134	634	527	558	153	148
17	182	171	168	156	153	150	126	716	505	521	153	146
18	183	169	168	156	154	150	125	818	464	486	153	144
19	181	169	168	156	153	148	123	918	436	451	150	145
20	183	169	168	157	152	150	120	1,050	419	429	154	143
21	183	168	166	157	152	149	115	1,260	443	400	162	142
22	187	169	165	156	151	147	115	1,260	516	380	159	145
23	187	169	162	155	151	147	115	1,050	640	353	155	145
24	186	169	161	154	152	151	114	867	820	326	153	147
25	183	173	162	155	152	152	114	794	904	304	154	146
26	183	174	162	154	151	149	114	743	988	283	152	145
27	182	174	162	155	150	149	114	661	1,830	269	151	148
28	183	174	162	154	149	149	114	579	1,510	251	150	148
29	183	173	160	153	-	149	113	514	1,080	235	148	149
30	183	173	160	153	-	150	112	474	885	221	149	157
31	182		160	153	-	147	------	463	------	211	146	------
Total	5,502	5,197	5,199	4,831	4,262	4,621	3,873	16,284	18,461	14,672	5,010	4,377
Mean	177	173	168	156	152	149	129	525	615	473	162	146
Ac-ft	10,910	10,310	10,310	9,580	8,450	9,170	7,680	32,300	36,620	29,100	9,940	8,680

Calendar year 1953: Max 1,860 Min 105 Mean 295 Ac-ft 213,600
Water year 1953-54: Max 1,830 Min 105 Mean 253 Ac-ft 183,000

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, 4 miles northwest of Mackay.

Records available.--January 1919 to September 1954.

Gage.--Staff gage read once daily. Datum of gage is 6,000 ft above mean sea level, Utah Construction Co. datum, or about 6,001.2 ft (revised) above mean sea level (unadjusted).

Extremes.--Maximum contents observed during year, 40,220 acre-ft June 30 (gage height, 63.40 ft); minimum observed, 3,780 acre-ft Sept. 30 (gage height, 20.10 ft).
1919-54: Maximum contents observed, 42,390 acre-ft May 30, 1951 (gage height, 65.04 ft); no available contents during periods in 1919-20, 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.

Coöperation.--Gage readings and capacity table furnished by Water District No. 27.

Contents, in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,340	15,130	21,950	27,820	32,240	35,020	37,330	36,400	34,370	39,950	24,380	9,980
2	9,220	15,430	22,240	27,920	32,290	35,140	37,390	36,150	33,840	39,950	23,490	9,730
3	9,220	15,600	22,440	28,090	32,360	35,190	37,390	35,900	33,480	39,690	22,620	9,340
4	9,220	15,710	22,660	28,250	32,520	35,230	37,420	35,660	33,370	39,430	21,760	9,100
5	9,280	16,090	22,790	28,410	32,580	35,310	37,470	35,410	32,780	38,920	20,840	8,730
6	9,410	16,310	23,000	28,560	32,700	35,420	37,540	34,680	32,840	38,400	19,940	8,490
7	9,600	16,550	23,290	28,690	32,800	35,460	37,620	34,200	33,010	37,900	19,230	8,130
8	9,660	16,870	23,300	28,900	32,920	35,560	37,640	33,480	33,250	37,140	18,540	7,900
9	9,730	17,040	23,490	28,960	23,020	35,660	37,670	32,540	33,480	36,640	17,860	7,780
10	9,860	17,240	23,770	29,150	33,110	35,750	37,710	30,930	33,720	35,840	17,200	7,560
11	10,050	17,530	24,080	29,330	33,250	35,850	37,710	30,700	34,440	35,290	16,550	7,560
12	10,110	17,760	24,280	29,390	23,340	35,900	37,730	30,360	35,170	34,800	15,760	7,560
13	10,250	18,030	24,470	29,570	23,480	35,960	37,730	30,130	35,890	34,200	15,360	7,450
14	10,440	18,200	24,680	29,680	23,600	36,020	37,800	29,950	36,520	33,960	14,980	7,340
15	10,510	18,540	24,840	29,820	33,720	26,120	37,820	29,800	37,140	33,010	14,670	7,230
16	10,780	18,710	25,040	30,020	33,790	36,170	37,870	29,910	37,640	32,780	14,440	6,960
17	11,050	18,890	25,240	30,150	33,910	36,260	37,900	29,960	38,400	32,660	14,220	6,910
18	11,190	19,100	25,400	30,330	34,030	36,370	37,900	30,240	38,660	32,540	13,770	6,750
19	11,600	19,410	25,620	30,470	34,140	36,400	37,900	30,700	38,920	32,540	13,620	6,490
20	11,880	19,580	25,710	30,640	34,250	36,470	37,770	31,270	38,920	32,250	13,100	6,440
21	12,200	19,760	25,930	30,760	34,320	36,620	37,770	31,960	38,660	32,080	12,880	6,190
22	12,450	20,030	26,120	30,900	34,440	36,640	37,770	32,540	38,150	31,730	12,600	5,990
23	12,600	20,300	26,330	31,130	34,500	36,680	37,770	34,080	37,670	31,270	12,450	5,700
24	12,960	20,480	26,490	31,150	34,620	36,790	37,770	34,380	37,520	30,700	12,240	5,320
25	13,320	20,660	26,640	31,330	34,680	36,890	37,640	34,680	37,140	30,020	12,060	4,600
26	13,540	20,840	26,830	31,440	34,780	36,930	37,640	34,920	36,640	29,130	11,880	4,340
27	13,770	21,110	26,980	31,590	34,880	36,980	37,630	34,440	36,890	28,250	11,600	4,080
28	14,070	21,210	27,180	31,670	34,950	37,070	37,390	34,560	39,050	27,500	11,250	3,910
29	14,370	21,410	27,300	31,820	-	37,140	36,890	34,560	40,080	26,430	10,910	3,820
30	14,670	21,670	27,470	31,900	------	37,170	36,640	34,440	40,220	25,810	10,590	3,780
31	14,840	------	27,620	32,080	------	37,270	------	34,420	------	25,300	10,250	------

Note.--Contents as given are computed from once-daily staff-gage readings made between 8 a.m. and 12 m.

Monthly gage height and usable contents, water year October 1953 to September 1954

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	30.93	9,300	-
Oct. 31	39.05	15,020	+5,720
Nov. 30	47.09	21,850	+6,830
Dec. 31	52.93	27,740	+5,890
Calendar year 1953	-	-	-10,010
Jan. 31	56.86	32,150	+4,410
Feb. 28	59.25	34,990	+2,840
Mar. 31	61.12	37,290	+2,300
Apr. 30	60.48	36,500	-790
May 31	58.76	34,390	-2,110
June 30	63.26	40,030	+5,640
July 31	50.02	24,700	-15,330
Aug. 31	32.15	10,080	-14,620
Sept.30	20.04	3,760	-6,320
Water year 1953-54	-	-	-5,540

† Interpolated to midnight.

Sharp ditch near Mackay, Idaho

Location.--Lat 43°57', long 113°39', in sec. 7, T. 7 N., R. 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 1954.

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, water-stage recorder, at site 1,400 ft upstream (upstream from Hintze ditch) at different datum.

Extremes.--1912-14, 1919-54: Maximum daily discharge, 46 cfs May 30, 1951; no flow at times most years.

Remarks.--Records excellent 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 174 acre-ft during year (16 in May, 27 in June, 87 in July, 30 in August, and 14 in September).

Cooperation.--Water-stage recorder inspected by employees of Water District No. 27.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.2	0	0.8	12
.3	.7	1.1	23
.4	2.1	1.5	41
.6	6.4		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.9	12	a2.4			0	a1.4	2.8	19	28	17	12
2	8.2	*7.8	a2.4			0	a1.4	2.4	19	27	16	13
3	7.9	9.3	a2.4			0	a1.4	1.4	19	23	14	14
4	7.7	10	a2.4			0	1.4	0.1	18	22	12	14
5	7.7	10	a2.4			0	a1.4	0	18	26	12	14
6	7.9	10	*2.4			0	a1.0	0	16	29	12	14
7	7.9	10	a2.4			0	a0	0	9.6	27	10	14
8	7.9	10	a1.2	(*)		0	a0	0	7.7	24	11	12
9	7.9	4.5	0			0	a0	0	7.1	24	14	9.6
10	7.7	.2	0			0	a0	5.1	6.4	*23	24	8.5
11	7.7	.6	0			0	a3.5	19	5.6	23	26	9.0
12	7.9	.1	0	(*)		0	a10	19	*5.1	23	22	10
13	7.9	.1	0			0	a10	16	5.6	22	20	12
14	8.2	.1	0			0	a10	14	6.4	22	18	12
15	8.2	3.0	0			0	a10	15	6.6	22	17	11
16	7.7	5.6	0		(*)	0	a10	20	12	18	18	10
17	6.4	5.8	0			0	a10	23	15	16	19	9.6
18	6.4	2.5	0			0	10	19	15	14	*16	10
19	4.7	.6	0			0	a9	16	19	13	12	10
20	4.7	.7	0			0	a9	*17	21	13	11	*9.0
21	3.9	1.3	0			0	a9	17	21	14	10	8.7
22	1.8	2.4	0			0	a9	15	25	16	9.0	9.6
23	1.6	a2.4	0			0	a9	14	28	19	6.9	11
24	1.4	a2.4	0			0	a9	14	31	19	7.7	7.7
25	6.8	a2.4	0			0	9	14	34	20	11	6.6
26	9.6	a2.4	0			0	a6.5	14	34	25	13	6.6
27	10	a2.4	0			0	*4.0	13	33	29	15	6.4
28	10	a2.4	0			0	4.2	13	31	27	15	6.6
29	11	a2.4	0		-	0	3.2	17	30	26	14	6.4
30	11	a2.4	0			*a0.9	3.0	19	29	23	15	5.1
31	11	------	0		------	a1.4	------	19	------	19	14	------
Total	226.6	125.8	18.0	0	0	2.3	165.4	358.8	547.1	676	451.6	302.4
Mean	7.31	4.19	0.58	0	0	0.07	5.51	11.6	18.2	21.8	14.6	10.1
Ac-ft	449	250	36	0	0	4.6	328	712	1,090	1,340	896	600

Calendar year 1953: Max 40 Min 0 Mean 9.70 Ac-ft 7,020
Water year 1953-54: Max 34 Min 0 Mean 7.87 Ac-ft 5,710

* Discharge measurement or observation of no flow made on this day.
a No gage-height record; discharge interpolated or estimated on basis of probable gate changes, discharge for adjacent periods, and records for Big Lost River below Mackay Reservoir.

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., on left bank 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 1954.

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 gages at sites within 1 mile upstream at different datums. May 12 to June 4, 1912, staff gages at site 1½ miles upstream (above Sharp ditch) at different datums. Apr. 29, 1913, to Mar. 15, 1915, staff gage at site 1 mile downstream (below Streeter ditch) at different datum.

Average discharge.--38 years (1904-5, 1912-14, 1919-54), 278 cfs (201,300 acre-ft per year).

Extremes.--1904-5: Maximum discharge observed during water year, 1,120 cfs June 14 (gage height, 5.4 ft); minimum observed, 129 cfs (revised) May 14-21 (gage height, 2.45 ft).
1953-54: Maximum discharge during water year, 1,860 cfs June 27 (gage height, 4.74 ft); minimum, 59 cfs Oct. 17, 18 (gage height, 1.72 ft).
1903-6, 1912-15, 1919-54: 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 excellent. Sharp ditch (see preceding page) is only diversion between station and reservoir; about 9,000 acres of land are irrigated by diversion from river and tributaries above reservoir. Flow regulated by Mackay Reservoir (see p. 110).

Cooperation.--Water-stage recorder inspected by employees of Water District No. 27.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1904, 1905 (complete water year), and 1906, superseding those published in WSP 135, 178, 214 are given herewith.

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1904		1906-Con.		1906-Con.		1906-Con.	
Sept.15	235	July 3	970	July 23	640	Aug. 12	250
16	235	4	1,080	24	584	13	316
17	215	5	1,120	25	531	14	302
18	215	6	1,200	26	497	15	275
19	215	7	1,160	27	463	16	262
20	215	8	1,120	28	446	17	262
21	215	9	1,120	29	429	18	262
22	215	10	1,030	30	412	19	250
23	205	11	1,010	31	412	20	250
24	205	12	1,010	Aug. 1	412	21	250
25	205	13	1,230	2	412	22	316
26	205	14	1,250	3	395	23	378
27	205	15	1,180	4	378	24	378
28	205	16	1,010	5	346	25	378
29	205	17	928	6	331	26	362
30	205	18	907	7	302	27	346
		19	802	8	288	28	316
1906		20	760	9	275	29	288
July 1	823	21	720	10	262	30	262
2	802	22	700	11	250	31	262

Month	Maximum	Minimum	Mean	Runoff in acre-feet
September 1904.....	260	205	223	13,270
Calendar year 1905.....	1,120	129	253	183,300
July 1906.....	1,250	412	850	52,270
August.....	412	250	310	19,060

Big Lost River below Mackay Reservoir, near Mackay, Idaho--Continued

Discharge, in cubic feet per second, water year October 1904 to September 1905

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	195	185	168	163	154	145	154	137	518	781	288	173
2	195	185	168	163	154	145	154	137	669	823	275	173
3	195	*185	168	163	154	145	154	137	748	740	275	173
4	195	185	168	163	154	145	145	137	748	720	275	173
5	195	185	168	163	154	145	145	137	868	700	262	163
6	185	185	168	163	154	145	145	137	888	700	262	163
7	185	185	168	163	154	145	145	137	788	700	262	163
8	185	185	168	163	154	145	145	137	748	700	262	163
9	185	185	168	163	154	145	145	137	950	680	262	163
10	185	185	168	163	154	145	145	137	*1,010	680	250	163
11	185	185	168	163	154	145	145	137	868	*621	250	163
12	195	185	168	163	154	145	137	137	1,030	602	250	163
13	195	175	168	163	154	145	137	137	1,100	584	238	163
14	195	175	168	163	154	145	137	129	1,120	531	238	163
15	195	175	168	163	154	145	137	*129	1,030	480	227	163
16	195	175	168	163	154	145	137	129	930	480	227	163
17	185	175	168	163	154	145	137	129	930	446	227	163
18	185	175	168	163	154	145	*137	129	909	429	227	163
19	185	175	168	163	154	145	137	129	748	412	227	154
20	185	175	168	163	154	145	137	129	748	395	227	154
21	185	175	168	163	145	145	137	129	748	378	216	*154
22	185	175	168	163	145	145	137	137	868	378	205	154
23	185	175	168	163	145	145	137	145	950	395	205	154
24	185	175	168	163	145	145	137	145	909	378	205	154
25	185	175	168	154	145	145	137	145	848	378	194	154
26	185	175	160	154	145	145	137	145	788	362	194	154
27	185	175	160	154	145	145	137	145	788	346	194	154
28	185	175	160	154	145	145	137	163	748	346	194	154
29	185	175	160	154	-	145	137	216	708	346	194	154
30	185	175	160	154	------	145	137	262	708	331	183	154
31	185	-	160	154	-----	145	------	316	------	316	183	------
Total	5,835	5,370	5,160	4,990	4,240	4,495	4,225	4,632	25,411	16,158	7,178	4,822
Mean	188	179	166	161	151	145	141	149	847	521	232	161
Ac-ft	11,560	10,650	10,210	9,900	8,390	8,920	8,390	9,160	50,400	32,030	14,260	9,580

Calendar year 1904: Max 1,755 Min 160 Mean 394 Ac-ft 286,200
Water year 1904-5: Max 1,120 Min 129 Mean 253 Ac-ft 183,400

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	175	66	82	100	100	124	127	274	550	973	640	310
2	197	68	82	100	100	124	127	266	550	892	640	319
3	182	68	82	103	103	124	127	274	533	874	646	324
4	153	66	82	103	103	124	127	298	522	862	658	319
5	153	66	82	103	106	124	127	341	494	931	658	306
6	153	66	85	103	106	124	127	425	425	980	610	286
7	153	66	85	103	106	124	130	489	359	945	582	274
8	153	66	*87	103	106	124	130	516	332	924	550	266
9	143	70	90	103	109	124	131	555	294	910	511	248
10	130	75	90	103	112	124	131	628	187	*886	516	226
11	124	75	90	103	112	124	131	634	*120	862	538	212
12	124	77	90	104	112	124	131	599	120	832	500	212
13	124	77	90	105	112	124	131	582	120	796	406	215
14	127	80	93	*106	115	124	134	588	131	772	350	229
15	127	77	93	106	115	124	134	634	177	736	306	236
16	103	75	93	106	115	124	134	646	208	658	302	248
17	59	75	93	103	115	124	134	682	240	599	332	248
18	62	77	93	106	115	124	138	718	302	577	*364	255
19	62	80	95	106	118	124	138	*730	355	572	355	255
20	64	80	95	106	118	124	134	742	450	572	332	*270
21	66	80	95	103	121	124	134	754	588	577	310	282
22	68	80	95	106	124	124	134	778	724	594	302	302
23	68	82	95	103	124	124	134	784	832	634	286	319
24	70	82	95	106	124	127	134	772	966	700	266	319
25	66	82	95	103	*124	127	134	742	1,120	724	266	319
26	64	82	98	103	124	127	*167	730	1,140	730	290	319
27	66	82	98	103	124	127	215	688	1,100	706	324	319
28	66	82	98	103	124	127	240	652	1,010	664	332	319
29	66	82	98	103	-	*127	286	604	1,030	604	332	298
30	*66	82	98	103	--	127	286	528	1,030	582	315	255
31	66	---	98	103	---- -	127	------	522	------	646	310	------
Total	3,300	2,266	2,835	3,214	3,187	3,868	4,487	18,175	16,009	23,314	13,129	8,309
Mean	106	75.5	91.5	104	114	125	150	586	534	752	424	277
Ac-ft	6,550	4,490	5,620	6,370	6,320	7,670	8,900	36,050	31,750	46,240	26,040	16,480

Calendar year 1953: Max 1,710 Min 59 Mean 322 Ac-ft 232,900
Water year 1953-54: Max 1,140 Min 59 Mean 280 Ac-ft 202,500

* Discharge measurement made on this day.

Big Lost River near Arco, Idaho

Location.--Lat 43°35', long 113°16', near line between secs. 17 and 20, T. 3 N., R. 27 E., on right bank a quarter of a mile downstream from head of box canyon, 0.4 mile downstream from slough entering from left bank, and 4 miles southeast of Arco.

Drainage area.--1,410 sq mi, approximately.

Records available.--August 1946 to September 1954.

Gage.--Water-stage recorder. Prior to Oct. 14, 1952, at site 800 ft upstream at different datum.

Average discharge.--8 years, 63.6 cfs (46,040 acre-ft per year).

Extremes.--Maximum daily discharge during year, 85 cfs Jan. 23; maximum gage height, 5.23 ft Dec. 29 (ice jam); minimum discharge, 6.0 cfs May 9, 10 (gage height, 2.41 ft).
1946-54: Maximum discharge, 698 cfs June 11, 1952 (gage height, 3.93 ft, site and datum then in use); maximum gage height, that of Dec. 29, 1953; minimum discharge, 3.0 cfs May 20, 21, 1948 (gage height, 1.01 ft, site and datum then use).

Remarks.--Records good except those for periods of ice effect, which are fair. Station is below all large diversions for irrigation in Big Lost River Valley. Flow regulated by Mackay Reservoir (see p. 110). About 42,000 acres of land irrigated by diversions from river and tributaries above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 16-29, June 22 to Sept. 30)

2.4	5.0	2.9	23
2.5	7.0	3.2	43
2.6	10	3.6	88
2.7	14		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	59	67	b75	78	b46	42	25	18	26	18	16
2	33	*58	68	b75	78	b45	42	22	16	28	17	17
3	34	56	64	b75	b75	b46	41	20	14	30	17	18
4	33	55	64	b75	b76	b47	41	15	16	31	18	18
5	30	55	b64	80	78	b47	39	12	18	34	17	17
6	32	55	70	80	62	48	38	12	23	31	16	18
7	33	55	70	80	62	48	38	11	27	27	17	17
8	33	54	*b69	b75	b56	47	37	9.7	27	21	17	17
9	34	53	b69	79	b53	49	34	6.4	28	*21	17	17
10	32	53	74	b75	b54	48	27	6.6	*34	22	16	18
11	30	53	b70	b75	b54	47	30	6.6	34	20	16	18
12	31	54	b67	*b75	61	b45	30	6.8	29	18	18	20
13	35	53	b68	b75	62	b46	30	6.8	27	15	17	22
14	38	52	b72	b75	58	b48	30	6.8	26	17	17	22
15	40	49	78	b78	b53	48	29	6.6	20	21	18	22
16	44	46	76	80	53	48	28	7.0	16	25	17	22
17	48	49	75	79	53	47	27	7.0	15	27	*17	22
18	49	47	76	b75	52	46	28	7.6	14	27	17	22
19	50	b45	78	b70	b48	45	28	*8.2	14	27	17	24
20	53	b46	78	b70	52	45	27	8.2	14	27	17	24
21	49	47	78	b70	54	45	20	11	14	27	17	22
22	48	50	b76	b75	53	45	18	19	12	30	18	22
23	58	53	b76	b85	50	44	20	18	12	30	18	22
24	59	50	b72	83	50	45	20	18	12	30	18	22
25	58	53	b70	b75	50	45	19	20	12	30	18	23
26	55	55	b70	b75	*49	44	*20	16	15	28	16	23
27	60	55	b76	b78	48	44	21	12	17	22	16	*22
28	59	54	b75	82	48	44	22	13	18	22	17	22
29	59	56	b75	82	-	44	21	16	22	20	17	22
30	59	63	b75	80	-	*44	25	20	24	20	17	24
31	59	---	b75	79	-	42	---	20	---	18	16	---
Total	1,369	1,583	2,235	2,385	1,620	1,422	872	394.3	588	772	529	615
Mean	44.2	52.8	72.1	76.9	57.9	45.9	29.1	12.7	19.6	24.9	17.1	20.5
Ac-ft	2,720	3,140	4,430	4,730	3,210	2,820	1,730	782	1,170	1,530	1,050	1,220

Calendar year 1953: Max 240 Min 16 Mean 75.4 Ac-ft 54,580
Water year 1953-54: Max 85 Min 6.4 Mean 39.4 Ac-ft 28,530

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

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 1951 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 3,000 ft (from topographic map).

Extremes.--1951-54: Maximum daily discharge, 16 cfs June 23-26, July 19-26, 30, Aug. 19, 20, 1951; no flow at times during March, April, September, and October 1952.

Remarks.--Records good except those below 2 cfs, which are fair. Brailsford ditch diverts from Lewis Spring for irrigation.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 12 to Jan. 3, Jan. 5-7, 10-12, Apr. 12 to May 2)

Oct. 1 to Jan. 18				Jan. 19 to Sept. 30			
0.4	0.5	0.8	2.8	0.3	0.3	0.7	2.5
.5	.9	.9	4.4	.4	.6	.8	4.1
.6	1.4	1.1	8.4	.5	1.0	1.0	8.7
.7	1.9	1.3	13	.6	1.6	1.2	15

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	1.0	0.8	0.7	0.6	0.8	1.4	14	13	12	11	13
2	12	1.0	*.8	.7	.6	.8	1.4	*14	a13	12	11	13
3	12	1.0	.8	.7	.6	.8	1.4	14	a13	12	11	13
4	12	1.0	.8	.7	.7	.8	1.3	14	a13	12	12	13
5	11	1.1	.7	.7	.6	.8	1.3	14	a13	12	12	13
6	11	1.0	.7	.7	.6	.8	1.5	14	a13	12	12	13
7	11	1.1	.7	.7	.6	.7	1.6	14	a13	12	12	13
8	11	1.1	.7	.7	.6	.7	.8	14	a13	12	12	13
9	11	1.1	.7	.7	.6	.7	.4	14	a13	11	12	14
10	11	1.1	.8	.7	.6	.7	.4	14	a12	11	13	14
11	12	1.0	.7	.7	.8	.7	.4	14	a12	11	13	14
12	12	1.1	.7	.7	.8	.7	3.5	14	a12	11	13	14
13	11	1.1	.7	a.7	.8	.7	9.3	13	a12	11	13	14
14	9.8	1.1	.8	a.7	.8	.7	9.6	13	a12	*11	13	14
15	9.8	1.1	.8	a.7	.8	.7	10	13	a12	11	13	14
16	9.8	1.1	.8	a.7	*.8	.7	10	13	a12	11	13	14
17	9.6	1.1	.8	a.7	.8	.7	10	13	a12	11	*13	14
18	9.6	1.1	.8	a.7	.8	.6	11	13	*12	11	13	14
19	9.8	1.1	.8	*.7	.9	.8	11	13	12	11	13	14
20	10	1.1	.7	.7	.9	1.2	10	13	12	11	13	*14
21	4.9	1.0	.8	.8	.8	1.2	12	13	12	11	13	14
22	2.0	1.2	.8	.8	.8	*1.2	13	13	12	11	14	14
23	1.9	1.2	.8	.8	.8	1.2	13	13	12	11	13	14
24	1.9	1.2	.7	.7	.8	1.2	14	13	12	11	13	14
25	1.9	1.2	.7	.7	.8	1.3	14	13	12	11	13	14
26	*1.8	1.1	.7	.7	.8	1.3	14	13	12	11	13	14
27	1.7	1.1	.8	.7	.8	1.3	13	13	12	11	13	14
28	1.3	.9	.8	.7	.7	1.3	13	13	12	10	13	14
29	1.0	.9	.7	.6	--	1.3	14	13	12	10	13	14
30	1.0	.9	.7	.6		1.4	14	13	12	10	14	14
31	1.0	------	.7	.6	------	1.4	------	*13	------	10	13	------
Total	237.8	32.1	23.3	21.7	20.6	29.2	230.3	415	369	345	393	412
Mean	7.67	1.07	0.75	0.70	0.74	0.94	7.68	13.4	12.3	11.1	12.7	13.7
Ac-ft	472	64	46	43	41	58	457	823	732	684	780	817

Calendar year 1953: Max 14 Min 0.6 Mean 7.54 Ac-ft 5,460
Water year 1953-54: Max 14 Min 0.4 Mean 6.93 Ac-ft 5,020

* Discharge measurement made on this day.
a No gage-height record; 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 1951 to September 1954.

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

Extremes.--1951-54: Maximum daily discharge, 78 cfs Nov. 14, 15, 20-23, 1953; minimum daily, 58 cfs July 14-22, 1951, July 17-22, 1953.

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, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	76	74	72	70	72	71	62	62	64	71	62
2	68	76	74	73	70	72	71	*62	62	63	71	62
3	68	77	74	72	70	72	71	60	62	63	69	62
4	68	77	74	71	70	72	71	60	63	65	68	62
5	68	77	74	71	71	72	71	60	62	64	69	63
6	68	77	74	71	71	72	70	60	62	63	68	63
7	68	76	73	71	72	72	70	60	62	62	68	63
8	67	76	73	71	72	72	71	60	62	62	68	63
9	66	77	73	71	72	72	71	60	62	63	68	63
10	66	77	73	70	73	72	71	61	62	63	68	63
11	66	77	73	70	72	72	71	60	61	63	66	62
12	66	77	73	71	72	72	68	60	61	63	66	63
13	67	77	72	71	72	72	63	61	61	63	66	63
14	68	78	71	71	72	72	63	61	62	*64	65	63
15	69	78	72	71	*72	72	63	60	62	65	64	63
16	69	77	72	72	72	72	63	60	61	65	*64	63
17	69	77	71	72	72	72	63	60	62	66	63	63
18	70	77	72	72	72	72	63	60	*62	66	63	64
19	70	77	72	*72	72	72	63	60	63	66	63	64
20	70	78	71	71	72	72	63	61	63	67	63	63
21	74	78	71	71	72	72	63	62	64	68	63	*63
22	76	78	71	71	72	72	63	62	64	68	63	63
23	76	78	71	71	72	*71	63	63	64	68	63	63
24	76	77	71	71	72	72	63	63	63	68	63	63
25	76	76	71	72	72	72	61	62	63	69	63	63
26	*76	76	72	72	72	72	61	63	65	70	62	63
27	76	77	72	72	72	72	60	62	65	70	62	63
28	76	76	72	72	72	72	61	62	65	70	62	63
29	76	75	73	71	-	72	62	62	64	70	62	64
30	77	*75	72	71	-- -	71	62	62	65	70	62	64
31	76	------	72	71	-------	71	------	*62	------	70	62	------
Total	2,194	2,305	2,243	2,211	2,007	2,229	1,970	1,893	1,881	2,041	2,018	1,889
Mean	70.8	76.8	72.4	71.3	71.7	71.9	65.7	61.1	62.7	65.8	65.1	63.0
Ac-ft	4,350	4,570	4,450	4,390	3,980	4,420	3,910	3,750	3,730	4,050	4,000	3,750

Calendar year 1953:	Max	78	Min	58	Mean	66.3	Ac-ft	47,970
Water year 1953-54:	Max	78	Min	60	Mean	68.2	Ac-ft	49,350

* Discharge measurement made on this day.

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 Malad River, and 2¼ miles north of Hagerman.

Records available.--November 1937 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 2,727.7 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Jan. 3, 1950, at site 340 ft upstream at same datum.

Extremes.--Maximum discharge during year, 18,100 cfs May 29 (gage height, 11.63 ft); minimum, 677 cfs Jan. 16 (gage height, 2.59 ft); minimum daily, 5,950 cfs May 12.
1937-54: 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, 3,970 cfs July 8, 1951.

Remarks.--Records excellent. 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.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,160	7,560	*8,250	8,750	8,640	8,490	10,400	6,930	9,240	6,730	6,880	7,150
2	6,370	7,750	8,560	8,600	8,620	8,740	10,600	*6,980	7,820	6,630	6,910	7,150
3	7,540	7,620	8,110	8,820	8,580	8,340	10,500	7,520	7,600	6,610	*6,970	7,160
4	7,730	7,210	8,150	8,830	8,560	9,410	10,000	6,750	7,390	6,450	*7,040	6,860
5	7,670	7,360	8,680	9,200	8,510	9,170	11,600	6,850	7,450	6,870	6,770	7,150
6	9,250	7,820	8,020	8,710	8,650	9,100	11,300	6,640	7,320	8,920	6,840	7,310
7	7,700	7,710	8,160	8,890	8,160	8,910	11,000	6,460	7,530	6,740	6,830	7,540
8	7,720	7,140	7,880	8,690	8,530	9,360	11,300	6,400	7,330	6,790	6,720	7,480
9	7,530	7,660	8,280	8,710	8,400	9,680	10,900	6,190	7,990	6,210	6,780	7,870
10	7,090	7,650	9,180	8,660	8,610	9,410	9,800	6,010	8,000	6,470	6,750	7,130
11	7,500	7,410	8,670	8,680	8,550	9,100	9,900	6,130	*7,770	6,390	7,000	7,390
12	7,320	7,480	9,240	8,820	8,660	8,760	11,200	5,950	8,390	6,700	6,650	7,270
13	7,670	7,880	9,180	8,520	8,520	9,380	11,600	6,330	7,910	6,630	6,760	7,500
14	6,900	7,100	8,900	8,570	8,500	10,000	9,800	6,230	7,930	*6,520	6,840	7,580
15	7,660	7,800	9,180	8,570	*8,500	9,640	8,300	6,170	8,260	6,580	6,810	7,660
16	8,130	7,890	9,500	8,820	8,390	9,130	8,400	6,070	8,170	6,880	6,800	7,730
17	8,340	7,390	9,210	8,610	8,480	7,620	8,400	6,110	7,930	6,880	6,840	7,990
18	7,780	7,510	8,980	8,400	8,360	8,830	7,500	6,260	7,740	6,780	6,770	7,860
19	8,200	7,490	8,990	*8,470	8,480	6,680	7,400	6,360	7,350	6,690	7,010	7,970
20	7,660	7,950	8,940	8,360	8,640	7,700	6,700	5,980	6,950	6,870	7,070	8,000
21	7,660	7,550	8,640	8,420	9,400	7,910	6,700	6,380	7,040	6,640	7,020	*7,680
22	7,630	7,790	8,950	8,280	8,580	*8,570	9,500	6,330	6,470	6,840	6,990	8,260
23	7,400	8,390	8,750	8,680	8,860	8,220	11,600	6,550	6,530	6,900	7,100	7,870
24	7,590	8,330	8,580	8,430	8,640	8,570	9,000	7,030	6,380	7,000	7,120	7,960
25	8,080	8,910	8,570	8,350	8,690	8,470	7,700	7,420	6,410	6,850	7,020	7,970
26	*8,160	7,650	8,510	8,820	8,710	8,400	7,000	11,900	6,640	6,870	7,210	7,740
27	7,860	8,060	8,360	8,520	8,740	9,000	6,650	12,800	6,730	6,990	7,290	7,920
28	7,850	8,840	8,540	8,420	8,680	9,000	6,380	13,400	6,790	6,830	7,280	7,810
29	7,830	7,820	8,510	9,570	-	8,300	6,530	15,000	6,890	7,470	7,190	7,860
30	7,750	8,250	8,590	8,740	------	8,400	6,700	14,400	6,920	7,020	7,320	7,820
31	7,710	------	8,690	8,770	------	10,300	------	13,700	------	6,900	7,400	------
Total	239,440	232,970	268,750	268,680	240,640	272,590	274,360	243,230	222,870	211,650	215,980	228,640
Mean	7,724	7,766	8,669	8,667	8,594	8,793	9,145	7,846	7,429	6,827	6,967	7,621
Ac-ft	474,900	462,100	533,100	532,900	477,300	540,700	544,200	482,400	442,100	419,800	428,400	453,500

Calendar year 1953: Max 22,800 Min 5,910 Mean 8,549 Ac-ft 6,189,000
Water year 1953-54: Max 15,000 Min 5,950 Mean 7,999 Ac-ft 5,791,000

* Discharge measurement made on this day.
Note.--No gage-height record Mar. 26 to Apr. 26; discharge estimated from records of power output and head at Lower Salmon Falls powerplant furnished by Idaho Power Co.

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 mile upstream from North Fork and 8 miles northwest of Ketchum.

Drainage area.--137 sq mi.

Records available.--May 1948 to September 1954.

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.

Average discharge.--6 years, 172 cfs (124,500 acre-ft per year).

Extremes.--Maximum discharge during year, 978 cfs May 21 (gage height, 4.90 ft); minimum, 24 cfs Dec. 8, Mar. 31, but may have been less during period of ice effect; minimum gage height, 1.90 ft Dec. 8.
1948-54: Maximum discharge, 1,240 cfs June 6, 1952; minimum recorded, 14 cfs sometime during period Jan. 1-22, 1951 (gage height, 1.52 ft).

Remarks.--Records excellent except those for periods of ice effect, 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 on Prairie Creek; diversion point below station for irrigation.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 13-17, July 2-7)

1.9	26	3.5	350
2.2	51	4.0	548
2.5	94	4.9	978
3.0	200		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	63	*60	52	50	48	47	254	313	442	126	75
2	74	65	50	50	47	39	47	237	281	431	122	75
3	74	64	50	52	48	40	47	246	269	408	118	75
4	71	64	55	51	49	43	49	290	275	401	116	74
5	71	65	54	55	49	45	54	372	313	*408	114	74
6	71	65	67	51	50	49	55	442	306	390	114	74
7	70	61	54	55	46	55	55	474	287	368	110	72
8	70	59	49	51	45	59	58	508	269	343	105	72
9	70	59	71	43	48	61	59	584	281	323	103	72
10	70	60	64	38	50	63	58	701	275	297	*103	71
11	68	61	46	44	52	51	63	733	257	281	101	71
12	68	63	55	*47	55	45	75	706	254	269	103	71
13	68	61	44	44	55	44	91	656	263	257	101	*71
14	70	63	46	47	56	47	110	616	284	248	98	70
15	71	65	61	48	54	48	126	620	316	260	98	72
16	70	63	58	45	52	54	158	660	364	248	96	72
17	70	63	50	67	54	58	221	743	*340	234	94	70
18	70	47	54	54	*50	51	284	768	319	218	92	70
19	68	45	58	b51	40	48	287	*823	306	203	91	70
20	68	52	60	b40	46	50	260	893	319	193	91	68
21	68	54	55	45	52	46	260	933	382	186	96	67
22	67	64	35	51	48	*43	287	838	431	176	94	67
23	67	70	b27	54	50	44	319	701	530	167	89	67
24	67	68	b27	b51	52	49	354	638	598	162	86	67
25	64	64	b30	b40	56	46	379	616	588	158	86	*65
26	64	74	b40	44	55	45	397	548	723	158	88	65
27	64	65	b48	47	45	47	*379	462	758	151	86	64
28	*65	60	50	48	47	46	379	404	620	147	83	64
29	64	59	50	49	-	45	357	372	516	138	80	65
30	64	60	44	52	------	43	303	336	470	136	80	65
31	64	-----	46	52	-----	43	-----	313	------	128	77	------
Total	2,124	1,846	1,558	1,518	1,401	1,495	5,618	17,487	11,507	7,929	3,041	2,095
Mean	68.5	61.5	50.3	49.0	50.0	48.2	187	564	384	256	98.1	69.8
Cfsm	0.500	0.449	0.367	0.358	0.365	0.352	1.36	4.12	2.80	1.87	0.716	0.509
In.	0.58	0.50	0.42	0.41	0.38	0.41	1.53	4.75	3.12	2.15	0.83	0.57
Ac-ft	4,210	3,660	3,090	3,010	2,780	2,970	11,140	34,680	22,820	15,730	6,030	4,160

Calendar year 1953: Max 808 Min 27 Mean 153 Cfsm 1.12 In. 15.21 Ac-ft 111,100
Water year 1953-54: Max 933 Min 27 Mean 158 Cfsm 1.15 In. 15.65 Ac-ft 114,300

Peak discharge (base, 400 cfs).--Apr. 26 (7 p.m.) 450 cfs (3.81 ft); May 10 (11 p.m.) 803 cfs (4.57 ft); May 21 (1:30 a.m.) 978 cfs (4.90 ft); June 26 (9:30 p.m.) 928 cfs (4.80 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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 1954.

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.--13 years (1941-54), 85.9 cfs (62,190 acre-ft per year).

Extremes.--Maximum discharge during year, 417 cfs May 20 (gage height, 2.64 ft); minimum, 16 cfs Jan. 9 (gage height, 0.70 ft), but may have been less during period of no gage-height record.

1940-54: Maximum discharge, 696 cfs May 30, 1943 (gage height, 3.36 ft); minimum, 6 cfs Feb. 29, 1944 (gage height, 0.55 ft), result of ice jam upstream; minimum daily, 17 cfs Dec. 17, 1946.

Remarks.--Records excellent except those for periods of fragmentary gage-height record, which are good, and those for periods 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 table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.8	22	1.8	164
1.0	38	2.2	270
1.4	88	2.6	402

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	36	*34	a31	f28	33	34	144	151	122	46	35
2	37	36	30	f30	f28	27	34	132	134	117	44	35
3	37	35	31	a30	a29	32	34	128	128	109	44	35
4	38	35	33	a31	f29	32	37	142	128	109	45	35
5	37	36	29	a31	f30	33	44	186	136	102	45	35
6	37	36	34	a31	a30	34	47	228	134	*101	45	35
7	37	34	33	a31	f28	35	48	256	128	96	44	36
8	37	34	26	a29	f28	36	51	282	120	93	42	35
9	37	34	33	f26	a29	38	53	311	128	88	41	35
10	37	34	32	f26	a30	39	55	353	134	85	*39	34
11	37	34	27	a29	a31	f36	61	360	124	81	38	34
12	37	34	32	*30	a33	34	74	347	120	78	40	34
13	37	35	31	a28	a35	34	85	323	120	75	40	*34
14	37	35	31	a29	a35	34	101	298	120	75	38	34
15	37	35	33	a30	a34	34	109	295	130	78	38	34
16	38	35	33	a31	a33	35	126	314	140	75	37	36
17	38	34	32	a31	a33	35	171	340	*132	73	37	35
18	37	28	32	a29	*33	33	204	343	128	70	37	35
19	37	26	a32	a27	27	33	188	357	124	70	36	36
20	37	28	a33	f23	34	34	169	*392	124	65	36	35
21	37	29	28	a28	32	31	164	402	130	61	39	35
22	36	33	26	a29	30	30	171	367	140	60	39	34
23	36	34	23	a30	33	*31	183	317	153	59	38	34
24	37	34	24	a28	33	34	191	282	160	56	37	34
25	36	33	a25	f26	34	33	204	258	162	54	37	34
26	36	34	a27	a28	34	33	214	233	201	53	38	34
27	36	34	a28	a31	30	34	*209	206	206	51	38	34
28	*37	34	f29	a31	33	34	204	186	171	50	36	33
29	37	33	a30	a31	-	34	201	171	146	50	35	34
30	34	34	f28	a31	-	33	171	157	132	48	34	35
31	36	---	f29	a30	-----	32	------	146	------	47	34	------
Total	1,140	1,006	928	906	876	1,040	3,637	8,256	4,184	2,351	1,217	1,038
Mean	36.8	33.5	29.9	29.2	31.3	33.5	121	266	139	75.8	39.3	34.6
Ac-ft	2,260	2,000	1,840	1,800	1,740	2,060	7,210	16,380	8,300	4,660	2,410	2,060

Calendar year 1953: Max 376 Min 21 Mean 79.9 Ac-ft 57,850
Water year 1953-54: Max 402 Min 23 Mean 72.8 Ac-ft 52,720

Peak discharge (base, 300 cfs).--May 10 (11:30 p.m.) 395 cfs (2.58 ft); May 20 (11:30 p.m.) 417 cfs (2.64 ft); June 26 (7 p.m.) 304 cfs (2.31 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for nearby Big Wood River stations.

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

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 40 ft (revised) 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 on following page.

Records available.--June 1915 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 5,301.17 ft above mean sea level, preliminary. Prior to Apr. 12, 1936, staff gages at or near highway bridge, at same datum.

Extremes.--Maximum discharge during year, 73 cfs Apr. 15 (gage height, 3.71 ft); maximum gage height, 3.87 ft Jan. 13 (ice jam); minimum discharge, 0.8 cfs Dec. 26 (gage height, 1.47 ft).

1915-54: 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 fair. 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 following page) is total discharge of river at this point.

Cooperation.--Water-stage recorder inspected by employees of Water District No. 7 AB.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 9, Aug. 9 to Sept. 30				May 9 to Aug. 8			
1.9	5.5	3.0	46	1.6	3.6	2.5	28
2.1	10	3.7	72	1.8	7.4	3.4	61
2.5	26			2.1	15		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	18	*13	a10	11	11	15	15	15	24	50	19
2	12	17	12	a10	10	9.8	15	12	12	33	49	18
3	13	18	12	a10	10	a9.5	16	12	11	29	47	18
4	13	17	13	a 11	10	a9.8	19	11	11	28	45	18
5	12	13	10	a 11	11	a10	25	12	16	27	44	18
6	12	13	12	a 11	11	a 11	31	9.6	16	*26	44	17
7	12	13	11	a 11	10	a 11	30	7.8	14	22	44	18
8	12	14	b8.0	a 11	b10	a12	31	7.3	11	16	42	19
9	14	15	b8.0	a10	a10	a13	34	23	12	14	40	19
10	14	15	11	a9.5	a 11	a15	34	17	14	9.5	*39	19
11	13	15	b9.0	a10	a 11	a14	37	20	12	8.3	38	19
12	11	15	9.2	*10	a12	a13	44	18	11	7.0	37	19
13	11	14	10	b9.8	a13	12	52	17	11	6.4	38	*19
14	11	15	9.2	b10	a12	13	62	16	12	6.1	35	20
15	12	15	11	11	a12	13	69	14	14	7.9	34	20
16	12	15	12	11	a12	15	50	10	*20	7.4	34	21
17	14	14	12	12	*12	15	59	12	18	7.5	34	20
18	16	13	12	a10	12	13	50	11	15	4.6	33	21
19	17	b9.8	12	a10	10	12	50	11	14	4.3	33	20
20	16	b9.0	13	a10	11	13	46	*9.9	15	4.3	32	20
21	17	10	12	a 11	12	12	44	9.7	25	4.8	34	20
22	18	11	11	a 11	11	a12	44	16	35	*4.8	35	20
23	18	12	b8.0	a12	11	*12	48	33	47	17	32	20
24	18	13	b7.0	a 11	12	15	46	28	51	52	30	*19
25	18	12	b7.0	a10	12	13	35	25	51	50	30	19
26	18	13	b7.0	a 11	12	13	30	22	59	47	28	19
27	*18	14	a8.5	a 11	10	13	*21	18	55	43	26	18
28	18	14	a9.5	a12	10	14	21	15	36	48	23	18
29	18	13	a10	a12	-	15	20	14	28	48	21	21
30	18	13	a9.6	a12	-	13	18	14	24	45	20	23
31	18		a9.6	a 11	------	13	------	16	------	48	19	------
Total	456	412.8	318.6	332.3	311	390.1	1,096	476.3	685	699.9	1,090	579
Mean	14.7	13.8	10.3	10.7	11.1	12.6	36.5	15.4	22.8	22.6	35.2	19.3
Ac-ft	904	819	632	659	617	774	2,170	945	1,360	1,390	2,160	1,150

Calendar year 1953: Max 69 Min 6.2 Mean 19.6 Ac-ft 14,170
Water year 1953-54: Max 69 Min 4.3 Mean 18.8 Ac-ft 13,580

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage, records for Big Wood River at Hailey, and weather records.
b Stage-discharge relation affected by ice.

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 1954. 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 upstream at different datums.

Average discharge.--Average combined discharge of Big Wood River and Big Wood Slough, 39 years, 422 cfs (305,500 acre-ft per year).

Extremes.--Maximum discharge during year, 3,050 cfs June 27 (gage height, 5.88 ft); minimum, 87 cfs Dec. 24 (gage height, 1.17 ft).

1915-54 (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.

1915-54 (combined): Maximum daily discharge, 4,500 cfs June 6, 7, 1938, minimum daily, 15 cfs Dec. 27, 1921.

Remarks.--Records excellent. Water diverted around station through Big Wood Slough (see preceding page). 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 employees of Water District No. 7 AB.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 26 to June 27)

1.2	89	3.0	880
1.5	170	4.0	1,550
2.0	360	5.0	2,340

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	177	184	*170	148	154	142	170	742	695	1,110	259	139
2	187	184	161	142	145	131	177	665	650	1,070	251	133
3	190	184	158	151	145	131	184	645	630	1,010	236	136
4	190	177	170	151	145	131	201	650	625	1,010	226	133
5	190	161	145	154	148	133	229	772	718	1,000	222	133
6	190	164	164	154	148	139	251	952	706	*970	222	133
7	184	161	158	158	142	148	251	1,050	660	922	218	133
8	177	164	128	154	139	158	259	1,180	615	844	211	145
9	177	177	139	148	142	180	274	1,220	635	796	204	148
10	173	177	148	128	142	190	274	1,560	650	736	197	145
11	177	177	133	142	148	180	286	1,580	620	700	*194	142
12	177	173	133	*145	170	161	322	1,580	605	665	194	145
13	177	170	136	139	180	154	352	1,490	625	630	197	*145
14	177	180	133	151	170	158	400	1,410	650	625	187	145
15	184	180	145	154	158	158	450	1,420	700	655	180	145
16	190	173	151	154	158	167	530	1,470	*826	635	180	154
17	187	170	151	154	*154	167	650	1,690	772	605	184	148
18	190	161	148	142	154	161	808	1,800	724	560	184	148
19	194	136	158	148	131	158	826	1,920	695	520	180	148
20	187	139	164	b120	145	164	778	*2,100	712	495	184	148
21	194	148	158	b140	148	151	748	2,290	868	470	190	145
22	201	167	139	158	139	148	766	1,920	994	*441	190	145
23	201	170	109	164	145	*148	832	1,560	1,240	391	180	145
24	201	170	104	158	148	164	880	1,420	1,370	318	170	*145
25	197	167	109	b130	148	158	916	1,340	1,350	306	170	142
26	197	173	119	b140	151	154	958	1,210	1,720	290	170	142
27	*194	180	133	158	139	164	*976	1,040	2,220	270	167	139
28	187	170	136	154	139	167	946	910	1,520	282	154	139
29	187	167	142	158	-	170	934	832	1,260	270	148	148
30	184	167	133	161	--	167	838	772	1,190	263	142	158
31	187	------	136	158	------	164	------	712	------	267	139	------
Total	5,805	5,071	4,411	4,616	4,175	4,866	16,466	39,902	27,245	19,126	5,930	4,294
Mean	187	169	142	149	149	157	548	1,287	908	617	191	143
Ac-ft	11,510	10,060	8,750	9,160	8,280	9,650	32,660	79,140	54,040	37,940	11,760	8,520

Calendar year 1953: Max 2,300 Min 104 Mean 441 Ac-ft 319,300
Water year 1953-54: Max 2,290 Min 104 Mean 389 Ac-ft 281,500

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

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Big Wood River at Hailey, Idaho--Continued

Combined discharge, in cubic feet per second, of Big Wood River and Big Wood Slough at Hailey, Idaho, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	189	202	183	158	165	153	185	757	710	1,130	309	158
2	199	201	173	152	155	141	192	677	662	1,100	300	151
3	203	202	170	161	155	140	200	657	641	1,040	283	154
4	203	194	183	162	155	141	220	661	636	1,040	271	151
5	202	174	155	165	159	143	254	784	734	1,030	266	151
6	202	177	176	165	159	150	282	962	722	996	266	150
7	196	174	169	169	152	159	281	1,060	674	944	262	151
8	189	178	136	165	149	170	290	1,190	626	860	253	164
9	191	192	147	158	152	193	308	1,240	647	810	244	167
10	187	192	159	138	153	205	308	1,580	664	746	236	164
11	190	192	142	152	159	194	323	1,600	632	708	232	161
12	188	188	142	155	182	174	366	1,600	616	672	231	164
13	188	184	146	149	193	166	404	1,510	636	636	235	164
14	188	195	142	161	182	171	462	1,430	662	631	222	165
15	196	195	156	165	170	171	519	1,430	714	663	214	165
16	202	188	163	165	170	182	580	1,480	846	642	214	175
17	201	184	163	166	166	182	709	1,700	790	612	218	168
18	206	174	160	152	166	174	858	1,810	739	565	217	169
19	211	146	170	158	141	170	876	1,930	709	524	213	168
20	203	148	177	130	156	177	824	2,110	727	499	216	168
21	211	158	170	151	160	163	792	2,300	893	475	224	165
22	219	178	150	169	150	160	810	1,940	1,030	446	225	165
23	219	182	117	176	156	160	880	1,590	1,290	408	212	165
24	219	183	111	169	160	179	926	1,450	1,420	370	200	164
25	215	179	116	140	160	171	951	1,360	1,400	356	200	161
26	215	186	126	151	163	167	988	1,230	1,780	337	198	161
27	212	194	142	169	149	177	997	1,060	2,280	313	193	157
28	205	184	146	166	149	181	967	925	1,560	330	177	157
29	205	180	152	170	-	185	954	846	1,290	318	169	169
30	202	180	143	173	-	180	856	786	1,210	308	162	181
31	205	------	146	169	------	177	------	728	------	315	158	------
Total	6,261	5,484	4,731	4,949	4,486	5,256	17,562	40,383	27,940	19,824	7,020	4,873
Mean	202	183	153	160	160	170	585	1,303	931	639	226	162
Ac-ft	12,420	10,880	9,380	9,820	8,900	10,430	34,830	80,100	55,420	39,320	13,920	9,670

Calendar year 1953: Max 2,340 Min 111 Mean 461 Ac-ft 333,500
Water year 1953-54: Max 2,300 Min 111 Mean 408 Ac-ft 295,100

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 1954 (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, at site three-eighths of a mile downstream at different datum.

Average discharge.--16 years (1915-16, 1921-22, 1939-41, 1942-54), 291 cfs (210,700 acre-ft per year).

Extremes.--Maximum discharge during year, 1,870 cfs June 27 (gage height, 5.60 ft); minimum, 31 cfs Jan. 21; minimum gage height, 2.93 ft Aug. 2.

1911-54: 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, which are fair. Diversions for irrigation of about 36,400 acres above station. Storage above station is negligible.

Cooperation.--Water-stage recorder inspected and three discharge measurements furnished by employees of Water District No. 7 AB.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from ice Feb. 8-10; shifting-control method used May 18-25, June 27 to Sept. 30)

3.2	42	4.5	660
3.4	88	5.0	1,030
3.7	198	6.0	1,920
4.0	350		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	100	*94	66	83	97	130	550	350	815	100	57
2	68	97	94	67	83	94	134	461	312	737	97	50
3	68	94	91	67	86	86	130	401	*286	674	97	55
4	70	86	91	67	83	86	141	334	276	654	97	63
5	73	83	88	68	86	88	149	318	a300	562	*116	63
6	73	80	94	68	86	88	156	390	a310	498	116	61
7	73	80	94	68	83	88	169	449	301	425	104	61
8	73	80	80	67	80	97	173	511	291	*384	97	63
9	76	76	78	62	76	156	181	543	291	413	97	63
10	76	83	78	60	86	164	185	723	318	361	94	76
11	73	86	73	*57	86	130	181	890	318	345	107	76
12	70	86	76	57	94	123	185	974	301	334	*97	73
13	66	86	73	55	110	116	207	875	307	312	113	76
14	66	86	70	55	110	113	245	758	312	296	104	*88
15	66	86	70	55	100	113	291	737	334	323	88	88
16	66	86	70	61	97	116	345	751	413	339	78	88
17	63	88	70	68	*94	116	431	882	407	312	68	76
18	61	91	70	68	104	116	569	990	*361	281	70	76
19	61	88	70	68	94	116	634	1,090	339	226	78	80
20	66	97	73	61	91	116	634	1,300	328	198	78	78
21	66	100	76	52	88	113	614	*1,500	350	181	86	73
22	68	130	73	57	88	113	614	1,450	425	156	88	73
23	70	160	68	59	91	113	654	1,170	595	152	88	73
24	80	110	59	68	94	*116	695	998	751	141	80	70
25	80	91	59	63	100	113	702	890	751	126	91	61
26	80	80	63	57	107	123	716	800	882	*119	97	59
27	83	78	65	57	104	130	765	695	1,740	116	88	52
28	*83	76	66	55	97	141	*744	556	1,530	107	*88	46
29	88	80	66	57	-	141	709	536	1,090	104	76	52
30	91	91	66	59	------	134	614	681	898	107	70	57
31	86	------	66	76	------	130	------	396	------	107	68	------
Total	2,253	2,735	2,324	1,925	2,581	3,586	12,097	23,599	15,467	9,905	2,816	2,027
Mean	72.7	91.2	75.0	62.1	92.2	116	403	761	516	320	90.8	67.6
Ac-ft	4,470	5,420	4,610	3,820	5,120	7,110	23,990	46,810	30,680	19,650	5,590	4,020

Calendar year 1953: Max 1,610 Min 59 Mean 252 Ac-ft 182,400
Water year 1953-54: Max 1,740 Min 46 Mean 223 Ac-ft 161,300

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 26 to Jan. 10, June 5, 6; discharge estimated on basis of weather records and records for other Big Wood River Stations.

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.

Records available.--May 1912 to September 1954 (no winter records prior to 1945). Discharge measurements only, for 1922.

Gage.--Water-stage recorder. Altitude of gage is 4,870 ft (by barometer).

Average discharge.--10 years (1944-54), 187 cfs (135,400 acre-ft per year).

Extremes.--Maximum discharge during year, 2,610 cfs Apr. 7 (gage height, 8.28 ft); minimum, 3.0 cfs Sept. 5 (gage height, 0.91 ft).
1912-54: Maximum discharge recorded, 9,780 cfs Apr. 8, 1943; maximum gage height, 15.48 ft about Apr. 18, 1938, from floodmark; minimum discharge recorded, 1.5 cfs Aug. 29, 1940.

Remarks.--Records excellent except those below 10 cfs, which are good, 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.--Occasional inspections of recorder furnished by Water District No. 7 AB.

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 5-20)

0.8	2.2	2.5	106
1.0	5.2	3.0	200
1.2	9.3	4.0	435
1.5	18	5.0	760
1.8	34	6.0	1,180
2.1	58	8.0	2,320

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.0	9.8	22	24	22	45	337	356	76	78	5.0	3.5
2	5.2	9.8	20	22	24	45	378	330	68	68	5.2	3.5
3	5.0	10	18	23	24	41	481	302	60	58	6.9	3.3
4	5.2	10	18	21	26	39	702	276	54	50	7.1	3.3
5	5.6	10	16	22	26	45	1,220	269	50	41	6.0	3.2
6	5.4	11	20	23	28	45	2,090	272	50	33	5.4	3.2
7	5.2	11	19	22	27	47	2,280	278	49	32	4.4	3.3
8	5.4	11	16	20	27	61	1,950	290	45	28	4.9	3.5
9	5.2	11	18	19	28	174	1,590	295	46	*25	4.9	3.5
10	5.2	11	20	17	29	342	1,290	302	57	19	4.7	3.6
11	5.2	11	19	*17	31	187	952	313	69	15	4.4	3.5
12	5.4	11	21	16	33	171	788	320	68	15	*4.2	3.5
13	6.0	11	22	15	35	151	720	313	64	13	4.2	3.5
14	6.5	11	22	15	34	144	*740	292	54	11	4.1	3.5
15	6.9	11	22	16	32	133	752	272	54	17	3.9	*3.6
16	8.9	12	24	18	*32	157	744	258	61	15	3.8	3.8
17	9.8	12	25	20	32	171	772	253	61	13	3.8	3.6
18	8.4	12	24	18	34	135	876	253	*60	13	3.6	3.8
19	8.6	11	24	17	31	151	864	242	57	11	3.6	3.8
20	8.6	11	25	16	33	161	748	218	57	12	3.6	3.9
21	8.9	11	26	16	33	150	636	207	47	11	3.8	4.1
22	8.9	12	24	17	32	150	547	*226	40	9.8	3.8	4.1
23	9.1	23	22	19	35	163	496	209	33	8.2	3.8	4.1
24	9.3	17	21	18	36	171	460	179	24	6.9	3.8	4.1
25	9.3	14	21	17	40	165	440	159	18	6.9	3.8	4.1
26	9.6	14	22	17	46	177	418	140	23	6.5	3.8	4.1
27	9.3	15	23	18	45	256	410	124	48	6.0	3.6	4.1
28	9.6	19	23	21	48	349	422	112	82	5.6	3.5	4.2
29	9.6	23	23	23	-	408	*410	93	108	5.0	3.5	4.2
30	9.6	*23	22	24		410	392	80	91	4.7	3.5	4.1
31	*9.8	-	23	23	- - -	347	------	74	------	4.6	3.3	------
Total	229.7	388.6	665	594	903	5,191	24,905	7,307	1,674	642.2	133.9	111.6
Mean	7.41	13.0	21.5	19.2	32.2	167	830	236	55.8	20.7	4.32	3.72
Ac-ft	456	771	1,320	1,180	1,790	10,300	49,400	14,490	3,320	1,270	266	221

Calendar year 1953: Max 2,310 Min 4.1 Mean 168 Ac-ft 121,900
Water year 1953-54: Max 2,280 Min 3.2 Mean 117 Ac-ft 84,780

Peak discharge (base, 500 cfs).--Apr. 7 (12:30 a.m.) 2,610 cfs (8.28 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Dec. 8 to Jan. 10, Jan. 12 to Feb. 13; discharge estimated on basis of weather records, inflow-outflow studies for Magic Reservoir, 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.
Records available.--February to April 1909 (gage heights only), April 1909 to September 1954.
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 or staff gages at dam. Datum of gages prior to Oct. 1, 1942, was 4,800 ft lower.
Extremes.--Maximum contents observed during year, 192,300 acre-ft May 21-23 (gage height, 135.2 ft); minimum observed, 81,370 acre-ft Sept. 30 (gage height, 97.1 ft).
1909-54: Maximum contents observed, 194,200 acre-ft Apr. 30, 1951 (gage height, 135.7 ft); no storage for several days in 1909, 1919-20, 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 reading and yield table furnished by Water District No. 7 AB.
Revisions.--WSP 1217: Drainage area.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	102,300	107,300	110,600	117,100	122,700	130,800	151,700	191,100	188,000	180,400	148,500	110,300
2	102,500	107,500	110,800	117,100	123,000	131,400	152,600	190,700	186,800	180,000	146,900	109,300
3	102,500	107,800	111,100	117,400	123,000	131,600	153,600	190,300	185,700	179,600	145,300	108,300
4	102,800	108,000	111,100	117,400	123,300	131,900	154,900	190,300	184,900	180,000	143,800	107,300
5	102,800	108,000	111,400	117,400	123,600	132,200	156,900	189,900	184,100	180,000	142,500	106,000
6	103,000	108,300	111,600	117,600	123,800	132,500	160,300	189,200	183,000	179,600	141,300	104,800
7	103,000	108,500	111,900	117,600	124,100	132,800	164,400	188,800	181,900	178,900	139,500	103,800
8	103,300	108,500	112,400	117,900	124,100	133,100	169,400	188,800	180,700	178,100	138,300	103,000
9	103,300	108,800	112,600	118,200	124,400	133,600	173,000	188,800	180,400	177,700	136,500	102,000
10	103,500	109,000	112,900	118,400	124,700	135,100	175,900	189,200	179,600	176,600	135,100	101,100
11	103,800	109,300	113,200	118,400	124,900	136,500	178,500	189,500	178,900	175,900	133,900	100,100
12	104,000	109,600	113,200	118,700	125,200	137,100	180,000	190,300	178,100	175,200	132,500	99,130
13	104,300	109,800	113,400	119,000	125,800	137,700	182,200	189,500	177,400	174,100	129,700	97,930
14	104,300	110,100	113,700	119,200	126,000	138,300	184,100	191,900	176,600	173,000	129,700	96,980
15	104,500	110,300	113,900	119,500	126,600	138,900	185,700	191,900	176,300	171,900	128,300	95,800
16	104,800	110,600	114,200	119,500	126,900	139,500	187,600	191,900	175,900	170,800	127,000	94,850
17	105,000	110,800	114,200	119,800	127,200	140,400	189,200	191,900	175,900	169,700	125,800	93,920
18	105,000	111,100	114,500	119,800	127,400	140,700	189,900	191,900	175,500	168,700	124,700	92,750
19	105,300	111,100	114,500	120,000	127,700	141,300	191,100	191,900	174,800	167,200	123,600	91,830
20	105,300	111,400	114,700	120,000	128,300	141,600	191,500	191,900	174,400	166,200	122,200	90,910
21	105,500	111,400	115,000	120,300	128,300	142,500	191,500	192,300	174,100	164,800	121,100	87,960
22	105,800	111,400	115,300	120,600	128,500	143,100	191,500	192,300	173,700	163,000	120,000	86,840
23	105,900	110,800	115,500	120,900	128,800	143,800	191,500	192,300	173,700	162,000	119,200	85,950
24	106,000	110,300	115,800	121,100	129,100	144,700	191,100	191,900	173,700	160,600	118,200	85,070
25	106,000	109,300	116,300	121,100	129,400	145,300	191,100	191,500	174,100	158,900	117,100	84,630
26	106,300	109,300	116,300	121,400	129,700	145,900	191,100	191,100	174,400	157,300	116,000	83,970
27	106,500	109,600	116,600	121,400	129,900	146,600	191,100	190,300	175,500	155,900	116,600	83,320
28	106,800	109,800	116,600	121,400	130,500	147,500	191,100	190,300	177,700	154,600	114,200	82,880
29	106,800	110,100	116,800	121,700	-	148,500	191,110	189,500	178,900	153,000	113,200	82,240
30	107,000	110,300	116,800	121,900	------	149,400	191,100	189,200	179,600	151,700	112,400	81,370
31	107,300	------	117,100	122,500	-------	150,700	-------	188,400	--------	150,100	111,400	------

Monthly gage height and usable contents, water year October 1953 to September 1954

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	106.2	102,300	-
Oct. 31	108.2	107,300	+5,000
Nov. 30	109.4	110,300	+3,000
Dec. 31	112.0	117,100	+6,800
Calendar year 1953	-	-	-10,900
Jan. 31	114.0	122,500	+5,400
Feb. 28	116.9	130,500	+8,000
Mar. 31	123.6	150,700	+20,200
Apr. 30	134.9	191,100	+40,400
May 31	134.2	188,400	-2,700
June 30	131.9	179,600	-8,800
July 31	123.4	150,100	-29,500
Aug. 31	109.8	111,400	-38,700
Sept.30	97.1	81,370	-30,030
Water year 1953-54	-	-	-20,930

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 4,665 ft (by barometer).

Average discharge.--42 years (1912-54), 424 cfs (307,000 acre-ft per year).

Extremes.--Maximum discharge during year, 1,730 cfs May 22 (gage height, 5.75 ft); minimum, 7.8 cfs Feb. 18, 21 (gage height, 1.91 ft).
1911-54: Maximum discharge, 10,000 cfs Apr. 26, 1952 (gage height, 15.68 ft, from floodmark); no flow Feb. 3, 1915.

Remarks.--Records excellent except those below 20 cfs, which are good, and those for period of no gage-height record, which are poor. 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 by employees of Water District No. 7 AB.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.9	5.0	3.5	312
2.0	12	4.0	540
2.3	42	5.0	1,140
2.6	81	6.0	1,910
3.0	156		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	11	9.9	9.2	9.2	9.2	9.9	1,080	894	750	864	600
2	14	11	*9.9	9.2	9.2	9.2	11	979	864	712	846	600
3	14	11	9.9	9.2	9.2	9.2	11	854	858	695	846	620
4	14	11	9.2	9.2	8.5	9.2	11	906	864	695	846	630
5	16	11	9.2	9.2	8.5	8.5	11	888	870	695	840	630
6	16	11	9.2	9.2	8.5	8.5	11	882	858	712	840	625
7	16	11	9.2	9.9	8.5	8.5	12	888	864	750	840	625
8	16	11	9.2	9.2	8.5	9.2	13	894	834	762	834	625
9	17	11	9.2	9.2	9.2	9.9	13	888	804	810	834	625
10	17	11	9.2	9.2	9.2	9.2	14	918	774	*822	834	625
11	17	11	9.2	*9.2	9.9	9.2	16	918	750	816	834	625
12	17	11	9.2	9.2	9.9	9.2	22	944	684	822	*834	620
13	17	11	9.2	9.2	11	9.2	22	1,040	662	846	822	620
14	17	11	9.2	9.2	9.9	9.2	23	1,110	662	882	792	620
15	15	11	9.2	9.2	9.9	9.9	24	1,130	651	888	774	*625
16	15	11	9.2	9.2	9.9	9.9	196	1,130	651	888	734	625
17	15	9.9	9.9	9.2	*9.9	9.9	620	1,110	620	888	728	625
18	14	9.9	9.9	9.2	9.2	9.9	1,020	1,310	*600	882	700	625
19	13	9.9	9.9	9.2	9.2	9.9	1,320	1,420	600	882	662	625
20	12	9.9	9.2	8.5	9.2	11	1,420	1,440	600	876	651	600
21	12	103	9.2	8.5	9.2	11	1.370	1,550	600	882	651	585
22	12	a600	9.9	9.2	9.2	11	1,300	*1,680	600	876	651	585
23	12	a695	9.2	9.2	9.2	11	1,260	1,590	662	876	630	585
24	11	a350	9.2	9.2	9.2	11	1.230	1,430	734	876	610	580
25	11	9.9	9.2	8.5	9.2	*9.9	1,240	1,210	750	876	605	580
26	11	9.9	9.2	9.2	9.2	9.9	1,230	1,160	756	876	600	580
27	11	9.9	9.2	9.9	9.2	9.9	1,260	1,010	756	846	600	535
28	11	9.9	9.2	9.9	9.2	9.9	1,350	918	756	834	595	510
29	11	9.9	9.2	9.9	-	11	*1,230	912	750	846	585	510
30	11	9.9	9.2	9.2		11	1.170	944	756	852	585	236
31	*11		9.2	9.2		9.9	-------	924	------	846	590	------
Total	430	2,023.0	290.1	285.9	260.1	303.4	17,439.9	34,057	22,084	25,559	22,657	17,701
Mean	13.9	67.4	9.36	9.22	9.29	9.79	581	1,099	736	824	731	590
Ac-ft	853	4,010	575	567	516	602	34,590	67,550	43,800	50,700	44,940	35,110

Calendar year 1953: Max 2,330 Min 9.2 Mean 464 Ac-ft 336,000
Water year 1953-54: Max 1,680 Min 8.5 Mean 392 Ac-ft 283,800

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of adjacent record and information from watermaster.

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 Little Wood River near Carey); March 1941 to December 1942, April 1944 to September 1954 (no winter records except 1921-24, 1926). Records for other years published as Little Wood River near Carey are at site 6 miles downstream and are not equivalent owing to diversion, inflow, and regulation.

Gage.--Water-stage recorder. Altitude of gage is 5,250 ft (by barometer). Prior to Apr. 5, 1944, at site 650 ft downstream at datum 3.50 ft lower.

Average discharge.--5 years (1920-24, 1925-26), 152 cfs (110,000 acre-ft per year).

Extremes.--Maximum discharge during year, 1,160 cfs June 26 (gage height, 3.73 ft); minimum, 28 cfs Sept. 11, 12 (gage height, 0.89 ft), but may have been less during period of no record in winter.
1920-26, 1941-42, 1944-54: Maximum discharge recorded, 2,350 cfs Apr. 27, 1952 (gage height, 5.44 ft); minimum recorded, 14 cfs Aug. 29, 30, 1926.

Remarks.--Records excellent except those for period of ice effect, which are fair, and those for period of no gage-height record, which are poor. Flow slightly regulated by Campbell Reservoir (capacity, 125 acre-ft; prior to 1930 when dam failed, capacity was 2,700 acre-ft) on tributary. Diversions above station for irrigation of about 5,250 acres.

Cooperation.--Water-stage recorder inspected by employees of Little Wood Reservoir Co. and Water District No. 11 C.

Revisions.--WSP 633: Drainage area.

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	29	2.0	240
1.2	59	2.5	428
1.5	109	3.0	690

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	54				60	83	237	170	203	47	34
2	40	55				60	86	211	148	191	46	34
3	40	55				52	109	197	144	180	45	33
4	41	54				52	160	197	144	175	43	33
5	41	54				56	243	220	164	170	43	33
6	40	57				63	252	262	159	159	43	32
7	39	57				78	217	288	*148	144	43	32
8	39	55				88	208	305	138	*134	42	31
9	38	58				105	203	343	146	124	41	31
10	39	58				120	191	359	167	113	38	31
11	41	58				105	200	402	156	107	*37	30
12	42	58				94	226	393	141	103	38	30
13	42	58				85	259	376	138	94	40	31
14	42	57				78	274	351	144	94	39	*32
15	45	58				76	268	351	151	103	38	33
16	46	57				76	265	355	146	103	37	35
17	46	57				76	320	384	154	90	37	34
18	47	54				75	351	397	144	85	37	32
19	49	b42				72	332	402	144	82	37	31
20	51	b41				68	*298	437	151	76	36	31
21	51	b42				68	285	456	189	70	39	32
22	52	b46				68	281	380	214	66	41	34
23	53	60				68	295	309	269	62	38	35
24	54	57				*69	302	288	281	57	35	35
25	54	55				69	291	*281	265	54	36	34
26	54	57				70	291	256	437	55	37	33
27	54	57				76	295	223	622	55	38	33
28	54	57				82	295	197	316	53	*36	33
29	54	54				82	*285	183	243	49	35	35
30	*53	*54			--	80	262	172	223	48	35	37
31	52	---			---	78	------	164	------	47	35	------
Total	1,433	1,636	-	-	-	2,349	7,429	9,376	6,055	3,146	1,212	984
Mean	46.2	54.5	-	-	-	75.8	248	302	202	101	39.1	32.8
Ac-ft	2,840	3,240	-	-	-	4,660	14,740	18,600	12,010	6,240	2,400	1,950

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Mar. 1-23; 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 1954. February 1920 to September 1926 at site 6 miles upstream; records not equivalent because of diversion and inflow.

Gage.--Water-stage recorder. Datum of gage is 4,990.59 ft above mean sea level, unadjusted. Apr. 28, 1904, to May 31, 1905, staff gage, Sept. 20, 1926, to Apr. 22, 1938, water-stage recorder, and Apr. 23 to Aug. 17, 1938, staff gage, at same site at datum 0.74 ft higher.

Average discharge.--25 years (1926-27, 1929-42, 1943-54), 135 cfs (97,740 acre-ft per year).

Extremes.--Maximum discharge during year, 730 cfs June 27 (gage height, 4.91 ft); minimum daily, 3 cfs Dec. 30 to Jan. 22.
1904-5, 1926-54: Maximum discharge, 6,000 cfs (due to failure of reservoirs on Little Fish Creek) Apr. 20, 1938 (gage height, 12.81 ft, present datum, from floodmark), from rating curve extended above 1,800 cfs; minimum, 1 cfs Jan. 26, 1945, Jan. 20, 1948.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation of about 6,450 acres. Storage in Little Wood Reservoir (capacity, 11,700 acre-ft) began Feb. 12, 1941. Flow 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 employees of Little Wood Reservoir Co. and Water District No. 11 C.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	2.8	2.8	88
1.8	4.8	3.2	169
2.0	11	3.6	271
2.2	24	4.0	396
2.5	50	4.6	612

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	51	55	3	5	6	25	252	188	213	186	60
2	52	53	53	3	5	6	28	223	183	203	169	55
3	52	53	49	3	5	6	32	203	186	188	174	47
4	51	51	51	3	5	6	34	198	169	179	203	51
5	52	52	40	3	5	7	35	210	171	174	196	56
6	59	53	48	3	5	7	41	247	160	160	171	56
7	76	55	52	3	5	7	216	277	*154	*141	145	57
8	68	55	45	3	5	7	223	303	145	134	128	59
9	66	55	46	3	5	16	221	328	145	134	122	67
10	64	56	50	3	5	13	206	389	145	145	128	67
11	63	56	46	3	5	9	206	406	143	160	*139	73
12	82	56	48	*3	5	9	234	403	143	158	136	85
13	90	56	48	3	5	9	268	386	143	179	134	84
14	126	56	49	3	5	9	291	328	147	171	126	*80
15	143	56	49	3	5	9	288	357	154	169	120	79
16	136	55	49	3	5	8	274	357	154	174	120	76
17	99	55	52	3	5	8	319	389	165	171	118	84
18	56	53	51	3	5	8	366	403	176	176	104	85
19	49	36	54	3	*5	9	360	406	176	193	97	73
20	50	32	55	3	5	9	*328	434	174	213	88	69
21	49	37	53	3	5	9	306	469	171	210	78	62
22	50	50	45	3	5	9	291	413	198	221	67	56
23	52	56	43	4	5	8	300	331	241	231	59	54
24	55	57	39	4	6	*8	306	294	263	228	66	56
25	53	57	36	4	6	8	303	*283	277	226	74	58
26	52	56	35	4	6	9	300	258	280	223	74	55
27	57	57	35	4	6	16	306	228	585	218	74	60
28	56	57	31	4	6	26	*312	221	376	210	74	62
29	54	57	17	4	-	26	297	206	266	236	*69	48
30	*52	*56	3	4		24	277	193	239	228	60	39
31	50		3	5		23		191		216	60	
Total	2,068	1,585	1,330	103	145	334	6,993	9,586	6,117	5,882	3,559	1,913
Mean	66.7	52.8	42.9	3.3	5.2	10.8	233	309	204	190	115	63.8
Ac-ft	4,100	3,140	2,640	204	288	662	13,870	19,010	12,130	11,670	7,060	3,790

Calendar year 1953: Max 654 Min 3 Mean 148 Ac-ft 107,300
Water year 1953-54: Max 585 Min 3 Mean 109 Ac-ft 78,560

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 19-21, Dec. 4, 5, 7-15, 17, Dec. 21 to Mar. 8 (no gage-height record Jan. 1 to Feb. 1; discharge estimated on basis of 2 discharge measurements, weather records, and reported gate changes for Little Wood Reservoir).

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 1954 (1922-35, irrigation seasons only).

Gage.--Water-stage recorder. Altitude of gage is 4,790 ft (by barometer).

Average discharge.--21 years (1920-22, 1935-54), 154 cfs (111,500 acre-ft per year).

Extremes.--Maximum discharge during year, 274 cfs Mar. 10 (gage height, 3.05 ft); minimum, 85 cfs May 9 (gage height, 1.24 ft).
1920-54: Maximum discharge recorded, 317 cfs Apr. 15, 1952 (gage height, 3.70 ft); maximum gage height recorded, 4.57 ft Jan. 22, 1950 (ice jam); minimum discharge, 26 cfs June 2, 1920 (gage height, 0.48 ft).

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

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.2	83	2.5	212
1.5	110	3.0	268
2.0	160		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	189	191	*192	160	157	177	184	110	120	212	141	148
2	188	192	188	156	156	173	182	113	118	214	139	140
3	185	190	184	161	156	168	187	110	115	205	138	137
4	185	187	185	158	156	165	191	105	116	206	137	130
5	185	187	182	159	156	164	190	103	112	204	137	131
6	186	188	182	159	156	165	188	93	119	188	137	132
7	186	185	183	160	155	169	176	93	121	*183	135	132
8	186	185	178	159	154	182	169	90	122	173	142	132
9	186	185	181	158	154	221	164	87	129	171	144	130
10	186	183	180	157	153	266	159	89	145	167	143	132
11	186	184	178	157	153	247	156	97	159	167	*143	147
12	188	185	177	*156	160	206	155	96	157	166	142	151
13	189	187	176	155	174	192	155	94	159	158	142	149
14	189	188	174	156	178	186	160	95	158	154	150	*154
15	191	188	174	157	166	185	155	94	153	162	149	153
16	191	186	173	160	162	186	152	95	161	164	148	152
17	190	187	172	160	161	189	150	96	*158	161	149	151
18	190	184	172	157	*171	184	147	99	153	159	154	152
19	189	180	174	157	161	181	145	98	159	160	157	159
20	190	180	177	142	165	183	144	96	164	161	157	166
21	192	178	173	b145	163	183	142	*100	163	160	157	167
22	198	182	172	b170	164	182	132	102	143	156	156	168
23	192	198	168	167	164	*186	128	103	132	146	165	168
24	193	212	165	b155	167	191	114	104	126	142	177	164
25	192	210	164	b150	174	193	112	106	128	151	174	*160
26	191	206	164	b155	186	191	107	113	137	151	164	155
27	191	204	163	161	185	196	111	114	180	152	158	154
28	*192	201	163	164	178	201	*124	115	218	148	160	155
29	190	196	161	160	-	208	104	114	215	145	158	153
30	187	193	160	159		201	105	113	209	145	163	154
31	190		160	157	- -	190	------	115	------	147	161	------
Total	5,863	5,702	5,395	4,887	4,585	5,911	4,488	3,152	4,449	5,178	4,677	4,476
Mean	189	190	174	158	164	191	150	102	148	167	151	149
Ac-ft	11,630	11,310	10,700	9,690	9,090	11,720	8,900	6,250	8,820	10,270	9,280	8,880

Calendar year 1953: Max 261 Min 93 Mean 172 Ac-ft 124,200
Water year 1953-54: Max 266 Min 87 Mean 161 Ac-ft 116,500

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Flow in bypass channel, which carries water around gage, measured as 5.21 cfs Oct. 28; 14.5 cfs Dec. 1; 5.37 cfs Jan. 12; 9.44 cfs Feb. 18; 18.6 cfs Mar. 23; 5.01 cfs Apr. 28; 5.74 cfs May 21; 10.8 cfs June 17; 10.7 cfs July 7; 1.22 cfs Aug. 11; 0.68 cfs Sept. 14; 8.32 cfs Sept. 25.

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. Prior to May 21, 1954, at site 500 ft downstream.

Drainage area.--570 sq mi, approximately.

Records available.--January 1911 to September 1954 (no winter records).

Gage.--Water-stage recorder. Altitude of gage is 4,270 ft (by barometer). Prior to Sept. 5, 1918, staff gage at site 500 ft downstream at datum 0.92 ft lower. Sept. 5, 1918, to Apr. 13, 1920, staff gage and Apr. 14, 1920, to May 20, 1954, water-stage recorder, at site 500 ft downstream at datum 0.08 ft higher than present datum.

Extremes.--Maximum discharge during year, 211 cfs Nov. 20 (gage height, 1.99 ft, site and datum then in use); minimum recorded, 54 cfs May 10, 17; minimum gage height recorded, 1.22 ft May 10.

1911-54: Maximum discharge recorded, 868 cfs May 3, 1938 (gage height, 3.97 ft, site and datum then in use); minimum recorded, 7.6 cfs June 24, 25, 1920 (gage height, 0.52 ft, site and datum then in use).

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 two discharge measurements furnished by Water District No. 11 AB.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 20		May 21 to Sept. 30	
1.2	49	2.3	62
1.4	77	2.5	80
1.7	136	2.8	124
2.0	214	3.1	178

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	158	186	189			-	181	96	76	170	98	136
2	163	186	*186			-	178	106	77	168	90	126
3	165	189	183			-	178	106	77	165	88	118
4	165	186	181			-	181	*87	76	155	89	111
5	165	183	-			-	183	79	77	157	90	106
6	165	181	-			-	183	76	76	146	89	110
7	168	181	-			-	181	65	84	141	86	111
8	168	181	-			-	173	61	80	141	89	100
9	165	181	-			-	170	58	81	131	94	104
10	165	181	-			-	165	56	85	*129	96	94
11	168	181	-			-	163	57	104	127	100	98
12	168	181	-			-	160	59	114	129	99	111
13	170	181	-			-	163	59	116	124	*104	122
14	173	183	-			-	163	61	129	119	108	122
15	173	183	-			-	163	64	114	126	113	127
16	176	181	-			-	158	58	119	126	110	*121
17	178	181	-			-	160	54	124	132	110	118
18	178	181	-			-	155	59	124	129	113	119
19	178	178	-			-	155	62	*124	131	118	121
20	178	178	-			-	160	*64	134	116	119	127
21	181	176	-			-	160	68	136	111	116	131
22	183	178	-			-	150	77	126	114	118	127
23	189	186	-			-	143	79	105	114	121	127
24	186	197	-			-	*129	79	90	100	129	129
25	186	203	-			*181	110	70	86	106	136	124
26	186	206	-			a180	94	70	90	110	136	119
27	186	200	-			a180	*100	74	118	108	124	116
28	186	197	-			a185	104	74	146	106	126	111
29	186	194	-			a190	102	76	152	102	124	108
30	*186	192	-			a190	89	75	163	104	132	108
31	183		-			183	------	76	------	99	141	------
Total	5,425	5,572	-	-	-	-	4,554	2,205	3,203	3,936	3,406	3,502
Mean	175	186	-	-	-	-	152	71.1	107	127	110	117
Ac-ft	10,760	11,050	-	-	-	-	9,030	4,370	6,350	7,810	6,760	6,950

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 station at Shoshone and Silver Creek near Picabo.

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, 400 ft upstream from highway bridge in Shoshone.

Drainage area.--620 sq mi, approximately.

Records available.--April 1922 to September 1954 (no winter records).

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, 559 cfs June 9 (gage height, 3.55 ft); minimum recorded, 13 cfs Oct. 2 (gage height, 0.28 ft).
1922-54: Maximum discharge recorded, 673 cfs Apr. 28, 1952 (gage height, 5.24 ft); practically no flow July 29, 1931, Oct. 3, 1938.

Remarks.--Records excellent except those for periods of ice effect, which are 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 furnished by Water District No. 11 AB.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	67	79		-	151	158	478	547	551	492	431
2	20	67	*81		-	149	153	477	548	555	488	436
3	28	68	78		-	144	153	490	544	543	491	433
4	28	68	b80		-	142	156	486	531	535	490	433
5	32	70	b80		-	140	158	487	523	530	492	444
6	33	70	-		-	135	158	465	528	508	493	451
7	33	73	-		-	133	158	485	538	480	497	458
8	37	74	-		-	135	153	492	547	480	490	467
9	36	74	-		-	146	146	498	546	487	489	474
10	36	74	-		-	160	142	482	510	490	490	479
11	39	74	-		-	177	137	475	505	*502	489	474
12	45	74	-		-	186	133	480	508	503	495	468
13	41	74	-		-	167	129	481	504	491	*498	470
14	42	74	-		-	156	122	484	487	489	499	474
15	44	74	-		-	151	216	486	491	503	500	477
16	49	73	-		-	149	296	480	501	510	491	*486
17	50	71	-		-	151	300	470	508	510	492	490
18	51	71	-		-	151	300	462	494	507	491	486
19	53	70	-		-	160	325	474	486	505	494	486
20	53	b68	-		-	156	369	462	479	506	479	475
21	55	b66	-		-	158	457	480	*479	495	475	473
22	62	b72	-		-	156	468	498	469	494	488	473
23	68	81	-		-	153	453	507	455	507	490	461
24	68	131	-		-	156	433	*512	472	507	489	453
25	70	151	-		-	*158	440	500	476	506	484	460
26	73	153	-		156	158	*438	500	498	508	485	458
27	73	98	-		158	162	424	508	524	509	473	452
28	71	86	-		156	156	431	520	529	504	476	446
29	*70	84	-		-	160	461	526	534	499	464	446
30	70	82	-			162	476	530	544	496	448	466
31	70		-		- -	160	------	537	------	495	432	------
Total	1,550	2,432	-	-	-	4,778	8,343	15,212	15,305	15,705	15,044	13,880
Mean	50.0	81.1	-	-	-	154	278	491	510	507	485	463
Ac-ft	3,070	4,820	-	-	-	9,480	16,550	30,170	30,360	31,150	29,840	27,530

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

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

Malad River near Gooding, Idaho

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 1954 (fragmentary 1922-37, 1941-42). 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.--22 years (1916-22, 1937-41, 1942-54), 231 cfs (167,200 acre-ft per year).

Extremes.--Maximum discharge during year, 1,630 cfs Jan. 30 (gage height, 6.79 ft); minimum, 2.4 cfs Oct. 14, 15 (gage height, 0.65 ft).

1916-54: Maximum discharge, 6,500 cfs Apr. 27, 1952 (gage height, 10.67 ft); no flow at times in many years.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Diversions for irrigation of about 155,000 acres above station. Flow regulated by Magic Reservoir (see p. 125) and by several smaller reservoirs on tributaries, and affected by deliveries from canals diverting from Snake River at Milner.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1934, superseding those published in WSP 768, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1934		1934-Con.		1934-Con.		1934-Con.	
Sept. 1	16	Sept. 9	11	Sept.17	11	Sept.25	23
2	13	10	9.8	18	13	26	20
3	15	11	11	19	12	27	23
4	27	12	11	20	12	28	26
5	16	13	10	21	15	29	27
6	15	14	9.4	22	15	30	24
7	13	15	11	23	17		
8	11	16	11	24	20		

Month	Maximum	Minimum	Mean	Runoff in acre-feet
September 1934.....	27	9.4	15.6	929

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	2.5	2.0	109
.7	4.5	3.0	258
.8	7.0	4.0	450
1.0	15	5.0	752
1.3	33	6.0	1,170
1.6	60		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	*82	99	b90	338	131	174	362	162	178	48	25
2	39	75	*93	b90	180	126	171	292	172	168	46	27
3	20	75	92	b95	148	122	170	232	186	133	39	25
4	12	83	b90	101	140	122	164	176	172	82	35	27
5	8.8	75	b88	115	134	123	168	136	172	58	35	35
6	5.0	71	b120	130	136	123	155	106	189	31	50	38
7	13	76	b115	129	131	122	127	83	196	23	68	55
8	13	78	b100	b120	140	123	133	101	188	11	71	78
9	16	82	b110	b115	133	291	136	136	218	13	60	87
10	14	78	b115	b110	116	419	129	147	273	16	37	83
11	10	76	b105	b110	129	216	129	119	289	32	33	86
12	8.4	75	b110	113	126	188	147	92	287	*38	39	73
13	6.2	77	b105	b115	129	188	164	84	334	39	*39	79
14	3.1	75	b110	*129	319	171	161	86	255	20	55	92
15	6.7	64	b115	140	338	144	140	83	244	21	76	106
16	18	64	b125	126	200	109	289	67	310	37	78	*129
17	30	57	141	127	150	104	384	43	339	51	56	155
18	35	40	145	b120	141	101	364	25	336	32	52	162
19	32	b40	140	b120	*140	99	565	15	*305	30	57	170
20	22	b40	150	b115	136	148	853	104	277	33	51	178
21	18	b50	b130	b115	133	184	890	122	206	26	45	194
22	23	b100	b110	115	130	174	871	201	144	30	58	180
23	77	130	b90	110	134	166	732	332	78	45	69	208
24	81	124	b80	302	140	165	516	*332	46	56	72	224
25	82	174	b80	236	141	174	406	260	55	58	66	228
26	86	213	b85	162	138	*172	*380	183	52	52	66	240
27	91	206	b85	145	136	171	310	109	161	49	64	239
28	95	155	b85	151	134	177	338	126	147	51	47	240
29	92	116	b80	201	-	170	345	129	123	44	39	218
30	87	104	b80	933	-	174	345	124	134	39	38	244
31	86		b85	651	-	174	------	136	------	33	25	------
Total	1,213.2	2,755	3,258	5,431	4,490	5,071	9,856	4,543	6,050	1,529	1,614	3,925
Mean	39.1	91.8	105	175	160	164	329	147	202	49.3	52.1	131
Ac-ft	2,410	5,460	6,460	10,770	8,910	10,060	19,550	9,010	12,000	3,030	3,200	7,790

Calendar year 1953: Max 2,140 Min 3.1 Mean 230 Ac-ft 166,500
Water year 1953-54: Max 933 Min 3.1 Mean 136 Ac-ft 98,650

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

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 Malad River and 3½ miles north of Hagerman.

Records available.--March 1930 to September 1954 (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; at present datum thereafter. Supplementary gage 500 ft downstream from siphon efflux used June 1, 1949, to May 22, 1951.

Extremes.--1930-54: Maximum daily discharge, 344 cfs May 23, 24, 1954; no flow or small flow from leakage at headgate during nonirrigation seasons and other periods when gates were closed.

Remarks.--Records excellent. 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 Malad River (Malad Springs water).

Cooperation.--Water-stage-recorder graph for supplementary gage furnished by King Hill Irrigation District. One discharge measurement furnished by Idaho Power Co.

Revisions (water years).--WSP 723: 1930.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	273					0	164	308	328	306	294	285
2	274					4	164	308	328	309	294	290
3	276					7	164	*310	327	179	297	294
4	278					7	164	314	324	292	300	296
5	279					4	164	314	321	302	303	297
6	282					0	164	314	324	304	304	298
7	282					3	164	314	326	309	304	302
8	286					8	164	318	327	312	302	303
9	288					8	164	326	330	310	302	304
10	*161					9	165	326	*322	309	294	201
11	5					9	165	324	322	309	290	294
12	5					9	164	324	190	312	71	294
13	5					9	210	322	309	*304	218	296
14	5					9	231	321	309	303	296	296
15	5					9	232	322	310	302	298	268
16	3					9	271	322	314	300	294	256
17	0					9	288	*326	316	300	297	252
18	0					7	288	330	*316	303	292	248
19	0					148	288	330	308	303	286	248
20	0					163	303	334	309	298	290	245
21	0					164	309	336	310	291	292	*232
22	0					*164	308	340	312	278	292	217
23	0					165	308	344	314	274	292	217
24	0					165	308	344	308	274	292	217
25	0					164	308	342	303	273	294	217
26	0					164	306	340	303	276	297	196
27	0					164	306	338	303	279	296	155
28	0					164	304	336	306	280	294	153
29	0					163	306	328	303	286	294	122
30	0					164	306	326	302	292	170	98
31	0					164	------	*327	------	297	284	------
Total	2,707	0	0	0	0	2,236	7,150	10,108	9,324	9,066	8,723	7,391
Mean	87.3	0	0	0	0	72.1	238	326	311	292	281	246
Ac-ft	5,370	0	0	0	0	4,440	14,180	20,050	18,490	17,980	17,300	14,660

Calendar year 1953 : Max 338 Min 0 Mean 154 Ac-ft 111,600
Water year 1953-54 : Max 344 Min 0 Mean 155 Ac-ft 112,500

* Discharge measurement made on this day.

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 Malad River.

Drainage area.--35,800 sq mi, approximately.

Records available.--May 1909 to September 1954.

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, 19,100 cfs May 30 (gage height, 9.88 ft); minimum, 1,810 cfs Jan. 19 (gage height, 2.43 ft); minimum daily, 6,740 cfs May 20.
1909-54: 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 by many reservoirs above station. Practically entire flow at Milner diverted during most irrigation seasons; 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 1954 are given in WSP 1353.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,570	9,320	9,820	10,000	10,700	10,500	12,100	7,700	11,400	8,280	7,860	8,320
2	8,240	9,210	10,100	10,400	10,300	10,300	12,000	8,010	8,660	7,990	*8,030	8,040
3	8,990	9,770	9,760	10,300	10,100	9,680	12,000	*8,000	8,530	8,230	*8,130	8,550
4	9,200	9,000	9,650	10,200	10,200	10,900	11,100	8,240	9,020	7,730	8,140	8,130
5	9,230	9,320	10,100	10,500	10,300	10,800	12,200	7,860	8,210	7,600	*7,960	8,160
6	10,800	8,980	9,660	10,300	10,200	10,500	12,800	7,560	8,450	10,100	8,120	8,600
7	9,070	9,380	9,980	10,300	10,200	10,400	12,600	7,350	8,660	8,310	7,920	8,690
8	9,170	8,820	9,720	10,500	10,400	10,800	12,700	7,260	8,420	7,810	7,900	8,420
9	9,000	9,420	9,950	10,400	10,000	12,300	12,400	7,230	9,350	7,500	8,110	9,270
10	8,750	9,150	11,000	10,400	9,900	12,200	10,900	7,150	*9,450	7,580	8,110	8,330
11	9,040	9,220	10,500	10,200	10,500	11,200	10,900	7,020	*9,180	7,370	8,030	8,740
12	9,390	9,240	11,000	10,400	10,300	10,400	13,000	7,060	9,740	7,780	8,150	8,620
13	8,990	9,230	10,900	10,200	10,500	10,800	12,600	7,100	9,130	*7,470	8,030	8,720
14	8,620	8,350	10,500	10,400	10,400	11,800	11,200	7,010	10,200	7,640	7,920	8,700
15	9,090	9,890	11,000	10,000	10,600	11,400	9,800	6,800	9,640	7,520	7,870	9,190
16	10,000	9,460	11,400	10,200	10,600	10,500	9,010	7,020	9,950	7,510	8,140	8,840
17	10,000	9,430	10,800	10,100	10,100	8,970	9,910	7,020	9,910	7,730	7,900	9,320
18	9,410	9,280	11,100	10,000	10,200	10,300	9,000	6,820	9,430	7,690	8,110	9,220
19	10,100	9,250	11,000	9,920	10,100	8,600	8,330	7,060	9,120	7,840	7,940	*9,120
20	9,550	9,290	10,700	*10,600	10,400	9,180	8,480	6,740	8,470	7,870	8,340	*9,390
21	9,040	9,180	10,600	10,100	10,600	9,200	8,290	7,050	8,700	7,540	8,030	9,110
22	9,440	9,460	10,500	10,200	10,400	*10,100	9,940	8,220	8,240	7,670	8,290	9,340
23	9,340	10,900	10,400	10,100	*10,900	9,750	13,100	7,880	7,960	7,820	8,090	9,190
24	8,780	10,500	10,200	9,760	10,700	9,700	10,700	7,800	7,700	7,940	8,380	9,400
25	9,650	10,600	10,200	10,600	10,600	9,970	8,800	8,380	7,940	7,850	8,370	9,230
26	*9,940	9,620	10,200	10,000	10,500	9,900	8,200	11,600	7,640	7,980	8,350	9,220
27	9,560	9,850	10,000	10,300	10,300	10,700	7,740	13,700	8,030	8,280	8,750	9,350
28	9,540	10,700	10,300	9,880	10,000	10,400	7,500	13,900	8,610	7,930	8,380	9,070
29	9,840	9,580	10,500	10,700		9,960	7,590	15,800	8,090	8,570	8,480	9,210
30	9,500	*10,100	10,200	11,400		9,940	7,570	15,300	8,090	7,980	8,600	9,140
31	9,250		10,300	11,000	- -	11,400	- - - - -	14,900	- - - - -	8,090	8,810	- - - - -
Total	290,090	285,500	322,040	319,360	290,000	322,550	312,460	270,540	265,920	245,200	253,240	266,630
Mean	9,358	9,517	10,390	10,300	10,360	10,400	10,420	8,727	8,864	7,910	8,169	8,888
Ac-ft	575,400	566,300	638,800	633,400	575,200	639,800	619,800	536,600	527,400	486,300	502,300	828,900

Calendar year 1953: **Max** 25,000 **Min** 7,500 **Mean** 10,340 **Ac-ft** 7,487,000
Water year 1953-54: **Max** 15,800 **Min** 6,740 **Mean** 9,434 **Ac-ft** 6,830,000

* Discharge measurement made on this day.

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 1954.

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, 1931-54: Maximum daily discharge, 182 cfs Jan. 1, 1943; no flow at times during most years.

Remarks.--Records excellent except those below 20 cfs, which are good, and those for periods of 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.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a2.4	2.2	2.8	b6.6	18	23	18	70	73	82	52	43
2	*2.4	2.2	*2.8	b6.5	*18	b21	18	69	72	79	52	43
3	2.4	2.2	3.1	6.5	18	b20	18	70	72	78	52	43
4	2.4	2.2	3.8	6.5	18	b20	18	69	72	78	52	43
5	2.4	2.0	3.5	6.5	17	19	19	68	73	78	52	42
6	2.4	1.5	3.1	6.5	18	18	20	73	73	77	52	36
7	2.4	1.4	3.5	6.5	18	17	20	78	72	74	52	36
8	2.4	1.4	b3.3	*6.0	18	19	20	84	63	74	52	36
9	2.4	1.2	3.1	b5.6	18	36	20	92	64	73	52	36
10	2.4	1.2	3.1	b5.3	18	46	19	96	64	73	44	36
11	2.4	1.2	b3.0	5.3	18	a38	18	94	*45	73	44	35
12	2.4	1.2	b3.0	b5.0	19	a35	18	94	17	73	43	35
13	2.4	1.5	b3.4	b5.2	20	a32	19	*93	16	72	43	34
14	2.0	1.4	3.8	5.3	24	a30	20	92	16	71	43	34
15	3.1	1.4	3.8	5.3	24	a29	19	91	17	72	43	34
16	2.8	1.4	3.5	5.3	*24	a28	18	91	26	72	43	33
17	2.4	1.5	3.5	5.3	23	a27	18	90	26	62	43	34
18	2.4	1.5	3.8	5.3	24	a27	18	90	27	60	44	32
19	2.8	1.4	4.6	5.3	22	a26	18	73	27	*59	48	30
20	2.4	1.2	6.0	b5.0	22	25	17	73	27	59	48	32
21	2.4	1.4	8.5	b5.0	22	24	*18	78	26	58	43	49
22	2.4	1.7	9.5	5.3	22	23	17	75	44	57	43	*48
23	2.4	2.2	b9.2	5.3	22	*22	16	75	46	57	43	47
24	2.4	2.2	b9.0	5.3	22	22	16	74	69	47	*44	44
25	2.4	2.2	b8.6	b5.3	24	21	16	74	73	44	44	40
26	2.4	2.4	b8.0	b5.4	25	20	16	74	*84	44	44	36
27	2.2	2.4	b7.8	5.6	25	21	44	74	86	44	44	31
28	2.2	2.4	b7.6	5.6	24	21	67	73	85	45	44	13
29	2.2	2.8	7.5	9.0	-	20	68	73	84	44	43	3.8
30	*2.2	2.8	b7.2	13	--	19	70	73	84	44	43	2.8
31	2.2	-	b6.7	16	----	18	------	73	------	50	42	------
Total	74.5	53.7	160.1	195.6	585	767	721	2,466	1,623	1,973	1,431	1,041.6
Mean	2.40	1.79	5.16	6.31	20.9	24.7	24.0	79.5	54.1	63.6	46.2	34.7
Ac-ft	148	107	318	388	1,160	1,520	1,430	4,890	3,220	3,910	2,840	2,070

Calendar year 1953: Max 129 Min 1.2 Mean 34.6 Ac-ft 25,060
Water year 1953-54: Max 96 Min 1.2 Mean 30.4 Ac-ft 22,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records, records for Moore Creek near Arrowrock, Malad River near Gooding, and other nearby streams of similar runoff characteristics.
b Stage-discharge relation affected by ice.

East Fork Jarbidge River near Three Creek, Idaho

Location.--Lat 42°02', long 115°22', in SE¼SE¼ sec. 14, T. 16 S., R. 9 E., on left bank a quarter of a mile downstream from Murphy Hot Springs, 2 miles upstream from mouth, and 11 miles southwest of Three Creek.

Drainage area.--89 sq mi, approximately.

Records available.--October 1928 to March 1933, September 1953 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 5,150 ft (by barometer). Prior to Sept. 23, 1953, at same site at datum about 1.6 ft higher.

Extremes.--Maximum discharge during period September 1953 to September 1954, 247 cfs May 17, 21 (gage height, 4.06 ft); minimum, 3.0 cfs Dec. 23 (gage height, 2.33 ft). 1928-33, 1953-54: Maximum discharge, 584 cfs May 25, 1929, June 25, 1932 (gage height, about 5.1 ft, present datum); minimum, that of Dec. 23, 1953.

Remarks.--Records good except those below 20 cfs, which are fair, and those for periods of no gage-height record, which are poor. No regulation or diversion above station.

Cooperation.--Readings of supplementary staff gage Oct. 16, 1953, to June 30, 1954, furnished by Salmon River Canal Co.

Rating table, Sept. 23, 1953, to Sept. 30, 1954 (gage height, in feet, and discharge, in cubic feet per second)

2.3	2.4	2.9	46
2.4	4.4	3.3	103
2.5	8.4	4.0	234
2.6	15		

Discharge, in cubic feet per second, 1953

Sept.23.....	8.4	Sept.27.....	7.6
24.....	*8.0	28.....	7.2
25.....	7.6	29.....	7.2
26.....	7.6	30.....	6.8

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.4	9.1	10	12	9.1	14	17	104	78	72	9.1	5.2
2	6.4	9.1	10	12	9.1	9.7	17	92	71	66	9.1	4.8
3	7.2	9.1	*10	11	12	12	20	82	67	60	8.4	4.8
4	7.2	9.1	12	12	12	12	22	74	67	54	9.1	5.2
5	6.8	*9.1	12	12	13	9.7	31	80	75	52	9.1	5.2
6	6.4	9	12	12	15	12	38	95	74	49	9.1	5.6
7	6.4	9	10	12	14	12	32	120	66	45	9.1	5.2
8	6.4	9	9.7	10	15	13	29	150	60	41	8.0	5.2
9	6.4	9	13	9.1	17	80	29	180	66	37	8.0	5.6
10	6.4	9	11	8.4	18	78	27	210	78	35	7.6	4.8
11	6.4	9	9.1	9.7	18	40	27	*224	76	32	*8.0	4.4
12	6.8	9	13	9.7	16	34	31	218	78	29	8.4	4.8
13	6.8	8	10	*7.6	16	33	39	208	76	27	8.4	5.2
14	7.6	8	11	10	14	29	58	200	82	25	8.4	5.2
15	8.0	8	11	9.7	*14	31	56	204	90	24	8.0	4.8
16	8.4	8	10	9.1	12	29	58	218	*114	25	8.0	5.2
17	8.4	8	11	9.7	12	27	75	234	114	24	8.4	5.2
18	8.0	8	11	8.0	12	22	86	226	103	22	8.0	5.2
19	9.7	4	11	8.4	7.6	24	94	224	98	20	7.2	5.2
20	9.7	4	12	7.6	14	23	88	234	100	*19	7.2	5.2
21	9.1	7	9.1	7.0	12	20	82	234	111	18	10	4.8
22	9.7	7	8.0	7.2	12	*17	*82	190	119	17	9.1	4.4
23	11	9	4.2	7.6	12	20	95	155	119	15	7.2	*4.8
24	12	10	6.8	6.8	14	20	106	141	115	14	6.8	5.2
25	9.7	12	8.0	4.8	16	20	108	135	107	13	6.4	5.2
26	9.1	11	9.7	4.8	18	18	112	121	102	13	6.4	5.2
27	9.7	11	12	9.7	15	19	110	101	102	13	6.4	4.8
28	9.1	11	12	9.7	13	18	120	89	98	10	6.0	4.8
29	9.7	11	12	9.1	-	19	116	86	90	9.7	5.6	4.8
30	9.7	11	8.4	9.1		18	110	84	80	9.7	4.8	5.6
31	9.1		12	8.4		16		81		9.1	5.2	
Total	253.7	264.5	321.0	284.2	381.8	749.4	1,915	4,794	2,676	899.5	240.5	151.6
Mean	8.18	8.82	10.4	9.17	13.6	24.2	63.8	155	89.2	29.0	7.76	5.05
Ac-ft	503	525	637	564	757	1,490	3,800	9,510	5,310	1,780	477	301

Calendar year 1953: Max - Min - Mean - Ac-ft -
Water year 1953-54: Max 234 Min 4 Mean 35.4 Ac-ft 25,650

Peak discharge (base, 200 cfs).--May 17 (3 a.m.) 247 cfs (4.06 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Nov. 6 to Dec. 2, Apr. 18-21, Apr. 25 to May 10, June 23 to July 19; discharge estimated on basis of weather records, recorded range in stage, readings of staff gage a quarter of a mile upstream, and records for other stations in Bruneau River and Salmon Falls Creek basins.

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 1954.

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.--9 years (1910-14, 1949-54), 35.0 cfs (25,340 acre-ft per year).

Extremes.--Maximum discharge during year, 44 cfs June 11 (gage height, 2.84 ft); maximum gage height, 3.03 ft Dec. 22 (ice jam); no flow July 15, July 17 to Sept. 30.

1910-15, 1948-54: Maximum daily discharge, 450 cfs Mar. 7, 8, 1911, during period of ice effect; maximum gage height observed, 10.65 ft Mar. 8, 1911, datum then in use; no flow July 15, July 17 to Sept. 30, 1954.

Maximum stage known, 16.9 ft, from floodmark, datum then in use, during spring of 1910.

Remarks.--Records good except those below 5 cfs and those for periods of ice effect, which are fair. Diversions for irrigation from main stem and tributaries above station. Water diverted from Deadwood Creek, tributary of the East Fork, to Cedar Creek Reservoir in Salmon Falls Creek basin for irrigation.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 7 to June 7, July 12-16)

1.3	0	1.9	4.2
1.5	.2	2.0	6.5
1.6	.7	2.2	13
1.7	1.5	2.8	40
1.8	2.7		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.1	7.2	8.4	9	13	11	13	21	11	4.4		
2	2.1	7.2	8.7	10	13	10	12	20	12	3.4		
3	2.0	*7.5	8.1	10	12	8	11	19	16	2.3		
4	2.0	7.5	*7.5	10	12	8	11	18	16	1.5		
5	2.1	7.8	8	10	12	9	11	15	14	1.3		
6	2.3	7.8	8	10	13	9	12	14	12	1.3		
7	2.6	7.5	9	10	13	10	12	12	12	1.1		
8	2.6	7.5	8	10	13	10	13	11	15	.8		
9	2.6	7.5	8	9	12	14	14	10	18	.6		
10	2.2	7.5	9	9	13	14	14	9.0	21	.4		
11	2.5	7.5	9	9	14	13	14	*6.1	33	.4	(*)	
12	2.5	7.5	8	9	14	12	14	5.9	36	.2		
13	2.7	7.5	10	*9	14	11	14	6.1	24	.2		
14	2.7	7.5	10	9	16	9.3	15	5.9	19	.1		
15	3.0	7.2	10	9	15	16	15	7.8	16	0		
16	3.2	6.9	11	10	*14	16	18	9.0	20	.1		
17	3.3	7.2	11	10	13	16	19	8.7	*19	0		
18	3.4	6.1	11	9	12	14	19	8.1	24	0		
19	3.4	5	12	9	13	14	19	7.5	19	*0		
20	3.9	6	12	8	12	13	20	6.3	15	0		
21	4.0	6	12	9	12	14	*20	6.1	10	0		
22	6.3	8	9	10	12	13	18	6.1	8.4	0		
23	5.9	8	7	11	12	*13	14	5.5	5.5	0		
24	6.6	9.3	5	11	12	12	7.5	6.6	2.5	0		(*)
25	7.2	10	4	9	11	12	4.8	8.1	1.1	0		
26	7.8	11	5	9	12	13	4.6	8.7	.8	0		
27	7.5	10	7	9	11	14	6.9	8.1	.8	0		
28	7.2	9	9	10	11	14	8.4	8.7	.5	0		
29	7.2	8.1	9	11	-	13	11	10	2.1	0		
30	7.5	8.1	9	13	-	12	23	10	5.7	0		
31	7.5		9	13		12		11		0		
Total	127.9	230.9	271.7	303	356	378.3	408.2	307.3	409.4	18.1	0	0
Mean	4.13	7.70	8.76	9.8	12.7	12.2	13.6	9.91	13.6	0.58	0	0
Ac-ft	254	458	539	601	706	750	810	610	812	36	0	0

Calendar year 1953: Max 120 Min 0.2 Mean 15.2 Ac-ft 11,040
Water year 1953-54: Max 36 Min 0 Mean 7.70 Ac-ft 5,580

* Discharge measurement or observation of no flow made on this day.

Note.--Stage-discharge relation affected by ice Nov. 19-23, Dec. 5-17, Dec. 22 to Feb. 12, Mar. 2-8, 12, 13.

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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 1954.

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.--16 years (1909-14, 1943-54), 420 cfs (304,100 acre-ft per year).

Extremes.--Maximum discharge during year, 920 cfs Mar. 10 (gage height, 5.78 ft); minimum, 52 cfs Dec. 25 (gage height, 3.53 ft).
1909-15, 1943-54: 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).--WSP 1063: 1913.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

3.5	48	5.0	500
3.9	109	6.0	1,040
4.3	211		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*77	105	120	109	152	165	187	443	258	193	77	61
2	75	105	117	117	152	157	184	406	244	181	75	61
3	75	*105	117	115	142	137	184	371	231	170	72	61
4	75	105	*113	126	137	132	193	349	228	162	71	60
5	78	105	113	124	142	149	211	358	224	152	69	60
6	80	105	109	126	147	157	251	402	237	147	69	60
7	80	105	124	128	152	159	324	457	234	140	71	60
8	80	105	113	126	147	159	312	505	224	132	71	61
9	80	105	98	120	142	178	292	550	234	126	71	61
10	80	104	126	107	152	660	280	610	276	120	69	61
11	78	105	117	102	173	716	266	*630	312	115	68	61
12	78	105	95	107	173	388	262	610	337	109	68	61
13	80	107	113	*109	168	308	273	615	324	105	68	61
14	81	107	117	107	176	300	312	610	308	104	68	60
15	85	105	124	113	178	276	388	595	308	102	68	60
16	85	105	122	126	*173	280	424	590	316	104	67	61
17	83	105	122	126	165	262	434	605	*358	102	64	61
18	86	107	122	122	159	237	476	620	345	96	64	60
19	86	105	128	113	159	211	520	600	324	*95	65	61
20	89	98	130	98	144	214	525	595	300	96	67	61
21	95	95	130	107	149	218	*490	600	292	95	67	61
22	95	111	126	122	154	202	471	570	292	91	67	61
23	96	113	105	137	152	*190	466	486	296	91	*68	62
24	96	120	86	135	154	193	476	429	288	89	69	*61
25	98	120	65	115	154	199	486	402	266	89	67	61
26	100	122	78	98	159	196	505	384	248	86	65	61
27	100	128	109	102	173	193	505	349	251	85	64	62
28	98	126	111	122	178	199	515	320	248	85	62	62
29	100	124	120	154	-	199	535	292	237	83	62	61
30	105	120	105	147		199	490	276	205	80	62	61
31	107	-	102	144	---	199	------	262	------	78	61	------
Total	2,701	3,277	3,477	3,704	4,406	7,432	11,237	14,891	8,245	3,503	2,096	1,826
Mean	87.1	109	112	119	157	240	375	480	275	113	67.6	60.9
Ac-ft	5,360	6,500	6,900	7,350	8,740	14,740	22,290	29,540	16,350	6,950	4,160	3,620

Calendar year 1953: Max 1,920 Min 65 Mean 352 Ac-ft 255,200
Water year 1953-54: Max 716 Min 60 Mean 183 Ac-ft 132,500

* Discharge measurement made on this day.

C. J. Strike Reservoir near Grand View, Idaho

Lat 42°56'45", long 115°58'35", in SW¼ sec. 34, T. 5 S., R. 4 E., at dam on Snake River, 1 mile downstream from Bruneau River, and 7 miles southeast of Grand View. Records available, March 1952 to September 1954. Remote registering water-stage recorder in channel leading to Grand View Irrigation District canal. Datum of gage is at mean sea level (levels by Idaho Power Co.).

Reservoir is formed by earth-fill and rock-faced dam. Storage began in February 1952. Total capacity, 250,000 acre-ft at elevation 2,455 ft (top of spillway gates), of which about 50,000 acre-ft will be controlled storage. Reservoir is used for power generation in plant of Idaho Power Co. Records given herein represent total contents. Elevations and area-elevation curve furnished by Idaho Power Co.

Monthly elevation and total contents at 12 p.m., October 1953 to September 1954

Date	Elevation (feet)	Contents (acre-feet)
Oct. 31, 1953	2,454.35	245,200
Nov. 30	2,454.16	243,800
Dec. 31	2,454.22	244,200
Jan. 31, 1954	2,454.62	247,200
Feb. 28	2,454.87	249,000
Mar. 31	2,454.20	244,100
Apr. 30	2,453.60	239,700
May 31	2,455.15	251,200
June 30	2,454.47	246,100
July 31	2,454.58	246,900
Aug. 31	2,454.60	247,000
Sept.30	2,454.90	249,300

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 1954.

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, 16,000 cfs May 31 (gage height, 6.82 ft); minimum, 5,380 cfs Nov. 9 (gage height, 3.11 ft); minimum daily, 7,060 cfs May 22.
1912-54: 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 upstream. Between this station and station at King Hill, flow is regulated at Swan Falls and by C. J. Strike Reservoir (see preceding page). About 1,630,000 acres irrigated by diversion from river and its tributaries above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 12, Mar. 6 to Apr. 26, Sept. 6-30)

3.8	6,900	6.0	13,500
4.5	8,890	7.0	16,800
5.0	10,400		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,650	9,430	10,300	10,900	12,100	10,600	12,400	8,740	15,800	7,930	7,900	8,920
2	8,680	9,100	10,100	10,400	12,400	11,800	11,600	7,530	10,700	8,950	7,560	10,300
3	8,330	10,200	10,800	9,850	10,500	10,600	10,900	7,670	9,850	10,500	7,900	10,800
4	7,980	10,500	10,800	10,000	9,970	10,600	11,700	8,130	9,490	9,880	8,530	7,760
5	8,010	10,200	9,670	10,500	10,200	10,800	12,600	8,390	9,130	7,140	9,100	7,670
6	9,460	11,300	9,010	10,900	10,600	10,600	12,400	8,100	7,700	7,390	9,070	7,370
7	10,200	9,250	9,100	10,900	10,400	14,000	12,700	8,890	7,620	8,590	7,790	7,370
8	9,370	8,950	9,730	10,900	10,300	14,100	12,800	8,040	9,250	7,620	7,170	8,420
9	9,910	*7,930	9,910	10,700	10,300	12,500	13,200	7,530	9,550	7,980	7,930	9,520
10	9,910	8,920	*10,700	10,100	10,300	10,000	13,000	7,480	10,200	7,560	8,390	8,950
11	8,360	9,340	10,800	10,200	10,400	10,300	12,300	7,310	*11,700	7,120	8,440	7,950
12	8,980	8,240	11,000	10,700	10,400	10,500	12,200	7,170	9,850	7,140	8,390	8,070
13	9,340	9,040	10,800	10,500	10,500	10,400	12,500	7,230	9,490	7,120	8,240	7,700
14	9,610	9,190	10,500	*10,600	10,500	10,200	13,100	*7,170	9,640	7,120	7,530	9,100
15	9,850	9,370	10,200	10,100	10,200	9,940	11,300	7,140	9,820	7,200	7,280	8,680
16	9,460	8,800	10,100	10,300	10,200	10,100	10,500	7,140	10,600	7,170	7,560	8,980
17	9,700	9,280	10,900	10,600	10,700	10,300	10,100	7,120	9,670	7,230	8,160	9,460
18	9,790	9,850	11,300	10,600	*10,900	11,300	10,400	7,090	9,190	7,200	8,100	8,300
19	8,890	10,200	11,200	10,900	10,700	10,500	9,670	7,090	10,300	7,200	8,100	7,650
20	9,700	10,800	11,000	10,600	10,600	11,000	9,280	7,090	10,100	7,420	8,100	8,100
21	10,400	10,400	11,100	10,100	10,600	10,300	9,940	7,090	9,190	*7,840	7,980	9,040
22	10,500	8,710	11,300	10,300	10,700	10,500	10,400	7,060	8,500	8,650	7,560	9,970
23	10,200	9,010	11,100	10,300	11,000	10,000	9,340	7,090	8,270	8,500	7,840	9,610
24	9,940	9,700	11,000	10,500	10,900	*9,880	11,900	7,140	7,980	7,900	8,070	10,300
25	8,980	11,400	10,500	10,500	10,900	9,910	11,500	9,280	8,420	7,170	8,500	9,820
26	8,620	11,000	10,300	10,100	10,700	9,670	*8,620	10,700	8,160	7,310	*8,530	8,180
27	9,280	10,500	11,100	10,100	11,000	9,670	7,980	11,800	7,340	8,100	8,500	8,270
28	9,490	9,370	9,460	10,400	9,730	9,580	8,070	13,500	7,140	8,270	8,100	*10,600
29	9,370	10,800	9,850	10,300	-	9,850	8,330	13,000	7,670	8,390	7,250	9,970
30	10,500	10,200	10,100	9,010		10,700	8,770	13,100	8,040	8,920	7,840	9,250
31	11,200		10,400	10,700		12,100		15,500		8,620	8,770	
Total	292,660	290,980	324,130	322,560	297,700	332,300	329,500	267,310	280,360	245,130	250,180	266,080
Mean	9,441	9,699	10,460	10,410	10,630	10,720	10,980	8,623	9,345	7,907	8,070	8,869
Ac-ft	580,500	577,200	642,900	639,800	590,500	659,100	653,600	530,200	556,100	486,200	496,200	527,800

Calendar year 1953: Max 26,700 Min 7,510 Mean 10,640 Ac-ft 7,704,000
Water year 1953-54: Max 15,800 Min 7,060 Mean 9,586 Ac-ft 6,940,000

* Discharge measurement made on this day.

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 southeast of Mountain City.

Drainage area.--209 sq mi.

Records available.--March 1938 to September 1954.

Gage.--Gage readings obtained about once a week 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, 22,570 acre-ft May 5 (gage height, 73.85 ft); minimum observed, 3,430 acre-ft Sept. 30.
1938-54: Maximum contents observed, 35,630 acre-ft Apr. 29, 1952 (gage height, 81.56 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 height 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.--Most of gage-height record and base data for capacity table furnished by Office of Indian Affairs.

Contents, in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	-	-	22,460	-	10,430	-	-
2	-	-	-	b15,650	-	-	-	-	-	10,050	-	-
3	16,800	-	-	-	-	-	19,770	-	-	9,790	-	-
4	-	-	-	-	-	-	-	-	15,350	-	5,920	4,010
5	-	-	14,870	-	-	-	-	22,570	15,260	-	-	-
6	-	-	-	-	b16,000	16,910	-	-	-	-	-	-
7	-	15,100	-	-	-	-	-	-	-	8,450	5,660	-
8	-	-	-	-	-	-	20,380	22,390	-	-	-	-
9	-	15,000	-	15,730	-	17,430	-	-	-	-	-	-
10	16,220	-	-	-	-	-	-	22,140	-	8,190	-	-
11	-	-	15,050	-	-	-	-	-	-	-	-	3,850
12	15,990	-	-	-	-	-	20,800	-	14,980	-	-	-
13	-	-	-	-	16,160	b17,800	-	-	-	-	-	-
14	-	14,860	-	-	-	-	-	-	-	-	5,050	-
15	-	-	-	-	-	-	-	20,930	-	-	-	-
16	15,720	-	-	15,790	-	-	-	-	14,680	-	-	-
17	-	-	-	-	-	-	21,410	-	-	7,570	-	-
18	-	-	-	-	-	-	-	-	-	-	-	3,700
19	-	-	-	-	-	-	-	-	14,150	-	-	-
20	-	-	-	-	b16,350	b18,400	-	-	-	-	-	-
21	-	14,640	-	-	-	-	-	-	13,600	-	4,470	3,610
22	-	-	-	-	-	-	-	18,510	-	-	-	-
23	-	-	-	15,840	-	-	-	-	-	-	4,310	-
24	15,500	-	-	-	-	-	21,900	-	-	6,920	-	-
25	-	14,650	-	-	-	-	-	-	-	-	-	3,550
26	-	-	-	-	-	-	-	-	12,020	-	-	-
27	-	-	-	-	b16,600	b19,100	-	-	-	-	-	-
28	-	14,700	-	-	a16,640	-	-	-	-	-	4,190	-
29	-	-	-	-	-	-	-	16,100	-	-	-	-
30	-	a14,750	-	b15,900	-------	-	a22,370	-	a10,750	-	-	3,430
31	15,290	-------	a15,600	a15,900	-------	a19,500	-------	15,370	-------	6,290	a4,110	-------

a No gage reading; contents interpolated by graph.
b Gage reading to top of ice; contents interpolated by graph.

Monthly gage height and contents, water year October 1953 to September 1954

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	69.8	17,130	-
Oct. 31	68.25	15,290	-1,840
Nov. 30	-	a14,750	-540
Dec. 31	-	a15,600	+850
Calendar year 1953	-	-	-1,290
Jan. 31	-	a15,900	+300
Feb. 28	-	a16,640	+740
Mar. 31	-	a19,500	+2,860
Apr. 30	-	a22,370	+2,870
May 31	68.32	15,370	-7,000
June 30	-	a10,750	-4,620
July 31	57.63	6,290	-4,460
Aug. 31	-	a4,110	-2,180
Sept.30	52.22	3,430	-680
Water year 1953-54	-	-	-13,700

a No gage reading; contents interpolated.

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, 8 miles west of Gold Creek, and 12 miles southeast of Mountain City.

Drainage area.--209 sq mi.

Records available.--March 1916 to September 1925, October 1936 to September 1954.

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.--25 years (1917-21, 1922-25, 1936-54), 43.9 cfs (31,780 acre-ft per year).

Extremes.--Maximum discharge during year, 182 cfs May 15 (gage height, 3.34 ft); no flow Oct. 18, Apr. 21 to May 4.
1916-25, 1936-54: 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 excellent above 5 cfs, fair below. Small diversions above station for irrigation. Flow regulated by Wild Horse Reservoir beginning Mar. 18, 1938 (see preceding page).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 16-19, Apr. 12 to May 5, and May 31 to June 5)

0.5	0.1	1.9	16
.6	.2	2.2	31
.9	.9	2.6	66
1.1	2.0	3.0	123
1.5	5.8	3.5	221

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	18						0	2.6	170	41	10
2	43	18						0	2.6	*168	41	10
3	43	18						0	2.4	168	41	10
4	43	18						0	*2.3	166	*41	10
5	43	18						13	10	164	41	10
6	43	18					0.1	36	22	164	41	10
7	43	18						45	22	129	41	10
8	43	18						63	22	42	41	10
9	43	*18				(**)		63	29	42	41	10
10	43	18						*77	45	41	41	10
11	43	18						100	45	41	41	10
12	*43	18					**.1	111	45	41	41	10
13	43	18					.1	130	45	41	41	10
14	42	18					.1	130	45	41	41	10
15	43	18					.1	147	45	41	42	10
16	18	18	0.1	0.1	0.1	0.1	.1	180	58	41	42	10
17	.1	18					.1	180	78	41	42	9.7
18	0	18					.1	180	92	41	42	9.7
19	4.2	19					.1	178	118	41	42	9.7
20	17	19					.1	178	118	41	42	9.7
21	18	19					0	178	139	41	42	*9.7
22	18	19					0	178	176	41	42	9.7
23	18	19					0	178	176	41	30	9.7
24	18	19					0	178	176	41	10	9.7
25	18	7.9					0	176	174	41	10	9.7
26	18						0	176	174	41	10	9.7
27	18						0	176	174	41	10	9.7
28	18	.1					0	174	172	41	10	9.7
29	18						0	174	170	41	10	9.7
30	18						0	174	170	41	10	9.7
31	18						------	114	------	41	10	------
Total	881.3	446.4	3.1	3.1	2.8	3.1	2.0	3,687	2,549.9	2,115	1,020	295.8
Mean	28.4	14.9	0.1	0.1	0.1	0.1	0.07	119	85.0	68.2	32.9	9.86
Ac-ft	1,750	885	6.1	6.1	5.6	6.1	4.0	7,310	5,060	4,200	2,020	587

Calendar year 1953: Max 434 Min 0 Mean 40.0 Ac-ft 28,970
Water year 1953-54: Max 180 Min 0 Mean 30.2 Ac-ft 21,840

* Discharge measurement made on this day.
** Field estimate made on this day.
Note.--No gage-height record Nov. 26 to Apr. 11; discharge estimated on basis of 1 field estimate and engineers' notes.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 5,425 ft above mean sea level, unadjusted.

Average discharge.--15 years, 152 cfs (110,000 acre-ft per year).

Extremes.--Maximum discharge during year, 350 cfs Mar. 9 (gage height, 4.85 ft); minimum, 7.3 cfs Sept. 12.
1939-54: Maximum discharge, 2,710 cfs May 3 or 4, 1952 (gage height, 10.07 ft); minimum daily, 2 cfs Sept. 15-18, 1940.

Remarks.--Records good except those for periods of ice effect, which are fair. Numerous diversions above station for irrigation of hay meadows. Flow partly regulated by Wild Horse Reservoir (see p. 141).

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	4.8	3.0	155
1.2	23	4.0	256
2.0	74	5.0	368

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	38	24				65	126	126	174	46	14
2	51	38	23				67	117	66	*170	42	13
3	52	39			b23	b32	70	109	51	171	42	12
4	52	38					82	94	*44	168	*43	12
5	52	37					108	89	42	166	43	10
6	52	37				34	122	106	48	160	40	10
7	52	36				38	110	126	57	159	41	11
8	53	36			b25	77	102	145	52	120	42	11
9	53	*36				*286	102	150	62	62	42	10
10	53	36				223	96	*155	94	56	42	9.1
11	54	37	(*)			122	92	176	109	51	42	8.5
12	*54	38				105	*98	187	96	50	38	7.9
13	54	39			b28	96	112	204	84	48	34	8.5
14	54	38				90	143	205	82	48	34	9.1
15	56	38				86	148	208	78	52	34	10
16	56	38		b21		78	142	239	84	50	39	12
17	40	40	b22			69	155	247	94	46	41	12
18	20	39			b29	62	174	243	102	47	42	11
19	19	b37				66	183	242	126	48	42	9.8
20	18	b36				66	169	234	135	48	45	11
21	31	b38		(*)		61	159	230	130	47	46	*13
22	38	42				54	154	228	163	48	45	14
23	38	45				69	153	226	177	48	45	15
24	39	48				63	149	218	174	48	39	14
25	39	48			b31	73	147	215	173	48	22	12
26	38	39				82	144	216	178	48	18	12
27	38	27				76	135	216	191	50	17	12
28	38	24				73	166	216	181	48	16	12
29	37	23			-	78	150	213	176	46	16	13
30	36	23				73	131	209	175	46	14	15
31	38	--			---	64	------	207	------	46	14	------
Total	1,355	1,108	685	651	773	2,424	3,828	5,796	3,350	2,417	1,106	343.9
Mean	43.7	36.9	22.1	21.0	27.6	78.2	128	187	112	78.0	35.7	11.5
Ac-ft	2,690	2,200	1,360	1,290	1,530	4,810	7,590	11,500	6,640	4,790	2,190	682

Calendar year 1953: Max 1,520 Min 18 Mean 157 Ac-ft 113,400
Water year 1953-54: Max 286 Min 7.9 Mean 65.3 Ac-ft 47,270

Peak discharge (base, 380 cfs).--No peak above base.
* 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, T. 31 S., R. 41 E., on right bank half a mile downstream from Jordan Creek and 2½ miles north of Rome.

Drainage area.--About 8,000 sq mi.

Records available.--October 1949 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 3,343.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Average discharge.--5 years, 1,021 cfs (739,200 acre-ft per year).

Extremes.--Maximum discharge during year, 8,100 cfs Mar. 10 (gage height, 8.50 ft); minimum, 42 cfs Aug. 12 (gage height, 0.65 ft).
1949-54: Maximum discharge, 27,800 cfs Apr. 14, 1952 (gage height, 15.60 ft); minimum, that of Aug. 12, 1954.

Remarks.--Records good. Diversions above station for irrigation. Flow regulated by Antelope Reservoir (capacity, 36,600 acre-ft), Wild Horse Reservoir (see p. 141), and numerous small reservoirs.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 20		Dec. 21 to Sept. 30			
1.0	110	0.7	51	5.0	2,450
1.5	220	1.0	116	6.0	3,800
2.0	360	2.0	365	7.0	5,400
		3.0	780	8.0	7,150
		4.0	1,450		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	128	156	200	193	558	730	626	359	205	118	80	67
2	134	156	200	193	578	586	608	359	200	121	80	67
3	134	156	198	196	542	490	534	350	193	128	82	65
4	130	156	195	205	490	460	494	335	191	121	75	63
5	130	156	192	203	442	418	538	325	210	116	73	59
6	134	154	185	203	435	372	*710	308	248	128	78	59
7	*134	156	180	203	438	362	671	290	245	123	78	59
8	132	152	180	203	474	376	680	272	218	121	73	59
9	134	152	175	203	514	1,430	671	265	210	111	*73	59
10	136	152	170	198	538	5,740	622	295	222	109	63	57
11	138	152	188	203	522	2,690	582	292	232	107	65	59
12	138	154	164	203	542	1,980	570	278	245	104	53	63
13	136	156	168	*200	750	1,340	578	252	240	114	55	65
14	138	154	195	176	1,780	1,060	599	225	270	*98	55	63
15	138	154	182	196	1,740	928	626	208	285	95	55	67
16	140	154	180	196	1,490	855	702	203	270	98	55	69
17	144	154	192	196	1,020	840	830	222	245	100	57	69
18	148	152	195	198	855	805	780	220	232	89	55	69
19	150	152	210	191	958	745	745	203	215	89	55	65
20	150	*150	300	210	835	658	785	200	215	89	55	63
21	152	150	498	193	658	640	730	193	215	91	57	67
22	170	158	393	188	635	640	671	186	200	91	57	63
23	164	156	300	210	730	680	604	188	176	95	59	65
24	160	162	252	208	810	735	542	*198	164	100	61	65
25	162	178	225	203	*934	690	478	191	153	98	59	67
26	162	195	230	184	1,230	640	424	191	130	93	57	69
27	158	200	205	191	1,310	653	393	186	125	91	57	69
28	154	205	242	210	1,060	780	393	186	118	89	59	65
29	154	210	230	260	-	740	390	193	121	89	61	65
30	158	205	220	594		676	365	205	116	84	65	67
31	156	-	205	478	-	626	-	205	-	82	67	-
Total	4,496	4,897	6,849	6,888	22,868	30,365	17,941	7,583	6,109	3,182	1,974	1,928
Mean	145	163	221	222	817	980	598	245	204	103	63.7	64.3
Ac-ft	8,920	9,710	13,580	13,660	45,360	60,230	35,590	15,040	12,120	6,310	3,920	3,820

Calendar year 1953: Max 5,030 Min 114 Mean 579 Ac-ft 419,100
Water year 1953-54: Max 5,740 Min 53 Mean 315 Ac-ft 228,300

Peak discharge (base, 3,000 cfs).--Mar. 10 (4 a.m.) 8,100 cfs (8.50 ft).
* Discharge measurement made on this day.

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, 21 miles southwest of Nyssa.

Drainage area.--11,160 sq mi, approximately.

Records available.--October 1932 to September 1954.

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, 943,800 acre-ft Apr. 6, 7, 8 (elevation, 2,655.10 ft); minimum observed, 538,300 acre-ft Sept. 30 (elevation, 2,610.40 ft).
1932-54: Maximum contents observed, 1,140,000 acre-ft Apr. 15, 1952 (elevation, 2,671.40 ft); minimum observed since full capacity was attained on May 7, 1936, that of Sept. 30, 1954.

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 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 the 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.--Record of elevations furnished by Bureau of Reclamation.

Monthly elevation and contents, water year October 1953 to September 1954

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	2,640.80	795,000	-
Oct. 31	2,638.79	775,800	-19,200
Nov. 30	2,640.39	791,100	+15,300
Dec. 31	2,642.30	809,700	+18,600
Calendar year 1953	-	-	-69,300
Jan. 31	2,643.95	826,000	+16,300
Feb. 28	2,648.58	873,400	+47,400
Mar. 31	2,654.65	938,900	+65,500
Apr. 30	2,652.22	912,200	-26,700
May 31	2,644.58	832,300	-79,900
June 30	2,638.65	774,400	-57,900
July 31	2,628.48	682,600	-91,800
Aug. 31	2,618.19	597,600	-85,000
Sept.30	2,610.40	538,300	-59,300
Water year 1953-54	-	-	-256,700

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 1954.

Gage.--Water-stage recorder. Datum of gage is 2,343.67 ft above mean sea level (levels by Bureau of Reclamation).

Average discharge.--25 years, 403 cfs (291,800 acre-ft per year).

Extremes.--Maximum discharge during year, 373 cfs Aug. 31 (gage height, 2.06 ft); minimum observed, 4 cfs Oct. 17 to Apr. 5.
1929-54: Maximum discharge, 22,900 cfs Apr. 15, 1952 (gage height, 15.7 ft); no flow for a few hours Aug. 8, 9, 1932, when temporary diversion tunnel at Owyhee Dam was closed.

Remarks.--Records fair. Diversions above station for irrigation. Flow regulated by Wild Horse and Owyhee Reservoirs (see p. 141, 145).

Cooperation.--Water-stage recorder inspected and one discharge measurement made by Bureau of Reclamation.

Revisions (water years).--WSP 983: 1941-42.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101	4	4	4	4	4	4	115	82	82	45	24
2	96	4	4	4	4	4	4	115	78	84	45	24
3	92	4	4	4	4	4	4	115	81	84	46	24
4	92	4	4	4	4	4	4	115	82	84	47	24
5	92	4	4	4	4	4	58	139	81	74	47	24
6	92	4	4	4	4	4	105	147	*81	70	47	24
7	76	4	4	4	4	4	*105	148	82	70	48	24
8	*65	4	4	4	4	4	105	148	82	72	*48	24
9	65	4	4	4	4	4	105	148	84	76	48	24
10	65	4	4	4	4	4	106	148	54	76	48	24
11	65	4	4	4	4	4	106	148	38	76	48	24
12	66	4	4	4	4	4	106	150	39	69	48	24
13	66	4	4	4	4	4	106	150	40	62	48	24
14	67	4	4	4	4	4	105	150	54	62	48	24
15	29	4	4	4	4	4	105	150	63	54	48	24
16	5	4	4	4	4	4	106	150	62	48	48	24
17	4	4	4	4	4	4	106	150	63	48	49	24
18	4	4	4	4	4	4	105	150	63	48	49	24
19	4	4	4	4	4	4	122	150	63	44	48	24
20	4	*4	4	4	4	4	132	150	63	42	48	24
21	4	4	4	4	4	4	131	150	64	42	49	24
22	4	4	4	4	4	4	145	150	85	43	49	24
23	4	4	4	4	4	4	154	148	118	43	49	24
24	4	4	4	4	4	4	154	147	140	43	*49	24
25	4	4	4	4	4	4	154	147	148	44	49	24
26	4	4	4	4	4	4	154	147	147	44	49	43
27	4	4	4	4	4	4	130	*147	145	44	50	60
28	4	4	4	4	4	4	115	147	145	44	50	60
29	4	4	4	4	-	4	115	147	157	44	50	59
30	4	4	4	4		4	115	119	124	44	44	49
31	4		4	4	----	4	------	98	------	45	*36	------
Total	1,194	120	124	124	112	124	3,066	4,383	2,608	1,805	1,475	871
Mean	38.5	4.0	4.0	4.0	4.0	4.0	102	141	86.9	58.2	47.6	29.0
Ac-ft	2,370	238	246	246	222	246	6,080	8,690	5,170	3,580	2,930	1,730

Calendar year 1953: Max 212 Min 4 Mean 68.5 Ac-ft 49,620
Water year 1953-54: Max 157 Min 4 Mean 43.9 Ac-ft 31,750

* Discharge measurement 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., on right bank 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 1954.

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.--43 years, 1,162 cfs (841,300 acre-ft per year).

Extremes.--Maximum discharge during year, 8,560 cfs May 21 (gage height, 7.57 ft); minimum, 225 cfs Nov. 19 (gage height, 1.99 ft).
1911-54: 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 for periods of ice effect or no gage-height record, which are fair.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	222	4.0	2,020
2.2	338	5.0	3,520
2.5	505	6.0	5,300
3.0	880	7.5	8,410
3.5	1,380		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	333	333	451	410	570	672	688	3,070	2,540	2,900	672	401
2	338	385	423	400	540	605	680	2,740	2,230	2,840	648	401
3	348	385	*401	390	510	612	704	2,660	2,160	2,710	633	396
4	343	359	401	380	500	612	880	2,770	2,200	2,770	605	396
5	343	354	401	380	500	626	1,580	3,500	2,530	2,840	598	396
6	338	396	418	380	520	680	2,300	4,320	2,480	2,800	598	390
7	333	380	390	380	500	736	1,850	4,710	2,370	2,600	584	390
8	333	364	348	370	500	872	1,630	5,110	2,200	2,380	564	385
9	329	359	364	330	520	1,570	1,580	5,790	2,160	2,230	544	385
10	324	359	401	290	540	2,360	1,440	6,700	2,220	2,010	531	380
11	324	369	324	320	580	1,780	1,450	6,310	2,290	1,940	524	369
12	324	374	359	370	640	1,400	1,700	5,990	2,330	1,840	518	369
13	329	369	350	360	900	1,100	2,200	5,650	2,530	1,760	550	364
14	329	364	350	370	880	930	3,340	*5,320	2,760	1,680	518	364
15	329	369	410	*385	770	900	3,250	5,300	3,150	1,660	505	369
16	343	364	400	385	700	870	3,140	5,610	3,950	1,570	493	434
17	338	359	380	401	670	820	3,730	6,270	3,520	1,500	487	406
18	338	329	370	390	670	780	4,410	6,270	3,120	1,350	475	390
19	354	244	420	390	630	780	4,410	6,620	3,000	1,230	469	385
20	*348	b285	500	348	600	780	3,820	7,620	3,060	1,140	469	380
21	338	b360	490	364	640	720	3,540	7,860	*3,600	1,080	512	374
22	338	440	350	457	610	700	3,520	*6,170	3,990	1,020	544	364
23	338	696	260	505	590	750	3,760	5,190	4,570	952	493	359
24	343	564	250	469	620	*784	3,830	4,730	4,940	907	469	359
25	343	475	270	428	660	792	4,070	4,530	4,710	848	463	359
26	338	469	320	418	700	800	4,210	4,050	5,170	832	*505	354
27	338	531	380	445	*696	832	4,370	3,470	5,410	*808	512	348
28	338	577	370	445	672	808	4,510	3,010	4,020	784	463	348
29	338	487	370	512	-'	760	4,280	2,710	3,330	752	440	*348
30	333	463	340	598	-----	704	*3,660	2,560	3,070	720	423	369
31	333	-----	350	598	-----	688	-----	2,380	------	704	412	------
Total	10,436	12,162	11,611	12,668	17,428	27,823	84,532	148,990	95,610	51,157	16,221	11,332
Mean	337	405	375	409	622	898	2,818	4,806	3,187	1,650	523	378
Cfsm	0.406	0.488	0.452	0.493	0.749	1.08	3.40	5.79	3.84	1.99	0.630	0.455
In.	0.47	0.54	0.52	0.57	0.78	1.25	3.79	6.68	4.28	2.29	0.73	0.51
Ac-ft	20,700	24,120	23,030	25,130	34,570	55,190	167,700	295,500	189,600	101,500	32,170	22,480

Calendar year 1953: Max 8,390 Min 244 Mean 1,366 Cfsm 1.65 In. 22.34 Ac-ft 989,000
Water year 1953-54: Max 7,860 Min 244 Mean 1,370 Cfsm 1.65 In. 22.41 Ac-ft 991,700

Peak discharge (base, 3,700 cfs).--Apr. 19 (2:30 a.m.) 4,790 cfs (5.73 ft); Apr. 29 (1:30 a.m.) 4,640 cfs (5.65 ft); May 21 (4 a.m.) 8,560 cfs (7.57 ft); June 16 (9 a.m.) 4,170 cfs (5.39 ft); June 26 (12 p.m.) 6,720 cfs (6.71 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Dec. 13 to Jan. 14, Feb. 2-26, Mar. 12-23; discharge estimated on basis of weather records, recorded range in stage, and records for nearby streams.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 4,220 ft (from topographic map of Bureau of Reclamation).

Average discharge.--9 years, 821 cfs (594,400 acre-ft per year).

Extremes.--Maximum discharge during year, 5,380 cfs May 21 (gage height, 7.34 ft); minimum, 128 cfs Nov. 20, Dec. 23: minimum gage height, 1.60 ft Dec. 23.
1945-54: Maximum discharge, 5,530 cfs Apr. 28, 1952 (gage height, 7.47 ft); minimum, 30 cfs Feb. 10, 1949 (gage height, 0.60 ft), result of snowslide upstream.

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

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.6	120	4.0	1,410
2.0	235	5.0	2,400
2.5	450	6.0	3,600
3.0	720	7.2	5,180
3.5	1,030		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*204	207	*242	214	256	302	342	1,800	1,560	1,570	368	218
2	200	*224	228	221	235	270	355	1,600	1,380	1,520	360	214
3	204	221	218	232	235	256	368	1,560	1,330	1,410	346	210
4	207	214	242	228	235	274	440	1,680	1,350	1,370	332	207
5	204	218	228	238	238	282	660	2,150	1,560	1,350	332	207
6	200	232	238	232	249	302	804	2,690	1,540	1,290	332	207
7	200	221	224	235	242	342	738	2,940	1,420	1,200	319	207
8	207	214	179	235	235	400	738	3,140	1,320	1,090	310	204
9	204	218	191	194	*235	577	750	3,480	1,310	1,010	294	200
10	200	221	235	160	242	670	744	4,180	*1,340	942	286	197
11	197	228	185	197	256	550	792	4,250	1,280	900	278	194
12	197	232	210	*224	286	445	930	*4,110	1,270	852	274	194
13	197	228	204	214	346	410	1,120	3,820	1,340	810	274	197
14	197	224	188	228	355	386	1,320	3,540	1,460	798	260	200
15	197	232	238	235	319	382	1,360	3,630	1,700	810	260	210
16	207	224	235	221	294	391	1,430	3,820	2,050	810	260	238
17	207	218	207	228	290	373	1,800	4,210	1,820	762	246	224
18	207	200	200	221	290	355	2,210	4,280	1,670	687	252	218
19	214	158	228	228	256	350	2,260	4,460	1,620	648	249	218
20	210	162	246	210	249	360	2,020	4,900	1,670	604	249	214
21	207	204	235	207	282	337	1,900	5,080	1,960	572	266	210
22	207	249	182	228	260	*328	1,910	4,300	2,150	*555	278	*210
23	207	332	142	270	252	346	2,060	3,550	2,420	533	266	a210
24	207	319	142	266	274	378	2,160	3,220	2,590	511	249	a210
25	207	270	155	246	306	391	2,380	3,040	2,510	485	*242	a210
26	207	270	168	228	314	382	2,540	2,710	2,920	470	260	a205
27	207	298	214	232	294	391	*2,560	2,310	3,120	450	260	a200
28	210	294	207	249	282	382	2,540	1,990	2,290	420	242	a200
29	207	256	221	278	-	364	2,470	1,780	1,900	405	228	a200
30	207	249	188	282	------	346	2,140	1,630	1,700	396	218	a215
31	207	-----	194	274	-----	342	------	1,540	------	382	214	------
Total	6,340	7,037	6,414	7,155	7,607	11,664	43,841	97,390	53,550	25,612	8,604	6,248
Mean	205	235	207	231	272	376	1,461	3,142	1,785	826	278	208
Cfsm	0.323	0.370	0.326	0.364	0.428	0.592	2.30	4.95	2.81	1.30	0.438	0.328
In.	0.37	0.41	0.38	0.42	0.45	0.68	2.57	5.70	3.14	1.50	0.50	0.37
Ac-ft	12,580	13,960	12,720	14,190	15,090	23,140	86,960	193,200	106,200	50,800	17,070	12,390

Calendar year 1953: Max 4,470 Min 142 Mean 793 Cfsm 1.25 In. 16.94 Ac-ft 574,100
Water year 1953-54: Max 5,080 Min 142 Mean 771 Cfsm 1.21 In. 16.49 Ac-ft 558,300

Peak discharge (base, 2,000 cfs).--Apr. 27 (3:30 a.m.) 2,720 cfs (5.27 ft); May 21 (6 a.m.) 5,380 cfs (7.34 ft); June 16 (4 a.m.) 2,170 cfs (4.79 ft); June 26 (12 p.m.) 3,940 cfs (6.26 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for Boise River near Twin Springs and other nearby streams.

Lime Creek near Bennett, Idaho

Location.--Lat 43°25', long 115°16', in SW¼NE¼ sec. 16, T. 1 N., 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 4,250 ft (from topographic map of Bureau of Reclamation).

Average discharge.--9 years, 90.0 cfs (65,160 acre-ft per year).

Extremes.--Maximum discharge during year, 523 cfs probably Apr. 18 (gage height, 4.60 ft); minimum, 9.7 cfs Nov. 19 (gage height, 2.21 ft), result of freezeup.
1945-54: Maximum discharge, 1,180 cfs Apr. 19, 1946, Apr. 27, 1952; maximum gage height, 8.02 ft Feb. 15, 1949 (backwater from snowslide); minimum discharge, 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 regulation or diversion.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.3	15	3.0	89
2.4	21	3.5	192
2.6	37	4.0	328
2.8	59	4.5	495

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	25	*34	36	a36	46	60	a250	a115	57	23	a19
2	*21	26	30	35	a37	39	60	a210	a105	54	23	a18
3	22	*26	29	36	a38	48	65	a220	a95	51	22	a18
4	22	26	32	35	a38	46	76	a240	a92	47	22	a17
5	22	26	32	38	a38	47	132	a270	a94	46	22	a18
6	21	28	32	37	a39	49	183	a300	a90	44	23	a17
7	21	27	32	38	a39	51	171	a320	a92	43	22	a18
8	21	27	24	36	a40	60	*183	a330	a90	41	22	a18
9	22	27	b26	29	*b41	118	194	a360	a91	40	22	a18
10	22	26	b30	b27	b42	130	a200	a400	a92	39	21	a18
11	22	27	b28	b32	b43	94	a220	a380	*91	38	21	a18
12	22	27	b30	*35	46	75	a260	a370	81	37	21	a19
13	22	28	b30	35	51	67	a320	*364	76	34	21	a19
14	22	27	b29	37	49	63	a380	a330	73	35	20	a19
15	23	28	b30	35	45	62	a340	a310	78	39	20	a22
16	24	27	b32	37	45	62	a400	a310	100	39	20	a25
17	24	28	32	38	45	60	a430	a320	76	36	a20	a22
18	24	20	34	36	44	60	a460	a310	72	34	a20	a21
19	26	18	35	37	39	60	a420	a300	67	33	a20	a21
20	25	25	38	b29	46	60	a380	a310	66	32	a20	a21
21	24	27	33	b28	43	58	a350	a280	58	30	a23	a21
22	25	32	b27	b35	42	58	a350	a250	a60	31	a24	*21
23	25	55	b24	b41	43	59	a360	a230	a62	*30	a23	22
24	26	45	b24	b38	46	63	a360	a210	a60	29	a22	22
25	26	38	b25	b34	51	65	a360	a190	59	27	*22	22
26	25	40	b27	b33	52	65	a350	a170	100	27	23	22
27	26	43	b31	a34	47	67	*349	a160	94	27	24	22
28	26	42	b33	a36	48	66	a360	a140	72	26	a22	21
29	26	35	b33	a38	-	65	a340	a130	65	25	a20	22
30	26	35	b31	a43	------	62	a300	a120	59	24	a19	a23
31	26	-----	b33	a40	-----	58	-----	a115	------	24	a19	------
Total	730	911	940	1,098	1,213	1,983	8,413	8,199	2,425	1,119	666	604
Mean	23.5	30.4	30.3	35.4	43.3	64.0	280	264	80.8	36.1	21.5	20.1
Cfsm	0.179	0.232	0.231	0.270	0.331	0.489	2.14	2.02	0.617	0.276	0.164	0.153
In.	0.21	0.26	0.27	0.31	0.34	0.56	2.39	2.33	0.69	0.32	0.19	0.17
Ac-ft	1,450	1,810	1,860	2,180	2,410	3,930	16,690	16,260	4,810	2,220	1,320	1,200

Calendar year 1953: Max 512 Min 18 Mean 81.7 Cfsm 0.624 In. 8.46 Ac-ft 59,160
Water year 1953-54: Max 460 Min 17 Mean 77.5 Cfsm 0.592 In. 8.04 Ac-ft 56,140

Peak discharge (base, 230 cfs).--Probably Apr. 18 (time unknown) 523 cfs (4.60 ft); probably May 10 (time unknown) 439 cfs (4.30 ft); June 26 (5:30 p.m.) 262 cfs (3.77 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, recorded range in stage, and records for Fall Creek near Anderson Ranch Dam, South Fork Boise River near Featherville, 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 4,350 ft (from topographic map of Bureau of Reclamation.

Average discharge.--9 years, 71.8 cfs (51,980 acre-ft per year).

Extremes.--Maximum discharge during year, 468 cfs Apr. 17 (gage height, 4.85 ft); maximum gage height, 4.86 ft Dec. 27 (ice jam); minimum discharge, 11 cfs Sept. 11 (gage height, 2.55 ft).

1945-54: Maximum discharge, 948 cfs Apr. 27, 1952 (gage height, 6.25 ft); minimum, 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, which are fair. No regulation or diversion.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 25				Dec. 26 to Sept. 30			
2.5	10	3.0	38	2.6	12	3.6	127
2.6	13	3.2	57	2.8	21	4.0	209
2.8	23			3.0	38	4.4	317
				3.2	63	4.8	445

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*15	15	*23	b19	26	33	43	214	113	70	18	14
2	15	*16	22	b19	b25	b30	44	198	100	67	18	13
3	15	16	21	20	b26	b32	49	196	94	60	18	13
4	15	16	20	20	b26	b32	64	211	92	58	18	12
5	15	16	21	20	b26	b30	118	241	95	54	18	13
6	15	18	20	19	27	b36	148	270	92	53	18	12
7	15	17	20	20	b27	39	125	279	94	49	17	13
8	15	17	b17	*b19	b28	b54	125	293	89	46	16	12
9	15	17	b18	b17	*b29	b128	129	317	95	44	16	12
10	15	17	19	b16	b29	135	131	342	*95	42	16	12
11	15	17	b17	b18	30	94	146	326	92	39	16	12
12	15	17	19	20	32	77	179	*293	89	37	16	12
13	15	17	b19	b19	36	69	231	273	88	34	16	12
14	15	17	b18	20	34	62	290	262	89	34	16	12
15	15	17	19	20	31	58	279	259	99	36	16	14
16	15	16	18	20	30	56	299	267	109	34	16	15
17	15	16	18	20	30	54	377	270	97	31	16	13
18	16	13	19	20	29	51	422	267	95	30	16	13
19	17	b12	21	21	b27	49	386	259	94	28	16	13
20	16	b13	22	b20	28	48	345	266	92	27	16	13
21	16	14	21	b20	27	45	317	254	94	25	17	*13
22	16	15	b18	b20	27	*43	320	221	94	*26	17	13
23	16	b48	b14	23	27	44	326	200	97	26	16	13
24	16	32	b14	21	30	46	326	187	95	24	*15	13
25	16	25	b15	b20	33	48	329	174	92	24	15	13
26	16	26	b16	b20	35	50	*329	160	109	22	17	13
27	16	29	b19	b21	33	51	317	142	95	22	16	12
28	16	28	b19	b22	33	50	323	131	84	20	15	12
29	16	24	b19	27	-	48	296	122	77	20	14	13
30	15	24	b17	27	------	46	254	116	74	20	14	13
31	15	-----	b18	26	-----	44	-----	113	------	19	14	------
Total	476	585	581	634	821	1,682	7,067	7,123	2,814	1,121	503	383
Mean	15.4	19.5	18.7	20.5	29.3	54.3	236	230	93.8	36.2	16.2	12.8
Cfsm	0.278	0.353	0.338	0.371	0.530	0.982	4.27	4.16	1.70	0.655	0.293	0.231
In.	0.32	0.39	0.39	0.43	0.55	1.13	4.75	4.79	1.89	0.75	0.34	0.26
Ac-ft	946	1,160	1,150	1,260	1,630	3,340	14,020	14,130	5,580	2,220	998	760

Calendar year 1953: Max 454 Min 12 Mean 68.6 Cfsm 1.24 In. 16.82 Ac-ft 49,690
Water year 1953-54: Max 422 Min 12 Mean 65.2 Cfsm 1.18 In. 15.99 Ac-ft 47,200

Peak discharge (base, 300 cfs).--Apr. 17 (10 p.m.) 468 cfs (4.85 ft); May 10 (8 p.m.) 380 cfs (4.60 ft).

* Discharge measurement made on this day.
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 1954.

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, 1924-54: Maximum daily discharge, 77 cfs Apr. 27-30, May 1, 3, 9, 1924; no flow during nonirrigation seasons.

Remarks.--Records good. 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	59	57	56	56	48
2							0	59	57	56	56	47
3							0	59	57	56	55	46
4							0	59	57	56	55	45
5							0	59	57	56	55	44
6							0	60	56	56	55	43
7							0	60	56	56	54	42
8							0	60	56	56	54	15
9							5	60	57	56	55	0
10							10	60	57	56	56	0
11							14	60	*57	56	56	0
12							18	60	57	55	56	0
13							30	*60	56	55	56	0
14							34	60	57	55	55	0
15							39	60	57	55	55	0
16							44	60	56	55	55	0
17							44	59	56	55	56	0
18							44	59	56	55	56	0
19							50	59	56	55	56	0
20							57	59	56	55	56	0
21							59	59	56	55	55	0
22							59	59	56	55	55	*0
23							59	59	56	*54	54	0
24							59	59	57	54	53	0
25							59	58	57	54	*52	0
26							*59	58	57	55	52	0
27							59	58	57	55	52	0
28							59	58	57	55	51	0
29							59	58	57	56	50	0
30							59	58	57	56	49	0
31							------	58	------	56	48	------
Total	0	0	0	0	0	0	979	1,833	1,698	1,716	1,679	330
Mean	0	0	0	0	0	0	32.6	59.1	56.6	55.4	54.2	11.0
Ac-ft	0	0	0	0	0	0	1,940	3,640	3,370	3,400	3,330	655

Calendar year 1953: Max 65 Min 0 Mean 20.0 Ac-ft 14,450
Water year 1953-54: Max 60 Min 0 Mean 22.6 Ac-ft 16,340

* Discharge measurement or observation of no flow 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 1954.

Gage.--Staff gage or supplementary pressure gage in powerhouse read once daily. Datum of gage is at mean sea level (surveys by Bureau of Reclamation).

Extremes.--Maximum contents observed during year, 470,700 acre-ft June 27 (elevation, 4,197.37 ft); minimum observed, 221,200 acre-ft Feb. 7 (elevation, 4,131.9 ft).
1945-54: Maximum contents observed, that of June 27, 1954; no usable contents prior to Jan. 27, 1946; minimum since full capacity was attained June 21, 1951, 209,600 acre-ft Jan. 28, 29, 1953 (elevation, 4,127.9 ft).

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 land in Boise Valley.

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

Usable contents at about 8 a.m., in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	313,000	286,800	286,500	242,900	223,600	232,700	258,100	342,200	465,600	466,600	437,100	362,900
2	311,800	287,400	285,200	243,200	222,700	233,100	258,400	344,700	465,200	466,000	434,900	360,400
3	310,100	287,700	283,700	243,200	221,800	233,600	259,000	348,200	464,800	465,300	432,600	357,800
4	309,300	287,800	282,200	243,200	221,500	234,300	259,900	349,900	464,200	465,100	430,300	354,900
5	309,400	287,900	281,200	242,600	222,100	234,700	261,200	351,700	464,200	464,900	428,000	352,600
6	309,100	287,700	280,400	242,000	221,500	235,100	263,000	354,700	464,700	464,700	425,900	349,900
7	306,800	287,000	280,100	241,300	221,200	235,700	265,000	358,700	464,900	464,500	423,600	347,200
8	304,300	286,900	279,400	241,000	221,500	236,500	267,000	363,200	464,800	464,200	421,200	344,300
9	301,800	286,800	278,400	240,400	221,500	237,700	268,700	368,200	464,400	464,000	418,900	341,600
10	298,500	286,400	277,700	240,100	221,800	239,500	270,100	374,400	464,400	463,600	416,800	339,000
11	294,000	286,600	277,000	240,100	222,400	241,100	272,000	382,200	464,500	463,100	414,500	336,300
12	290,700	287,100	275,300	238,800	223,000	242,200	274,000	389,800	464,400	462,600	412,100	333,400
13	287,000	287,500	274,300	237,600	223,900	243,200	275,900	396,700	464,100	462,000	409,900	330,600
14	284,300	287,700	271,900	236,000	224,500	244,100	278,800	402,400	464,000	461,300	407,400	327,700
15	282,500	288,100	270,600	234,800	225,100	245,100	281,100	407,700	464,500	460,600	405,500	325,000
16	282,500	288,500	269,300	233,600	226,300	246,000	284,000	413,200	465,600	460,100	403,000	322,500
17	282,800	288,900	269,300	233,000	226,900	246,900	286,300	419,200	466,100	459,500	400,700	319,400
18	283,000	289,000	269,300	233,000	227,500	247,600	290,700	425,900	466,000	458,500	398,000	316,800
19	283,300	289,000	268,900	232,100	227,800	248,300	295,600	432,700	465,700	457,500	395,600	314,200
20	283,700	289,000	d267,000	231,400	228,100	249,200	300,300	440,300	465,700	456,200	392,700	311,700
21	283,900	288,400	d266,000	230,500	228,400	249,700	303,900	448,700	465,800	454,800	390,400	308,600
22	284,300	288,200	d264,000	229,300	229,000	250,400	307,300	456,700	466,400	453,600	388,300	306,000
23	284,500	289,200	d262,000	228,100	229,600	250,900	311,600	461,600	467,000	452,200	385,700	303,200
24	284,600	288,800	260,300	227,500	229,900	251,600	315,700	462,600	468,000	450,800	383,300	300,600
25	284,900	287,900	259,000	228,100	230,200	252,400	320,000	462,800	468,600	449,300	380,700	297,700
26	285,100	286,700	258,000	226,900	231,200	253,000	324,600	464,000	468,700	447,800	378,100	294,400
27	285,400	287,200	256,400	225,700	231,400	253,800	328,300	464,400	470,700	446,300	375,700	291,700
28	285,600	287,400	253,400	224,200	231,900	254,900	332,200	465,000	470,400	444,800	373,200	288,600
29	286,100	287,400	250,200	223,300	-	255,800	336,000	465,600	469,300	443,000	370,900	286,000
30	286,300	287,700	248,300	223,000	-------	256,500	339,300	465,600	467,900	441,400	368,400	283,200
31	286,500	-------	245,400	223,300	-------	257,300	-------	465,900	-------	439,300	365,600	-------

d Doubtful gage-height record; contents estimated on basis of inflow-outflow studies.

Monthly elevation and usable contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	4,160.02	314,400	-
Oct. 31	4,152.16	286,500	-27,900
Nov. 30	4,152.51	287,700	+1,200
Dec. 31	4,139.80	245,400	-42,300
Calendar year 1953	-	-	+26,200
Jan. 31	4,132.60	223,300	-22,100
Feb. 28	4,135.46	231,900	+8,600
Mar. 31	4,143.50	257,300	+25,400
Apr. 30	4,166.70	339,300	+82,000
May 31	4,196.36	465,900	+126,600
June 30	4,196.78	467,900	+2,000
July 31	4,190.67	439,300	-28,600
Aug. 31	4,173.44	365,600	-73,700
Sept. 30	4,151.20	283,200	-82,400
Water year 1953-54	-	-	-31,200

† Elevation at 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 1954 (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.--11 years (1943-54), 977 cfs (707,300 acre-ft per year).

Extremes.--Maximum discharge during year, 3,460 cfs May 24 (gage height, 6.44 ft); minimum, 62 cfs Nov. 6 (gage height, 1.85 ft).
1943-54: 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. Flow of Little Camas Creek stored in Little Camas Reservoir (no spill most years) and diverted through Little Camas Canal (see p. 151) 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.0	88	3.5	730
2.3	168	4.0	1,050
2.6	276	5.0	1,890
3.0	450	7.0	4,190

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*946	110	*1,020	552	622	144	243	1,010	2,110	2,220	1,550	1,610
2	1,190	103	998	239	485	118	250	414	1,910	2,020	1,550	1,600
3	705	137	1,040	134	464	118	204	1,110	1,840	1,840	1,550	1,580
4	124	252	952	1,110	147	160	159	1,350	1,760	1,650	1,550	1,620
5	440	330	574	566	496	170	282	1,410	1,700	1,580	1,550	1,520
6	980	632	268	291	414	187	206	1,380	1,710	1,610	1,550	1,620
7	1,580	476	910	442	198	158	209	1,460	1,770	1,540	1,550	1,650
8	1,580	210	914	*848	340	283	417	1,460	1,830	1,380	1,550	1,660
9	1,910	532	766	440	184	204	503	1,460	1,750	1,290	1,550	1,600
10	2,160	266	772	165	194	214	308	1,460	*1,660	1,340	1,510	1,600
11	1,910	118	1,040	1,040	165	250	132	1,470	1,680	1,300	1,560	1,670
12	2,160	118	965	1,020	204	228	674	*1,490	1,700	1,320	1,540	1,670
13	1,860	121	1,330	982	115	135	652	1,480	1,670	1,240	1,560	1,670
14	1,560	118	674	922	118	129	997	1,560	1,640	1,310	1,450	1,670
15	420	121	814	929	146	206	704	1,580	1,680	1,300	1,450	1,670
16	118	121	324	592	194	220	1,130	1,590	2,000	1,300	1,540	1,670
17	153	156	401	160	*194	214	1,100	1,590	2,070	1,310	1,570	1,670
18	118	216	284	984	194	175	1,050	1,580	2,070	1,300	1,600	1,660
19	113	208	628	786	217	132	1,250	1,570	1,990	1,310	1,620	1,670
20	110	528	1,180	703	142	258	1,080	1,570	1,960	1,320	1,620	1,670
21	119	506	1,460	892	115	126	1,110	1,580	2,010	1,330	1,620	*1,660
22	101	138	1,310	797	154	306	704	1,850	2,060	*1,330	1,480	1,660
23	186	811	1,550	672	206	*198	696	3,430	2,250	1,340	1,620	1,620
24	229	813	1,070	146	164	232	861	3,430	2,490	1,340	*1,620	1,580
25	118	993	864	1,030	192	228	924	3,010	*2,600	1,340	1,620	1,630
26	166	124	1,280	1,030	269	248	*1,290	2,860	2,690	1,330	1,620	1,620
27	99	362	1,580	1,070	131	132	1,460	2,450	3,040	1,340	1,560	1,620
28	97	400	1,570	1,090	118	132	1,400	2,060	2,980	1,340	1,620	1,630
29	99	121	1,410	530	-	214	1,470	1,980	2,780	1,350	1,490	1,630
30	*101	990	1,610	409		208	1,480	1,810	2,540	1,450	1,600	2,020
31	110		1,610	229		216		2,070		1,550	1,620	
Total	21,562	10,131	31,168	20,800	6,582	5,943	22,945	54,524	61,940	44,520	48,440	49,420
Mean	696	338	1,005	671	235	192	765	1,759	2,065	1,436	1,563	1,647
Ac-ft	42,770	20,090	61,820	41,260	13,060	11,790	45,510	108,100	122,900	88,300	96,080	98,020

Calendar year 1953: Max 4,640 Min 97 Mean 1,003 Ac-ft 726,200
Water year 1953-54: Max 3,430 Min 97 Mean 1,036 Ac-ft 749,700

* Discharge measurement made on this day.

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Arrowrock Reservoir at Arrowrock, Idaho

Location.--Lat 43°36', long 115°55', in E½ sec. 13, T. 3 N., R. 4 E., on Boise River at Arrowrock, 22 miles by road east of Boise.

Drainage area.--2,210 sq mi, approximately.

Records available.--October 1917 to September 1954.

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, 294,700 acre-ft June 27 (elevation, 3,218.6 ft); minimum observed, 12,320 acre-ft Oct. 15 (elevation, 3,050.9 ft).
1917-54: 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, 286,600 acre-ft between elevations 2,974 ft (9.5 ft above sluice gate sill) and 3,216 ft (highest position of movable crest of spillway). Silt deposition at dam has raised the lower storage level and decreased the capacity of the reservoir. Prior to Oct. 1, 1952, contents in publications of the Geological Survey applied from original contents table and no silt corrections were made. Beginning Oct. 1, 1952, contents applied from revised table, which is the original table reduced by amounts varying from 347 acre-ft at elevation 2,974 ft to 5,000 acre-ft at elevation 3,085 ft and above. Water is used for irrigation of lands in Boise Valley.

Cooperation.--Gage readings and revised capacity table furnished by Bureau of Reclamation.

Contents at about 8 a.m., in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33,600	34,900	77,850	164,500	240,000	257,800	220,800	199,100	251,800	293,700	214,300	97,130
2	31,280	36,070	79,350	167,400	243,100	256,000	220,200	197,200	251,200	293,100	210,800	92,880
3	29,220	37,240	80,550	169,200	245,300	253,700	219,700	193,300	250,100	292,800	207,000	88,580
4	25,570	38,410	81,900	170,500	247,800	252,000	219,500	191,700	249,500	291,600	203,200	84,420
5	22,200	39,900	85,060	173,400	249,500	250,100	219,700	190,200	249,000	290,600	199,300	80,250
6	18,590	41,500	87,620	175,800	252,000	248,400	222,300	191,400	248,700	290,300	195,500	75,750
7	16,240	43,500	89,060	177,100	254,800	246,700	225,200	193,100	248,400	290,000	191,700	71,360
8	15,010	45,590	92,030	179,200	256,600	245,000	227,000	195,700	248,100	289,400	188,100	67,350
9	13,740	47,020	94,750	181,700	258,600	243,600	228,000	200,100	247,600	287,200	184,400	63,320
10	13,650	48,780	97,640	183,800	260,700	242,500	227,500	204,800	247,800	284,700	180,500	59,290
11	14,120	50,560	100,200	184,700	262,400	241,100	226,000	210,800	249,000	282,300	176,700	55,000
12	14,170	51,760	103,400	187,200	264,400	238,400	224,400	215,800	250,400	279,900	172,700	51,280
13	14,220	53,080	106,000	190,000	266,800	235,300	222,600	220,000	252,600	277,200	169,200	47,570
14	13,740	54,280	109,800	193,100	269,700	231,200	222,800	223,400	255,200	274,200	165,700	43,940
15	12,320	55,390	112,000	195,700	272,700	227,000	221,300	226,200	258,400	271,200	162,000	40,800
16	15,160	56,690	114,700	198,600	273,900	222,300	218,900	229,300	262,700	268,500	157,800	37,690
17	16,500	57,730	116,500	201,000	274,500	219,700	215,800	233,200	268,500	265,300	154,000	34,900
18	17,800	59,030	118,200	202,500	275,100	218,700	214,300	237,900	273,300	262,400	149,800	32,880
19	19,220	60,330	119,400	205,200	274,200	219,500	213,500	242,500	277,200	259,200	145,800	30,800
20	20,670	61,240	122,200	207,800	273,300	220,000	212,500	246,400	280,200	255,700	141,600	28,910
21	21,680	62,930	126,000	210,000	271,500	220,800	210,500	248,400	283,200	252,300	137,400	27,020
22	23,000	65,400	130,400	212,500	269,700	221,500	208,000	249,000	285,700	249,000	133,600	25,790
23	24,160	67,870	133,800	215,600	267,600	222,100	205,000	247,600	287,800	245,300	129,400	24,440
24	25,430	71,920	137,600	218,200	265,600	221,800	202,500	247,600	290,000	242,000	125,400	23,330
25	26,730	74,020	140,400	219,700	263,900	222,300	200,500	250,400	290,600	238,400	121,600	22,140
26	28,300	75,900	142,600	222,800	262,400	222,100	199,300	251,500	291,900	235,300	117,800	21,100
27	29,770	76,050	146,200	226,200	261,200	221,800	199,100	254,600	294,700	231,900	115,800	20,170
28	30,720	76,500	150,200	229,300	259,800	221,800	199,300	255,400	294,000	228,600	113,300	18,990
29	31,680	76,950	154,200	232,700	-	221,500	199,800	254,900	294,400	225,400	109,300	17,360
30	32,880	76,800	157,800	235,600	-------	221,500	199,100	253,700	294,000	221,300	105,100	15,820
31	33,920	-------	161,800	237,900	-------	221,300	-------	251,800	-------	217,900	101,000	-------

Monthly elevations and contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	3,087.1	35,890	-
Oct. 31	3,084.9	33,920	-1,970
Nov. 30	3,121.2	76,800	+42,880
Dec. 31	3,167.5	161,800	+85,000
Calendar year 1953	-	-	-7,200
Jan. 31	3,199.2	237,900	+76,100
Feb. 28	3,207.0	259,800	+21,900
Mar. 31	3,192.8	221,300	-38,500
Apr. 30	3,184.0	199,100	-22,200
May 31	3,204.2	251,800	+52,700
June 30	3,218.4	294,000	+42,200
July 31	3,191.5	217,900	-76,100
Aug. 31	3,136.2	101,000	-116,900
Sept.30	3,058.2	15,820	-85,180
Water year 1953-54	-	-	-20,070

† 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 1954.

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.--43 years, 2,311 cfs (1,673,000 acre-ft per year).

Extremes.--Maximum discharge during year, 8,930 cfs May 20 (gage height, 7.21 ft); minimum, 6 cfs Jan. 20 (gage height, 0.91 ft); minimum daily, 8 cfs Oct. 21-23, Oct. 26 to Nov. 5.

1911-54: 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 1935-36, 1942.

Remarks.--Records excellent except those below 20 cfs, which are good. Flow regulated by Arrowrock Reservoir (see preceding page) and Anderson Ranch Reservoir (see p. 152). Small diversion from tributaries above station for irrigation.

Revisions.--WSP 883: Drainage area.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	7	3.0	770
1.1	18	4.0	1,810
1.3	38	5.0	3,430
1.6	90	6.0	5,600
2.0	210	8.0	11,400
2.5	435		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,630	8	922	b11	16	2,030	1,330	5,290	4,870	5,430	4,340	4,040
2	2,660	8	922	b12	15	2,080	1,330	5,260	4,870	5,120	4,290	4,020
3	2,650	8	939	12	14	2,050	1,320	5,190	4,570	5,100	4,270	4,020
4	2,570	8	473	12	14	2,050	1,320	5,170	4,400	4,960	4,310	4,040
5	2,470	10	13	12	14	2,020	1,320	5,170	4,400	4,660	4,340	4,040
6	2,530	10	13	12	14	2,010	1,320	5,190	4,400	4,480	4,310	4,020
7	2,580	10	*13	12	14	2,010	1,330	5,120	4,400	4,480	4,250	3,920
8	2,520	10	13	12	14	2,490	1,630	5,260	4,420	4,640	4,230	4,060
9	2,490	10	12	10	14	3,390	2,340	5,310	4,150	4,570	4,250	4,000
10	2,490	10	12	b10	32	3,860	2,760	5,410	3,680	4,590	4,270	4,040
11	2,500	10	12	10	32	3,840	2,760	5,500	3,510	4,550	4,290	3,980
12	2,500	10	10	10	32	3,820	3,300	5,550	3,190	4,590	4,250	3,920
13	2,530	10	10	b10	35	3,780	3,680	5,620	3,060	4,780	4,190	3,860
14	2,500	10	10	b10	35	3,760	4,800	*5,680	3,110	4,550	4,190	3,820
15	1,020	10	10	*10	358	3,720	5,530	5,720	3,150	4,480	4,190	3,720
16	14	10	10	12	870	3,130	6,110	5,750	3,190	4,480	4,210	3,580
17	11	10	10	14	1,080	2,180	6,400	5,780	3,200	4,460	4,230	3,370
18	10	10	10	12	1,360	1,300	6,370	5,820	*3,390	4,420	4,250	3,240
19	10	10	10	12	1,590	930	6,370	6,480	3,410	4,420	4,270	3,080
20	9	10	13	10	1,910	930	6,370	8,130	3,660	4,380	4,290	2,970
21	*8	10	13	b10	2,100	922	*6,340	8,870	4,270	4,360	4,310	2,860
22	8	10	12	12	2,100	922	6,320	8,810	5,000	4,310	4,210	2,730
23	8	10	b10	14	2,090	1,160	6,270	8,810	5,700	4,250	4,120	2,690
24	9	316	b9	12	2,080	1,180	6,210	7,520	6,860	4,230	4,060	2,650
25	9	577	b9	12	2,060	1,160	6,190	6,840	6,860	4,170	4,060	2,580
26	8	662	b10	b12	2,050	1,330	6,190	5,880	*6,810	4,150	*4,060	2,550
27	8	834	10	13	2,030	1,330	6,190	5,380	8,360	*4,120	2,380	2,630
28	8	922	10	14	*2,030	1,330	6,210	5,380	7,170	4,170	4,210	2,760
29	8	922	b10	16	-	1,330	6,210	5,380	6,270	4,210	4,060	2,850
30	8	922	b10	16		*1,330	5,680	5,380	5,930	4,190	4,060	2,830
31	8	--	b10	15	----	1,330	------	5,070	------	4,230	4,040	------
Total	36,784	5,375	3,550	371	24,003	64,704	129,500	185,720	140,260	139,530	128,790	102,870
Mean	1,187	179	115	12.0	857	2,087	4,317	5,991	4,675	4,501	4,155	3,429
Ac-ft	72,960	10,660	7,040	736	47,610	128,300	256,900	368,400	278,200	276,800	255,500	204,000

Calendar year 1953: Max 10,100 Min 8 Mean 2,579 Ac-ft 1,867,000
Water year 1953-54: Max 8,870 Min 8 Mean 2,634 Ac-ft 1,907,000

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Discharge computed from once-daily staff-gage readings and record of gate changes at Arrowrock Reservoir Oct. 24 to Jan. 14, Feb. 1-27, Mar. 2-8.

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 1954.

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).

Average discharge.--5 years (1939-41, 1951-54), 2.05 cfs (1,480 acre-ft per year).

Extremes.--Maximum discharge during year, 14 cfs Apr. 18 (gage height, 1.47 ft); minimum, 0.4 cfs Nov. 18, 19; minimum gage height, 0.27 ft Dec. 26 (result of siphon action at weir).

1939-41, 1950-54: Maximum discharge, 39 cfs Apr. 26, 1952 (gage height, 1.95 ft), from rating curve extended above 18 cfs; maximum gage height, 2.03 ft Feb. 6, 1952 (backwater from ice); minimum discharge, 0.07 cfs Aug. 23, 1940; minimum gage height, 0.06 ft Nov. 29, 1952 (result of siphon action at weir).

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

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.4	0.5	0.9	3.8
.5	.9	1.1	6.3
.6	1.4	1.3	10
.7	2.1	1.5	17

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.6	1.0	0.9	1.3	b1.3	2.0	7.9	3.2	2.6	1.1	0.6
2	.6	.8	1.0	.9	1.2	b1.4	2.0	7.2	2.6	2.4	1.0	.6
3	.6	.6	*1.0	.9	1.2	b1.5	2.2	6.7	2.5	2.3	1.0	.6
4	.6	.6	.9	.9	b1.1	b1.5	2.9	6.3	2.4	2.2	1.0	.5
5	.6	.7	.9	.9	b1.1	b1.5	5.3	6.2	2.3	2.2	1.0	.6
6	.6	.8	.9	.9	b1.0	b1.5	5.9	6.5	2.2	2.1	1.0	.5
7	.6	.7	.8	.9	b1.0	1.6	5.6	6.7	2.2	2.0	.9	.5
8	.6	.7	.8	.9	*b1.0	2.6	5.5	7.0	2.2	2.0	.8	.5
9	.6	.7	.9	.8	b1.0	4.9	5.6	7.2	2.2	1.9	.8	.5
10	.6	.7	.8	.8	b1.0	4.7	5.5	7.7	2.6	1.8	.8	.5
11	.5	.7	.8	.9	b1.0	4.3	5.5	7.4	2.6	1.8	.8	.6
12	.5	.7	.8	.9	1.7	b3.6	5.9	7.0	3.8	1.7	.8	.6
13	.6	.7	.8	.8	1.9	b3.4	7.4	6.3	3.9	1.6	.8	.6
14	.5	.7	.8	*.9	1.7	b3.2	9.6	*5.9	3.8	1.6	.8	.6
15	.5	.8	.9	.9	1.6	3.1	9.6	5.5	4.2	1.8	.8	.7
16	.6	.7	.9	.9	1.5	2.8	9.6	5.1	4.2	1.6	.8	.7
17	.6	.7	.8	1.2	1.6	2.6	*11	4.7	3.7	1.6	.8	.7
18	.6	.6	.9	1.0	1.5	2.6	-13	4.3	*3.5	1.5	.8	.7
19	.6	.6	1.1	.9	b1.4	2.5	13	4.3	3.5	1.4	.8	.6
20	.6	.6	1.2	b.9	1.5	2.5	11	4.1	3.5	1.4	.8	.6
21	*.6	.6	1.0	.9	1.5	2.2	10	3.8	3.3	1.4	.9	.6
22	.5	1.0	b.7	.9	1.4	2.2	10	3.6	3.2	1.4	.9	.5
23	.6	3.1	b.6	1.4	1.4	2.2	9.9	3.5	3.0	1.4	.7	.5
24	.6	1.4	b.6	1.1	1.5	2.1	9.4	3.2	2.9	1.3	.8	.5
25	.6	1.2	b.6	b1.0	1.5	2.1	9.0	3.1	2.8	1.3	.8	.5
26	.6	1.2	b.6	1.0	1.5	*2.1	9.2	3.2	3.1	1.2	.9	.5
27	.6	1.3	b.6	1.0	1.5	2.1	9.6	2.9	3.3	1.2	*.8	*.6
28	.6	1.2	b.7	1.2	1.6	2.1	9.9	2.7	2.7	*1.2	.7	.6
29	.6	1.1	b.7	1.6	-	2.0	9.4	2.7	2.6	1.1	.6	.6
30	.6	1.1	.8	1.5	------	b1.9	8.7	2.8	2.6	1.1	.6	.6
31	.6	-----	.8	1.3	------	b1.9	-----	2.9	------	1.1	.6	------
Total	18.0	26.9	25.7	31.0	38.2	76.0	233.2	158.4	90.6	51.2	25.7	17.3
Mean	0.58	0.90	0.83	1.00	1.36	2.45	7.77	5.11	3.02	1.65	0.83	0.58
Cfsm	0.129	0.200	0.184	0.222	0.302	0.544	1.73	1.14	0.671	0.367	0.184	0.129
In.	0.15	0.22	0.21	0.26	0.32	0.63	1.93	1.31	0.75	0.42	0.21	0.14
Ac-ft	36	53	51	61	76	151	463	314	180	102	51	34

Calendar year 1953: Max 15 Min 0.5 Mean 2.52 Cfsm 0.560 In. 7.60 Ac-ft 1,820
Water year 1953-54: Max 13 Min 0.5 Mean 2.17 Cfsm 0.482 In. 6.55 Ac-ft 1,570

Peak discharge (base, 4.5 cfs).--Nov. 23 (7 a.m.) 4.9 cfs (1.01 ft); Mar. 9 (4 to 11 p.m.) 5.3 cfs (1.06 ft); Apr. 18 (9:30 p.m.) 14 cfs (1.47 ft); May 31 (11 p.m.) 4.8 cfs (0.99 ft); June 15 (6 p.m.) 4.7 cfs (0.98 ft).

* Discharge measurement made on this day.
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 1954.

Gage.--Water-stage recorder. Altitude of gage is 3,120 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,910 cfs Mar. 10 (gage height, 6.18 ft); minimum, 31 cfs Sept. 4; minimum gage height, 2.08 ft Sept. 4, 12, 13.
1950-54: Maximum discharge, 3,620 cfs Apr. 27, 1952 (gage height, 8.23 ft); minimum, 29 cfs Dec. 24, 1952 (gage height, 2.08 ft), but may have been less during period of ice effect.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Diversions above station and from Robie Creek for irrigation of about 900 acres.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 9, 10, Apr. 14, 15, 17-19)

2.1	31	3.5	340
2.2	39	4.0	560
2.4	60	5.0	1,150
2.7	112	6.0	1,850
3.0	186		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	56	126	b100	301	333	356	736	470	249	56	37
2	42	64	*117	b105	269	298	356	670	400	234	53	34
3	46	69	102	b110	228	304	398	640	368	214	51	33
4	47	64	106	b115	226	294	560	616	348	197	48	33
5	45	62	106	117	220	294	1,030	682	344	186	48	33
6	44	72	108	114	214	308	1,330	748	340	176	47	33
7	43	70	102	110	211	329	1,080	796	360	168	45	33
8	42	66	80	106	*208	513	988	802	344	155	45	33
9	43	63	93	100	208	1,300	964	844	348	148	42	34
10	42	63	100	b94	217	1,680	862	910	396	143	41	33
11	43	63	74	b93	211	1,110	850	898	424	136	38	33
12	43	66	98	b92	266	820	904	856	384	126	38	33
13	44	66	82	b90	368	682	1,090	790	376	119	38	33
14	45	64	87	*b94	400	605	*1,490	742	372	114	38	33
15	45	68	104	b100	352	550	1,350	718	400	129	39	37
16	48	66	100	117	318	510	1,260	724	470	129	39	41
17	49	64	89	181	304	490	1,350	*736	420	114	37	42
18	51	64	98	192	344	456	1,500	730	392	104	37	43
19	53	53	108	163	291	428	1,440	718	*368	102	37	43
20	53	59	158	106	301	428	1,270	724	352	96	38	44
21	52	60	155	104	291	404	1,130	724	340	87	43	43
22	*53	77	102	138	272	392	1,070	658	329	87	54	43
23	53	326	69	194	275	396	1,050	590	322	85	51	42
24	54	243	69	189	291	408	1,010	545	311	69	47	41
25	53	165	66	155	326	*412	994	525	301	74	46	41
26	54	148	b68	141	348	428	970	505	311	70	48	40
27	54	168	b66	148	333	440	988	470	336	70	*49	*40
28	54	186	b70	168	326	432	1,010	424	301	*64	48	37
29	54	153	b75	228	-	400	940	396	266	62	42	38
30	56	131	b85	318	------	372	838	424	246	59	39	40
31	56	------	b90	336	------	364	------	408	------	57	37	------
Total	1,501	2,939	2,953	4,418	7,919	16,180	30,426	20,749	10,739	3,823	1,359	1,123
Mean	48.4	98.0	95.3	143	283	522	1,014	669	358	123	43.8	37.4
Cfsm	0.121	0.246	0.239	0.358	0.709	1.31	2.54	1.68	0.897	0.308	0.110	0.094
In.	0.14	0.27	0.28	0.41	0.74	1.51	2.84	1.93	1.00	0.36	0.13	0.10
Ac-ft	2,980	5,830	5,860	8,760	15,710	32,090	60,350	41,160	21,300	7,580	2,700	2,230

Calendar year 1953: Max 1,820 Min 32 Mean 326 Cfsm 0.817 In. 11.10 Ac-ft 236,400
Water year 1953-54: Max 1,680 Min 33 Mean 285 Cfsm 0.714 In. 9.71 Ac-ft 206,600

Peak discharge (base, 800 cfs).--Mar. 10 (1 to 2 a.m.) 1,910 cfs (6.18 ft); Apr. 6 (7 a.m.) 1,440 cfs (5.40 ft); Apr. 14 (5:30 a.m.) 1,550 cfs (5.67 ft); May 10 (8 to 9 a.m.) 946 cfs (4.71 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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 1954.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 3,080 ft (from topographic map).

Extremes.-- Maximum discharge during year, 40 cfs Mar. 10 (gage height, 1.92 ft); minimum, 0.3 cfs July 29, 30, 31; minimum gage height, 0.66 ft July 30, 31.
1950-54: Maximum discharge, 118 cfs Jan. 18, 1953 (gage height, 2.43 ft); minimum, 0.3 cfs Aug. 19, 1951, July 29, 30, 31, 1954; minimum gage height, that of July 30, 31, 1954.

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

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 16, June 1 to Sept. 30				Feb. 16 to May 31			
0.6	0.3	1.1	4.5	1.0	2.0	1.6	18
.7	.6	1.2	6.5	1.1	3.5	1.8	30
.8	1.1	1.3	9.0	1.2	5.5	2.0	48
.9	2.0	1.5	17	1.4	11		
1.0	3.1						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	2.3	4.4	b3.7	9.4	*9.5	9.8	10	6.3	2.1	0.4	0.5
2	1.8	2.6	*4.4	3.7	8.5	9.5	9.8	9.2	4.9	2.0	.5	.5
3	1.8	2.6	4.2	3.7	7.8	8.9	11	8.3	3.9	1.9	.5	.6
4	1.6	2.6	4.2	3.8	7.5	8.9	13	7.5	3.5	1.7	.5	.6
5	1.5	2.6	4.4	4.2	7.5	8.6	17	7.0	3.7	1.6	.4	.6
6	1.6	3.1	4.4	4.1	7.0	8.3	20	6.8	3.9	1.5	.4	.6
7	1.5	2.7	4.4	4.1	7.2	8.3	18	6.5	4.4	1.4	.4	.5
8	1.6	2.7	3.9	4.1	*7.8	14	17	6.5	3.8	1.3	.5	.5
9	1.6	2.6	4.4	b4.0	b7.5	32	17	6.2	5.1	1.2	.6	.6
10	1.6	2.6	4.4	b3.9	b7.2	34	16	6.0	7.2	1.2	.8	.5
11	1.8	2.6	3.8	3.8	7.0	24	16	5.8	6.5	1.1	.7	.5
12	1.7	2.7	4.4	3.7	7.8	20	17	5.3	5.7	1.0	.8	.5
13	1.7	2.7	4.1	b3.7	8.5	17	20	5.3	4.9	1.0	.5	.6
14	1.7	2.7	4.1	*3.8	9.8	16	*22	4.9	4.7	.9	.5	1.0
15	1.9	2.7	4.2	3.7	9.4	15	21	4.7	5.5	1.0	.5	1.6
16	1.9	2.7	4.1	4.2	8.8	14	20	4.3	5.7	1.0	.5	1.6
17	2.0	2.8	3.9	5.9	9.5	13	21	*4.1	4.7	.9	.4	1.3
18	2.1	2.8	4.1	4.9	10	13	22	4.3	4.2	.8	.4	1.0
19	2.3	2.7	5.3	4.5	9.2	12	20	3.9	*4.1	.7	.5	1.0
20	2.2	2.7	6.5	b3.9	9.8	12	18	3.5	3.5	.7	.6	.8
21	2.3	2.7	5.7	b4.3	9.5	11	17	3.7	3.1	.6	.7	.8
22	*2.2	4.9	4.4	4.4	8.9	11	16	3.4	2.9	.6	.7	.8
23	2.0	14	3.7	5.5	8.9	11	16	3.0	2.8	.6	.7	.8
24	2.0	7.0	b3.4	4.7	9.5	11	15	2.9	2.7	.5	.7	.8
25	2.0	5.5	b3.3	b4.5	10	*11	14	2.8	2.6	.5	.7	.8
26	2.0	5.5	b3.2	b4.5	11	11	13	3.4	2.5	.5	.7	.8
27	2.1	5.9	b3.2	4.5	10	11	14	3.2	2.8	.4	*.6	*.8
28	2.2	5.3	b3.3	5.3	9.8	11	13	2.9	2.6	*.4	.5	.8
29	2.2	4.5	b3.4	9.4	-	11	12	2.9	2.4	.4	.5	1.0
30	2.2	4.4	b3.5	11	------	9.8	11	3.5	2.2	.4	.5	1.1
31	2.2	-----	b3.6	11	-----	9.8	-----	4.6	------	.4	.5	------
Total	58.9	113.2	128.3	150.5	244.8	416.6	486.6	156.4	122.8	30.3	17.2	23.9
Mean	1.90	3.77	4.14	4.85	8.74	13.4	16.2	5.05	4.09	0.98	0.55	0.80
Cfsm	0.120	0.239	0.262	0.307	0.553	0.848	1.03	0.320	0.259	0.062	0.035	0.051
In.	0.14	0.27	0.30	0.35	0.58	0.98	1.15	0.37	0.29	0.07	0.04	0.06
Ac-ft	117	225	254	299	486	826	96.5	310	244	60	34	47

Calendar year 1953: Max 87 Min 0.7 Mean 8.49 Cfsm 0.537 In. 7.31 Ac-ft 6,150
Water year 1953-54: Max 34 Min 0.4 Mean 5.34 Cfsm 0.338 In. 4.60 Ac-ft 3,870

Peak discharge (base, 35 cfs).--Mar. 10 (4 a.m.) 40 cfs (1.92 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record June 26 to July 27; discharge estimated on basis of weather records and records for Moore Creek near Arrowrock and other nearby streams.

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 1954.

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.--38 years (1916-54), 302 cfs (218,600 acre-ft per year).

Extremes.--Maximum discharge during year, 2,020 cfs Mar. 10 (gage height, 3.87 ft, from graph based on gage readings); minimum, 33 cfs Sept. 4 (gage height, 0.30 ft, from graph based on gage readings).
1915-54: Maximum discharge, 6,610 cfs Apr. 8, 1943 (gage height, 7.1 ft, site and datum then in use, from floodmark); minimum observed, 7.9 cfs Aug. 13-15, 17, 18, 1924.

Remarks.--Records good. Diversions for irrigation of about 900 acres above station.

Cooperation.--Gage readings furnished by Water District No. 12A.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.3	32	2.0	470
.5	46	2.5	750
.8	83	3.0	1,120
1.2	181	4.0	2,180
1.6	316		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	57	141	a110	a360	*361	364	757	510	262	55	38
2	44	62	133	118	a300	320	368	679	407	245	52	36
3	46	76	114	a120	a250	331	410	655	364	225	51	36
4	49	70	118	a124	a240	316	530	643	342	206	49	34
5	49	64	123	a124	a235	312	968	679	338	193	47	34
6	49	76	123	a120	a230	331	1,400	744	353	178	46	34
7	47	72	*116	a115	a225	353	1,110	792	364	169	46	34
8	46	72	92	a112	222	497	1,030	820	361	164	45	34
9	45	72	a100	a105	a222	1,430	1,020	855	391	155	44	34
10	46	70	a105	a103	222	1,750	911	911	454	149	43	34
11	46	70	a80	a100	a225	1,230	883	911	484	147	40	34
12	47	70	a105	a100	302	946	946	869	399	136	40	34
13	47	72	a88	a100	a390	771	1,120	827	380	123	*39	34
14	a48	72	a95	*104	a420	643	*1,570	778	368	118	38	34
15	48	72	a110	107	372	589	1,440	744	399	136	40	38
16	51	72	a105	a123	a340	545	1,360	750	520	130	40	44
17	53	72	a95	a198	323	506	1,380	*778	450	123	40	44
18	53	72	a102	a206	a360	470	1,540	750	*399	104	38	44
19	55	57	a115	a173	316	438	1,530	737	368	100	40	44
20	57	67	a165	a115	a314	446	1,340	744	349	96	40	46
21	56	68	a165	a112	a306	426	1,180	750	334	89	46	44
22	*57	91	a110	a145	a290	418	1,110	667	334	85	57	43
23	57	374	a75	209	a290	418	1,100	601	327	85	53	43
24	56	280	a75	a204	a310	426	1,030	550	320	78	48	43
25	56	181	a75	a163	a350	434	1,010	540	312	78	48	43
26	56	164	76	a150	376	*434	984	520	327	72	48	41
27	57	190	a75	a158	a360	450	1,000	488	357	*68	*52	41
28	57	206	a80	184	a355	442	1,050	434	338	66	48	40
29	57	169	a85	a245	-	426	984	399	291	60	44	40
30	57	147	a95	342	-------	387	890	438	262	57	40	41
31	57	-------	a100	a360	-------	380	-------	410	-------	57	38	-------
Total	1,592	3,257	3,236	4,749	8,505	17,226	31,558	21,220	11,202	3,954	1,395	1,163
Mean	51.4	109	104	153	304	556	1,052	685	373	128	45.0	38.8
Cfsm	0.121	0.256	0.244	0.359	0.714	1.31	2.47	1.61	0.876	0.300	0.106	0.091
In.	0.14	0.28	0.28	0.41	0.74	1.50	2.76	1.85	0.98	0.35	0.12	0.10
Ac-ft	3,160	6,460	6,420	9,420	16,870	34,170	62,590	42,090	22,220	7,840	2,770	2,310

Calendar year 1953: Max 1,870 Min 36 Mean 342 Cfsm 0.803 In. 10.89 Ac-ft 247,500
Water year 1953-54: Max 1,750 Min 34 Mean 299 Cfsm 0.702 In. 9.51 Ac-ft 216,300

Peak discharge (base, 850 cfs).--Mar. 10 (2 to 3 a.m.) 2,020 cfs (3.87 ft); Apr. 6 (8 a.m.) 1,520 cfs (3.45 ft); Apr. 14 (7 a.m.) 1,630 cfs (3.52 ft); May 10 (10 a.m.) 960 cfs (2.76 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for combined flow of station above Robie Creek and Robie Creek.

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 1947-54, 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 1954 on file in office of Idaho State Reclamation Engineer. No record of October and March diversion except for New York Canal. Diversion through New York Canal for period October to March as reported by Boise Project, Board of Control were: October, 52,830 acre-ft; November, 10,820 acre-ft; December, 8,140 acre-ft; February, 26,860 acre-ft; March, 49,060 acre-ft.

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 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							1,490	3,420	3,590	3,580	3,320	3,490
2							1,500	3,430	3,580	3,570	3,290	3,500
3							1,500	3,440	3,540	3,580	3,360	3,500
4							1,500	3,450	3,510	3,550	3,280	3,510
5							1,510	3,450	3,540	3,420	3,310	3,520
6							1,230	3,460	3,480	3,430	3,310	3,500
7							1,240	3,480	3,340	3,440	3,310	3,500
8							1,690	3,510	3,180	3,430	3,320	3,500
9							2,070	3,510	3,200	3,410	3,320	3,500
10							2,190	3,560	2,910	3,470	3,320	3,450
11							2,300	3,590	2,460	3,460	3,350	3,460
12							2,350	3,590	2,510	3,450	3,380	3,400
13							2,660	3,580	2,500	3,420	3,400	3,390
14							2,800	3,590	2,540	3,420	3,410	3,330
15							2,930	3,590	2,610	3,370	3,430	3,340
16							3,110	3,580	2,560	3,380	3,420	3,220
17							3,200	3,590	2,580	3,330	3,430	3,170
18							3,240	3,560	2,630	3,250	3,430	2,990
19							3,280	3,590	2,710	3,250	3,440	2,840
20							3,340	3,590	2,880	3,220	3,440	2,780
21							3,360	3,600	3,000	3,270	3,490	2,690
22							3,370	3,600	3,340	3,310	3,480	2,460
23							3,430	3,590	3,590	3,260	3,470	2,420
24							3,420	3,600	3,600	3,190	3,460	2,370
25							3,440	3,590	3,650	3,220	3,330	2,330
26							3,440	3,580	3,650	3,150	3,300	2,350
27							3,450	3,580	3,650	3,200	2,600	2,310
28							3,460	3,570	3,660	3,250	3,010	2,440
29							3,460	3,580	3,640	3,320	3,470	2,520
30							3,480	3,570	3,660	3,360	3,470	2,590
31							------	3,550	------	3,370	3,490	------
Total							79,440	109,970	95,290	104,330	103,840	91,370
Mean							2,648	3,547	3,176	3,365	3,350	3,046
Ac-ft							157,600	218,100	189,000	206,900	206,000	181,200

Calendar year	: Max		Min		Mean		Ac-ft
The period	: Max	3,660	Min	1,230	Mean	-	Ac-ft 1,159,000

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 1954.

Gage.--Staff gages read once daily. Datum of gages is 2,500.5 ft above mean sea level (surveys of Bureau of Reclamation).

Extremes.--Maximum contents observed during year, 175,700 acre-ft Apr. 11 (gage height, 29.85 ft); minimum observed, 46,200 acre-ft Aug. 24.
1917-54: 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.

Usable contents, in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53,490	69,080	84,290	94,700	96,960	122,100	161,300	159,300	126,900	141,700	80,590	49,370
2	54,240	69,460	86,090	94,770	97,030	123,800	163,500	158,500	127,800	139,600	79,240	49,540
3	54,990	69,590	87,560	94,920	97,100	125,800	165,600	158,200	129,100	137,700	77,760	49,210
4	56,160	69,780	89,460	95,060	97,180	127,300	167,700	157,800	130,300	135,700	76,300	49,040
5	56,920	69,980	92,170	95,060	97,250	129,400	169,600	156,900	131,500	134,100	74,120	48,880
6	57,980	70,230	92,750	95,200	97,400	131,300	171,300	155,800	132,800	132,100	72,170	49,100
7	59,060	70,360	93,110	95,350	97,400	133,200	171,800	154,800	134,300	129,600	70,100	49,650
8	59,780	70,490	93,110	95,420	97,470	135,200	172,300	153,300	135,800	127,200	68,570	49,980
9	60,810	70,620	93,180	95,420	97,470	137,700	173,100	152,100	137,400	124,500	66,740	50,480
10	62,090	70,750	93,250	95,500	97,620	139,500	174,400	150,800	139,100	122,000	64,860	51,100
11	62,760	70,940	93,250	95,640	97,620	141,200	175,700	149,600	140,900	119,700	62,880	52,060
12	63,810	71,130	93,400	95,790	97,760	142,900	175,400	148,700	142,700	117,400	60,810	53,030
13	64,800	71,390	93,400	95,790	97,840	144,800	174,700	146,900	144,900	115,500	59,000	54,010
14	65,730	71,580	93,400	95,930	97,980	146,000	174,500	145,700	146,800	113,100	57,040	55,160
15	66,990	71,840	93,400	96,080	98,060	146,400	174,400	144,600	149,200	110,800	55,340	56,390
16	67,430	71,970	93,470	96,080	98,200	145,900	174,400	143,300	151,100	108,700	53,890	57,810
17	67,560	72,300	93,470	96,150	99,530	145,400	174,500	142,400	153,300	106,400	52,630	59,180
18	66,930	72,490	93,540	96,300	101,400	145,300	174,100	141,100	154,700	104,200	51,440	60,930
19	66,610	72,750	93,680	96,300	103,100	145,300	173,900	139,900	156,000	102,200	50,210	62,760
20	66,740	72,750	93,680	96,370	105,200	145,300	173,200	138,200	157,400	100,200	48,710	64,550
21	66,990	72,820	93,830	96,370	107,300	145,300	172,600	136,100	158,300	97,980	47,890	66,110
22	67,180	72,880	93,830	96,370	109,100	145,100	171,600	134,500	158,700	95,640	47,290	67,940
23	67,370	73,270	93,970	96,520	111,300	145,000	170,400	132,900	158,000	93,760	46,640	68,890
24	67,620	73,600	93,970	96,520	113,200	146,100	169,300	131,500	156,400	92,100	46,200	69,590
25	67,750	74,120	94,120	96,660	114,700	147,800	167,800	129,700	154,700	90,530	46,580	70,680
26	67,940	75,240	94,190	96,660	116,500	148,800	166,100	128,800	153,100	89,180	46,960	71,390
27	68,190	76,500	94,260	96,660	118,400	150,300	165,100	127,400	150,400	87,770	46,910	72,300
28	68,380	78,030	94,330	96,740	120,300	152,600	163,400	126,700	147,800	86,230	47,120	72,950
29	68,510	80,190	94,410	96,740	-	154,900	161,900	126,300	146,000	84,910	47,340	73,470
30	68,700	82,020	94,550	96,880	-------	156,800	160,500	126,300	143,600	83,320	48,270	74,190
31	68,760	-------	94,620	96,880	-------	158,900	-------	126,100	-------	82,020	48,880	-------

Monthly gage height and usable contents, water year October 1953 to September 1954

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	13.64	52,010	-
Oct. 31	16.42	68,760	+16,750
Nov. 30	18.43	82,020	+13,260
Dec. 31	20.22	94,620	+12,600
Calendar year 1953	-	-	+720
Jan. 31	20.53	96,880	+2,260
Feb. 28	23.58	120,300	+23,420
Mar. 31	28.08	158,900	+38,600
Apr. 30	28.25	160,500	+1,600
May 31	24.29	126,100	-34,400
June 30	26.36	143,600	+17,500
July 31	18.43	82,020	-61,580
Aug. 31	13.08	48,880	-33,140
Sept.30	17.26	74,190	+25,310
Water year 1953-54	-	-	+22,180

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 1954.

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, at site 1 mile upstream at datum 13.69 ft higher. Apr. 30 to July 10, 1943, at site 400 ft downstream at present datum.

Extremes.--Maximum discharge during year, 6,080 cfs May 22 (gage height, 6.66 ft); minimum, 52 cfs Jan. 21 (gage height, 2.81 ft); minimum daily, 64 cfs Dec. 5.
1940-54: 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 excellent except those for periods of ice effect, which are fair. Flow regulated by Arrowrock Reservoir (see p. 154) and Anderson Ranch Reservoir (see p. 152). New York, Ridenbaugh, and four smaller canals divert between Moore Creek and this station (see p. 160).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.8	50	4.1	880
3.0	96	4.5	1,570
3.2	166	5.0	2,510
3.5	317	6.0	4,590
3.8	528	6.7	6,170

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	409	80	70	128	388	1,410	197	2,850	2,040	2,530	962	745
2	444	83	68	143	343	1,390	197	2,670	2,040	2,150	946	730
3	409	91	68	143	300	1,360	206	2,570	1,880	1,980	913	730
4	381	93	68	147	266	1,340	294	2,510	1,480	1,940	1,010	730
5	423	93	64	151	260	1,320	722	2,470	1,440	1,730	1,030	745
6	375	96	139	155	250	1,300	1,440	2,530	1,570	1,440	979	760
7	368	102	250	151	245	1,280	1,200	2,610	1,700	1,300	930	708
8	375	102	162	151	245	1,530	696	2,650	1,730	1,390	913	652
9	423	93	*128	118	240	3,010	962	2,730	1,700	1,430	896	696
10	381	91	143	91	255	4,240	1,770	2,770	1,710	1,390	930	708
11	375	91	122	132	271	4,300	1,960	2,870	1,620	1,340	913	745
12	388	91	118	136	277	3,940	2,070	2,910	1,440	1,320	913	745
13	381	93	122	102	368	4,130	2,240	2,910	1,010	1,320	880	708
14	381	93	109	139	416	4,570	2,790	2,910	930	1,300	835	685
15	490	91	143	*139	170	4,440	3,940	2,890	913	1,270	835	640
16	199	93	143	143	109	4,220	4,020	2,910	1,010	1,250	820	629
17	122	93	139	170	290	3,370	4,660	2,930	1,040	1,250	790	528
18	106	93	132	215	484	2,470	4,790	*2,990	962	1,280	865	505
19	96	91	147	220	*790	1,530	4,810	3,130	930	1,270	896	459
20	91	83	175	166	944	1,460	4,570	4,110	1,010	1,270	913	375
21	88	88	210	101	1,370	1,430	4,350	5,710	*1,200	1,160	1,010	423
22	88	112	188	188	1,390	923	*4,190	6,030	1,920	1,200	1,030	416
23	88	118	102	215	1,370	312	4,020	5,990	2,340	1,130	896	409
24	86	125	b85	250	1,370	423	3,940	5,030	3,230	1,060	835	409
25	83	106	b85	*b195	1,410	*1,060	3,840	4,170	3,840	1,040	708	402
26	83	68	b85	b180	1,440	402	3,810	3,600	3,650	1,010	609	362
27	83	70	b90	210	1,460	375	3,770	2,610	4,370	962	*527	368
28	*83	73	b95	210	1,430	388	3,810	2,420	4,830	913	730	388
29	83	75	b100	235	-	375	3,770	2,360	3,500	*930	745	416
30	80	70	b105	323	-	323	3,620	2,360	3,030	896	760	416
31	80		115	381	------	235	------	2,280	------	880	745	------
Total	7,542	2,741	3,770	5,428	18,151	58,856	82,654	99,480	60,065	41,331	26,764	17,232
Mean	243	91.4	122	175	648	1,899	2,755	3,209	2,002	1,333	863	574
Ac-ft	14,960	5,440	7,480	10,770	36,000	116,700	163,900	197,300	119,100	81,980	53,090	34,180

Calendar year 1953: Max 8,110 Min 64 Mean 1,365 Ac-ft 988,200
Water year 1953-54: Max 6,030 Min 64 Mean 1,162 Ac-ft 840,900

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

Diversions from Boise River between Boise and Notus gaging stations, Idaho

Between Boise and Notus gaging stations, 21 principal 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 1947-54 in reports of Geological Survey. Records of daily diversion for each canal from 1916 to 1954 on file in office of Idaho State Reclamation Engineer. Diversions usually made also during October and March; no record available.

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 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	2,320	2,090	2,440	2,020	1,790
2							0	2,320	2,000	2,420	2,040	1,800
3							0	2,320	1,960	2,400	2,010	1,820
4							84	2,320	1,900	2,370	2,020	1,820
5							84	2,340	1,890	2,340	2,060	1,820
6							123	2,390	1,890	2,310	2,000	1,820
7							260	2,420	1,930	2,260	1,990	1,800
8							272	2,440	2,000	2,390	1,970	1,730
9							526	2,460	1,970	2,380	1,970	1,800
10							645	2,480	1,790	2,390	1,970	1,770
11							653	2,510	1,670	2,400	1,970	1,760
12							872	2,530	1,670	2,380	1,960	1,750
13							1,040	2,500	1,550	2,380	1,980	1,730
14							1,160	2,490	1,520	2,300	1,960	1,720
15							1,410	2,510	1,660	2,300	1,960	1,700
16							1,610	2,500	1,640	2,320	1,970	1,590
17							1,720	2,510	1,630	2,420	1,920	1,500
18							1,830	2,490	1,660	2,400	1,960	1,440
19							1,940	2,490	1,700	2,370	1,960	1,430
20							2,100	2,500	1,780	2,390	2,000	1,360
21							2,210	2,470	1,930	2,350	2,000	1,370
22							2,260	2,460	2,150	2,340	1,980	1,360
23							2,240	2,330	2,190	2,340	1,980	1,340
24							2,300	2,320	2,290	2,290	1,940	1,330
25							2,340	2,490	2,360	2,180	1,930	1,330
26							2,380	2,490	2,420	2,220	1,750	1,310
27							2,380	2,420	2,440	2,190	1,590	1,320
28							2,420	2,440	2,460	2,140	1,820	1,320
29							2,400	2,400	2,410	2,120	1,820	1,290
30							2,380	2,310	2,440	2,070	1,810	1,270
31							------	2,280	------	2,050	1,810	------
Total							39,639	75,250	58,990	71,650	60,120	47,190
Mean							1,321	2,427	1,966	2,311	1,939	1,573
Ac-ft							78,620	149,300	117,000	142,100	119,200	93,600

Calendar year	: Max	Min	Mean	Ac-ft		
The period	: Max 2,530	Min 0	Mean -	Ac-ft	699,800	

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 county road 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 1954.

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.

Extremes.--Maximum discharge during year, 5,340 cfs Mar. 14 (gage height, 6.30 ft); minimum, 70 cfs Aug. 11 (gage height, 1.23 ft); minimum daily, 83 cfs Aug. 4, 11.

1920-54: Maximum discharge, 20,500 cfs Apr. 20, 1943 (gage height, 10.43 ft); minimum observed, 10 cfs Aug. 18, 21, 1920.

Revisions.--The maximum observed discharge for water year 1930 has been revised to 3,650 cfs June 1 (gage height, 4.35 ft) and the maximum observed gage height to 4.50 ft Feb. 3 (ice jam), superseding figures published in WSP 708.

Remarks.--Records excellent. 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. 154) and Anderson Ranch Reservoir (see p. 152). Records of chemical analyses and water temperatures for the water year 1954 are given in WSP 1353.

Revisions.--Revised figures of discharge, in cubic feet per second, for water year 1930, superseding figures published in WSP 708, are given herewith:

1930	
Feb. 2	700
3	740
4	740

Month	Maximum	Minimum	Mean	Runoff in acre-feet
February 1930	940	520	679	37,700
Water year 1929-30	3,650	25	358	259,000
Calendary year 1930	3,650	25	394	285,000

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.3	75	3.0	965
1.6	147	4.0	1,960
2.0	288	5.0	3,140
2.5	565	6.3	5,340

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	499	798	650	600	875	1,890	702	2,420	2,370	1,870	113	125
2	468	824	658	600	858	1,890	672	1,950	2,200	1,250	131	115
3	506	790	658	607	824	1,840	586	1,720	2,070	938	108	139
4	525	790	672	607	782	1,850	621	1,520	1,780	816	83	171
5	545	798	665	614	750	1,840	758	1,320	1,520	726	108	190
6	539	790	665	621	734	1,810	1,460	1,260	1,470	462	136	225
7	545	766	726	614	726	1,780	1,830	1,290	1,600	263	118	259
8	512	766	*816	607	718	1,860	1,070	1,310	1,410	165	108	292
9	468	758	734	600	710	2,790	774	1,410	1,520	174	113	276
10	487	750	710	572	710	4,400	1,190	1,540	1,970	210	92	348
11	462	750	695	565	726	5,040	1,750	1,620	2,100	203	83	438
12	468	750	680	572	742	4,790	1,640	1,680	1,780	207	103	422
13	462	742	665	579	766	4,480	1,780	1,740	1,460	187	120	427
14	450	734	672	565	902	5,230	1,750	1,780	1,110	228	142	450
15	701	718	658	*579	841	5,210	2,970	1,730	920	243	128	444
16	1,200	710	672	572	665	5,100	3,150	1,720	938	276	147	628
17	893	710	672	593	607	4,500	3,530	1,750	929	243	134	734
18	758	702	665	600	750	3,460	3,730	1,730	790	228	106	665
19	858	695	680	650	*1,030	2,840	3,770	1,780	593	272	113	621
20	956	688	695	635	1,260	2,150	3,490	2,280	438	251	136	572
21	929	680	695	607	1,630	2,110	3,210	3,840	353	236	221	475
22	902	734	718	579	1,810	2,000	*3,020	4,860	*292	251	432	462
23	902	766	688	650	1,830	1,200	2,780	4,930	650	284	456	450
24	893	758	628	688	1,840	*902	2,680	4,840	1,240	272	373	416
25	858	750	607	688	1,860	1,350	2,530	*3,730	2,280	247	333	363
26	850	726	614	*642	1,890	1,420	2,510	3,100	2,390	272	*315	333
27	832	695	614	642	1,950	974	2,480	2,330	2,690	276	272	292
28	*841	680	614	672	1,940	965	2,660	1,830	3,730	247	259	263
29	832	665	621	695	-	938	2,710	1,740	3,040	*221	207	284
30	832	665	607	750		884	2,810	1,860	2,190	168	210	373
31	807	- -	600	824	---	798	------	2,090	------	128	171	-----
Total	21,780	22,148	20,714	19,389	30,726	78,291	64,613	68,700	47,823	11,814	5,571	11,252
Mean	703	738	668	625	1,097	2,526	2,154	2,216	1,594	381	180	375
Ac-ft	43,200	43,930	41,090	38,460	60,940	155,300	128,200	136,300	94,860	23,430	11,050	22,320

Calendar year 1953: Max 7,490 Min 48 Mean 1,411 Ac-ft 1,022,000
Water year 1953-54: Max 5,230 Min 83 Mean 1,104 Ac-ft 799,100

* Discharge measurement made on this day.

Boise River basin winter drainage investigation

The winter season drainage conditions in Boise Valley are pertinent to investigations of feasibility of developing additional irrigation water supplies by diverting the winter flow of certain drains to storage reservoirs or by pumping from wells located within the irrigated tract during the irrigation season. Board of Control and River Watermaster records provide information concerning drain discharges and canal diversions during the irrigation season. The watermaster applies these data to the river station discharge records to determine losses and gains in river channel during summer operations. Little detail is available other than the overall differences between flows recorded at river gaging stations during the winter season.

On Jan. 25, 1954, two field runs of the "spot type" were made. One of these included discharge measurements at points where nine south side drains crossed the Phyllis Canal. These, combined with the river flow below that canal heading, are compared with January averages recorded in 1936, 1937, and 1938, showing the current status of those sources of supplemental water supply via winter season storage, which were investigated 1936-38. The other field run included Boise River measurements to define gains and losses in some 10 successive channel reaches between the mouth of Moore Creek 4 miles downstream from Arrowrock Dam and the confluence with Snake River some 69 miles downstream. Stock water diversions through irrigation canals were measured in each section; also, drain ditch and other miscellaneous tributary flows entering the river. The locations of the measuring points were reviewed in the field and several results confirmed by repeat measurements on the days following.

During the period of the investigation, the valley lands were drier than usual for the time of year with no snow accumulated on the ground. The Arrowrock Reservoir and the New York Canal diversion gates were closed Dec. 5, 1953, to Feb. 15, 1954. No releases were being made from Deer Flat Reservoir and no diversion was being made from Wilson and Elijah drains via siphon to the north side Notus unit. Monthly precipitation at Boise was below normal during both December and January. The small side streams were contributing very little to the valley area proper.

Discharge measurements on Boise River and drains crossing Phyllis Canal to Boise River, Idaho, Jan. 25, 1954, versus corresponding January mean flows 1936, 1937, and 1938

	January mean discharge (cfs)			Discharge (cfs) measured Jan. 25, 1954
	1936	1937	1938	
Boise River below Phyllis Heading (2 channels).	122.4	117.0	252.4	257.0
Fivemile drain.....	11.9	8.5	8.9	22.5
Tenmile drain.....	7.0	4.3	3.8	4.4
Purdam drain.....	8.5	6.0	7.2	18.6
Mason drain.....	10.5	6.5	5.6	14.5
Indian Creek drain.....	20.3	16.6	16.4	26.4
Elijah drain.....	18.0	14.5	16.3	27.4
Wilson drain.....	23.9	22.3	21.6	45.4
Upper Embankment drain...	9.2	8.9	9.4	10.2
Combined discharge.....	231.7	204.6	341.6	426.4

Boise River basin winter drainage investigation--Continued

Inventory of gains and losses, Boise River, Idaho, Jan. 25, 1954

Stream or diversion	Location	Miles below initial point	Discharge in cubic feet per second				
			Main stream	Total surface inflow in reach (measured)	Total diversion in reach (measured)	Sub-surface gain or loss in reach	Total sub-surface gain or loss
Boise River...	NE¼ sec. 21, T. 3 N., R. 4 E., just below mouth of Moore Creek and 4 miles downstream from Arrowrock Dam.	0.0	a175	11.5	14.0	0	0
....do.....	SW¼ sec. 10, T. 3 N., R. 2 E., at Capitol Boulevard Bridge, at Boise.	18.0	b195	20.4	2.2	22.5	22.5
....do.....	NE¼ sec. 25, T. 4 N., R. 1 E., 1,000 ft downstream from Strawberry Glen Bridge and 5 miles northwest of Boise.	24.0	199	.5	9.0	-14.2	8.3
Boise River (2 channels)	North channel 300 ft below bridge, ½ mile south of Eagle; south channel 200 ft above bridge, 1½ miles south of Eagle.	28.0	203.4	30.6	0	12.9	21.2
....do.....	North channel 400 ft above Linder Bridge, 3 miles southwest of Eagle; south channel 40 ft above south Linder Bridge and 3.2 miles southwest of Eagle.	31.0	257.4	5.1	1.7	23.4	44.6
Boise River...	SW¼ sec. 18, T. 4 N., R. 1 W., 1,000 ft below highway bridge and 0.8 mile south of Star.	35.5	268	43.8	0	7.2	51.8
....do.....	SE¼ sec. 7, T. 4 N., R. 2 W., 100 ft below highway bridge and 0.6 mile south of Middleton (above entry of Middleton Slough).	42.0	360	105.5	.3	48.2	100.0
....do.....	NW¼ sec. 21, T. 4 N., R. 3 W., 1,000 ft below railroad bridge at Caldwell (above entry of Indian Creek drain).	48.0	479	197.2	0	13.8	113.8
....do.....	SE¼ sec. 34, T. 5 N., R. 4 W., ¼ mile southeast of Notus.	54.0	c688	134.2	0	11.8	125.6
Boise River (main channel).	Sec. 17, T. 5 N., R. 5 W., at highway bridge, 1 mile southwest of Parma.	64.0	817	10.4	2.5	-	-
Parma Waste or Slough.	(Considered as side channel of river at above location).	64.0	35.2	-	-	-	-
Combined flow.	.....	-	d852.2	-	-	30.0	155.6
Boise River (main channel).	SE¼ sec. 35, T. 6 N., R. 6 W., 300 ft above mouth and 4 miles northwest of Parma.	69.0	839	-	-	-	-
North Slough..	NE¼ sec. 35, T. 6 N., R. 6 W., 300 ft above mouth and 4 miles northwest of Parma (considered as side channel of Boise River).	69.0	42.8	-	-	-	-
Combined flow.	.....	-	e881.8	-	-	21.7	177.3

a Mean daily flow computed from records at gaging stations on Boise River at Dowling Ranch and Moore Creek near Arrowrock.
b Mean daily flow from records at gaging station on Boise River at Boise.
c Mean daily flow from records at gaging station on Boise River at Notus.
d Combined flow of Boise River at Parma and Parma Waste or Slough.
e Combined flow of Boise River near Parma and North Slough.
Note.--Diversion gates of canals either closed or passing only stock water or leakage.

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.--910 sq mi, approximately.

Records available.--June 1920 to September 1921, April to September 1923, June 1926 to September 1954. 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 3,479.13 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.--28 years (1926-54), 168 cfs (121,600 acre-ft per year).

Extremes.--Maximum discharge during year, 710 cfs Mar. 10 (gage height, 5.77 ft); minimum, 1.7 cfs Aug. 22 (gage height, 2.62 ft).
1920-21, 1923, 1926-54: Maximum discharge, 5,600 cfs Mar. 25, 1952 (gage height, 12.90 ft); no flow at times.

Remarks.--Records good except those for periods of ice effect, which are poor. Diversions for irrigation of about 13,000 acres above station.

Revisions (water years).--WSP 1093: 1927. WSP 1287: Drainage area.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 29 to Feb. 1, Feb. 12 to Mar. 1, Mar. 8, 9)

Oct. 1 to Dec. 20

2.9	12	3.5	94
3.0	22	4.0	190
3.2	45	4.5	315

Dec. 21 to Sept. 30

2.6	1.0	3.5	108
2.7	4.3	4.0	215
2.8	10	4.5	470
3.0	29		720
3.2	54		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	45	83	b85	230	192	172	268	175	45	7.7	4.9
2	16	46	83	b90	170	170	175	245	160	45	7.7	8.9
3	20	48	81	98	160	150	198	230	128	44	7.7	9.4
4	21	46	81	98	148	150	260	215	116	40	7.7	9.4
5	24	50	80	102	142	156	*348	198	110	35	6.6	8.3
6	25	51	78	102	138	160	485	183	96	33	6.6	7.7
7	21	60	81	94	124	162	485	170	*94	29	6.6	7.7
8	23	62	65	90	140	198	422	179	98	26	5.4	8.3
9	*41	58	73	83	150	512	422	177	106	23	4.0	8.3
10	35	54	81	84	158	692	390	190	144	17	3.6	7.2
11	30	56	78	*98	148	530	382	198	142	12	*3.6	5.4
12	29	62	b70	83	491	382	405	205	146	10	3.6	4.0
13	31	63	b75	81	479	348	432	188	168	8.9	3.6	3.6
14	30	65	80	84	332	332	578	181	172	8.9	3.6	3.6
15	30	62	81	102	260	310	620	177	150	8.3	4.3	4.0
16	31	68	83	100	210	292	560	172	154	* 7.7	7.2	4.0
17	33	*66	80	b95	190	282	542	175	154	7.2	6.6	4.0
18	35	65	83	b90	232	232	581	177	142	8.3	19	4.9
19	37	62	89	b80	195	225	608	181	128	7.7	11	6.0
20	41	71	264	b70	179	235	*566	192	124	8.3	15	8.3
21	44	71	170	b80	228	230	536	186	114	11	9.4	8.9
22	38	65	122	83	235	235	461	186	81	10	2.0	9.4
23	38	89	92	b90	208	215	410	172	68	12	3.3	11
24	39	116	83	b80	*230	220	385	152	60	11	3.6	13
25	39	101	b80	b70	270	218	370	136	53	12	4.0	15
26	43	103	83	b80	258	208	348	*134	39	11	*3.6	16
27	43	105	90	94	220	210	332	144	39	8.9	4.3	16
28	44	125	96	130	198	205	355	142	41	8.3	5.4	16
29	44	107	b95	338	-	208	330	128	42	8.9	5.4	17
30	44	90	b80	506	-	192	295	192	39	8.3	4.3	18
31	45	-	b85	298	- - -	179	- - - - -	192	- - - -	7.7	4.9	- - - - - -
Total	1,029	2,132	2,845	3,658	6,123	8,030	12,453	5,665	3,283	533.4	191.3	268.2
Mean	33.2	71.1	91.8	118	219	259	415	183	109	17.2	6.17	8.94
Ac-ft	2,040	4,230	5,640	7,260	12,140	15,930	24,700	11,240	6,510	1,060	379	532

Calendar year 1953: Max 2,470 Min 4.6 Mean 251 Ac-ft 181,400
Water year 1953-54: Max 692 Min 2.0 Mean 127 Ac-ft 91,660

Peak discharge (base, 800 cfs).--No peak above base.
* Discharge measurement made on this day.
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 1954 in reports of Geological Survey. October 1910 to November 1914 in reports of State engineer.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 3,305 ft (by barometer). Prior to Dec. 9, 1914, staff or chain gages at several sites 3 miles downstream, 200 ft upstream from South Fork, at various datums. 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.--42 years (1909-16, 1919-54), 177 cfs (128,100 acre-ft per year).

Extremes.--Maximum discharge during year, 740 cfs May 11 (gage height, 5.30 ft); minimum recorded, 2 cfs Oct. 18, 19 (but may have been less during period of backwater from beaver dam).

1906-17, 1919-54: 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 below 10 cfs, which are poor. Flow completely regulated since November 1919 by Warmsprings Reservoir (see p. 173). Diversions for irrigation of about 16,000 acres above station.

Revisions (water years).--WSP 833: 1936. WSP 1063: 1942-45.

Rating table, water year 1953-54, except period of backwater from beaver dam (gage height, in feet, and discharge, in cubic feet per second)

2.8	2	3.7	74
3.0	7	4.0	143
3.2	16	4.5	340
3.4	32	5.1	640

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	170						2	575	510	605	380	405
2	167						2	580	326	600	380	430
3	167						2	585	238	595	380	450
4	167						80	585	230	615	380	450
5	125						199	590	230	630	380	450
6	117						230	590	230	630	380	445
7	117						230	590	*230	635	430	445
8	96						230	590	230	635	465	445
9	74						230	590	254	*635	470	435
10	*74						230	590	268	630	*470	430
11	76						246	590	268	630	470	430
12	76						336	580	268	630	470	425
13	76						365	580	272	630	470	425
14	76						365	580	272	625	470	425
15	43						380	585	272	630	475	425
		2	2	2	2	2						
16	11						430	595	272	615	475	390
17	6						465	595	277	565	440	350
18	2						475	595	282	510	430	304
19	2						*470	595	286	470	415	272
20							500	595	286	445	420	254
21							560	590	286	425	420	246
22							580	590	340	405	425	218
23							580	590	440	380	425	203
24							580	590	465	375	420	203
25							580	590	555	380	425	203
	2											
26							575	590	605	380	405	203
27							575	590	620	380	*370	203
28							570	590	620	380	360	203
29							575	590	615	380	360	199
30							575	590	610	380	360	199
31		-			- - -		------	590	------	380	385	------
Total	1,666	60	62	62	56	62	11,217	18,245	10,657	16,205	13,005	10,165
Mean	53.7	2.0	2.0	2.0	2.0	2.0	374	589	355	523	420	339
Ac-ft	3,300	119	123	123	111	123	22,250	36,190	21,140	32,140	25,800	20,160

Calendar year 1953: Max 1,300 Min - Mean 248 Ac-ft 179,600
Water year 1953-54: Max 635 Min - Mean 223 Ac-ft 161,600

* Discharge measurement made on this day.
Note.--Backwater from beaver dam Oct. 20 to Apr. 4.

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 about 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 1954. Published as "at Scott's Ranch, near Beulah" in 1914.

Gage.--Water-stage recorder. Altitude of gage is 3,350 ft (by barometer). Jan. 1 to Sept. 30, 1914, staff gage at same site at different datum.

Average discharge.--18 years, 127 cfs (91,940 acre-ft per year).

Extremes.--Maximum discharge during year, 460 cfs Apr. 19 (gage height, 1.50 ft); maximum gage height, 1.60 ft Feb. 12; minimum discharge, 28 cfs sometime during period Dec. 18 to Jan. 7.

1914, 1936-54: Maximum discharge, 1,300 cfs Mar. 25, 1952 (gage height, 4.17 ft), from rating curve extended above 530 cfs by logarithmic plotting; 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 except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 900 acres above station.

Revisions (water years).--WSP 883: 1938(M). WSP 1093: 1944(m).

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 9				Mar. 10 to Sept. 30			
-0.2	39	0.5	142	-0.1	37	0.5	127
0.0	59	1.0	260	0.0	47	1.0	255
.2	87	1.5	410	.2	74	1.5	460

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a60	60	67	a55	86	102	104	237	151	90	45	53
2	63	60	66	a55	81	84	104	222	136	85	44	53
3	a65	59	66	a58	76	89	113	208	125	80	43	53
4	a70	59	64	a60	69	90	138	203	117	77	40	53
5	a70	59	68	a60	69	92	*205	205	113	72	41	53
6	a70	60	67	a60	75	99	237	219	107	70	44	52
7	a68	62	52	63	72	99	208	228	105	68	44	52
8	a65	59	b50	63	71	146	217	252	*104	*68	41	52
9	a65	58	b55	a50	64	345	219	272	117	66	41	52
10	a65	59	b50	a55	69	338	197	294	145	66	*41	52
11	*63	59	b50	a50	78	205	208	314	140	64	43	52
12	a62	59	b52	*b45	255	163	231	310	165	57	45	52
13	*60	59	b52	b40	210	142	306	290	160	55	46	52
14	a60	59	b54	b45	128	147	382	272	154	55	48	51
15	60	59	b55	b55	99	138	362	255	149	a54	49	51
16	60	59	b56	74	94	131	358	252	154	a53	51	54
17	59	*59	b55	148	109	125	402	252	140	52	49	54
18	62	55	b58	82	122	97	445	252	129	51	47	54
19	76	56	a60	74	96	117	445	249	115	51	48	53
20	66	62	a80	44	97	105	*398	252	113	51	59	51
21	64	55	a70	b60	130	109	358	249	107	51	57	51
22	62	78	a60	b100	113	98	342	228	97	51	52	51
23	60	117	a50	b85	*113	104	346	203	93	49	48	51
24	60	84	a55	69	134	111	342	184	88	48	48	49
25	60	76	a50	b50	146	102	334	172	88	47	48	49
26	60	76	a54	b65	130	104	322	*174	87	47	49	48
27	60	87	a56	87	109	102	318	172	85	45	*51	47
28	60	84	a60	89	109	107	322	156	85	a44	51	47
29	60	72	a55	212	-	104	283	151	84	44	51	47
30	60	68	a50	148	-	93	269	165	82	45	52	47
31	60	--	a55	109	-	100	------	151	------	45	53	------
Total	1,955	1,978	1,792	2,310	3,004	3,988	8,515	7,043	3,535	1,801	1,469	1,536
Mean	63.1	65.9	57.8	74.5	107	129	284	227	118	58.1	47.4	51.2
Ac-ft	3,880	3,920	3,550	4,580	5,960	7,910	16,890	13,970	7,010	3,570	2,910	3,050

Calendar year 1953: Max 770 Min 45 Mean 167 Ac-ft 121,000
Water year 1953-54: Max 445 Min 40 Mean 107 Ac-ft 77,200

Peak discharge (base, 500 cfs).--No peak above base.

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Malheur River near Drewsey and computed inflow to Agency Valley Reservoir.

b Stage-discharge relation affected by ice.

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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 1954. 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.--19 years (1935-54), 134 cfs (97,010 acre-ft per year).

Extremes.--Maximum discharge during year, 358 cfs June 27-30 (gage height, 2.31 ft); practically no flow Jan. 19, 20.

1909-12, 1913-14, 1926-54: 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 3 cfs, which are poor. Flow regulated by Agency Valley Reservoir (see p. 173). 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

-0.1	0	0.6	30
0.0	.2	1.0	80
.1	1.0	1.5	170
.2	3.5	2.0	280
.3	7.5	2.5	410
.4	13		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	315	0.4	0.2	0.2	0.2	0.3	3.0	250	93	355	280	144
2	298	.4	.2	.2	.2	.3	3.0	220	94	355	272	164
3	285	.4	.2	.2	.2	.3	.9	208	94	355	270	176
4	278	.5	.2	.2	.2	.3	.7	186	96	355	270	176
5	278	.4	.2	.2	.2	.3	*45	174	98	352	268	174
6	262	.4	.2	.2	.2	.3	62	176	132	350	268	172
7	240	.3	.2	.2	.2	.2	56	178	174	350	268	154
8	230	.3	.2	.2	.3	.3	54	180	*186	*350	265	146
9	216	.3	.2	.2	.3	.3	56	180	186	348	265	146
10	210	.2	.2	.1	.3	.2	56	182	160	345	*262	146
11	*208	.3	.2	.1	.3	.2	56	182	103	348	260	144
12	192	.4	.2	*.1	.3	.3	56	184	45	345	260	144
13	182	.4	.2	.1	.3	.5	90	184	38	328	260	144
14	182	.4	.2	.1	.3	.7	128	184	48	318	260	142
15	180	.4	.2	.1	.3	.6	178	208	61	318	260	132
16	180	.4	.2	.1	.4	.6	180	232	49	318	258	127
17	178	*.4	.2	.1	.4	.6	180	240	45	318	258	127
18	176	.4	.2	.1	.4	.7	182	240	56	318	258	125
19	65	.4	.2	.1	.4	.6	182	240	93	318	258	125
20	.4	.4	.2	.1	.4	.5	*182	270	127	318	255	123
21	.4	.4	.2	.1	.4	.6	194	285	229	315	252	118
22	.3	.5	.2	.1	.4	.7	226	285	300	315	226	116
23	.3	.3	.2	.1	**.4	.7	238	285	312	315	196	116
24	.4	.3	.2	.1	.4	.6	262	285	312	315	190	115
25	.4	.2	.2	.1	.4	.8	288	262	312	300	170	115
26	.4	.2	.2	.1	.3	1.8	310	*252	312	282	160	115
27	.4	.2	.2	.1	.3	3.2	325	222	340	278	*160	115
28	.4	.2	.2	.2	.3	3.0	278	210	358	290	160	115
29	.4	.2	.2	.2	-	3.0	250	198	358	312	150	115
30	.4	.2	.2	.2		3.0	260	180	358	320	146	115
31	.4	-	.2	.2	-	3.0	- - - -	122	- - - - -	305	144	- - - - -
Total	4,159.6	10.2	6.2	4.4	8.7	28.5	4,381.6	6,684	5,169	10,109	7,229	4,086
Mean	134	0.34	0.20	0.14	0.31	0.92	146	216	172	326	233	136
Ac-ft	8,250	20	12	8.7	17	57	8,690	13,260	10,250	20,050	14,340	8,100

Calendar year 1953: Max 846 Min 0.1 Mean 181 Ac-ft 131,300
Water year 1953-54: Max 358 Min 0.1 Mean 115 Ac-ft 83,050

* Discharge measurement made on this day.
** Field estimate made on this day.
Note.--No gage-height record Nov. 28 to Jan. 6, Jan. 31 to Feb. 22; discharge estimated on basis of weather records and recorded range in stage.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 2,424.12 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Average discharge.--5 years, 203 cfs (147,000 acre-ft per year).

Extremes.--Maximum discharge during year, 343 cfs July 14 (gage height, 2.98 ft); minimum, 20 cfs Apr. 6 (gage height, 1.57 ft).
1949-54: Maximum discharge, 8,800 cfs Mar. 26, 1952 (gage height, 9.00 ft); minimum, 20 cfs Oct. 27 to Nov. 1, Nov. 4-12, 1950, Apr. 6, 1954.
The two greatest floods known occurred in March 1894 and March 1910.

Remarks.--Records good. 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. 173).

Revisions (water years).--WSP 1217: 1949(M), 1950.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.5	14	2.5	190
1.7	34	3.0	350
2.0	74		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84	42	50	50	143	68	25	214	247	290	156	79
2	82	44	49	46	110	62	25	223	214	284	140	84
3	81	52	50	52	89	60	25	208	160	280	124	93
4	79	55	51	54	81	59	24	205	97	280	126	128
5	77	51	51	54	76	56	23	202	*79	287	133	143
6	74	51	51	50	71	55	21	181	74	298	133	143
7	72	52	51	49	68	55	95	178	72	*290	*130	140
8	*65	52	52	45	65	55	*119	184	72	304	161	133
9	59	51	51	49	65	59	119	184	86	315	196	128
10	58	51	50	46	65	65	119	193	112	312	184	119
11	52	50	45	*49	65	72	119	190	114	312	176	104
12	51	50	46	50	70	114	114	181	95	326	184	102
13	51	49	49	40	81	93	135	176	79	326	199	102
14	50	49	54	42	84	81	181	170	71	332	208	102
15	50	47	59	55	104	74	181	173	71	332	208	110
16	49	*49	54	55	104	47	196	190	68	336	202	119
17	47	49	50	55	91	49	214	232	65	318	193	119
18	44	49	51	76	88	32	238	235	62	290	161	112
19	44	46	50	60	81	30	*226	235	59	259	148	99
20	42	46	54	55	77	31	202	235	59	235	143	81
21	38	46	52	50	74	27	208	247	62	211	148	74
22	30	50	50	51	72	25	226	250	58	196	153	72
23	27	55	47	56	*70	26	256	259	108	170	145	71
24	26	54	55	56	71	26	244	268	170	167	*121	65
25	28	52	45	47	70	27	238	262	229	148	121	62
26	28	55	50	49	70	23	250	256	229	140	121	62
27	34	56	48	50	66	25	271	*250	259	119	114	64
28	51	55	47	54	68	26	287	241	284	140	97	62
29	27	52	52	64	-	26	244	223	287	148	84	60
30	36	51	46	167		23	214	244	290	153	81	59
31	40		49	153		25	------	235	------	156	77	------
Total	1,576	1,511	1,559	1,829	2,239	1,496	4,839	6,724	3,934	7,754	4,567	2,891
Mean	50.8	50.4	50.3	59.0	80.0	48.3	161	217	131	250	147	96.4
Ac-ft	3,130	3,000	3,090	3,630	4,440	2,970	9,600	13,340	7,800	15,380	9,060	5,730

Calendar year 1953: Max 1,420 Min 26 Mean 221 Ac-ft 160,300
Water year 1953-54: Max 336 Min 21 Mean 112 Ac-ft 81,170

* Discharge measurement made on this day.

Bully Creek near Vale, Oreg.

Location.--Lat 43°57'30", long 117°20'30", in SW¼ sec. 33, T. 18 S., R. 44 E., on right bank 5 miles southwest of Vale and about 7 miles upstream from mouth.

Drainage area.--602 sq mi.

Records available.--October 1945 to September 1954 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 2,313 ft (by levels to reference point furnished by Union Pacific RR.). Prior to March 1937, water-stage recorder or staff gage at site 2 miles upstream at different datum. Mar. 15, 1937, to Jan. 1, 1940, water-stage recorder and concrete control at present site at datum 0.38 ft higher.

Average discharge.--18 years (1933-34, 1937-54), 41.1 cfs (29,760 acre-ft per year).

Extremes.--Maximum discharge during year, 366 cfs Jan. 30 (gage height, 2.69 ft); minimum, 2.3 cfs Apr. 1.
1933-54: Maximum discharge, 3,400 cfs Feb. 27, 1940, from rating curve extended above 1,000 cfs; maximum gage height, 6.98 ft Mar. 26, 1952; no flow at times.

Remarks.--Records fair except those for period of no gage-height record, which are poor. 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).--WSP 1183: 1946-47.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from moss Oct. 1-23, June 1 to Sept. 30)

0.3	2.0	1.0	31
.4	3.5	1.2	46
.5	6.0	1.5	80
.6	9.0	2.0	173
.8	18	2.5	300

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	13	14	14	137	25	2.6	12	30	14	20	14
2	20	12	15	11	76	20	2.9	12	22	13	18	13
3	22	12	16	16	59	16	2.6	12	20	11	13	13
4	23	12	16	14	48	10	3.0	12	21	11	14	14
5	23	13	16	14	43	8.4	3.2	11	*22	11	13	13
6	20	12	16	13	40	7.8	3.0	9.0	22	11	11	13
7	19	11	16	16	36	6.9	*21	9.4	21	*11	*11	14
8	*19	11	14	15	35	7.5	67	9.8	23	11	11	13
9	19	10	16	11	a35	8.4	75	11	28	11	11	13
10	19	11	16	16	a40	7.2	40	9.4	30	11	10	14
11	18	*10	12	*15	a50	20	30	12	31	13	11	12
12	20	11	14	14	a150	16	22	12	25	16	12	13
13	22	11	13	11	a100	11	12	14	24	14	14	14
14	22	10	15	14	a70	8.7	12	13	24	14	12	13
15	23	9.4	17	17	a50	8.1	12	16	25	14	12	16
16	21	*10	16	14	a40	7.5	10	16	20	14	12	15
17	20	9.8	16	40	a45	7.5	9.0	14	20	16	11	16
18	22	9.8	16	135	a40	7.2	10	13	19	18	11	16
19	20	9.4	18	54	a40	7.5	*11	11	19	17	11	16
20	16	8.7	19	45	a40	22	12	13	18	18	14	16
21	14	9.0	18	25	a50	42	9.8	9.0	16	18	30	16
22	15	9.8	14	30	a45	30	9.8	9.4	12	19	18	17
23	26	9.8	12	27	*40	9.0	9.4	17	12	19	17	16
24	22	10	15	25	38	8.4	12	11	13	20	*16	14
25	16	11	13	19	36	8.4	16	22	14	21	16	13
26	16	14	17	22	37	8.1	15	17	16	22	18	13
27	14	15	14	25	37	9.0	12	*19	16	23	17	14
28	14	14	14	25	30	9.4	13	19	17	23	18	14
29	14	14	16	113	-	9.4	14	20	16	21	18	14
30	13	14	11	283		4.0	14	23	14	21	17	14
31	13		12	177		2.9	- -- -	27	-------	21	16	-------
Total	585	336.7	467	1,270	1,487	373.3	485.3	435.0	610	497	453	426
Mean	18.9	11.2	15.1	41.0	53.1	12.0	16.2	14.0	20.3	16.0	14.6	14.2
Ac-ft	1,160	668	926	2,520	2,950	740	963	863	1,210	986	899	845

Calendar year 1953: Max 660 Min 8.7 Mean 65.1 Ac-ft 47,100
Water year 1953-54: Max 283 Min 2.6 Mean 20.3 Ac-ft 14,730

Peak discharge (base, 130 cfs).--Jan. 18 (4 a.m.) 200 cfs (2.12 ft); Jan. 30 (4 to 5 a.m.) 366 cfs (2.69 ft); Feb. 12 (time unknown) 303 cfs (2.51 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage and records for North Fork Malheur River above Agency Valley Reservoir, near Beulah.

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 1954. Tape gage read once daily with some exceptions April to September, and about once each week 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, 147,500 acre-ft Apr. 20 (elevation, 3,396.00 ft); minimum observed, 14,240 acre-ft Sept. 30 (elevation, 3,348.10 ft). Maximum contents observed during period 1920-54, 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 (bottom of outlet tunnel) and 3,406 ft (top of 5-foot flashboards). Dead storage, 1,400 acre-ft below elevation 3,327 ft, not included in records presented. 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 1954. Pressure gage with mercury column read once each day except Nov. 1-29, when no readings were made. Datum of gage is at mean sea level (surveys by Bureau of Reclamation); add 7.72 ft to obtain mean sea level elevation, datum of 1929. Maximum contents observed during year, 48,580 acre-ft June 21 (elevation, 3,333.70 ft); minimum observed, 7,320 acre-ft Oct. 19 (elevation, 3,297.30 ft). Maximum contents observed during period 1935-54, 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 open 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 1953 to September 1954

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	3,381.00	93,700	-	3,305.94	13,290	-
Oct. 31	3,380.55	92,260	-1,440	3,299.80	8,850	-4,440
Nov. 30	-	a96,750	+4,490	3,305.60	13,010	+4,160
Dec. 31	-	a102,100	+5,350	3,310.15	17,100	+4,090
Calendar year 1953	-	-	+4,940	-	-	-
Jan. 31	-	a110,000	+7,900	3,315.05	22,280	+5,180
Feb. 28	3,389.30	121,900	+11,900	3,320.75	29,220	+6,940
Mar. 31	3,394.10	139,900	+18,000	3,327.57	38,820	+9,600
Apr. 30	3,395.05	143,700	+3,800	3,332.55	46,660	+7,840
May 31	3,387.60	115,900	-27,800	3,332.53	46,620	-40
June 30	-	a100,000	-15,900	3,331.08	44,250	-2,370
July 31	3,371.20	63,580	-36,420	3,319.15	27,180	-17,070
Aug. 31	3,360.07	35,350	-28,230	3,308.12	15,150	-12,030
Sept.30	3,348.10	14,240	-21,110	3,301.55	10,000	-5,150
Water year 1953-54	-	-	-79,460	-	-	-3,290

† Gage reading observed about 8 a.m.
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., on right bank 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 3,790 ft (from river-profile map). Prior to Dec. 18, 1941, staff gage at site 900 ft upstream at different datum.

Average discharge.--13 years, 892 cfs (645,800 acre-ft per year).

Extremes.--Maximum discharge during year, 5,450 cfs May 21 (gage height, 6.83 ft); minimum, 194 cfs Dec. 23 (gage height, 2.58 ft).
1941-54: Maximum discharge, that of May 21, 1954; 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.6	203	4.5	1,630
2.8	277	5.0	2,270
3.0	370	5.5	3,030
3.5	690	6.0	3,880
4.0	1,110	6.8	5,390

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	350	307	350	345	325	365	398	1,460	1,970	2,540	760	461
2	370	365	*335	345	307	340	392	1,370	1,810	2,480	736	449
3	360	335	325	325	311	360	403	1,350	1,750	2,380	720	443
4	355	316	330	303	311	355	461	1,400	1,830	2,410	704	431
5	350	316	330	311	320	365	728	1,750	2,040	2,480	688	431
6	345	345	330	298	325	392	885	2,090	1,990	2,520	688	425
7	340	330	325	298	325	408	752	2,280	1,880	2,350	659	425
8	335	320	303	294	335	491	728	2,540	1,760	2,210	638	420
9	330	316	325	273	355	720	704	2,980	1,750	2,090	617	414
10	325	316	325	242	370	966	652	3,390	1,810	1,950	604	403
11	330	325	277	281	355	744	688	3,290	1,820	1,880	590	398
12	325	325	330	277	437	617	800	3,210	1,910	1,850	597	398
13	325	325	294	273	497	552	1,030	3,130	2,090	1,800	617	392
14	325	316	307	294	461	515	1,380	3,050	*2,210	1,770	584	392
15	325	320	325	294	431	491	1,340	3,130	2,540	1,740	571	403
16	335	316	311	286	403	479	1,380	3,440	3,000	1,680	558	425
17	330	320	303	316	386	467	1,600	3,810	2,710	1,560	552	403
18	325	286	303	265	398	449	1,800	3,950	2,440	1,480	539	403
19	330	258	320	286	355	437	1,800	4,370	2,350	1,360	527	392
20	325	307	398	*281	370	431	1,610	4,970	2,440	*1,290	533	381
21	*320	311	350	281	360	420	1,530	5,230	2,820	1,230	584	376
22	316	335	290	340	345	408	1,540	*4,350	3,160	1,140	558	370
23	316	473	234	350	340	420	*1,690	3,790	3,670	1,080	539	365
24	316	376	242	307	*365	437	1,760	3,510	4,010	1,000	*521	365
25	311	345	273	298	392	437	1,860	3,440	3,970	957	515	360
26	311	365	307	286	392	443	1,910	3,130	4,150	939	571	350
27	311	414	307	311	376	449	2,000	2,730	4,310	912	545	350
28	307	420	298	316	365	449	2,030	2,350	3,500	885	509	345
29	307	365	316	345	-	420	1,900	2,160	2,870	849	485	350
30	307	355	281	355	------	408	1,690	2,080	2,660	824	473	*355
31	307	------	320	345	------	*398	------	1,940	------	784	467	------
Total	10,164	10,123	9,664	9,421	10,312	14,633	37,441	91,670	77,220	50,400	18,249	11,875
Mean	328	337	312	304	368	472	1,248	2,957	2,574	1,626	589	396
Cfsm	0.719	0.739	0.684	0.667	0.807	1.04	2.74	6.48	5.64	3.57	1.29	0.868
In.	0.83	0.83	0.79	0.77	0.84	1.19	3.05	7.48	6.30	4.11	1.49	0.97
Ac-ft	20,160	20,080	19,170	18,690	20,450	29,020	74,260	181,800	153,200	99,970	36,200	23,550

Calendar year 1953: Max 4,930 Min 234 Mean 901 Cfsm 1.98 In. 26.82 Ac-ft 652,100
Water year 1953-54: Max 5,230 Min 234 Mean 962 Cfsm 2.11 In. 28.65 Ac-ft 696,600

* 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, and 15 miles north of Lowman.

Drainage area.--108 sq mi.

Records available.--October 1935 to September 1954.

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, 5,336.0 ft June 25-28; minimum observed, 5,288.20 ft Sept. 30.

1935-54: Maximum elevation observed, 5,337.1 ft June 1, 2, 1943; minimum observed, 5,205.0 ft Sept. 18 to Oct. 11, 1951, when reservoir was drained for repairs.

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 ft, about 1,500 acre-ft. Water is used to augment flow of Payette River at Black Canyon powerplant near Emmett. Small diversion from a tributary of Johnson Creek in Salmon River basin to Deadwood River basin for supplemental storage in Deadwood Reservoir. Discharge of 7.49 cfs was measured in this canal July 21. Gage read 7 a.m. to 12 m.

Cooperation.--Gage readings furnished by Bureau of Reclamation.

Elevation, in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	298.55	296.65	299.40	301.60	304.00	305.90	308.20	311.10	328.10	335.80	333.40	314.00
2	298.00	296.90	299.50	301.65	304.10	306.00	308.30	311.10	328.60	335.75	332.90	312.80
3	297.60	297.00	299.60	301.75	304.20	306.10	308.40	310.90	329.00	335.65	332.80	311.60
4	297.20	297.05	299.70	301.80	304.20	306.10	308.50	310.70	329.40	335.60	332.90	310.40
5	296.75	297.15	299.75	301.90	304.20	306.20	308.60	310.60	329.90	335.55	332.95	309.10
6	296.50	297.30	299.80	302.00	304.20	306.30	309.00	310.65	330.30	335.50	333.00	307.90
7	296.25	297.40	299.90	302.00	304.20	306.30	309.10	310.80	330.80	335.45	333.00	306.60
8	296.00	297.40	299.95	302.05	304.30	306.40	309.20	311.00	331.20	335.40	332.80	304.90
9	295.80	297.45	300.00	302.10	304.40	306.60	309.40	311.40	331.60	335.35	332.30	304.00
10	295.65	297.50	300.10	302.15	304.50	306.70	309.60	311.90	332.00	335.30	331.70	303.00
11	295.60	297.55	300.20	302.15	304.60	306.80	309.60	312.40	332.50	335.20	331.10	301.40
12	295.60	297.65	300.25	302.15	304.65	306.90	309.80	312.90	332.90	335.20	330.50	300.20
13	295.55	297.70	300.30	302.15	304.80	306.90	310.00	313.40	333.40	335.10	330.00	299.00
14	295.65	297.75	300.30	302.20	304.90	307.00	310.30	313.80	333.80	335.05	329.40	298.05
15	295.70	297.85	300.35	302.60	305.00	307.00	310.50	314.30	334.30	335.05	328.80	297.10
16	295.80	297.90	300.50	302.70	305.10	307.20	310.80	314.80	334.80	335.00	328.20	296.30
17	295.85	298.00	300.60	302.80	305.20	307.30	311.00	315.40	335.10	335.00	327.60	295.60
18	295.90	298.05	300.60	302.80	305.30	307.40	311.20	316.00	335.40	334.95	327.00	294.80
19	295.95	298.10	300.65	303.20	305.40	307.40	311.50	317.00	335.50	334.90	326.10	294.10
20	296.00	298.15	300.85	303.20	305.45	307.40	311.70	318.40	335.60	334.90	325.30	293.40
21	296.10	298.20	300.90	303.20	305.50	307.60	311.70	319.80	335.65	334.80	324.40	292.70
22	296.15	298.30	300.90	303.25	305.60	307.60	311.70	320.40	335.70	334.75	323.40	292.00
23	296.20	298.60	300.95	303.30	305.70	307.60	311.50	321.20	335.75	334.70	322.40	291.50
24	296.30	298.70	301.00	303.40	305.70	307.60	311.40	322.60	335.90	334.70	321.40	291.00
25	296.35	298.80	301.00	303.50	305.70	307.80	311.10	323.80	336.00	334.70	320.50	290.50
26	296.40	298.90	301.05	303.60	305.80	307.80	311.00	324.70	336.00	334.60	319.60	290.00
27	296.45	299.00	301.05	-	305.90	307.80	310.95	325.50	336.00	334.50	318.70	289.50
28	296.50	299.10	301.30	-	305.90	308.00	311.10	326.30	336.00	334.20	317.00	288.90
29	296.50	299.20	301.40	303.80	-	308.10	311.20	326.60	335.95	334.10	316.90	288.50
30	296.55	299.30	301.40	303.90	-------	308.10	311.20	327.10	335.85	334.00	316.00	288.20
31	296.60	-------	301.45	304.00	-------	308.20	-------	327.60	-------	334.00	315.00	-------

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 1954.

Gage.--Water-stage recorder. Datum of gage is 5,181.52 ft above mean sea level (levels by Bureau of Reclamation). Datum of Geological Survey levels (1952, preliminary), is 22.8 ft higher. 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.--27 years (1927-54), 214 cfs (154,900 acre-ft per year).

Extremes.--Maximum discharge during year, 2,220 cfs July 27 (gage height, 7.79 ft); minimum observed, 2 cfs many days during period when gates in dam were closed.
1926-54: Maximum discharge, 2,580 cfs July 14, 1953; maximum gage height, that of July 27, 1954; no flow or small amount of leakage from reservoir for long periods during 1934-37, when gates in dam were closed.

Remarks.--Records excellent except those below 200 cfs, which are fair. Flow regulated by Deadwood Reservoir (see preceding page).

Revisions (water years).--WSP 1123: 1943.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 11				June 12 to Sept. 30			
0.5	1	1.5	139	0.6	2	3.0	307
.6	3	2.0	242	.7	4	4.0	552
.7	10	3.0	505	.8	10	5.0	911
.8	20	4.0	895	1.0	31	6.0	1,340
1.0	48			1.5	92	7.0	1,820
				2.0	159		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	563	2	2	2	2	2	2	692	2	751	1,050	1,440
2	514	2	2	2	2	2	2	688	2	708	524	1,490
3	490	2	2	2	2	2	2	688	2	662	2	1,500
4	439	2	2	2	2	2	2	688	2	624	2	1,530
5	392	2	2	2	2	2	2	688	2	591	2	1,550
6	360	2	2	2	2	2	2	688	2	558	40	1,550
7	320	2	2	2	2	2	2	688	2	525	292	1,530
8	270	2	2	2	2	2	2	692	2	490	799	1,490
9	219	2	2	2	2	2	2	692	2	462	990	1,460
10	165	2	2	2	2	2	2	696	*110	430	970	1,430
11	69	2	2	2	2	2	2	696	2	402	966	1,320
12	69	2	2	2	2	2	2	700	2	379	974	1,220
13	27	2	2	2	2	2	2	700	2	358	978	1,090
14	2	2	2	2	2	2	2	700	6	341	970	982
15	2	2	2	2	2	2	2	704	136	333	966	919
16	2	2	2	2	2	2	49	704	316	316	982	803
17	2	2	2	2	2	2	100	708	476	304	998	744
18	2	2	2	2	2	2	100	473	571	287	1,120	740
19	2	2	2	2	2	2	188	120	631	272	1,300	736
20	*2	2	2	2	2	2	382	2	665	259	1,460	708
21	2	2	2	2	2	2	591	2	708	*246	1,530	641
22	2	2	2	2	2	2	692	2	765	230	1,450	558
23	2	2	2	2	2	2	696	2	829	221	1,410	499
24	2	2	2	2	2	2	700	2	888	211	*1,400	496
25	2	2	2	2	2	2	704	2	*923	284	1,360	496
26	2	2	2	2	2	2	704	2	954	312	1,340	496
27	2	2	2	2	2	2	704	2	998	*555	1,270	525
28	2	2	2	2	2	2	704	2	974	320	1,240	446
29	2	2	2	2	-	2	704	2	872	335	1,260	*275
30	2	2	2	2		2	700	2	795	246	1,360	138
31	2		2	2	- -	2	------	2	-----	528	1,420	----
Total	3,933	60	62	62	56	62	7,748	12,429	11,641	12,540	30,425	28,802
Mean	127	2.0	2.0	2.0	2.0	2.0	258	401	388	405	981	960
Ac-ft	7,800	119	123	123	111	123	15,370	24,650	23,090	24,870	60,350	57,130

Calendar year 1953: Max 1,640 Min 2 Mean 246 Ac-ft 177,800
Water year 1953-54: Max 1,550 Min 2 Mean 295 Ac-ft 213,960

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 14 to Apr. 21, May 21 to June 9, June 11-13, Aug. 3-5, except for staff-gage readings made about once a week; discharge estimated on basis of staff-gage readings and records of gate openings at Deadwood Reservoir.

South Fork Payette River near Garden Valley, Idaho

Location.--Lat 44°04', long 115°56', in sec. 1, T. 8 N., R. 4 E., on right bank 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 1954.

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.--30 years (1924-54), 1,294 cfs (936,800 acre-ft per year).

Extremes.--Maximum discharge during year, 7,520 cfs May 21 (gage height, 6.45 ft); minimum, 222 cfs Dec. 24 (gage height, 1.45 ft).
1921-54: 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 excellent except those for periods of ice effect, which are good. Practically no diversion above station. Flow regulated by Deadwood Reservoir (see p. 175).

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 20-22)

1.5	250	3.0	1,570
1.7	375	4.0	2,890
2.0	600	5.0	4,510
2.5	1,050	6.5	7,410

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,030	410	482	468	520	560	592	3,130	2,740	3,840	1,970	2,020
2	1,020	505	*460	417	482	512	576	2,920	2,490	3,720	1,810	2,050
3	974	460	431	424	468	528	592	2,890	2,420	3,530	917	2,070
4	936	431	445	417	460	520	676	2,900	2,460	3,470	879	2,070
5	860	431	431	424	468	544	1,130	3,400	2,680	3,470	860	2,110
6	815	468	438	424	468	576	1,500	4,020	2,660	3,480	860	2,090
7	779	445	417	403	475	600	1,290	4,310	2,540	3,280	946	2,070
8	728	431	382	417	482	710	1,210	4,710	2,390	3,080	1,460	2,030
9	685	424	403	368	505	1,160	1,180	5,200	2,330	2,890	1,750	2,000
10	626	417	431	310	520	1,650	1,090	5,890	2,570	2,730	1,730	1,970
11	560	431	342	356	512	1,290	1,110	5,750	2,500	2,610	1,700	1,890
12	512	438	410	368	626	1,050	1,250	5,660	2,560	2,530	1,700	1,730
13	512	438	389	349	806	917	1,560	5,470	2,730	2,430	1,750	1,700
14	438	424	375	403	779	833	2,180	5,300	*2,900	2,390	1,730	1,460
15	417	438	431	403	694	779	2,150	5,320	3,540	2,360	1,700	1,460
16	431	424	410	403	626	753	2,150	5,680	4,160	2,280	1,690	1,380
17	417	424	389	498	608	736	2,630	6,220	4,010	2,140	1,690	1,270
18	417	389	396	389	626	710	2,940	6,300	3,820	2,010	1,750	1,260
19	424	316	424	424	552	685	3,130	6,300	3,740	1,870	1,940	1,250
20	417	368	560	*b400	568	676	3,000	6,860	3,790	*1,750	2,100	1,230
21	*417	424	512	b375	560	651	3,060	7,260	4,160	1,680	2,260	1,150
22	424	460	403	b450	536	634	3,190	*6,160	4,580	1,590	2,200	1,110
23	424	728	280	528	528	642	*3,360	5,240	5,140	1,490	*2,100	993
24	424	584	268	460	*552	676	3,470	4,830	5,580	1,420	2,060	984
25	424	498	b320	431	592	676	3,610	4,650	5,660	1,390	2,050	974
26	424	490	b390	396	608	685	3,680	4,260	5,790	1,450	2,060	964
27	417	560	b400	438	576	710	3,850	3,720	6,300	1,610	2,020	974
28	417	642	b390	460	560	702	4,060	3,260	5,240	1,470	1,890	964
29	417	528	b390	520	-	660	3,870	2,980	4,440	1,400	1,880	833
30	410	498	b380	560		626	3,500	2,880	4,060	1,360	1,930	*668
31	410		b400	544	---	*608	------	2,640	---	1,190	2,010	------
Total	17,606	13,924	12,579	13,227	15,757	23,059	67,586	146,110	109,780	71,910	53,392	44,724
Mean	568	464	406	427	563	744	2,253	4,713	3,659	2,320	1,722	1,491
Ac-ft	34,920	27,620	24,950	26,240	31,250	45,740	134,100	289,800	217,700	142,600	105,900	88,710

Calendar year 1953: Max 6,940 Min 268 Mean 1,484 Ac-ft 1,075,000
Water year 1953-54: Max 7,260 Min 268 Mean 1,615 Ac-ft 1,170,000

* 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_1, on right bank 1 mile upstream from confluence with North Fork Payette River and 1½ miles northeast of Banks.

Drainage area.--1,200 sq mi, approximately.

Records available.--August 1921 to September 1954.

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.--33 years, 1,724 cfs (1,248,000 acre-ft per year).

Extremes.--Maximum discharge during year, 9,810 cfs May 21 (gage height, 9.28 ft); minimum, 359 cfs Dec. 24 (gage height, 0.26 ft).
1921-54: 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 periods of no gage-height record, which are good. Small diversions above station for irrigation. Flow regulated by Deadwood Reservoir (see p. 175).

Rating table, water year 1953-54 (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	8.0	7,900
3.0	2,130	9.2	9,690

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,140	565	692	738	964	957	1,060	4,540	3,750	4,500	2,160	2,170
2	1,130	670	*665	687	886	872	1,030	4,190	3,450	4,310	2,110	2,190
3	1,090	643	648	632	822	886	1,070	4,110	3,250	4,090	1,310	2,220
4	1,070	590	654	605	792	879	1,200	4,040	3,250	3,990	1,150	2,210
5	996	590	654	605	786	905	2,270	4,680	3,450	3,990	1,090	2,240
6	944	638	670	610	780	938	3,060	5,540	3,450	3,970	1,070	2,240
7	912	626	648	595	762	976	2,570	6,000	3,360	3,740	1,050	2,230
8	853	595	605	595	768	1,220	2,340	6,600	3,160	3,520	1,460	2,190
9	804	585	610	545	786	2,350	2,290	7,200	3,070	3,320	1,940	2,140
10	750	585	643	483	816	3,420	2,160	8,400	3,370	3,130	1,900	2,110
11	692	595	545	515	792	2,550	2,180	8,100	3,530	2,990	1,880	2,050
12	643	616	605	550	990	2,000	2,330	7,900	3,450	2,890	1,870	1,890
13	643	610	590	506	1,540	1,690	2,920	7,500	3,650	2,800	1,920	1,870
14	595	600	570	565	1,490	1,520	4,120	7,200	*3,800	2,730	1,900	1,600
15	565	600	654	595	1,250	1,430	3,930	7,100	4,240	2,710	1,870	1,600
16	575	595	632	648	1,120	1,360	3,750	7,500	5,290	2,610	1,850	1,550
17	575	595	605	924	1,080	1,310	4,450	8,200	5,040	2,470	1,840	1,450
18	570	580	595	810	1,170	1,270	5,010	8,500	4,740	2,320	1,900	1,430
19	585	474	638	*709	1,010	1,210	5,270	8,400	4,600	2,180	2,090	1,380
20	575	530	828	616	1,010	1,210	4,770	8,700	4,590	*2,040	2,240	1,360
21	570	616	798	555	990	1,160	4,650	9,460	4,980	1,960	2,440	1,310
22	*570	648	638	687	944	1,110	*4,740	7,860	5,380	1,870	2,410	1,240
23	570	1,100	456	860	924	1,120	5,000	6,780	5,970	1,780	*2,280	1,110
24	570	931	424	762	950	1,160	5,060	*6,220	6,390	1,690	2,230	1,110
25	570	726	510	687	*1,010	1,160	5,260	6,080	6,390	1,630	2,210	1,100
26	570	709	605	621	1,040	1,190	5,380	5,500	6,520	1,700	2,240	1,070
27	570	810	648	665	983	1,240	5,630	4,900	7,210	1,810	2,230	1,070
28	570	964	626	726	964	1,240	6,260	4,300	6,080	1,740	2,070	1,100
29	565	780	638	872	-	*1,160	5,910	3,800	5,180	1,620	2,060	980
30	565	709	595	1,100	-	1,100	5,210	3,800	4,720	1,580	2,070	*810
31	565		605	1,050	----	1,070	------	3,500	------	1,380	2,180	------
Total	21,962	19,875	19,294	21,118	27,419	41,663	110,880	196,600	135,310	83,060	59,020	49,020
Mean	708	662	622	681	979	1,344	3,696	6,342	4,510	2,679	1,904	1,634
Ac-ft	43,560	39,420	38,270	41,890	54,380	82,640	219,900	390,000	268,400	164,700	117,100	97,230

Calendar year 1953: Max 9,020 Min 424 Mean 2,069 Ac-ft 1,498,000
Water year 1953-54: Max 9,460 Min 424 Mean 2,151 Ac-ft 1,557,000

* Discharge measurement made on this day.
Note.--No gage-height record May 7-19, May 26 to June 6, June 12, 13, Sept. 14-29; discharge estimated on basis of recorded range in stage and records for stations near Garden Valley and at Lowman.

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 1954 (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 datum 2.0 ft higher. Aug. 26, 1931, to Nov. 22, 1943, staff gage at site 75 ft downstream at present datum.

Extremes.--Maximum gage height during year, 7.02 ft June 27; minimum, 1.67 ft Jan. 13. 1921-54: 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 taintor 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 employees of U. S. Forest Service.

Revisions (water years).--WSP 753: 1931. WSP 1013: Drainage area.

Gage height at 12 p.m., in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.78	5.33	2.03	1.75	1.95	1.90	1.92	3.61	4.53	6.16	6.00	5.97
2	5.77	5.00	2.02	1.73	1.93	1.89	1.92	3.54	4.45	6.16	6.01	5.96
3	5.75	4.69	2.03	1.73	1.91	1.88	1.94	3.50	4.43	6.17	6.00	5.93
4	5.74	4.40	2.01	1.74	1.90	1.87	2.00	3.53	4.56	6.21	5.98	5.92
5	5.73	4.15	2.00	1.74	1.88	1.86	2.07	3.71	4.63	6.25	5.99	5.92
6	5.72	3.89	2.00	1.74	1.87	1.85	2.09	3.95	4.63	6.24	5.98	5.91
7	5.71	3.66	1.98	1.73	1.85	1.84	2.10	4.17	4.58	6.18	5.98	5.91
8	5.70	3.45	1.98	1.73	1.85	1.87	2.13	4.45	4.48	6.12	5.98	5.89
9	5.70	3.26	1.96	1.72	1.84	1.97	2.13	4.83	4.49	6.13	5.97	5.86
10	5.68	3.09	1.94	1.71	1.83	2.01	2.13	5.37	4.59	6.14	5.96	5.86
11	5.67	2.94	1.92	1.70	1.85	2.02	2.13	5.54	4.65	6.14	5.95	5.85
12	5.66	2.85	1.91	1.68	1.92	2.02	2.14	5.55	4.71	6.15	5.94	5.83
13	5.65	2.85	1.88	1.68	1.92	2.01	2.31	5.47	4.83	6.14	5.94	5.81
14	5.63	2.82	1.87	1.69	1.95	2.01	2.42	5.41	4.94	6.20	5.95	5.80
15	5.63	2.73	1.86	1.72	1.95	2.00	2.47	5.49	5.25	6.22	5.93	5.83
16	5.62	2.65	1.85	1.77	1.93	2.00	2.53	5.75	5.59	6.22	5.91	5.83
17	5.62	2.57	1.84	1.90	1.97	2.00	2.62	5.94	5.45	6.20	5.90	5.83
18	5.63	2.48	1.82	1.89	1.97	1.99	2.75	6.11	5.27	6.16	5.90	5.82
19	5.62	2.39	1.88	1.87	1.98	1.98	2.85	6.38	5.19	6.10	5.88	5.82
20	5.62	2.33	1.88	1.86	1.99	1.99	2.91	6.64	5.16	6.04	5.89	5.81
21	• 5.61	2.28	1.88	1.87	1.98	1.97	2.95	6.60	5.30	5.99	5.91	5.81
22	5.57	2.30	1.87	1.92	1.96	1.97	3.03	6.21	5.80	6.00	5.91	5.81
23	5.57	2.27	1.84	1.93	1.95	1.96	3.10	5.90	6.60	6.02	5.90	5.80
24	5.56	2.23	1.83	1.91	1.95	1.95	3.18	5.71	6.85	6.04	5.92	5.79
25	5.56	2.18	1.81	1.90	1.94	1.95	3.27	5.62	6.77	6.03	5.93	5.78
26	5.56	2.16	1.82	1.90	1.93	1.94	3.38	5.35	6.94	6.05	5.97	5.77
27	5.55	2.15	1.81	2.00	1.92	1.97	3.60	5.00	7.01	6.04	5.98	5.76
28	5.55	2.12	1.81	1.98	1.91	1.96	3.75	4.71	6.80	6.03	5.97	5.74
29	5.55	2.09	1.80	2.00	-	1.95	3.76	4.55	6.52	6.04	5.97	5.73
30	5.55	2.07	1.77	1.99	------	1.95	3.70	4.53	6.27	6.01	5.97	5.72
31	5.55	------	1.77	1.97	------	1.93	------	4.55	------	6.00	5.97	------

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., on left bank 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 1954.

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.--43 years (1908-16, 1919-54), 356 cfs (257,700 acre-ft per year).

Extremes.--Maximum discharge during year, 3,220 cfs May 21 (gage height, 6.76 ft); minimum, 7 cfs Nov. 1 (gage height, 1.29 ft).
1908-17, 1919-54: 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 excellent except those below 100 cfs, which are good. 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 employees of U. S. Forest Service.

Revisions.--WSP 963: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.3	6	3.0	275
1.4	9	3.5	486
1.6	17	4.0	770
1.8	30	5.0	1,490
2.0	48	6.0	2,430
2.3	90	7.0	3,480
2.6	154		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	545	108	49	83	75	80	788	1,100	1,460	67	26
2	20	794	105	47	80	72	79	739	1,060	1,140	49	26
3	19	770	99	45	77	71	82	708	1,030	1,070	43	26
4	19	714	101	47	72	68	85	696	1,070	1,080	33	26
5	19	666	99	47	70	67	103	758	1,140	1,090	33	27
6	19	620	99	47	67	65	113	890	1,150	1,100	32	27
7	19	564	94	46	64	64	117	1,030	1,140	1,090	32	27
8	19	527	90	46	63	67	121	1,180	1,080	918	32	27
9	19	476	90	45	60	79	130	1,400	1,040	666	31	27
10	19	424	85	43	58	95	130	1,820	1,090	591	30	27
11	19	380	80	*42	58	97	130	2,110	*1,140	575	31	26
12	19	265	77	40	70	101	130	2,190	1,170	501	31	26
13	19	14	71	38	74	101	157	2,160	1,230	*486	30	26
14	19	78	68	39	79	99	196	2,100	1,310	420	27	26
15	19	261	67	41	80	97	222	2,080	1,400	424	26	26
16	19	238	64	48	79	97	238	2,220	1,720	429	*26	26
17	19	238	61	65	*80	94	261	2,450	1,770	398	26	26
18	19	229	60	71	87	95	297	2,590	1,620	376	26	26
19	16	204	61	70	87	94	335	2,780	1,540	364	26	26
20	13	187	70	65	90	92	355	*3,010	1,490	347	26	26
21	11	168	70	64	90	94	368	3,170	1,540	264	26	26
22	8	168	65	71	90	*90	402	2,940	760	128	26	26
23	8	170	63	79	85	87	486	2,630	429	97	26	*23
24	8	159	60	75	82	85	522	2,430	1,710	103	26	22
25	8	147	58	72	82	83	564	2,330	2,140	103	26	22
26	8	140	56	72	80	82	*620	2,160	2,140	105	26	22
27	8	135	56	80	79	85	696	1,890	2,250	103	26	22
28	8	128	56	90	79	87	812	1,580	2,190	103	26	21
29	8	119	54	92	-	85	848	1,320	1,980	101	26	20
30	*8	*113	52	92	-	83	830	1,170	1,790	85	26	20
31	8		51	87	-----	82	-----	1,040	-----	74	26	-----
Total	464	9,641	2,290	1,855	2,145	2,633	9,509	56,359	42,219	15,791	943	750
Mean	15.0	321	73.9	59.8	76.6	84.9	317	1,818	1,407	509	30.4	25.0
Ac-ft	920	19,120	4,540	3,680	4,250	5,220	18,860	111,800	83,740	31,320	1,870	1,490

Calendar year 1953: Max 2,620 Min 8 Mean 375 Ac-ft 271,200
Water year 1953-54: Max 3,170 Min 8 Mean 396 Ac-ft 286,800

* 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 1954.

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.--9 years, 153 cfs (110,800 acre-ft per year).

Extremes.--Maximum discharge during year, 1,640 cfs May 20 (gage height, 8.01 ft); minimum, 8.2 cfs Nov. 19 (gage height, 1.75 ft).
1945-54: 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, 5.5 cfs Nov. 9, 1952 (gage height, 1.62 ft).

Remarks.--Records excellent except those below 15 cfs, which are good, and those for periods of ice effect, which are fair. No diversion above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.0	11	5.0	216
2.3	18	5.5	306
2.6	26	6.0	422
3.0	43	6.5	595
3.5	71	7.0	850
4.0	105	8.0	1,630
4.5	151		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	12	22	18	b20	b24	31	212	338	553	50	23
2	18	19	20	17	b19	b24	30	200	290	508	48	22
3	15	16	b17	16	b19	b23	32	207	310	495	46	21
4	15	14	b18	17	b19	b23	39	249	417	534	43	21
5	14	14	19	18	b19	b23	88	384	391	666	42	21
6	13	16	19	18	b18	b23	78	481	340	512	40	20
7	13	15	b17	18	b18	23	65	542	316	453	38	19
8	12	14	b16	18	b18	26	63	667	300	384	35	19
9	12	14	b19	16	b18	b35	58	838	342	342	34	18
10	12	14	b18	17	b19	b80	54	1,090	417	319	32	18
11	12	17	b17	17	b19	74	57	850	436	312	31	17
12	12	17	18	b14	b26	54	65	796	*450	296	30	17
13	12	16	b17	b15	b28	50	148	685	501	*271	31	17
14	12	16	18	17	b35	46	198	672	530	242	32	16
15	12	16	18	17	b32	44	150	740	649	284	30	21
16	12	15	18	17	b30	41	154	943	667	246	*29	25
17	12	17	17	18	b30	40	212	985	466	195	28	22
18	13	14	17	16	b30	38	275	1,020	436	166	28	22
19	16	11	18	18	b29	b37	262	1,200	484	142	27	20
20	14	15	b24	*b18	b29	36	198	*1,310	545	127	28	19
21	14	14	b23	b18	b29	34	191	1,060	680	116	36	18
22	13	15	b20	b18	b28	34	218	715	757	103	31	17
23	12	b23	b13	b18	b28	34	275	672	889	95	30	16
24	12	20	b16	b17	*b28	34	288	690	802	89	29	*16
25	12	18	b16	b16	b28	33	314	*695	757	84	33	16
26	12	22	b17	b17	b27	33	323	508	896	79	38	15
27	12	b38	b17	b18	b27	*34	*412	404	896	73	37	15
28	12	36	b17	19	b26	33	422	354	695	67	28	15
29	12	25	b17	20	-	32	319	340	557	62	26	15
30	*12	*23	17	21	------	32	254	349	530	58	24	16
31	12	-----	17	21	-----	34	-----	331	------	54	23	------
Total	400	536	557	543	696	1,131	5,273	20,189	16,084	7,827	1,037	557
Mean	12.9	17.9	18.0	17.5	24.9	36.5	176	651	536	252	33.5	18.6
Cfsm	0.264	0.366	0.368	0.358	0.509	0.746	3.60	13.3	11.0	5.15	0.685	0.380
In.	0.30	0.41	0.42	0.41	0.53	0.86	4.01	15.35	12.23	5.95	0.79	0.42
Ac-ft	793	1,060	1,100	1,080	1,380	2,240	10,460	40,040	31,900	15,520	2,060	1,100

Calendar year 1953: Max 1,220 Min 10 Mean 146 Cfsm 2.99 In. 40.54 Ac-ft 105,700
Water year 1953-54: Max 1,310 Min 11 Mean 150 Cfsm 3.07 In. 41.68 Ac-ft 108,700

Peak discharge (base, 850 cfs).--May 10 (3 a.m.) 1,310 cfs (7.62 ft); May 20 (9 p.m.) 1,640 cfs (8.01 ft); June 15 (11 p.m.) 908 cfs (7.09 ft); June 23 (10 p.m.) 1,220 cfs (7.51 ft).
* Discharge measurement made on this day.
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 1954 (fragmentary).

Gage.--Staff gage and graduations on concrete gate-control structure of dam. Gage read once daily during irrigation season. Datum of gage is at mean sea level (levels by Lake Irrigation District).

Extremes.--Maximum contents observed during year, 19,140 acre-ft June 22-24, 26 (elevation, 5,118.38 ft); practically no storage at times during fall and winter.
1926-54: 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. Stage in reservoir reported below 5,101.0 ft as follows: Jan. 21, 5,099.85 ft; Feb. 25, 5,100.16 ft. 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	959							-	17,300	18,810	14,350	4,760
2	921							-	17,320	18,830	13,970	4,510
3	-							-	17,290	18,780	13,570	4,270
4	-							-	17,440	18,830	13,190	4,040
5	834							-	17,730	18,960	12,810	3,800
6	-							-	17,890	19,070	12,440	3,580
7	-							-	17,970	19,010	12,080	3,410
8	-							-	18,050	18,850	11,720	3,240
9	-							-	18,140	18,670	11,400	3,100
10	638							-	18,360	18,680	11,060	2,970
11	-							-	18,650	18,750	10,730	2,840
12	-							-	18,800	18,780	10,390	2,740
13	-							14,850	18,800	18,850	10,080	2,640
14	-							-	18,810	18,810	9,750	2,580
15	-							15,230	18,730	18,800	9,380	2,510
16	-							-	19,010	18,890	9,080	-
17	-							16,390	18,520	18,810	8,730	-
18	-							-	18,430	18,670	8,410	-
19	-							-	18,670	18,510	8,080	-
20	-							17,600	18,880	18,270	7,780	2,280
21	-							18,050	19,090	18,000	7,500	-
22	-							17,330	19,140	17,710	7,220	-
23	-							16,630	19,140	17,410	6,960	-
24	-							16,750	19,140	17,100	6,650	2,010
25	-							17,350	18,880	16,890	6,400	1,950
26	-							17,570	19,140	16,530	6,190	-
27	-						2,840	17,510	19,070	16,220	5,950	-
28	-							17,250	18,770	15,870	5,720	1,760
29	-							17,100	18,770	15,510	5,490	-
30	510	235			-------			17,160	18,810	15,140	4,240	†1,610
31	-	-------			-------		-------	17,110	-------	14,740	4,970	-------

† Interpolated.

Monthly elevation and contents, May to September 1954

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
May 31.....	5,117.11	17,110	-
June 30.....	5,118.18	18,810	+1,700
July 31.....	5,115.58	14,740	-4,070
Aug. 31.....	5,008.40	4,970	-9,770
Sept.30.....	†5,004.19	1,611	-3,359

† 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 1954.

Gage.--Staff gage read once daily. Altitude of gage is 5,090 ft (from topographic map). Prior to May 1947, staff gage at same site at different datum.

Extremes.--1926-54: Maximum daily discharge. 205 cfs July 18, 1953; 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 fair. No diversion 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.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11							0	97	164	157	102
2	11							0	106	164	154	101
3	a 11							0	113	164	153	98
4	a12							0	116	164	150	97
5	12							0	120	168	140	97
6	a12							0	120	170	134	93
7	a12							0	118	170	131	83
8	a12							0	116	172	129	70
9	a12							0	114	174	129	64
10	4							0	114	175	129	58
11	0							0	110	175	129	46
12	0							0	*108	*174	132	40
13	0							13	112	175	136	31
14	0							a22	114	176	137	26
15	0							a22	114	176	137	26
16	0							a22	114	175	137	a26
17	0							29	114	171	*136	a26
18	0							a35	114	171	134	a26
19	0							a35	114	171	127	23
20	0							a35	117	171	122	22
21	0			(*)				*41	124	167	122	22
22	0							55	135	157	122	22
23	0							64	144	155	122	a22
24	0							73	153	155	122	*22
25	0				(*)			80	162	155	122	22
26	0							83	168	155	116	22
27	0						(*)	84	166	159	108	22
28	0					(*)		91	164	161	104	22
29	0				-			95	164	161	104	a22
30	*0	(*)			- -			95	164	161	104	a22
31	0						- - - - - -	98	- - - - -	158	104	- - - - - -
Total	109	0	0	0	0	0	0	1,072	3,809	5,163	3,983	1,375
Mean	3.52	0	0	0	0	0	0	34.6	127	167	128	45.8
Ac-ft	216	0	0	0	0	0	0	2,130	7,560	10,240	7,900	2,730

Calendar year 1953: Max 205 Min 0 Mean 34.5 Ac-ft 24,960
Water year 1953-54: Max 176 Min 0 Mean 42.5 Ac-ft 30,780

* Discharge measurement or observation of no flow made on this day.
a No gage-height record; discharge estimated on basis of 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 5,080 ft (from topographic map).

Average discharge.--14 years, 133 cfs (96,290 acre-ft per year).

Extremes.--Maximum discharge during year, 1,460 cfs May 21 (gage height, 6.28 ft); minimum, 14 cfs Nov. 21 (gage height, 2.44 ft).
1940-54: 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 excellent except those below 50 cfs, which are good. Flow regulated by Lake Fork Reservoir (see p. 182). Lake Irrigation District Canal diverts above station for irrigation of about 6,800 acres.

Revisions (water years).--WSP 963: 1941.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 22)

Oct. 1 to May 22				May 23 to Sept. 30			
2.4	12	4.0	273	2.6	23	4.0	275
2.5	17	4.5	436	2.8	41	4.5	490
2.7	33	5.0	635	3.0	67	5.0	740
2.9	54	5.5	900	3.5	152	5.6	1,060
3.2	94	6.2	1,350				
3.5	148						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	15	78	23	27	b30	45	82	232	382	79	33
2	21	15	70	b22	b25	b30	45	84	220	382	78	39
3	20	15	64	22	b25	b29	45	85	191	338	74	42
4	20	15	58	22	b25	b29	46	86	180	322	72	43
5	19	15	54	22	b25	b29	51	86	191	338	73	41
6	19	15	51	22	b25	b28	61	90	198	350	73	35
7	20	15	47	22	b25	b28	66	91	208	346	72	32
8	20	15	44	22	b24	28	69	96	191	300	68	34
9	22	15	42	b22	b24	32	71	115	180	210	63	34
10	28	15	39	21	b23	41	71	282	213	124	59	31
11	28	15	36	20	b24	48	72	440	269	115	56	33
12	22	15	35	b20	28	53	74	542	*330	*106	56	35
13	17	15	33	b20	28	b53	85	586	440	101	56	34
14	17	15	31	20	31	54	115	604	515	95	53	31
15	17	15	30	20	33	54	138	630	545	100	53	29
16	17	15	28	22	33	54	152	685	730	103	*54	29
17	17	16	28	24	35	53	177	801	570	90	54	29
18	17	16	27	25	36	52	204	856	301	74	56	29
19	16	15	28	24	b30	b52	227	960	266	76	53	29
20	16	15	28	b26	36	51	237	1,150	382	73	53	29
21	16	15	28	*26	36	50	237	*1,350	575	82	53	33
22	16	16	28	28	b36	b50	242	1,170	755	90	53	33
23	16	17	b27	28	b34	b48	251	820	856	88	52	32
24	16	18	27	b25	b34	47	256	431	906	80	51	*31
25	15	18	26	b25	*33	b47	265	*480	660	73	51	30
26	15	18	26	27	b33	47	270	525	835	73	49	30
27	15	74	26	31	b31	47	*282	490	1,020	73	48	29
28	15	117	b25	35	b31	47	300	386	700	79	47	29
29	15	100	25	28	-	*b47	178	318	440	78	46	29
30	*15	*88	b24	27		b46	82	286	386	78	46	30
31	15		23	26	- -	b46	- - - - -	235	- - - - -	79	34	- - - - -
Total	563	783	1,136	747	836	1,350	4,414	14,842	13,485	4,898	1,785	977
Mean	18.2	26.1	36.6	24.1	29.9	43.5	147	479	450	158	57.6	32.6
Ac-ft	1,120	1,550	2,250	1,480	1,660	2,680	8,760	29,440	26,750	9,720	3,540	1,940

Calendar year 1953: Max 1,250 Min 14 Mean 131 Ac-ft 94,560
Water year 1953-54: Max 1,350 Min 15 Mean 126 Ac-ft 90,890

* Discharge measurement made on this day.
b Stage-discharge 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 1954.

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, 404,100 acre-ft June 29 (elevation, 4,814.96 ft); minimum observed, 113,300 acre-ft Jan. 12 (elevation, 4,795.44 ft).
1948-54: Maximum contents observed, 405,100 acre-ft June 20, 1953 (elevation, 4,815.01 ft); 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.

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

Contents, in acre-feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	211,400	143,500	141,300	125,300	122,000	138,700	163,100	188,300	328,200	402,000	356,200	276,800
2	208,700	142,800	140,900	123,600	122,400	139,000	162,400	187,000	330,700	400,800	354,300	275,200
3	206,000	142,700	140,400	122,400	122,900	139,400	162,100	186,000	332,100	398,500	350,200	273,100
4	203,200	142,700	140,100	121,200	123,700	139,700	162,400	184,800	334,700	397,300	345,700	271,400
5	200,600	142,800	139,300	120,100	124,300	140,100	165,400	183,900	338,300	396,900	341,400	269,800
6	198,000	142,800	138,900	119,300	124,800	140,400	169,000	183,200	339,100	398,300	337,000	268,200
7	195,300	143,100	138,400	118,000	125,000	140,600	170,700	183,100	341,800	399,000	332,800	266,600
8	192,900	143,400	137,700	117,200	125,300	141,300	172,300	183,600	344,300	399,000	329,100	264,800
9	190,100	143,500	137,000	116,100	125,600	142,500	173,800	184,400	346,800	398,700	326,100	263,300
10	187,500	143,500	136,300	115,100	125,700	145,600	173,900	187,000	351,100	398,100	323,200	261,700
11	184,500	143,500	135,400	114,000	125,800	148,200	173,800	190,300	354,300	397,500	320,400	259,800
12	181,800	142,900	134,600	113,300	126,700	149,600	173,600	191,700	357,200	397,900	317,600	257,600
13	178,700	142,500	133,600	113,400	128,200	151,000	174,700	198,900	360,900	397,900	314,400	255,500
14	175,600	141,600	132,600	113,600	129,400	152,200	175,700	203,100	364,900	397,100	312,100	253,200
15	173,100	140,300	131,800	113,900	130,000	153,100	177,100	207,300	368,600	396,700	309,600	250,400
16	170,900	138,600	131,100	114,400	130,800	154,200	177,900	211,700	373,500	395,900	306,500	247,800
17	168,600	138,900	130,800	115,400	131,300	155,300	178,800	216,600	378,400	395,200	303,600	244,900
18	166,300	137,800	130,600	115,900	132,400	156,500	180,500	222,900	381,800	394,400	300,600	242,500
19	165,000	136,800	131,200	116,100	133,000	157,100	182,200	230,800	384,000	392,700	298,200	240,100
20	163,000	136,400	132,500	116,400	134,100	158,100	183,500	240,400	385,200	391,100	295,900	237,700
21	161,700	135,400	133,200	116,400	135,000	159,000	184,000	253,500	386,700	388,600	294,500	235,900
22	160,100	137,400	133,500	116,500	135,200	159,500	184,100	265,300	388,200	386,300	292,700	233,500
23	158,100	139,400	133,000	117,500	135,900	160,200	184,400	275,900	389,000	383,300	290,700	230,800
24	156,400	140,000	132,300	117,900	136,300	160,800	184,600	284,300	389,400	380,200	289,100	228,200
25	154,900	140,200	131,400	118,200	136,800	161,400	184,600	294,000	390,700	377,400	287,400	225,800
26	153,400	140,700	130,800	118,500	137,400	162,100	184,600	301,600	393,800	374,400	285,800	223,500
27	151,900	141,400	130,000	119,000	137,900	163,100	185,200	308,500	397,500	371,600	284,500	221,000
28	149,900	141,400	129,100	119,600	138,400	163,700	187,000	313,800	400,200	367,900	283,000	218,600
29	148,500	141,400	128,200	120,500	-	164,200	188,600	317,300	404,100	365,100	281,700	215,100
30	146,800	141,400	127,300	121,000	-------	164,000	190,500	321,400	403,900	362,000	280,100	211,700
31	145,100	-------	126,200	121,600	-------	163,700	-------	324,900	-------	357,600	278,900	-------

Monthly elevation and contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30.....	4,803.53	212,100	-
Oct. 31.....	4,798.26	143,900	-68,200
Nov. 30.....	4,798.04	141,400	-2,500
Dec. 31.....	4,796.65	125,900	-15,500
Calendar year 1953...	-	-	+40,830
Jan. 31.....	4,796.25	121,700	-4,200
Feb. 28.....	4,797.79	138,500	+16,800
Mar. 31.....	4,799.86	163,400	+24,900
Apr. 30.....	4,801.91	189,800	+26,400
May 31.....	4,810.72	326,000	+136,200
June 30.....	4,814.88	402,600	+76,600
July 31.....	4,812.44	356,500	-46,100
Aug. 31.....	4,807.83	277,300	-79,200
Sept.30.....	4,803.34	209,400	-67,900
Water year 1953-54...	-	-	-2,700

† Elevation interpolated to midnight.

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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 milldam, 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 1954.

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.--13 years, 1,041 cfs (753,700 acre-ft per year).

Extremes.--Maximum discharge during year, 4,010 cfs June 28 (gage height, 3.84 ft); minimum, 13 cfs Feb. 12 (gage height, 0.01 ft).
1941-54: 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 excellent. Flow regulated by Cascade Reservoir (see preceding page), Payette Lake (see p. 179), Lake Fork Reservoir (see p. 182), and occasionally by milldam at Cascade. Diversions above station for irrigation of about 37,000 acres.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.4	59	2.0	1,040
.5	79	2.5	1,720
.7	135	3.0	2,640
1.0	264	4.0	4,220
1.5	578		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,480	990	*571	910	242	215	723	2,410	1,010	3,590	980	990
2	1,480	990	586	880	225	215	723	2,430	1,010	3,360	1,780	990
3	1,480	940	635	860	158	215	732	2,430	1,010	2,770	2,200	1,010
4	1,480	890	687	795	69	215	732	2,410	1,000	1,770	2,260	740
5	1,480	900	687	795	67	215	870	2,390	1,020	1,330	2,300	960
6	1,480	840	687	795	94	215	970	2,390	1,030	1,340	2,280	960
7	1,480	786	687	786	230	215	1,060	2,370	1,020	1,720	2,030	960
8	1,480	786	687	795	230	225	1,140	2,410	1,040	1,860	1,660	960
9	1,480	786	705	795	230	230	1,330	2,410	*1,040	1,750	1,500	960
10	1,540	804	723	795	230	240	1,640	2,410	1,040	1,370	1,540	960
11	1,610	831	750	*795	230	230	1,790	2,430	1,040	980	1,540	1,100
12	1,670	831	768	519	157	230	1,980	2,430	1,040	813	1,540	1,170
13	1,720	831	768	189	194	230	2,370	2,450	*1,030	980	1,520	1,300
14	1,560	831	768	189	240	230	2,490	2,470	1,050	1,120	1,540	1,370
15	1,210	822	768	172	322	225	2,450	2,490	1,100	1,120	1,540	1,520
16	1,260	822	618	176	143	225	2,450	2,490	1,220	1,080	1,530	1,670
17	1,280	822	430	189	*160	230	2,430	2,510	1,340	950	1,530	1,500
18	1,140	822	312	185	215	230	2,410	2,130	1,730	1,130	*1,350	1,340
19	1,000	850	185	*206	215	230	2,450	1,540	2,160	1,380	1,140	1,330
20	960	694	185	189	215	230	2,410	1,090	2,280	1,480	1,070	1,310
21	950	526	176	185	215	230	2,410	*674	2,360	1,440	1,050	1,280
22	910	563	225	185	215	*225	2,410	311	2,370	*1,610	1,050	1,440
23	930	563	585	194	215	225	2,410	436	2,370	1,770	1,050	1,580
24	960	417	696	189	215	230	2,410	456	2,390	1,770	1,010	1,410
25	960	290	687	189	215	235	2,410	463	2,430	1,770	990	1,230
26	970	443	687	189	215	235	*2,410	463	2,450	1,750	990	1,340
27	*1,000	603	741	194	215	235	2,430	470	2,900	1,750	990	*1,440
28	990	563	777	194	215	235	2,430	789	*3,340	1,750	990	1,620
29	970	556	768	194	-	333	2,410	1,010	2,400	1,740	990	1,820
30	980	556	768	194	-	563	2,410	1,000	3,890	2,020	990	2,000
31	990	----	795	189	----	627	------	1,000	------	1,480	990	------
Total	38,880	21,948	19,112	13,111	5,586	7,863	57,290	53,162	51,110	50,743	43,920	38,260
Mean	1,254	732	617	423	200	254	1,910	1,715	1,704	1,637	1,417	1,275
Ac-ft	77,120	43,530	37,910	26,010	11,080	15,600	113,600	105,400	101,400	100,600	87,110	75,890

Calendar year 1953: Max 5,220 Min 26 Mean 1,033 Ac-ft 747,600
Water year 1953-54: Max 3,890 Min 67 Mean 1,099 Ac-ft 795,200

* Discharge measurement made on this day.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 3,081.13 ft above mean sea level, preliminary unadjusted elevation.

Average discharge.--7 years, 1,402 cfs (1,015,000 acre-ft per year).

Extremes.--Maximum discharge during year, 4,540 cfs Apr. 13 (gage height, 10.46 ft); minimum, 155 cfs Jan. 18 (gage height, 3.81 ft).
1947-54: Maximum discharge, 8,830 cfs May 11, 1947 (gage height, about 13.5 ft), 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. Flow regulated by Payette Lake (see p. 179), Lake Fork Reservoir (see p. 182), Cascade Reservoir (see p. 185), and occasionally by milldam at Cascade. Many diversions from tributaries above station for irrigation.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

3.9	173	6.0	915
4.1	216	7.0	1,460
4.4	294	9.0	2,960
4.8	416	11.0	5,220
5.3	596		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,530	1,030	699	960	384	397	905	3,340	1,780	4,230	1,090	1,050
2	1,530	1,060	715	1,000	423	368	935	3,250	1,640	3,900	1,230	1,050
3	1,530	1,030	715	970	381	381	965	3,230	1,570	3,720	2,170	1,040
4	1,530	945	805	935	303	372	1,090	3,240	1,570	2,960	2,230	1,130
5	1,530	930	835	935	214	372	1,700	3,300	1,560	2,250	2,320	890
6	1,530	940	835	930	203	378	2,370	3,380	1,550	1,680	2,320	1,030
7	1,530	840	820	925	212	375	2,130	3,430	1,570	1,860	2,260	1,030
8	1,520	825	*795	905	347	430	2,190	3,520	1,540	2,040	1,890	1,030
9	1,520	820	830	875	347	596	2,280	3,630	1,560	2,040	1,600	1,020
10	1,530	820	850	890	353	890	2,540	3,780	1,710	1,800	1,580	1,020
11	1,600	870	855	895	341	895	2,830	3,760	1,790	1,350	1,580	1,020
12	1,620	880	905	865	419	775	3,000	3,710	1,680	*1,140	1,580	1,220
13	1,710	880	885	440	400	720	3,750	3,630	*1,640	975	1,570	1,250
14	1,700	870	895	283	460	679	4,240	3,570	1,620	1,300	1,560	1,410
15	1,410	870	900	286	474	639	3,970	3,570	1,740	1,300	1,560	1,460
16	1,270	870	890	261	554	612	3,770	3,630	1,870	1,280	1,560	1,630
17	1,340	880	608	256	353	581	3,780	3,670	1,950	1,160	1,560	1,710
18	1,330	870	532	186	390	566	3,810	3,640	1,950	1,110	1,540	1,450
19	1,110	855	390	*261	390	525	3,740	3,190	2,640	1,450	1,300	1,390
20	1,030	915	387	300	390	532	3,600	2,680	2,780	1,570	1,200	1,380
21	990	679	375	272	410	514	3,450	2,140	2,890	1,550	1,160	1,370
22	*970	687	306	286	403	496	*3,420	*1,740	2,880	1,570	1,140	1,370
23	950	940	297	306	410	489	3,430	1,340	2,900	1,810	*1,130	1,560
24	985	845	724	303	410	496	3,430	1,400	2,880	1,830	1,120	1,580
25	990	532	775	283	*416	496	3,420	1,380	2,850	1,810	1,080	1,350
26	995	503	755	291	426	496	3,420	1,310	2,920	1,800	1,080	1,310
27	1,030	735	760	266	403	510	3,580	1,250	3,190	1,790	1,080	1,450
28	1,040	865	835	256	400	503	3,880	1,190	3,680	1,780	1,070	1,510
29	1,000	745	870	384	-	*482	3,700	1,590	2,760	1,780	1,070	1,710
30	1,000	711	840	410	-------	623	3,500	1,680	4,110	1,800	1,060	1,870
31	1,020	-------	845	397	-------	765	-------	1,660	-------	2,090	1,050	-------
Total	40,370	25,242	22,528	16,812	10,616	16,953	88,825	85,830	66,770	58,725	45,740	39,290
Mean	1,302	841	727	542	379	547	2,961	2,769	2,226	1,894	1,475	1,310
Ac-ft	80,070	50,070	44,680	33,350	21,060	33,630	176,200	170,200	132,400	116,500	90,720	77,930

Calendar year 1953: Max 6,300 Min 163 Mean 1,379 Ac-ft 998,100
Water year 1953-54: Max 4,240 Min 186 Mean 1,418 Ac-ft 1,027,000

* Discharge measurement made on this day.

Payette River near Horseshoe Bend, Idaho

Location.--Lat 43°56'30", long 116°12'00", in SE¼ sec. 15, T. 7 N., R. 2 E., on left bank 300 ft upstream from bridge on State Highway 15, half a mile downstream from Porter Creek, and 2 miles north of Horseshoe Bend.

Drainage area.--2,230 sq mi, approximately.

Records available.--February 1906 to September 1916, July 1919 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 2,625.61 ft above mean sea level, preliminary. Prior to Nov. 23, 1912, staff gage at site 1¾ miles upstream at different datum. Nov. 23, 1912, to Apr. 16, 1953, water-stage recorder at site 1,000 ft downstream at datum 2.1 ft lower.

Average discharge.--43 years (1907-15, 1919-54), 3,110 cfs (2,252,000 acre-ft per year).

Extremes.--Maximum discharge during year, 12,800 cfs May 10 (gage height, 11.62 ft); minimum, 728 cfs Dec. 23.

1906-16, 1919-54: Maximum discharge, 22,100 cfs June 9, 1921 (gage height, 9.57 ft, site and datum then in use); minimum, 350 cfs Dec. 17, 1935 (gage height, 0.26 ft, site and datum then in use), from rating curve extended below 600 cfs.

Remarks.--Records excellent. Flow regulated by Deadwood Reservoir (see p. 175), Payette Lake (see p. 179), Lake Fork Reservoir (see p. 182), and Cascade Reservoir (see p. 185). Diversions from tributaries above station for irrigation of about 50,000 acres.

Revisions.--WSP 533: Drainage area.

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 15 to Nov. 17)

3.0	860	7.0	3,910
4.0	1,330	8.0	5,230
5.0	1,950	10.0	8,770
6.0	2,800	12.0	13,900

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,670	1,640	1,430	1,670	1,470	1,430	1,990	7,960	5,700	8,820	3,250	3,230
2	2,670	1,810	1,410	1,700	1,400	1,310	2,020	7,470	5,190	8,240	3,320	3,250
3	2,610	1,770	1,380	1,640	1,310	1,320	2,070	7,360	4,960	7,820	3,400	3,280
4	2,610	1,580	1,460	1,590	1,190	1,310	2,310	7,300	4,940	6,970	3,330	3,360
5	2,520	1,540	1,510	1,560	1,080	1,320	4,010	8,050	5,120	6,320	3,410	3,150
6	2,470	1,630	1,530	1,580	1,050	1,370	5,620	9,120	5,100	5,740	3,410	3,280
7	2,430	1,510	1,490	1,560	1,020	1,410	4,940	9,630	5,030	5,630	3,410	3,280
8	2,380	1,400	*1,410	1,540	1,150	1,660	4,800	10,300	4,840	5,620	3,430	3,240
9	2,330	1,400	1,450	1,470	1,180	2,990	4,800	11,000	4,750	5,440	3,600	3,190
10	2,270	1,390	1,520	1,380	1,210	4,660	4,840	12,400	5,220	5,060	3,500	3,160
11	2,310	1,460	1,400	1,430	1,200	3,810	5,130	12,100	5,430	4,480	3,480	3,090
12	2,270	1,520	1,520	1,460	1,400	3,020	5,500	11,800	5,240	4,140	3,470	3,090
13	2,370	1,520	1,500	1,040	2,010	2,640	6,620	11,300	5,380	3,840	3,510	3,120
14	2,330	1,510	1,480	892	2,060	2,380	8,640	10,900	5,500	4,050	3,480	3,020
15	2,110	1,510	1,560	912	1,820	2,220	8,150	10,800	*5,980	4,070	3,460	3,080
16	1,870	1,490	1,550	952	1,760	2,110	7,710	11,300	7,200	3,970	3,430	3,200
17	1,940	1,520	1,260	1,200	1,550	2,020	8,460	12,100	7,110	3,720	3,430	3,190
18	1,950	1,470	1,140	1,110	1,630	1,960	9,120	12,300	6,730	3,470	3,450	2,910
19	1,750	1,340	1,080	*996	1,490	1,850	9,440	11,800	7,170	3,630	3,430	2,800
20	1,640	1,410	1,240	968	1,470	1,870	8,680	11,900	7,340	3,630	3,440	2,770
21	1,600	1,330	1,220	888	1,490	1,800	8,350	12,100	7,820	3,550	3,620	2,710
22	1,590	1,350	1,000	1,010	1,430	1,750	8,370	10,200	8,290	3,470	3,600	2,630
23	*1,530	2,010	b780	1,210	1,400	1,710	8,590	8,440	8,930	3,600	3,440	2,700
24	1,580	1,870	b1,180	1,130	1,420	1,760	8,680	*7,840	9,480	3,550	3,380	2,720
25	1,590	1,340	1,290	1,010	*1,500	1,780	8,910	7,570	9,510	3,470	*3,310	2,490
26	1,590	1,200	1,410	948	1,540	1,770	9,020	6,980	9,600	*3,540	3,330	2,410
27	1,640	1,520	1,440	980	1,470	1,840	9,440	6,320	10,700	3,530	3,340	2,550
28	1,650	1,840	1,490	1,060	1,430	1,850	*10,500	5,600	10,000	3,630	3,160	2,630
29	1,610	1,580	1,570	1,370	-	1,740	10,000	5,570	8,110	3,450	3,130	2,710
30	1,600	1,470	1,460	1,640	-------	1,770	8,930	5,680	8,790	3,380	3,130	2,720
31	1,600	-------	1,480	1,580	-------	*1,920	------	5,360	------	3,530	3,230	------
Total	63,080	45,930	42,640	39,476	40,130	62,310	205,640	288,550	205,160	143,340	105,310	88,960
Mean	2,035	1,531	1,375	1,273	1,433	2,010	6,855	9,308	6,839	4,624	3,397	2,965
Ac-ft	125,100	91,100	84,580	78,300	79,600	123,600	407,900	572,300	406,900	284,300	208,900	176,400

Calendar year 1953: Max 16,300 Min 780 Mean 3,576 Ac-ft 2,589,000
Water year 1953-54: Max 12,400 Min 780 Mean 3,645 Ac-ft 2,639,000

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Discharge computed from water-stage recorder 1,000 ft downstream Oct. 15 to Nov. 17, Dec. 23, 24.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 2,400 ft (from topographic map).

Average discharge.--29 years, 2,985 cfs (2,161,000 acre-ft per year).

Extremes.--Maximum discharge during year, 12,900 cfs May 20 (gage height, 9.46 ft); minimum, 205 cfs Dec. 23 (gage height, 1.12 ft); minimum daily, 831 cfs Dec. 18.
1925-54: 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. 185), Deadwood Reservoir (see p. 175), Payette Lake (see p. 179), and Lake Fork Reservoir (see p. 182).

Cooperation.--Gage-height record collected in cooperation with Bureau of Reclamation.

Revisions (water years). WSP 1153: 1946(m), 1948(m).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.3	790	5.0	4,150
3.0	1,540	6.0	5,700
4.0	2,770	8.0	9,550
		10.0	14,200

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,910	1,660	1,580	1,680	2,090	1,670	2,040	9,350	4,840	7,580	1,730	1,850
2	1,910	1,720	1,560	1,800	1,860	1,520	2,070	6,700	4,360	7,080	1,730	1,900
3	1,910	1,800	1,560	1,790	1,760	1,590	2,100	6,480	4,160	6,640	1,830	1,900
4	1,940	1,830	1,580	1,740	1,540	1,540	2,270	6,390	4,200	5,900	1,770	1,830
5	1,910	1,780	1,580	1,710	1,640	1,530	3,820	9,140	4,390	5,170	1,800	1,900
6	1,850	1,800	1,580	1,680	1,400	1,580	6,110	8,400	4,420	4,540	1,880	1,890
7	1,850	1,830	1,580	1,720	1,310	1,590	5,360	8,880	4,360	4,300	1,890	1,920
8	1,840	1,800	*1,580	1,740	1,390	1,740	4,950	9,260	4,150	4,240	1,800	1,920
9	1,830	1,590	1,580	1,690	1,440	3,760	4,930	9,900	4,090	4,040	2,060	1,920
10	1,790	1,510	1,560	1,800	1,350	5,620	4,820	11,400	4,680	3,690	1,950	1,920
11	1,760	1,530	1,550	1,610	1,290	4,810	5,140	11,100	5,300	3,100	1,920	1,910
12	1,720	1,580	1,310	1,580	1,590	3,650	5,380	10,800	4,900	2,690	1,900	1,880
13	1,720	1,580	1,540	1,480	2,470	3,200	6,370	10,300	4,930	2,340	1,950	1,890
14	1,790	1,580	1,540	983	2,810	2,950	9,110	9,900	5,060	2,480	1,910	1,900
15	1,780	1,590	1,540	975	2,470	2,700	8,340	9,770	*5,440	2,550	1,900	1,860
16	1,720	1,590	1,310	1,050	2,160	2,600	7,660	10,300	6,930	2,430	1,880	1,900
17	1,720	1,590	1,080	1,260	1,960	2,430	8,100	11,100	6,730	2,220	1,840	2,140
18	1,770	1,580	831	1,890	2,120	2,510	8,880	11,400	6,320	1,910	2,000	2,080
19	1,760	1,550	1,170	1,500	1,920	2,360	9,170	10,900	6,610	2,040	1,900	1,910
20	1,740	1,580	1,580	1,130	1,920	2,380	8,320	10,900	6,700	2,040	1,900	1,890
21	1,670	1,700	1,660	*947	1,950	2,310	*7,800	11,200	7,010	1,980	2,130	1,850
22	1,670	1,760	1,500	1,200	1,880	2,160	7,740	9,420	7,230	1,950	2,240	1,850
23	1,640	2,180	1,170	1,280	1,790	2,160	7,960	7,700	7,740	2,040	1,980	1,850
24	1,610	2,340	855	1,650	1,770	2,160	7,940	*6,910	8,260	2,030	1,950	1,950
25	1,610	1,740	1,050	1,390	1,780	2,160	8,140	6,590	8,300	1,910	*1,920	1,890
26	1,610	1,330	1,490	1,240	*1,850	2,150	8,200	6,020	8,180	*1,980	1,900	1,760
27	*1,660	1,410	1,020	965	1,840	2,240	8,400	5,350	9,380	2,000	2,040	1,700
28	1,720	1,790	1,580	1,230	1,670	2,260	9,920	4,580	8,860	2,150	1,850	1,680
29	1,700	1,950	1,590	2,220	-	*2,060	9,360	4,390	7,390	1,910	1,830	1,790
30	1,660	1,780	1,590	2,690	-------	2,030	8,180	4,620	7,120	1,850	1,760	1,820
31	1,660	-------	1,610	2,360	-------	2,100	-------	4,330	-------	2,060	1,890	------
Total	54,430	51,050	44,306	47,780	51,020	75,520	198,580	263,480	182,040	98,840	59,030	56,510
Mean	1,756	1,702	1,429	1,541	1,822	2,436	6,619	8,499	6,068	3,188	1,904	1,884
Ac-ft	108,000	101,300	87,880	94,770	101,200	149,800	393,900	522,600	361,100	196,000	117,100	112,100

Calendar year 1953: Max 17,000 Min 607 Mean 3,333 Ac-ft 2,413,000
Water year 1953-54: Max 11,400 Min 831 Mean 3,240 Ac-ft 2,346,000

* 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 1954. Records for January 1895 to July 1897 (published as "at Payette" in 18th and 19th Annual Reports) found to be unreliable.

Gage.--Water-stage recorder. Datum of gage is 2,138.44 ft above mean sea level, unadjusted. Aug. 1, 1935, to Aug. 7, 1939, wire-weight gage at site 50 ft downstream at present datum.

Average discharge.--19 years (1935-54), 3,149 cfs (2,280,000 acre-ft per year).

Extremes.--Maximum discharge during year, 11,700 cfs May 10 (gage height, 9.64 ft); minimum, 380 cfs Jan. 14 (gage height, 4.73 ft); minimum daily, 1,050 cfs Dec. 24.
1935-54: Maximum discharge, 23,400 cfs May 2, 1938 (gage height, 11.90 ft); minimum, 180 cfs Oct. 13, 20, 1935 (gage height, 2.04 ft); minimum daily, 220 cfs Oct. 5, 1935.

Remarks.--Records excellent. Diversions above station for irrigation of about 188,000 acres. Flow regulated by Black Canyon Dam and reservoirs on tributary streams.

Revisions (water years).--See Records available.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 22 to July 2)

5.2	910	7.0	4,350
5.5	1,330	8.0	6,800
6.0	2,230	9.5	11,100

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,900	2,070	1,970	1,970	2,450	1,940	2,110	7,570	4,810	7,030	1,590	1,610
2	1,900	2,070	1,940	2,050	2,250	1,940	2,250	6,640	4,810	6,590	1,610	1,610
3	1,900	2,150	1,940	2,070	2,150	1,790	2,270	6,230	4,350	6,080	1,440	1,630
4	1,920	2,170	1,950	2,070	1,990	1,840	2,330	6,100	4,190	5,510	1,410	1,660
5	1,950	2,150	1,950	2,030	1,940	1,790	2,870	6,230	4,300	4,600	1,390	1,680
6	1,920	2,110	1,940	2,010	1,920	1,840	5,660	7,440	4,400	3,880	1,430	1,660
7	1,920	2,130	1,950	2,030	1,520	1,860	5,780	8,290	4,330	3,440	1,460	1,730
8	1,880	2,130	1,940	2,030	1,640	1,940	4,930	8,570	4,170	3,480	1,460	1,770
9	1,920	2,050	*1,940	1,970	1,750	3,000	4,860	9,320	4,050	3,330	1,580	1,750
10	1,900	1,880	1,940	2,090	1,680	5,150	4,760	10,500	4,400	3,100	1,610	1,750
11	1,880	1,880	1,940	2,010	1,940	5,240	4,880	11,100	5,240	2,670	1,590	1,750
12	1,840	1,940	1,840	1,920	1,610	4,050	5,030	10,800	4,980	2,210	1,540	1,750
13	1,820	1,950	1,790	1,900	2,230	3,330	5,630	10,300	4,910	1,970	1,520	1,770
14	1,840	1,950	1,920	1,310	2,910	3,120	8,350	9,910	5,050	1,900	1,560	1,840
15	1,920	1,950	1,920	1,250	2,810	2,890	8,570	9,610	5,190	2,030	1,560	1,940
16	1,860	1,950	1,940	1,210	2,410	2,730	7,570	9,820	*6,540	2,010	1,590	2,010
17	1,860	1,950	1,300	1,580	2,270	2,570	7,630	10,600	7,010	*1,920	1,630	2,110
18	1,880	1,940	1,240	*2,330	2,330	2,590	8,460	11,100	6,570	1,660	1,660	2,270
19	1,950	1,900	1,530	1,730	2,290	2,550	9,090	11,000	6,380	1,610	1,640	2,130
20	1,990	1,920	1,820	1,620	2,110	2,510	8,430	10,700	6,700	1,730	1,610	2,090
21	2,070	1,950	1,990	1,290	2,190	2,590	*7,680	11,100	6,720	1,750	1,660	2,070
22	2,030	2,050	1,990	1,370	*2,150	2,370	7,300	10,200	6,830	1,680	1,820	2,050
23	2,030	2,150	1,820	1,640	2,110	2,290	7,300	8,150	7,010	1,700	1,880	2,030
24	1,970	2,670	1,050	1,970	2,050	2,230	7,440	6,980	7,360	1,790	1,750	2,030
25	1,970	2,190	1,480	1,710	2,030	2,250	7,550	*6,330	7,630	1,750	*1,730	2,070
26	1,970	1,840	1,690	1,680	2,070	2,270	7,650	6,000	7,520	1,680	1,700	1,970
27	*1,990	1,730	1,230	1,270	2,130	2,290	7,740	5,410	8,260	1,680	1,750	1,820
28	2,050	1,990	1,860	1,490	1,990	2,350	9,090	4,490	8,540	1,790	1,770	1,790
29	2,070	2,150	1,920	2,210	-	2,270	9,520	4,080	7,710	1,700	1,640	1,800
30	2,090	2,190	1,920	3,310	-------	*2,130	8,460	4,510	5,980	1,590	1,580	1,880
31	2,050	-------	1,920	2,750	-------	2,190	-------	4,510	-------	1,520	1,580	-------
Total	60,240	61,150	55,570	57,870	58,920	79,900	191,190	253,590	175,940	85,380	49,740	56,020
Mean	1,943	2,038	1,793	1,867	2,104	2,577	6,373	8,180	5,865	2,754	1,605	1,867
Ac-ft	119,500	121,300	110,200	114,800	116,900	158,500	379,200	503,000	349,000	169,300	98,660	111,100

Calendar year 1953: Max 17,100 Min 1,050 Mean 3,390 Ac-ft 2,455,000
Water year 1953-54: Max 11,100 Min 1,050 Mean 3,248 Ac-ft 2,351,000

* Discharge measurement made on this day.

Weiser River at Tamarack, Idaho

Location.--Lat 44°57', long 116°23', in NW¼NE¼ 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 1954.

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.--18 years, 43.9 cfs (31,780 acre-ft per year).

Extremes.--Maximum discharge during year, 524 cfs Apr. 14 (gage height, 4.78 ft); minimum, 2.4 cfs Nov. 28 (gage height, 1.12 ft).
1936-54: 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. 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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 14 to Mar. 7)

1.2	3.8	2.5	82
1.4	8.8	3.0	152
1.6	17	4.0	350
2.0	39	4.6	478

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.7	7.1	9.2	8.2	18	33	58	165	35	17	8.2	6.8
2	8.0	7.4	8.8	b8.2	18	28	61	138	29	17	8.0	6.8
3	8.0	6.8	8.8	8.2	18	b28	100	121	27	15	8.0	7.1
4	8.0	7.1	8.2	8.5	18	b27	156	*115	26	14	8.5	6.8
5	7.7	7.4	9.2	8.5	b18	b26	382	126	25	14	9.2	6.8
6	7.7	8.8	8.8	8.5	18	28	402	141	24	12	8.5	6.6
7	7.4	8.2	8.8	8.5	b18	29	322	147	27	12	8.5	6.6
8	6.8	7.4	*b7.7	8.5	b18	b50	286	152	26	12	8.2	6.8
9	6.3	7.4	8.8	b8.0	b18	b210	260	160	24	12	8.2	6.8
10	6.3	7.1	b8.8	b8.0	b17	326	226	182	*34	12	7.7	7.1
11	6.6	7.1	b8.2	8.0	b16	208	220	163	33	12	8.2	7.1
12	*6.8	7.1	8.5	b8.0	33	143	234	134	31	*11	8.0	6.8
13	6.3	7.1	b8.2	b8.0	b45	110	360	111	31	11	7.4	7.1
14	6.3	7.4	8.2	8.0	51	93	476	96	32	10	6.6	7.1
15	6.6	7.1	8.5	8.2	49	83	386	85	36	11	6.6	9.9
16	6.6	7.1	8.8	8.5	43	76	338	79	44	11	7.1	16
17	6.6	*8.5	8.5	b12	40	72	*342	74	35	11	6.8	9.9
18	7.1	8.0	8.5	14	42	68	380	68	33	9.9	7.4	9.9
19	8.2	6.6	8.8	*b14	36	66	400	60	31	9.5	6.0	8.5
20	6.6	8.0	11	b13	35	59	320	54	29	9.2	*7.1	7.7
21	6.0	7.4	11	b13	35	62	282	53	27	11	8.5	6.0
22	6.3	11	b8.0	12	32	62	260	48	24	11	8.5	6.8
23	6.0	16	b6.5	b11	32	63	260	40	22	11	8.2	*6.4
24	5.8	12	6.6	b11	*33	69	252	37	22	11	8.5	6.3
25	5.8	16	8.0	b12	34	74	244	35	21	9.5	8.5	6.3
26	5.8	7.1	8.0	14	35	79	236	35	22	8.8	8.8	6.3
27	5.8	16	8.2	b13	33	77	244	34	25	8.0	8.8	6.3
28	6.0	11	b8.5	b14	34	78	262	31	21	8.2	8.2	6.3
29	5.6	8.0	b8.5	15	-	70	244	29	19	8.0	7.4	6.3
30	6.3	8.5	b8.2	16	-------	67	206	33	18	8.0	7.1	6.3
31	6.8	-------	8.2	17	-------	*62	-------	34	-------	8.0	7.1	-------
Total	207.8	261.7	264.0	332.8	837	2,526	8,199	2,780	833	345.1	243.8	221.5
Mean	6.70	8.72	8.52	10.7	29.9	81.5	273	89.7	27.8	11.1	7.86	7.38
Ac-ft	412	519	524	660	1,660	5,010	16,260	5,510	1,650	684	484	439

Calendar year 1953: Max 500 Min 5.4 Mean 49.1 Ac-ft 35,570
Water year 1953-54: Max 476 Min 5.6 Mean 46.7 Ac-ft 33,810

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

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 1954 (fragmentary).

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, 26.30 ft June 21; minimum observed, 15.64 ft Nov. 16.

1924, 1926-54: Maximum gage height observed, 26.90 ft May 14, 1940; no storage at times during several years.

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 25.9 ft. Bottom of outlet tunnel is at gage height 1.46 ft, but natural flow through reservoir limits withdrawal below about gage height 2.8 ft. Water is used for irrigation of lands in Weiser River basin.

Cooperation.--Nine gage readings furnished by Lost Valley Reservoir Co.

Revisions.--WSP 833: Drainage area.

Gage height, in feet, 1953-54

Oct.	12	16.33	June	2	26.00
Nov.	16	15.64		10	26.28
Feb.	23	17.84		21	26.30
	26	17.87	July	12	25.88
May	4	24.23		13	25.86
	7	24.45	Aug.	18	21.12
	11	25.60		20	20.67
	12	25.61	Sept.	11	16.60
	20	25.90		23	15.80
	27	25.45			

Note.--Gage-height readings obtained only on days listed above.

Lost Creek near Tamarack, Idaho

Location.--Lat 44°57', long 116°28', in SE¼NW¼ 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 1954.

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.--24 years (1930-54), 38.6 cfs (27,950 acre-ft per year).

Extremes.--Maximum discharge during year, 280 cfs May 11, 12; maximum gage height, 2.83 ft sometime during period Apr. 15-20 and May 11, 12; minimum discharge, 4.4 cfs Oct. 27 (gage height, 1.16 ft).
1910-14, 1920-21, 1924-54: 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, which are fair, and those for period of no gage-height record, which are poor. 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 employees of Lost Valley Reservoir Co.

Revisions.--WSP 833: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 16				Apr. 17 to Sept. 30			
1.2	5.7	2.0	70	1.4	12	2.4	134
1.3	9.0	2.5	160	1.7	32	2.9	300
1.5	20	3.0	315	2.0	63		
1.7	36						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	6.4	6.0	6.0	6.0	6.0	6.0	180	27	28	41	58
2	26	6.4	6.0	6.0	6.0	6.0	6.0	170	27	26	41	58
3	26	6.4	6.0	6.0	6.0	6.0	6.0	160	23	24	46	58
4	26	6.4	6.0	6.0	6.0	6.0	6.0	*157	26	23	50	57
5	26	6.4	6.0	6.0	6.0	6.0	6.0	157	28	21	56	57
6	26	6.4	6.0	6.0	6.0	6.0	6.0	169	29	20	63	57
7	26	6.4	6.0	6.0	6.0	6.0	6.0	141	33	19	63	56
8	26	6.4	6.0	6.0	6.0	6.0	6.0	139	34	18	63	56
9	26	6.4	6.0	6.0	6.0	6.0	20	181	35	17	63	56
10	26	6.4	6.0	6.0	6.0	6.0	35	228	*39	16	62	56
11	26	6.4	6.0	6.0	6.0	6.0	50	268	41	16	62	50
12	26	6.4	6.0	6.0	6.0	6.0	90	*272	41	*16	62	44
13	*26	6.4	6.0	6.0	6.0	6.0	140	242	42	30	62	44
14	26	6.4	6.0	6.0	6.0	6.0	210	218	42	49	62	44
15	26	6.4	6.0	6.0	6.0	6.0	260	148	45	47	61	44
16	26	*6.4	6.0	6.0	6.0	6.0	270	106	49	45	62	44
17	26	6.4	6.0	6.0	6.0	6.0	270	110	49	44	61	43
18	26	6.4	6.0	6.0	6.0	6.0	260	125	49	43	61	43
19	26	6.4	6.0	6.0	6.0	6.0	260	137	48	43	59	36
20	25	6.4	6.0	6.0	6.0	6.0	250	142	46	43	*59	26
21	25	6.4	6.0	6.0	6.0	6.0	230	144	45	43	61	26
22	25	6.4	6.0	6.0	6.0	6.0	230	139	43	42	61	26
23	24	6.4	6.0	6.0	*6.0	6.0	220	125	41	42	61	*26
24	24	6.4	6.0	6.0	6.0	6.0	220	110	38	42	61	26
25	24	6.4	6.0	6.0	6.4	6.0	220	102	36	42	59	28
26	24	6.4	6.0	6.0	*6.0	6.0	220	93	37	42	59	31
27	15	6.0	6.0	6.0	6.0	6.0	220	60	38	42	58	31
28	6.4	6.0	6.0	6.0	6.0	6.0	220	14	36	42	58	31
29	6.4	6.0	6.0	6.0	-	6.0	210	16	33	41	58	31
30	6.4	6.0	6.0	6.0		6.0	200	19	30	41	58	31
31	6.4		6.0	6.0		6.0		23		40	58	
Total	706.6	190.4	186.0	186.0	168.4	186.0	4,353.0	4,295	1,130	1,047	1,811	1,274
Mean	22.8	6.35	6.00	6.00	6.01	6.00	145	139	37.7	33.8	58.4	42.5
Ac-ft	1,400	378	369	369	334	369	8,630	8,520	2,240	2,080	3,590	2,530

Calendar year 1953: Max 401 Min 3.2 Mean 46.7 Ac-ft 33,820
Water year 1953-54: Max 272 Min 6.0 Mean 42.6 Ac-ft 30,810

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 9 to Feb. 22, Mar. 3 to May 3; discharge estimated on basis of weather records, recorded range in stage, records of gate openings at Lost Valley Reservoir, and records for nearby streams.

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 upstream from lower end, 1½ miles northeast of Mesa, and 3 miles downstream from headgates.

Records available.--1924, 1928-54 (irrigation seasons only, prior to 1947).

Gage.--Staff gage read twice daily. Prior to May 20, 1938, staff gages in flume at sites within 600 ft of present site at different datums. May 20, 1938, to Sept. 30, 1953, staff gage at present site at datum 0.10 ft lower.

Extremes.--1924, 1928-54: Maximum daily discharge, 42 cfs July 20, 21, 1952; 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21						0	a12	38	35	34	a26
2	23						0	a12	35	34	34	a25
3	23						0	12	35	34	34	a25
4	23						0	*15	34	35	35	a24
5	22						0	16	35	34	34	a24
6	21						0	15	34	34	35	a24
7	21	a8					0	17	34	33	35	a23
8	21						0	19	32	33	34	23
9	20						0	a22	*29	34	34	23
10	a20						0	22	28	34	34	22
11	a19						a3	22	20	35	33	21
12	a18							22	16	34	33	a22
13	*18	a4						24	a16	*34	33	23
14	a16	0					a5	25	18	35	33	23
15	a14	0						25	22	35	32	24
16	a 11	0					*5.4	a26	23	35	32	25
17		0						26	25	34	31	25
18		0						28	26	34	31	26
19		0						31	29	34	31	a25
20		0						33	a32	34	*30	24
21		0						35	33	34	32	24
22		0						35	35	34	31	23
23		0						37	35	34	31	*22
24	a8	0					a5	36	36	34	30	
25		0						37	35	34	31	
26		0						38	36	34	32	a22
27		0						37	a36	35	a30	
28		0						39	36	35	a29	
29		0						39	35	35	a28	
30		0						a38	35	35	26	
31		------			------		------	38	------	35	26	------
Total	431	100	0	0	0	0	98.4	833	913	1,063	988	700
Mean	13.9	33.3	0	0	0	0	3.28	26.9	30.4	34.3	31.9	23.3
Ac-ft	855	198	0	0	0	0	195	1,650	1,810	2,110	1,960	1,390

Calendar year 1953: Max 34 Min 0 Mean 12.2 Ac-ft 8,800
Water year 1953-54: Max 39 Min 0 Mean 14.0 Ac-ft 10,170

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of reported gate operations, weather records, and record for Weiser River near Cambridge.

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 1954.

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.--15 years, 670 cfs (485,100 acre-ft per year).

Extremes.--Maximum discharge during year, 4,600 cfs Jan. 17 (gage height, 7.56 ft); minimum, 37 cfs Aug. 2 (gage height, 0.46 ft).
1939-54: Maximum discharge, 6,670 cfs Mar. 31, 1940 (gage height, 8.30 ft); minimum, 23 cfs Oct. 1, 1943; minimum gage height, that of Aug. 2, 1954.

Remarks.--Records excellent. Flow partly regulated by Lost Vallley Reservoir (see p. 192) and other reservoirs. Diversions above station for irrigation of about 9,200 acres.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.5	40	2.0	354
.7	57	3.0	780
1.0	92	4.0	1,380
1.2	122	5.0	2,130
1.5	188	7.0	3,980

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	83	168	178	1,350	640	*510	1,710	904	470	71	78
2	65	87	163	143	1,080	558	490	1,510	745	434	59	77
3	67	87	159	170	946	546	558	1,400	695	403	49	72
4	68	88	163	154	800	502	695	1,430	700	377	47	71
5	71	89	161	176	715	490	1,530	*1,610	680	350	47	71
6	69	96	180	161	640	494	2,020	1,800	650	310	52	71
7	69	99	186	170	606	490	1,720	1,930	670	271	69	69
8	71	96	145	170	582	800	1,550	2,030	645	247	71	69
9	71	95	*145	145	558	2,620	1,440	2,200	*650	232	72	69
10	72	93	161	148	538	3,580	1,260	2,640	845	216	68	68
11	72	95	126	168	482	2,390	1,220	2,540	850	194	68	65
12	74	98	159	132	1,360	1,660	1,310	2,380	795	178	71	63
13	75	96	141	116	1,840	1,300	1,810	2,140	775	*166	72	59
14	*77	103	137	166	1,750	1,120	2,880	1,950	770	166	67	58
15	78	103	152	170	1,400	994	2,550	1,870	810	170	68	59
16	80	98	148	222	1,110	904	*2,270	1,890	964	168	69	79
17	86	*106	141	2,940	988	840	2,400	1,940	815	154	68	79
18	87	108	143	1,600	1,200	775	2,620	1,920	750	139	68	83
19	99	92	292	770	934	705	2,680	1,960	720	128	*68	83
20	99	99	765	466	1,080	705	2,360	1,990	690	119	67	83
21	96	109	438	407	1,190	650	2,140	1,960	695	114	79	73
22	95	147	295	411	1,040	610	2,030	1,670	670	109	82	*71
23	95	299	205	*610	892	602	2,090	1,470	660	105	87	65
24	98	247	186	502	*845	622	2,070	1,350	635	99	87	57
25	98	180	186	384	840	640	2,110	1,290	594	91	99	57
26	96	173	194	362	815	655	2,090	1,160	594	88	116	59
27	96	258	170	369	730	670	2,290	1,030	618	84	117	63
28	98	288	166	494	680	660	2,580	870	554	79	100	61
29	88	199	183	1,310	-	620	2,330	770	530	74	88	62
30	84	170	124	1,930		580	2,020	800	502	71	87	62
31	83		154	1,740		538	------	800	------	72	80	------
Total	2,539	3,981	6,136	16,884	26,991	28,960	55,623	52,010	21,175	5,878	2,313	2,056
Mean	81.9	133	198	545	964	934	1,854	1,678	706	190	74.6	68.5
Ac-ft	5,040	7,900	12,170	33,490	53,540	57,440	110,300	103,200	42,000	11,660	4,590	4,080

Calendar year 1953 : Max 3,790 Min 51 Mean 703 Ac-ft 508,800
Water year 1953-54 : Max 3,580 Min 47 Mean 615 Ac-ft 445,400

* Discharge measurement made on this day.

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 1954.

Gage.--Staff gage read twice daily. Altitude of gage is 2,800 ft (by barometer). Prior to Mar. 7, 1951, staff gages at nearby sites at present datum.

Average discharge.--16 years, 39.4 cfs (28,520 acre-ft per year).

Extremes.--Maximum discharge observed during year, 151 cfs May 19 (gage height, 2.73 ft); minimum observed, 0.7 cfs July 13, 14 (gage height, 1.18 ft).

1938-54: 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, July 13, 14, 1954; minimum gage height observed, 0.29 ft Aug. 5, 1952.

Remarks.--Records fair except those for periods of ice effect or doubtful gage-height record, which are poor. Several diversions above station for irrigation.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 8-15, July 17 to Sept. 30)

1.0	0.4	1.7	24
1.1	1.2	2.0	52
1.2	2.7	2.3	92
1.3	5.2	2.7	154
1.5	12		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	9.7	14	b12	49	38	*26	45	44	32	2.4	2.6
2	7.2	9.7	15	b13	46	36	26	42	39	26	2.1	2.6
3	7.5	9.3	15	12	44	36	27	43	38	23	2.4	2.7
4	7.8	9.3	15	12	43	34	32	43	38	18	2.2	2.6
5	8.2	9.3	15	12	43	32	33	*49	37	16	2.4	3.0
6	8.2	10	15	12	40	32	39	68	38	12	2.4	3.0
7	7.8	11	14	12	40	32	37	84	36	7.6	2.4	2.7
8	7.8	10	14	12	40	47	35	89	*34	5.2	2.1	3.0
9	7.8	10	*13	13	34	96	35	96	34	4.2	2.2	3.0
10	8.2	10	12	13	32	96	35	130	45	3.0	2.4	2.6
11	8.2	9.3	12	13	30	91	38	136	49	2.1	2.2	2.6
12	7.5	10	9.7	14	62	84	37	122	50	1.0	2.0	2.6
13	7.8	9.3	8.2	12	64	73	51	116	50	.7	2.0	2.6
14	*8.5	9.3	10	12	51	62	55	106	51	*.8	1.8	2.6
15	8.9	9.7	11	12	49	59	*52	100	58	.9	2.0	4.0
16	8.5	10	12	18	48	51	59	114	64	10	1.8	4.7
17	9.3	*10	12	130	49	44	62	128	56	4.7	2.0	5.2
18	10	10	13	48	44	42	62	127	49	3.7	2.0	4.7
19	12	10	18	24	43	40	62	140	43	2.4	*1.6	4.7
20	11	10	21	*b15	41	43	62	144	41	3.0	2.2	4.2
21	11	10	15	b16	45	39	61	120	39	3.7	2.4	4.0
22	9.7	11	13	b18	44	40	60	98	38	4.0	1.8	*4.2
23	9.7	14	13	22	47	36	61	96	37	3.0	1.8	4.7
24	10	d13	b12	21	46	33	61	92	36	2.6	2.2	4.7
25	10	d12	b13	b16	*47	33	60	85	36	2.6	3.2	4.7
26	10	d13	14	b17	42	33	62	73	44	2.6	3.0	4.2
27	9.7	19	12	b18	41	35	68	56	41	2.6	3.4	4.2
28	10	18	12	24	40	33	64	46	37	2.6	3.0	4.5
29	8.9	17	12	30	-	32	52	42	36	2.2	3.0	4.7
30	8.2	15	b11	48	-	29	48	45	35	2.1	2.7	4.2
31	8.9		b12	54	- - -	27	------	50	------	2.2	2.6	------
Total	275.1	337.9	407.9	705	1,244	1,438	1,462	2,725	1,273	206.5	71.7	109.8
Mean	8.87	11.3	13.2	22.7	44.4	46.4	48.7	87.9	42.4	6.66	2.31	3.66
Ac-ft	546	670	809	1,400	2,470	2,850	2,900	5,400	2,520	410	142	218

Calendar year 1953: Max 200 Min 4.0 Mean 49.7 Ac-ft 35,990
Water year 1953-54: Max 144 Min 0.7 Mean 28.1 Ac-ft 20,340

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge estimated on basis of weather records and records for other streams in Weiser River basin.

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 June 1923, February 1924 to October 1927, April 1938 to September 1954.

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.--19 years (1924-27, 1938-54), 106 cfs (76,740 acre-ft per year).

Extremes.--Maximum discharge during year, 622 cfs May 20 (gage height, 3.48 ft); minimum, 7.2 cfs Sept. 11; minimum gage height, 0.42 ft Sept. 11, 15.
1920-21, 1923-27, 1938-54: Maximum discharge observed, about 1,840 cfs Feb. 4, 1925; minimum recorded, 3.3 cfs Nov. 22, 1952 (gage height, 0.25 ft).
Revisions.--The maximum discharge for the water year 1923 has been revised to 550 cfs (maximum daily) May 10, superseding figure published in WSP 573.

Remarks.--Records excellent except those below 20 cfs, which are good, and those for period of doubtful gage-height record, which are fair. One small ranch diversion above station. Many diversions below station for irrigation, including feeder canal to C. Ben Ross Reservoir.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1923, superseding those published in WSP 573, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1923		1923-Con.		1923-Con.	
May 1	210	May 10	550	May 18	350
2	180	11	370	19	400
3	170	13	350	20-27	e450
4	190	14	330	28	350
5	210	15	300	29-31	e300
6	250	16	290		
9	420	17	310		

e Average for period indicated.

Month	Maximum	Minimum	Mean	Runoff in acre-feet
May 1923.....	-	-	350	21,500

Little Weiser River near Indian Valley, Idaho--Continued

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.4	6.4	1.5	84
.6	12	2.0	173
.8	21	2.5	315
1.0	34	3.3	592

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	12	22	23	100	59	50	284	315	115	19	10
2	14	16	21	22	85	51	48	260	242	108	20	9.5
3	14	15	20	23	76	50	51	251	222	102	20	9.5
4	14	14	20	22	70	46	73	257	231	98	20	9.5
5	13	14	22	22	64	45	231	*318	220	93	21	9.9
6	12	16	21	22	61	46	201	353	203	89	20	10
7	12	15	20	23	60	46	157	376	212	82	18	10
8	12	15	14	22	58	119	148	412	201	78	18	8.6
9	12	14	*23	18	56	361	135	471	*203	74	17	7.9
10	12	14	19	21	53	312	126	548	272	72	14	7.6
11	12	16	16	22	50	206	131	507	281	68	13	7.4
12	12	15	21	16	118	152	155	486	281	a65	13	7.6
13	*12	15	17	17	129	127	373	460	278	*60	13	7.9
14	12	15	20	25	112	112	399	443	269	57	13	7.9
15	12	15	20	22	96	103	312	450	321	55	13	11
16	12	14	20	25	88	97	*312	504	334	54	12	16
17	12	*17	20	127	94	92	344	525	278	47	12	12
18	13	13	20	*60	102	88	360	551	254	44	12	12
19	15	12	47	44	85	83	347	577	242	37	12	12
20	13	17	83	26	90	82	293	592	231	37	*12	11
21	13	15	44	35	106	78	284	562	237	35	14	10
22	13	20	28	40	93	73	281	486	237	36	14	*10
23	13	33	21	60	88	72	300	450	234	34	12	11
24	12	25	23	44	*87	72	303	436	217	30	12	10
25	13	20	23	32	84	69	312	419	220	29	14	10
26	13	23	25	35	76	66	309	366	201	28	18	9.9
27	13	38	22	36	69	66	389	318	171	26	16	9.5
28	13	35	24	56	63	62	471	278	146	25	14	9.5
29	13	25	23	228	-	58	392	254	131	25	13	9.9
30	13	22	18	220	------	55	331	269	122	24	12	10
31	12	-----	22	135	-----	*53	-----	266	-----	22	12	------
Total	395	550	759	1,523	2,313	3,001	7,618	12,729	7,006	1,749	463	297.1
Mean	12.7	18.3	24.5	49.1	82.6	96.8	254	411	234	56.4	14.9	9.90
Cfsm	0.155	0.223	0.299	0.600	1.01	1.18	3.10	5.02	2.86	0.689	0.182	0.121
In.	0.18	0.25	0.34	0.69	1.05	1.36	3.46	5.78	3.18	0.79	0.21	0.13
Ac-ft	783	1,090	1,510	3,020	4,590	5,950	15,110	25,250	13,900	3,470	918	589

Calendar year 1953: Max 766 Min 12 Mean 132 Cfsm 1.61 In. 21.89 Ac-ft 95,610
Water year 1953-54: Max 592 Min 7.4 Mean 105 Cfsm 1.28 In. 17.42 Ac-ft 76,180

Peak discharge (base, 400 cfs).--Mar. 9 (4:30 p.m.) 450 cfs (2.91 ft); Apr. 13 (6 p.m.) 650 cfs (3.45 ft); Apr. 28 (3:30 a.m.) 529 cfs (3.13 ft); May 10 (1 and 3 a.m.) 607 cfs (3.34 ft); May 20 (10 p.m.) 662 cfs (3.48 ft); June 15 (10 to 11 p.m.) 422 cfs (283 ft).

* Discharge measurement made on this day.

Note.--Doubtful gage-height record June 6 to July 12; discharge computed on basis of gage heights as recorded.

Crane Creek Reservoir near Midvale, Idaho

Location (revised).--Lat 44°21'30", long 116°37'00", in SE¼ sec. 19, T. 12 N., R. 2 W., at gate-control structure near left end of dam on Crane Creek, 9½ miles southeast of Midvale.

Drainage area.--242 sq mi.

Records available.--November 1923 to September 1954.

Gage.--Staff gage. Altitude of gage is 3,190 ft (by barometer).

Extremes.--Maximum gage height observed during year, 48.4 ft Apr. 7; minimum observed, 32.0 ft Sept. 27.

1923-54: 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, Oct. 22 to Dec. 3, 1952.

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 between bottom of outlet gates (6.56 ft gage height) and spillway crest (54.92 ft gage height). No usable contents below about 7 ft gage height. Water is used for irrigation of lands in lower Weiser Valley.

Cooperation.--Gage readings furnished by Crane Creek Reservoir Administration Board.

Revisions.--WSP 833: Drainage area.

Gage height, in feet, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-		-	-	-	-	48.2	-	-	-	-	-
2	-		-	-	-	-	-	47.7	-	46.7	-	-
3	33.5		-	-	-	44.3	-	-	-	-	-	-
4	-		-	-	-	-	-	47.8	-	-	-	-
5	-		-	-	-	-	-	-	-	-	41.5	-
6	-		-	-	-	-	-	47.75	-	-	41.4	-
7	-		-	-	-	-	48.4	-	47.0	-	-	-
8	-		33.3	-	-	-	-	-	47.0	46.7	-	34.2
9	-		33.25	-	-	-	-	-	-	-	-	-
10	-		-	-	42.0	-	-	-	-	-	-	-
11	-		-	34.0	-	45.8	-	-	-	-	-	-
12	-		-	-	-	-	-	47.5	-	46.1	-	-
13	-		-	-	-	-	-	-	-	46.1	-	-
14	33.2		-	-	-	-	-	-	-	46.0	-	-
15	-		-	-	-	-	-	-	-	-	-	-
16	33.0		-	-	-	-	-	-	-	46.0	-	33.0
17	-		-	-	43.5	-	48.2	47.5	-	-	-	-
18	-	33.00	-	-	-	-	-	-	-	-	-	-
19	-		-	-	-	-	48.2	-	-	45.0	38.02	32.5
20	-		-	-	-	-	-	-	-	44.9	37.7	-
21	-		-	-	-	47.7	-	-	-	-	-	-
22	33.0		-	-	-	-	-	-	-	-	-	32.4
23	33.00		-	36.6	-	-	-	-	-	-	-	-
24	-		-	-	-	-	-	-	-	-	-	-
25	-		-	-	43.95	48.1	-	-	47.0	-	36.7	-
26	-		-	36.8	-	-	-	-	-	-	-	-
27	-		-	-	-	-	-	-	-	-	-	32.0
28	-		-	-	-	-	-	-	-	-	36.0	-
29	-		-	-	-	-	-	-	-	-	-	-
30	-		33.9	-	-------	-	-	-	46.8	42.7	35.7	-
31	-	-------	-	-	-------	48.2	-------	-	-------	-	-	-------

Crane Creek near Midvale, Idaho

Location.--Lat 44°21'10", long 116°37'10", in SE¼ sec. 19, T. 12 N., R. 2 W., on left bank 400 ft downstream from Crane Creek Dam and 9½ miles southeast of Midvale.
Drainage area.--242 sq mi.
Records available.--October 1910 to April 1916, May 1924 to September 1954.
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. May 1, 1924, to Dec. 7, 1952, water-stage recorder on right bank at datum 1.54 ft higher.
Average discharge.--33 years (1912-15, 1924-54), 72.3 cfs (52,340 acre-ft per year).
Extremes.--Maximum discharge during year, 218 cfs July 28 (gage height, 3.56 ft); no flow for long periods.
1910-16, 1924-54: Maximum discharge observed, 4,240 cfs Dec. 3, 1910 (gage height, 8.9 ft, site and datum then in use), from rating curve extended above 3,500 cfs; no flow at times in many years when gates in dam were closed.
Revisions.--Figures of maximum discharge for the water years 1925 and 1927 have been revised to 898 cfs Feb. 7-12, 1924 (gage height, 3.42 ft) and 742 cfs Feb. 21-23, 1927 (gage height, 3.19 ft), superseding those published in WSP 613 and 653, respectively.
Remarks.--Records good. Flow regulated since 1911 by Crane Creek Reservoir (see preceding page). No large diversion above station.
Cooperation.--Water-stage recorder inspected by employees of Crane Creek Reservoir Administration Board.
Revisions (water years).--WSP 833: Drainage area. WSP 963: 1941(M). Revised figures of discharge, in cubic feet per second, for the water years 1925 and 1927, superseding figures published in WSP 613 and 653, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1925		1925-Con.		1925-Con.		1927-Con.	
Feb. 4	430	Feb. 13	891	Feb. 28	330	Feb. 25	735
5	884	14	884			26	735
6	884	15	870	1927		27	630
7	898	16	856	Feb. 19	735	28	464
8	898	17	710	20	735	Mar. 15	568
9	898	18	330	21	742	16	678
10	898	25	330	22	742	17	666
11	898	26	330	23	742	18	558
12	898	27	330	24	735		

Month	Maximum	Minimum	Mean	Runoff in acre-feet
February 1925	898	0	495	27,500
Water year 1924-25	898	0	83.9	60,700
Calendar year 1925	898	0	84.6	61,200
February 1927	742	0	277	†15,400
March	670	17	184	†11,300
Water year 1926-27	742	0	53.1	38,400
Calendar year 1927	742	0	82.0	59,400

† Does not include estimated flows of 7,150 acre-ft and 300 acre-ft over spillway during periods Feb. 17-27 and Mar. 14-16, respectively, which bypassed station.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50			0		3.2	*34	46	14	6.2	189	105
2	50			0		0	34	33	14	7.6	189	105
3	36			0		0	33	0	14	16	189	105
4	25			0		0	33	3.4	14	16	189	105
5	25			0		0	35	27	14	16	189	104
6	25			0		0	37	*26	14	15	205	104
7	25			0		0	43	25	6.5	15	216	104
8	25			0		0	49	25	**.4	33	216	103
9	25		(*)	0		0	49	24	.4	67	214	104
10	24			0		0	48	24	.4	67	214	104
11	24			0		0	48	[illegible]	.4	66	214	103
12	24			[illegible]		0	47	24	.4	77	214	103
13	24			0		0	47	24	.4	149	214	103
14	*24			0		0	47	24	.4	*182	214	103
15	24			0		0	47	24	.4	182	214	101
16	11			0		0	47	25	.4	171	214	87
17	0			0		0	*46	23	.4	150	214	66
18	0	(*)		0		0	46	13	.4	150	212	66
19	0			0		0	46	13	.4	155	*209	51
20	0			0		0	46	13	.4	173	205	39
21	0			0		0	46	13	.4	197	205	39
22	*0			0.1		0	46	13	.4	197	189	*38
23	0			*0		0	46	13	.4	195	167	37
24	0			0		0	46	13	.4	195	166	37
25	0			0	(*)	12	46	14	4.3	195	161	36
26	0			0		36	45	14	11	214	130	36
27	0			0		35	46	13	18	216	130	36
28	0			0		34	46	14	18	218	103	36
29	0			0	-	34	46	14	18	216	76	36
30	0			0		34	46	14	17	205	91	36
31	0			0		34	- - - -	14	- - - -	189	105	- - -
Total	441	0	0	0.1	0	222.2	1,321	589.4	183.6	3,950.8	5,657	2,232
Mean	14.2	0	0	0.003	0	7.17	44.0	19.0	6.12	127	182	74.4
Ac-ft	875	0	0	0.2	0	441	2,620	1,170	364	7,840	11,220	4,430

Calendar year 1953: Max 590 Min 0 Mean 74.9 Ac-ft 54,200
Water year 1953-54: Max 218 Min 0 Mean 40.0 Ac-ft 28,960

* Discharge measurement or observation of no flow made on this day.
** Field estimate made on this day.
Note.--No gage-height record June 8-24; discharge estimated on basis of 1 field estimate and record of gate changes at Crane Creek Reservoir.

Crane Creek at mouth, near Weiser, Idaho

Location.--Lat 44°18', long 116°47', in sec. 14, T. 11 N., R. 4 W., on right bank 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 1954.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 2,240 ft (by barometer).

Average discharge.--33 years (1921-54), 81.2 cfs (58,790 acre-ft per year).

Extremes.--Maximum discharge during year, 715 cfs Jan. 17 (gage height, 4.74 ft); minimum, 1.4 cfs June 22, 23, July 2 (gage height, 1.56 ft); minimum daily, 1.9 cfs July 3.

1920-54: Maximum discharge, 2,350 cfs about Feb. 7, 1925 (gage height, 6.80 ft, from high-water 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. Flow regulated since 1911 by Crane Creek Reservoir (see p. 199). Several small ditches divert above station for irrigation.

Revisions.--WSP 833: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 5-25)

1.6	1.3	2.2	24
1.7	2.5	2.5	54
1.8	4.2	2.8	95
1.9	7.0	3.1	146
2.0	11	3.5	233
2.1	16	4.0	380

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	5.9	6.7	6.4	35	6.7	43	34	9.8	8.6	170	95
2	54	5.9	6.7	6.2	24	9.0	*43	37	13	2.5	174	92
3	52	5.9	7.8	6.2	19	7.0	44	15	14	1.9	170	90
4	30	5.6	9.4	6.2	15	6.7	45	3.4	15	4.2	168	95
5	29	5.6	7.8	6.4	13	6.4	53	7.0	17	7.0	174	95
6	29	5.9	7.0	6.4	12	6.4	50	*19	16	6.7	185	94
7	29	5.9	7.0	6.7	10	6.4	50	20	*17	6.7	205	95
8	29	5.9	7.0	6.7	9.8	8.2	56	20	12	4.2	207	94
9	29	5.9	7.0	6.2	9.0	123	56	21	9.0	48	202	94
10	29	5.9	*7.0	6.2	8.6	68	55	22	9.0	59	198	94
11	29	5.9	6.7	6.2	8.2	24	55	22	9.0	60	205	94
12	28	5.9	6.4	6.4	16	21	53	21	7.0	60	202	88
13	28	5.9	6.4	6.4	28	13	58	21	4.2	116	196	88
14	28	5.9	6.4	6.4	59	11	56	17	3.5	164	196	89
15	*27	6.2	6.4	6.4	27	9.4	*53	18	5.9	166	189	92
16	26	6.2	6.4	6.7	14	9.0	53	22	6.2	*170	191	84
17	12	6.2	6.4	197	11	9.0	53	23	5.9	146	196	59
18	7.4	*6.2	6.4	49	23	9.4	51	16	5.6	144	*196	58
19	7.0	6.2	8.2	16	15	11	51	6.7	5.6	142	196	53
20	6.4	6.2	22	10	12	12	50	5.0	5.6	150	196	*41
21	5.9	6.2	11	*9.8	16	20	48	3.9	3.1	170	194	39
22	5.9	8.2	7.8	9.4	14	12	50	4.2	2.3	179	181	35
23	5.9	7.4	7.8	15	9.8	10	46	4.5	2.0	183	156	31
24	5.9	6.7	7.0	14	8.6	9.8	44	6.2	3.5	183	154	33
25	5.9	6.4	6.4	9.8	*8.2	9.8	43	8.6	3.5	183	146	33
26	5.9	6.4	6.4	8.6	7.8	34	45	9.8	3.7	196	114	34
27	5.9	7.0	6.4	9.0	7.4	46	45	10	5.9	196	114	35
28	5.9	6.7	6.7	33	7.0	45	44	9.8	9.8	202	101	35
29	5.9	6.4	6.4	313	-	44	42	6.2	9.0	200	72	36
30	5.9	6.7	6.2	130		43	38	5.9	9.4	196	77	35
31	5.9		6.4	59		43		5.3		174	95	
Total	627.7	187.3	233.6	984.7	447.4	693.2	1,473	444.5	242.5	3,528.8	5,220	2,030
Mean	20.2	6.24	7.54	31.8	16.0	22.4	49.1	14.3	8.08	114	168	67.7
Ac-ft	1,250	372	463	1,950	887	1,370	2,920	882	481	7,000	10,350	4,030

Calendar year 1953: Max 705 Min 5.6 Mean 89.7 Ac-ft 64,940
Water year 1953-54: Max 313 Min 1.9 Mean 44.1 Ac-ft 31,960

* Discharge measurement made on this day.

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Weiser River near Weiser, Idaho

Location.--Lat 44°16'50", long 116°47'00", in NW¼ sec. 23, T. 11 N., R. 4 W., on right bank 0.4 mile upstream from county road bridge, 1¾ miles downstream from Crane Creek, and 9½ miles northeast of Weiser.

Drainage area.--1,460 sq mi, approximately; 1,470 sq mi, approximately, at site used prior to Dec. 12, 1911.

Records available.--March 1890 to June 1891, December 1894 to December 1904, October 1910 to December 1914, October 1952 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 2,220 ft (by barometer). Prior to October 1952, staff gages at several sites within about 2½ miles downstream from present site at different datums.

Average discharge.--11 years (1895-96, 1898-99,1900-04, 1911-14, 1952-54), 1,264 cfs (915,100 acre-ft per year).

Extremes.--Maximum and minimum discharges for the water years 1895-1904, 1953-54, some of which have been revised, are contained in the following table. They supersede figures published in the water-supply papers indicated.

WSP	Water year	Maximum			Minimum	
		Date	Discharge (cfs)	Gage height (feet)†	Date	Discharge (cfs)
(a)	1895	Mar. 28, 29, 1895	*4,300	6.4	-	-
(a)	1896	May 5, 1896	*12,800	9.5	-	-
(b)	1897	Apr. 20, 1897	*10,500	8.3	-	-
(c)	1898	Apr. 17, 27, 1898	*3,500	4.4	-	-
(d)	1899	Mar. 27, 1899	*7,850	6.8	Sept. 27-30, 1899	‡80
(e)	1900	Mar. 8, 1900	*10,600	8.0	-	-
75	1901	Feb. 27, 1901	*8,730	7.25	Aug. 24-31, 1901	‡35
85	1902	Feb. 10, 11, 1902	*9,180	7.4	Aug. 12-14, Sept. 7-9, 1902	‡35
100	1903	Mar. 15, 16, 1903	*14,500	9.6	Aug. 8-25, 1903	‡35
135	1904	Mar. 8, 1904	*16,900	10.5	Aug. 27, Sept. 10-30, 1904	‡47
1287	1953	Jan. 18, 19, 1953	13,000	9.14	-	-
-	1954	Jan. 17, 1954	7,850	7.63	Sept. 29, 1954	**97

* Maximum observed.
** Gage height 1.62 ft.
† Sites and datums then in use.
‡ Minimum daily.
a 18th Ann. Rept., Pt. 4.
b 19th Ann. Rept., Pt. 4.
c 20th Ann. Rept., Pt. 4.
d 21st Ann. Rept., Pt. 4.
e 22nd Ann. Rept., Pt. 4.

1890-91, 1894-1904, 1910-14, 1952-54 (revised): Maximum discharge observed, 16,900 cfs Mar. 8, 1904 (gage height, 10.5 ft, site and datum then in use), from rating curve extended above 4,000 cfs; minimum observed, 14 cfs Aug. 7, 1911 (gage height, 2.80 ft, site and datum then in use).

Flood of Mar. 19, 1932, reached a discharge of about 17,500 cfs.

Remarks.--Records excellent. Flow partly regulated by Crane Creek Reservoir (see p. 199), Lost Valley Reservoir (see p. 192), and other small reservoirs. Diversions above station for irrigation of about 22,000 acres.

Revisions.--Revised figures of discharge for the water years 1895 to 1905, superseding those published in reports listed above under "Extremes", are given herein:

Weiser River near Weiser, Idaho--Continued

Discharge, in cubic feet per second, December 1894 to September 1895

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			-		167	1,220	2,100	2,410	1,380	316	110	86
2			-		167	1,140	2,000	2,300	1,300	316	110	86
3			-		167	1,070	1,900	2,300	1,140	296	110	86
4			-		167	1,070	1,720	2,200	1,070	296	110	86
5			200		137	996	996	2,520	1,140	296	110	86
6			200	b350	137	928	1,300	2,740	1,070	296	110	86
7			200		137	862	1,220	2,860	1,140	296	110	86
8			200		137	928	1,220	2,520	1,070	296	110	86
9			200		137	1,140	1,300	2,300	996	296	110	86
10			200		137	1,220	1,380	1,900	996	296	86	110
11			200		137	1,300	1,540	1,720	928	296	86	110
12			200	b450	137	1,140	1,460	2,410	862	296	86	137
13			200	1,220	167	996	1,460	2,200	862	296	86	137
14			200	1,380	167	798	1,810	1,900	798	296	86	167
15			200	928	167	508	2,100	2,000	736	296	86	236
16			200	736	167	508	2,000	2,000	676	296	86	200
17			562	676	137	508	2,100	1,900	676	275	66	167
18			562	562	137	562	2,100	1,900	618	275	66	167
19			508	456	137	862	2,000	1,810	618	275	66	167
20			508	407	110	1,070	2,000	1,810	618	236	66	137
21			508	360	137	1,900	2,000	1,900	562	236	66	137
22			508	316	137	1,460	2,000	1,720	562	236	66	137
23			456	275	200	1,540	2,000	2,410	562	*200	66	137
24			456	275	798	2,000	*2,100	2,300	508	236	66	137
25			456	236	1,140	3,100	2,300	2,410	407	236	66	137
26			456	236	928	3,350	2,300	2,300	*407	236	66	137
27			407	200	1,220	3,480	2,520	3,100	407	200	66	137
28			407	200	1,070	4,300	2,860	*2,520	360	200	66	137
29			407	200	-	4,300	2,630	2,200	360	*137	66	137
30			407	167	---	3,610	2,520	1,810	360	137	66	137
31		------	360	167	------	3,220	------	1,630	------	137	66	------
Total			-	13,297	8,583	51,086	56,936	68,000	23,189	8,028	2,582	3,879
Mean			-	429	307	1,640	1,900	2,190	773	259	83.3	129
Ac-ft			-	26,400	17,000	101,000	113,000	135,000	46,000	15,900	5,120	7,680

Calendar year	: Max		Min		Mean		Ac-ft
Water year	: Max		Min		Mean		Ac-ft

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

Discharge, in cubic feet per second, water year October 1895 to September 1896

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	137	137	200		1,890	1,660	2,270	2,010	7,160	3,120	279	201
2	137	137	200		1,550	1,340	1,890	3,590	7,160	2,820	279	201
3	137	137	200		890	1,060	1,660	3,430	7,160	2,680	279	*201
4	137	137	200			890	1,550	9,850	7,810	2,400	279	238
5	137	137	200			890	1,550	12,000	6,950	2,140	279	238
6	137	137	167	b100		811	1,660	11,800	8,930	1,890	279	238
7	137	137	167		b500	811	2,010	10,300	11,300	1,660	279	238
8	137	137	137			890	2,540	7,810	8,250	1,440	279	238
9	137	137	137			1,150	2,820	6,330	6,330	1,340	279	238
10	137	137	*137			1,550	2,540	4,790	6,330	1,240	238	238
11	137	137	137			1,890	2,270	4,970	6,130	1,150	238	238
12	137	137	137			1,660	2,010	5,730	6,130	1,060	238	238
13	137	137	137	b200	b400	1,660	2,680	4,090	5,930	970	238	279
14	137	137	137			1,550	2,540	3,270	5,730	890	238	279
15	137	167	167			1,340	3,590	2,820	5,730	811	201	279
16	137	167	167	b400		1,240	2,970	2,680	5,730	737	201	279
17	137	167		b900		1,150	2,540	2,820	5,730	667	201	279
18	137	167		3,100	b500	1,150	2,010	3,590	5,930	600	201	279
19	137	167		5,200		1,240	1,890	2,820	6,130	537	201	279
20	137	167		7,930		1,660	1,770	2,680	5,730	478	201	238
21	137	167		9,850	667	2,680	1,660	2,680	*5,350	478	*238	238
22	137	167		7,810	737	2,820	1,550	2,820	4,790	423	201	238
23	137	167		4,610	811	2,820	1,660	3,430	4,610	423	201	238
24	137	137	b100	2,540	811	3,590	1,770	4,260	4,260	371	201	201
25	137	137		1,660	890	4,970	2,010	5,160	3,920	371	201	201
26	137	137		*1,660	1,060	4,970	2,400	5,160	3,590	371	201	201
27	137	137		1,890	1,890	5,930	2,820	5,160	3,120	323	201	201
28	137	137		2,400	2,400	5,350	3,120	5,350	3,590	323	201	201
29	137	137		5,730	2,010	4,260	2,540	5,350	3,750	323	201	201
30	137	137		4,430	---	3,270	2,140	6,130	3,590	323	201	201
31	137	------		2,540	------	2,680	------	6,740	------	279	201	------
Total	4,247	4,380	4,127	64,650	23,606	68,932	66,430	159,620	176,850	32,638	7,155	7,057
Mean	137	146	133	209	814	2,220	2,210	5,150	5,900	1,050	231	235
Ac-ft	8,420	8,690	8,180	12,900	46,800	136,000	132,000	317,000	351,000	64,600	14,200	14,000

Calendar year 1895:	Max	4,300	Min	66	Mean	680	Ac-ft	492,000
Water year 1895-96:	Max	12,000	Min	-	Mean	1,690	Ac-ft	1,110,000

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

Weiser River near Weiser, Idaho--Continued

Discharge, in cubic feet per second, water year October 1896 to September 1897

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	201						3,980	5,590	2,500	630	159	130
2	201						5,210	5,970	2,120	630	159	130
3	167						5,590	6,170	1,880	765	159	130
4	167						5,780	6,370	1,770	695	130	130
5	167						7,610	6,770	1,660	630	*130	130
6	167						7,400	7,190	1,660	568	130	130
7	167						6,980	8,260	1,550	568	130	130
8	167						6,570	7,190	1,550	568	105	159
9	167						7,400	5,970	1,450	509	105	159
10	167						7,610	5,210	1,350	509	105	159
11	167						7,610	5,210	1,260	453	105	159
12	167						6,570	5,210	1,260	453	105	159
13	167						6,770	5,400	1,170	401	105	159
14	167						6,770	5,780	1,170	401	105	159
15	167						6,570	6,170	1,080	352	105	159
16	167						6,980	6,370	1,080	352	105	159
17	167						7,820	6,370	1,000	352	105	159
18	-						8,700	6,370	1,000	307	105	159
19	-						9,600	6,170	920	307	105	159
20	-						10,500	6,170	840	307	105	159
21	-						10,500	6,170	840	307	105	159
22	-						9,830	5,970	765	265	105	159
23	-						9,140	5,400	765	265	105	159
24	-						5,780	4,490	765	265	105	191
25	-						5,590	4,850	695	226	105	191
26	-						6,370	*4,490	695	226	105	191
27	-						7,400	3,350	840	226	105	191
28	-						8,260	3,200	765	226	105	191
29	-						7,400	3,050	695	191	105	191
30	-				--		5,970	2,910	630	191	105	191
31	-	------			----		------	2,910	------	191	105	------
Total	-	-	-	-	-	-	218,260	170,700	35,725	12,336	3,517	4,791
Mean	-	-	-	-	-	-	7,280	5,510	1,190	398	113	160
Ac-ft	-	-	-	-	-	-	433,000	339,000	70,800	24,500	6,950	9,520

Calendar year	: Max	Min	Mean	Ac-ft	
Water year	: Max	Min	Mean	Ac-ft	

* Discharge measurement made on this day.

Discharge, in cubic feet per second, March to September 1898

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						-	159	2,370	2,000	695	130	105
2						-	191	2,240	*2,000	695	105	105
3						-	191	2,120	1,880	630	105	105
4						-	191	2,000	1,770	630	105	118
5						-	765	1,880	1,660	568	83	105
6						-	1,000	1,770	1,550	568	*74	83
7						-	1,350	1,770	1,550	568	83	83
8						-	1,350	1,660	1,450	509	83	83
9						-	1,260	1,660	1,450	509	64	64
10						-	1,350	1,660	1,450	453	64	64
11						-	1,770	1,770	1,350	453	64	64
12						-	*1,880	1,770	1,350	401	48	64
13						1,260	2,000	1,770	1,350	401	48	64
14						1,170	2,240	1,770	1,260	352	48	64
15						1,080	2,910	1,660	1,260	352	48	64
16						1,080	3,350	1,660	1,260	307	48	64
17						1,000	3,500	1,660	1,170	307	48	64
18						920	3,350	1,660	1,170	265	48	64
19						840	2,770	1,660	1,170	265	48	64
20						765	2,630	1,550	1,080	265	48	64
21						695	2,500	1,450	1,080	226	35	64
22						630	2,630	1,450	1,080	226	42	64
23						568	2,770	1,350	1,000	226	64	64
24						509	2,910	1,350	1,000	191	64	64
25						453	2,770	1,350	1,000	191	64	64
26						352	2,910	1,450	920	191	74	74
27						265	3,500	1,660	920	159	74	83
28						226	3,200	2,500	840	159	83	83
29						191	2,770	2,370	840	159	83	105
30					--	159	2,630	2,120	765	130	83	105
31		-- - -			------	159	------	2,000	------	130	83	------
Total						-	62,797	55,110	38,625	11,181	2,141	2,325
Mean						-	2,090	1,780	1,290	361	69.1	77.5
Ac-ft						-	124,000	109,000	76,800	22,200	4,250	4,610

Calendar year	: Max	Min	Mean	Ac-ft	
Water year	: Max	Min	Mean	Ac-ft	

* Discharge measurement made on this day.

Weiser River near Weiser, Idaho--Continued

Discharge, in cubic feet per second, water year October 1898 to September 1899

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	105	175			509	840	4,360	2,540	2,950	1,810	295	153
2	105	175			453	920	4,360	2,040	3,240	1,590	295	153
3	118	175	200	500		1,000	4,530	1,810	3,860	1,490	295	153
4	118	175				1,080	4,360	1,590	4,190	1,390	255	153
5	144	175			250	1,000	4,360	1,590	3,700	1,300	255	153
6	144	175				1,000	4,530	1,810	3,240	1,210	255	153
7	159	175				1,080	4,360	2,410	2,810	1,120	255	153
8	159	175		300		1,170	4,190	3,390	2,540	*1,030	218	153
9	159	175				1,260	4,360	4,190	2,540	950	218	*153
10	159	175				1,350	4,700	4,700	2,670	875	218	153
11	159	191	100			1,450	4,530	4,880	2,810	875	218	153
12	159	191			300	1,260	4,700	4,700	2,950	800	218	125
13	159	191		600		1,260	5,430	4,700	3,090	800	184	125
14	*159	208				1,350	4,880	3,860	3,090	730	184	125
15	159	208				1,450	3,860	*3,390	3,240	730	184	125
16	159	208		840		1,660	*3,860	2,810	3,240	663	184	125
17	159	265		920	401	3,980	4,190	2,540	3,240	663	184	125
18	159	226		1,080	427	4,150	3,700	2,410	3,390	600	184	125
19	175	208		1,260	453	3,820	3,240	2,280	3,700	600	153	125
20	175	200		2,370	538	3,660	2,950	2,280	3,700	541	153	125
21	175	160	200	2,770	568	3,200	2,810	2,280	3,540	541	153	101
22	175	160		3,500	568	*2,630	3,240	2,280	2,950	485	153	101
23	175	160		4,490	568	2,500	3,090	2,410	2,540	485	153	101
24	175	140		5,590	509	7,190	2,810	2,810	2,540	433	153	101
25	175	120		4,490	509	7,190	3,700	3,240	2,410	433	184	101
26	175	120		2,370	568	6,980	3,700	3,240	2,410	384	184	101
27	175	130		1,660	630	7,850	2,810	3,090	2,280	384	184	80
28	175	160	500	1,260	695	4,190	2,540	3,090	2,160	384	153	80
29	175	200		920	-	4,020	2,540	*2,810	2,040	338	153	80
30	175	200		920	--	4,700	2,410	2,810	1,920	338	153	80
31	175	------		568	--- --	4,360	------	2,810	------	338	153	------
Total	4,917	5,396	6,900	42,008	11,346	89,550	115,100	90,790	88,980	24,310	6,181	3,734
Mean	159	180	223	1,360	405	2,890	3,840	2,930	2,970	784	199	124
Ac-ft	9,780	10,700	13,700	83,600	22,500	178,000	228,000	180,000	177,000	48,200	12,200	7,380

Calendar year 1898: Max - Min - Mean - Ac-ft -
Water year 1898-99: Max 7,850 Min 80 Mean 1,340 Ac-ft 971,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 20 to Jan. 15, Feb. 3-16.

Discharge, in cubic feet per second, water year October 1899 to September 1900

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	255				2,810	1,810	1,920	1,700	255	47	62
2	80	255				3,700	1,920	2,040	1,700	255	47	62
3	80	255				4,360	2,280	2,040	1,590	255	47	62
4	80	255				6,200	2,410	2,280	1,590	184	47	62
5	80	255				5,430	2,410	2,670	1,490	184	35	62
6	80	255				5,060	2,540	3,090	1,390	184	35	80
7	80	255				6,200	2,540	3,390	1,390	184	35	80
8	80	433				10,600	2,410	2,810	1,300	184	35	101
9	80	485				8,070	2,410	2,950	1,300	184	35	101
10	80	541				6,400	2,540	3,090	1,210	184	47	101
11	101	663				5,620	2,670	3,390	1,210	153	47	80
12	101	730				4,880	2,810	3,700	1,120	153	47	80
13	101	730				4,700	2,950	4,020	1,120	153	47	80
14	101	663				4,190	2,540	3,860	1,030	153	47	80
15	101	600				3,860	2,280	4,020	950	125	*47	80
16	153	541				3,540	2,160	3,860	875	125	47	80
17	153	485				3,390	2,040	3,700	800	125	47	80
18	184	485				3,240	2,160	3,390	730	125	47	80
19	218	485				3,090	2,280	3,090	*663	101	47	80
20	295	541				2,950	2,280	2,810	600	101	47	80
21	338	541				2,950	2,410	2,670	541	101	47	80
22	384	600				2,810	2,410	2,540	485	80	47	80
23	384	663				2,810	2,280	2,410	433	*80	47	80
24	338	730				2,810	2,160	2,280	384	80	47	101
25	338	1,120				2,810	2,040	2,160	384	80	47	101
26	295	1,390				2,670	2,040	2,040	338	62	47	101
27	295	1,590				2,540	1,920	2,040	338	62	47	101
28	295	2,950				2,410	1,920	*2,040	295	62	62	101
29	255	3,090				2,160	1,920	1,920	295	62	62	101
30	255	3,240				2,040	1,920	1,810	255	62	62	101
31	255				-	1,920	------	1,810	------	47	62	------
Total	5,740	25,081	-	-	-	126,200	68,460	85,840	27,506	4,145	1,457	2,520
Mean	185	836	-	-	-	4,070	2,280	2,770	917	134	47.0	84.0
Ac-ft	11,400	49,700	-	-	-	250,000	136,000	170,000	54,600	8,240	2,890	5,000

Calendar year : Max Min Mean Ac-ft
Water year : Max Min Mean Ac-ft

* Discharge measurement made on this day

Weiser River near Weiser, Idaho--Continued

Discharge, in cubic feet per second, water year October 1900 to September 1901

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	101	295	300	433		7,220	1,390	3,540	2,540	600	218	41
2	125	295		384		7,220	1,300	4,020	2,410	600	184	41
3	125	295	384	485		6,600	1,700	4,530	2,160	541	153	41
4	125	295	433	875		5,430	1,590	4,700	1,920	541	125	47
5	153	295	485	1,120		4,530	1,490	4,880	1,810	541	101	47
6	153	295	541	1,030		3,860	2,160	5,240	1,810	485	80	47
7	184	295	600	875	250	3,700	2,280	4,880	1,590	541	80	47
8	184	295	663	730		3,540	1,920	4,530	1,490	485	62	47
9	184	255	600			3,390	1,700	4,360	1,490	485	62	47
10	184	255	600	550		3,240	1,810	4,360	1,490	433	47	62
11	184	255	541			3,090	1,810	4,360	1,490	384	47	62
12	153	255	541	663		2,950	2,160	4,530	1,390	384	47	62
13	153	255	541	1,120		2,810	2,280	5,240	1,390	384	41	62
14	153	255	541	3,860		2,670	2,410	5,430	1,390	338	41	62
15	153	255	600	3,700	541	2,540	2,540	5,620	1,390	338	41	62
16	153	295	800	1,700	1,120	2,410	2,670	5,430	1,210	338	41	62
17	153	295	1,030	800	4,020	2,280	2,670	5,620	1,210	338	41	62
18	153	295	800		2,280	2,160	2,810	5,240	*1,030	295	41	62
19	153		875		1,490	2,040	*2,810	4,360	950	295	*41	71
20	218		1,030		1,390	1,920	2,950	3,860	950	295	41	71
21	485	200	4,530		4,190	1,920	2,950	3,240	875	295	41	71
22	485		2,950		2,950	2,040	3,090	2,950	800	295	41	71
23	433		1,920		2,540	2,280	3,240	2,670	800	255	41	80
24	433		1,490		4,360	2,160	3,540	2,540	800	255	35	80
25	384		1,300	500	4,020	2,040	3,540	2,810	800	255	35	80
26	384		1,120		5,060	2,160	3,540	2,950	730	255	35	80
27	295		950		8,730	2,040	3,390	3,090	730	255	35	80
28	295	250	730		8,070	1,810	3,090	3,090	663	255	35	80
29	255		663		-	1,590	2,810	2,950	663	255	35	80
30	255		663		-	1,490	3,090	2,810	600	255	35	80
31	295	- -	433		- - - - - -	1,390	- - - - - -	2,670	- - - - - -	255	35	- - - - - -
Total	7,143	7,680	28,954	26,425	54,261	94,520	74,730	126,500	38,571	11,526	1,937	1,887
Mean	230	256	934	852	1,940	3,050	2,490	4,080	1,290	372	62.5	62.9
Ac-ft	14,100	15,200	57,400	52,400	108,000	188,000	148,000	251,000	76,800	22,900	3,840	3,740

Calendar year 1900: Max - Min - Mean - Ac-ft -
Water year 1900-1901: Max 8,730 Min 35 Mean 1,300 Ac-ft 941,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 19 to Dec. 2, Jan. 9-11, Jan. 18 to Feb. 14.

Discharge, in cubic feet per second, water year October 1901 to September 1902

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	153	338	250		4,020	696	1,810	2,670	600	80	41
2	90	168	384		150	3,240	730	1,700	2,540	541	71	41
3	90	168	838	295		2,810	875	1,590	2,160	485	62	41
4	90	168	1,300	361		2,540	1,030	1,390	1,920	433	*62	41
5	90	168	1,210	361	338	2,280	1,120	1,390	1,810	541	62	41
6	90	168	1,120	408	485	2,040	1,300	1,390	1,810	663	54	41
7	101	168	1,080	513	730	1,810	1,490	1,590	1,810	800	54	35
8	101	168	950	600	1,210	1,700	2,280	2,280	1,920	800	54	35
9	101	168	875	570	5,430	1,700	2,670	2,280	2,040	730	47	35
10	101	168	1,030	541	9,180	1,590	1,810	3,390	2,410	663	47	41
11	101	168			9,180	1,490	1,590	2,950	2,280	600	41	47
12	101	168	500		3,540	1,390	1,590	3,090	2,160	541	35	41
13	101	153		400	2,540	1,210	1,490	3,090	2,040	513	35	41
14	101	153			1,920	1,210	1,590	3,390	1,920	485	35	41
15	113	153			3,240	1,120	1,810	3,240	1,590	433	41	41
16	113	153			3,240	1,120	1,920	3,090	1,490	384	62	47
17	113	153			3,390	1,080	2,040	2,810	1,390	338	71	47
18	*113	153	250		3,390	1,030	2,160	2,670	1,210	338	113	*47
19	125	168			2,670	950	2,540	2,160	1,120	*295	101	47
20	125	168		250	2,540	875	3,090	1,810	1,120	275	90	54
21	125	201			2,280	875	2,810	1,700	1,030	255	80	54
22	125	275			1,920	912	2,540	1,810	1,030	218	80	54
23	125	295	338		1,810	950	2,540	1,810	950	184	80	62
24	125	338	338		5,060	950	2,410	1,700	875	168	71	62
25	125	338	295		8,950	912	2,280	1,810	800	153	62	62
26	125	338	295		8,730	912	2,160	1,920	*800	153	62	71
27	139	295	255	100	6,200	875	2,040	2,280	765	139	54	80
28	139	255			6,000	875	1,590	2,950	730	125	47	80
29	153	275			-	800	1,590	3,090	663	113	47	80
30	153	275	225		-	730	1,700	2,950	632	101	41	80
31	153	- -			-	800	- - - - - -	2,810	- - - - - -	90	41	- - - - - -
Total	3,537	6,140	15,046	9,099	94,573	44,796	55,481	71,940	45,685	12,157	1,882	1,530
Mean	114	205	485	294	3,380	1,450	1,850	2,320	1,520	392	60.7	51.0
Ac-ft	7,010	12,200	29,800	18,100	188,000	89,200	110,000	143,000	90,400	24,100	3,730	3,030

Calendar year 1901: Max 8,730 Min 35 Mean 1,250 Ac-ft 904,000
Water year 1901-2: Max 9,180 Min 35 Mean 991 Ac-ft 719,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 11-22, Dec. 28 to Jan. 2, Jan. 11 to Feb. 4.

Weiser River near Weiser, Idaho--Continued

Discharge, in cubic feet per second, water year October 1902 to September 1903

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	153					8,290	2,810	2,810	600	80	101
2	80	153					6,400	2,810	3,390	600	80	101
3	80	153	200		500		5,240	2,810	3,540	541	80	80
4	80	153					4,360	3,090	3,540	485	62	80
5	80	168		600			3,700	3,390	3,240	433	62	62
6	90	168				175	3,390	3,390	3,090	384	47	62
7	90	184					2,950	3,540	2,810	433	47	62
8	90	218	400				2,670	3,540	2,810	541	35	62
9	90	255					2,160	3,240	2,670	485	35	62
10	90	255	1,390	485	200		2,670	2,950	2,540	433	35	62
11	101	255	1,920	485		730	3,090	2,810	2,280	384	35	80
12	101	255	2,040			2,280	2,670	2,810	2,040	384	35	125
13	101	255	1,590			5,430	2,280	2,950	*2,040	384	35	125
14	101	275				10,600	2,160	3,240	1,920	338	35	153
15	101	275				14,500	2,040	3,540	1,810	295	35	184
16	101	275				14,500	2,040	3,240	1,590	295	35	184
17	101	295		350		13,200	2,280	2,950	1,490	295	35	184
18	101	295	500			9,410	2,540	2,410	1,390	295	35	153
19	101	295				4,530	2,810	2,040	1,120	295	*35	153
20	101					4,360	2,670	1,700	1,030	295	35	153
21	113					4,530	2,670	1,590	950	255	35	125
22	113			541	150	4,700	2,950	1,590	875	255	35	125
23	113			1,390		4,700	3,390	1,700	875	218	35	125
24	125		485	4,020		5,240	3,700	1,810	800	184	35	125
25	125	200	730	4,700		5,240	3,700	1,810	730	153	35	101
26	125		875	5,240		7,220	4,020	1,920	663	153	47	101
27	139		1,590	4,700		8,290	4,360	1,810	663	153	80	101
28	139		1,390	4,360		7,220	4,020	1,920	663	153	101	101
29	139			4,020	-	10,600	3,540	2,160	663	153	153	125
30	153		900	1,810	-	10,600	3,240	2,160	600	125	125	125
31	153	- -		1,000	- - - -	9,410	- - - - - -	2,540	- - - - - -	101	125	- - - - - -
Total	3,297	6,535	22,310	41,651	6,150	159,040	102,000	80,270	54,632	10,098	1,719	3,382
Mean	106	218	720	1,340	220	5,130	3,400	2,590	1,820	326	55.5	113
Ac-ft	6,520	13,000	44,300	82,400	12,200	315,000	202,000	159,000	108,000	20,000	3,410	6,720

Calendar year 1902: Max 9,180 Min 35 Mean 1,010 Ac-ft 733,000
Water year 1902-3: Max 14,500 Min 35 Mean 1,350 Ac-ft 973,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 20 to Dec. 9, Dec. 14-23, Dec. 29 to Jan. 9, Jan. 12-21, Jan. 31 to Mar. 10.

Discharge, in cubic feet per second, water year October 1903 to September 1904

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	125	184	800			4,020	5,240	3,860	3,390	875	125	80
2	125	184	800			6,600	5,060	3,700	3,390	950	101	80
3	184	184	730			6,600	5,060	4,360	3,390	875	101	80
4	218	184	730			3,390	5,810	4,190	3,390	875	101	80
5	255	184	663		250	2,810	5,240	3,860	3,240	800	101	80
6	295	184	663			4,530	5,240	3,860	3,240	730	125	80
7	295	184	663			10,600	5,240	3,860	2,810	663	125	80
8	295	218	600	200		16,900	4,360	3,860	2,810	663	101	62
9	255	184	485			15,200	4,360	4,020	2,810	663	80	62
10	218	153	433			10,600	4,700	3,700	2,810	600	80	47
11	255	184	338			12,800	6,400	3,700	2,540	541	80	47
12	255	218				8,290	7,430	3,700	2,280	541	80	47
13	255	255			400	5,810	8,290	3,700	1,920	541	62	47
14	*236	295				5,430	9,180	3,700	1,920	485	80	47
15	218	338				7,220	9,640	3,700	1,920	433	80	47
16	218	338		295	1,120	5,620	10,100	3,860	2,040	433	80	47
17	218	295		338	7,430	8,290	9,410	3,860	2,160	433	80	47
18	184	218		384	5,060	7,010	7,850	3,860	2,280	384	80	47
19	184	255			4,700	13,000	7,640	3,860	2,160	338	62	47
20	218	338			2,810	11,500	7,850	4,190	1,810	295	62	47
21	218	632	200		2,810	6,200	8,290	4,360	1,810	295	62	47
22	218	4,700			2,810	5,430	6,400	5,240	1,590	255	62	47
23	218	3,860			3,390	4,360	5,240	5,240	1,590	218	62	47
24	218	3,700		250	5,810	3,540	4,360	5,240	1,490	218	62	47
25	184	2,160			5,620	3,390	3,860	5,060	1,300	218	62	47
26	184	1,590			8,950	3,390	3,860	4,190	1,120	184	62	47
27	184	1,300			7,010	2,810	4,700	3,540	1,120	153	47	47
28	184	950			5,060	3,390	5,430	3,540	1,030	153	80	47
29	184	875			4,190	8,730	4,880	3,390	1,030	125	101	47
30	184	875			-	9,410	4,360	3,390	950	125	153	47
31	184				- - - -	6,200	- - - - - -	3,390	- - - - - -	125	101	- - - - - -
Total	6,666	25,219	10,905	7,267	71,270	223,070	185,480	123,980	65,340	14,187	2,640	1,671
Mean	215	841	352	234	2,460	7,200	6,180	4,000	2,180	458	85.2	55.7
Ac-ft	13,200	50,000	21,600	14,400	142,000	443,000	368,000	246,000	130,000	28,000	5,240	3,310

Calendar year 1903: Max 14,500 Min 35 Mean 1,370 Ac-ft 994,000
Water year 1903-4: Max 16,900 Min 47 Mean 2,020 Ac-ft 1,470,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 12 to Jan. 15, Jan. 19 to Feb. 15.

Weiser River near Weiser, Idaho--Continued

Discharge, in cubic feet per second, October to December 1904

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	125										
2	101	125										
3	101	125										
4	101	125										
5	80	125										
6	101	125										
7	62	125										
8	101	125										
9	153	125										
10	153	125										
11	184	125										
12	184	125										
13	153	125										
14	153	125										
15	153	125										
16	153	125	b100									
17	153	125										
18	153	125										
19	153	125										
20	153	125										
21	153	125										
22	153	125										
23	153	125										
24	125	125										
25	125	125										
26	125	125										
27	125	125										
28	125	125										
29	125	125										
30	125	125										
31	125											
Total	4,066	3,750	3,100									
Mean	131	125	100									
Ac-ft	8,060	7,440	6,150									

Calendar year 1904: Max 16,900 Min 47 Mean 1,930 Ac-ft 1,400,000
Water year : Max Min Mean Ac-ft

b Stage-discharge affected by ice.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	140	140	250	312	2,560	907	688	2,310	1,360	560	210	180
2	143	146	254	295	1,970	798	*659	2,010	1,160	508	223	173
3	143	146	258	295	1,740	763	665	1,810	1,050	463	222	173
4	129	148	270	274	1,420	706	784	1,740	1,020	420	219	173
5	129	151	250	274	1,220	671	1,490	1,950	1,030	396	208	170
6	129	154	262	278	1,080	659	2,420	*2,230	988	356	219	170
7	127	157	312	283	997	648	2,210	2,420	997	312	235	170
8	124	157	270	278	931	848	1,940	2,580	*988	295	238	164
9	129	157	227	258	892	3,490	1,810	2,820	964	308	238	161
10	129	154	*242	238	847	5,150	1,620	3,450	1,160	295	235	167
11	129	154	231	270	777	3,660	1,520	3,460	1,350	254	246	167
12	124	157	231	250	1,610	2,530	1,580	3,300	1,230	238	254	161
13	120	157	240	197	2,830	1,980	1,830	2,990	1,190	274	242	161
14	120	154	215	246	2,700	1,690	*3,550	2,720	1,170	312	246	154
15	*140	164	231	274	2,280	1,450	3,380	2,590	1,180	316	242	170
16	154	157	235	283	1,760	1,320	2,940	2,620	1,540	*320	242	177
17	140	154	231	4,320	1,520	1,200	2,990	2,820	1,310	283	242	187
18	146	*164	223	3,890	1,930	1,100	3,240	2,780	1,170	270	*246	187
19	154	161	258	1,390	1,500	1,010	3,410	2,830	1,110	246	250	190
20	164	146	1,170	825	1,430	980	3,050	2,880	1,050	242	246	*161
21	154	151	838	*648	2,030	964	2,760	2,910	1,020	254	250	170
22	146	201	545	648	1,730	854	2,590	2,530	980	254	246	154
23	146	312	378	871	1,400	818	2,620	2,210	948	258	223	132
24	151	410	308	900	1,270	818	2,640	2,010	900	254	235	124
25	154	320	333	631	*1,240	825	2,660	1,930	840	246	250	120
26	154	262	329	534	1,180	847	2,650	1,740	798	262	242	115
27	146	278	287	576	1,070	884	2,640	1,560	892	262	254	109
28	151	425	291	770	980	884	3,330	1,320	798	254	246	102
29	151	342	266	2,690	-	811	3,150	1,120	688	254	190	98
30	143	283	242	4,070		744	2,710	1,140	609	246	177	111
31	140	-	212	3,520		706	------	1,160	------	227	197	------
Total	4,349	6,062	9,889	30,588	42,894	40,715	69,526	71,940	31,490	9,439	7,242	4,651
Mean	140	202	319	987	1,532	1,313	2,318	2,321	1,050	304	234	155
Ac-ft	8,630	12,020	19,610	60,670	85,080	80,760	137,900	142,700	62,460	18,720	14,360	9,230

Calendar year 1953: Max 9,470 Min 120 Mean 1,238 Ac-ft 896,200
Water year 1953-54: Max 5,150 Min 98 Mean 901 Ac-ft 652,100

* 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 1954 (winter records fragmentary prior to 1950).

Gage.--Water-stage recorder. Altitude of gage is 2,160 ft (by barometer).

Extremes.--1920-54: Maximum daily discharge, 220 cfs June 27, July 1, 1954; no flow at times when gates were closed.

Remarks.--Records excellent except those below 20 cfs, which are good, and those for periods of ice effect, no gage-height record, or indefinite stage-discharge relation, all of which are poor. Canal diverts water from right bank of Weiser River in sec. 35, T. 11 N., R. 4 W., for irrigation of about 11,700 acres, including about 1,200 acres irrigated from five diversions above station in projects of Weiser and Weiser Bench Irrigation Districts.

Cooperation.--Water-stage recorder inspected by employees of Weiser Irrigation District.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	119	3.2	12	6.2	5.2	4.8	0	198	210	220	189	155
2	122	3.2	11	b6.5	5.2	4.8	0	199	206	218	190	150
3	120	2.8	11	7.3	4.8	4.8	0	200	205	216	197	150
4	118	2.4	11	8.0	4.8	4.8	0	200	204	216	188	150
5	116	2.4	11	8.8	4.8	4.8	0	202	203	214	178	150
6	112	a2.2	10	b9.0	4.4	4.8	0	203	204	212	178	150
7	109	a2.0	10	10	4.4	4.8	1.5	*205	*205	211	192	150
8	105	1.8	10	b10	4.4	4.8	23	203	205	213	193	140
9	102	1.5	10	b9.5	4.4	3.1	a50	208	205	214	198	140
10	103	1.5	*10	8.0	4.4	.2	a75	213	208	212	195	140
11	103	1.8	8.8	9.6	4.4	0	99	214	208	208	198	140
12	103	1.8	5.7	b10	4.4	0	105	212	209	198	201	140
13	102	1.5	b6.0	b10	4.8	0	105	212	208	198	200	140
14	101	1.5	b8.0	10	4.8	0	108	214	208	214	199	135
15	*103	1.8	12	11	4.8	0	*116	212	208	214	198	150
16	98	1.8	12	11	4.4	0	136	212	208	*215	*194	160
17	88	1.8	12	16	4.4	0	143	213	205	212	192	165
18	92	*1.8	12	14	4.4	0	150	212	206	212	192	165
19	88	3.8	13	10	4.4	0	157	212	209	203	192	165
20	76	9.6	14	*7.3	4.4	0	165	213	209	202	193	*144
21	78	9.6	17	b7.3	4.4	0	172	214	209	203	192	136
22	69	10	14	7.3	4.4	0	184	212	210	203	190	135
23	98	11	b9.5	7.3	4.4	0	196	214	211	208	188	125
24	59	12	b11	6.7	4.4	0	202	213	215	206	190	116
25	22	12	b11	5.2	*4.4	0	202	215	217	206	190	111
26	46	12	b10	7.3	4.8	0	205	212	216	208	188	105
27	58	12	b9	6.2	4.8	0	205	210	220	209	188	96
28	104	12	b8	6.2	4.8	0	203	209	218	204	189	88
29	105	12	b7	7.3	-	0	199	211	212	205	165	79
30	88	12	b6.7	6.7		0	199	211	210	204	155	93
31	7.7		5.7	6.2	--	0	------	213	--- -	195	165	----
Total	2,814.7	164.8	318.4	265.9	128.4	41.7	3,400.5	6,491	6,271	6,473	5,857	4,063
Mean	90.8	5.49	10.3	8.57	4.59	1.35	113	209	209	209	189	135
Ac-ft	5,580	327	632	527	255	83	6,740	12,870	12,440	12,840	11,620	8,060

Calendar year 1953: Max 215 Min 0.9 Mean 91.0 Ac-ft 65,870
Water year 1953-54: Max 220 Min 0 Mean 99.4 Ac-ft 71,970

* Discharge measurement made on this day.
a No gage-height record; discharge estimated.
b Stage-discharge relation affected by ice.
Note.--Stage-discharge relation indefinite Apr. 18-21, Aug. 29 to Sept. 19; discharge estimated on basis of recorder record and records for Weiser River near Weiser.

Mann Creek near Weiser, Idaho

Location (revised).--Lat 44°23'30", long 116°53'40", in NE¼ 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 1954.

Gage.--Staff gage read twice daily. 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.--19 years (1911-13, 1937-54), 42.1 cfs (30,480 acre-ft per year).

Extremes.--Maximum discharge observed during year, 560 cfs Mar. 9 (gage height, 3.03 ft); minimum observed, 0.6 cfs Aug. 11; minimum gage height, 0.68 ft Oct. 1, 3-11, Aug. 11, Sept. 2, 3.

1911-13, 1920, 1937-54: 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. One diversion above station for irrigation.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 5-8, 12, 14, June 17 to Sept. 30)

0.5	0.5	1.4	47
.6	1.5	1.6	76
.7	3.6	1.9	141
.8	6.3	2.2	228
.9	9.5	2.5	330
1.0	14	3.0	520
1.2	27		

2

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.2	4.7	6.6	6.6	46	35	40	76	24	9.2	1.9	0.8
2	3.4	4.7	6.3	7.9	39	32	*38	68	21	9.2	1.7	.7
3	3.2	4.7	5.8	5.2	34	32	40	70	19	8.5	1.7	.7
4	3.2	5.0	5.0	6.3	34	30	54	55	19	7.9	1.5	.8
5	3.2	5.2	5.0	6.3	32	28	95	57	18	7.3	1.5	1.0
6	3.2	5.2	6.6	6.3	32	30	104	*60	18	7.3	1.5	1.1
7	3.2	5.2	6.9	6.6	36	29	89	62	18	7.3	1.5	1.2
8	3.2	5.2	3.4	6.0	35	117	86	62	*18	6.6	1.5	.9
9	3.2	5.5	6.5	5.5	32	~ 504	87	62	21	6.6	1.4	.8
10	3.2	5.5	*6.0	7.3	32	225	78	62	21	6.3	1.0	.8
11	3.2	5.5	6.0	6.3	27	124	86	56	19	6.3	.6	.9
12	3.4	5.2	6.0	7.9	55	102	95	52	18	6.0	.7	1.0
13	3.4	5.2	5.5	4.4	57	80	154	45	19	5.5	.8	1.1
14	*3.4	5.2	8.2	5.2	50	71	165	45	16	5.0	1.0	1.1
15	3.4	5.2	6.9	5.8	39	60	*141	43	19	*5.8	1.0	1.7
16	3.4	5.2	6.3	6.6	34	56	144	43	19	6.6	1.1	5.0
17	3.4	5.8	5.8	141	36	54	160	43	15	5.2	1.2	3.2
18	3.9	*5.8	6.6	32	37	47	168	42	15	4.7	*1.2	3.0
19	4.7	5.5	10	19	34	47	154	37	15	4.4	1.1	3.0
20	5.2	5.5	13	*11	32	47	144	37	14	3.6	1.4	2.1
21	4.7	6.0	9.2	16	37	47	134	34	14	3.6	3.4	2.6
22	4.7	8.5	5.5	16	*33	44	122	32	11	4.4	2.6	*2.1
23	4.4	10	5.2	13	31	43	122	31	10	3.6	1.5	2.1
24	4.4	9.2	6.6	13	36	43	127	28	10	3.2	2.1	1.5
25	4.4	8.2	7.3	13	42	42	124	27	12	3.0	3.0	1.5
26	4.7	8.2	7.9	11	42	43	124	28	12	2.8	2.6	1.5
27	4.7	8.9	7.8	11	37	44	115	28	12	2.8	2.6	1.7
28	4.7	8.2	7.6	15	36	43	106	26	12	2.3	1.9	1.4
29	5.0	6.9	7.3	35	-	42	95	21	11	1.9	1.2	1.9
30	5.0	6.9	8.2	87	-	40	86	21	10	1.9	1.1	2.8
31	5.0	-	7.3	66	-	39	------	22	------	1.9	.9	------
Total	121.3	186.0	212.3	599.2	1,047	2,220	3,277	1,375	480	160.7	48.2	50.0
Mean	3.91	6.20	6.85	19.3	37.4	71.6	109	44.4	16.0	5.18	1.55	1.67
Ac-ft	241	369	421	1,190	2,080	4,400	6,500	2,730	952	319	96	99

Calendar year 1953: Max 373 Min 1.4 Mean 52.6 Ac-ft 38,090
Water year 1953-54: Max 504 Min 0.6 Mean 26.8 Ac-ft 19,400

* Discharge measurement made on this day.

Snake River at Weiser, Idaho

Location.--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 1954. Fragmentary gage-height record obtained by U. S. 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, 30,000 cfs Apr. 15 (gage height, 7.22 ft); minimum, 9,820 cfs July 19 (gage height, 3.10 ft).

1910-54: Maximum discharge 84,500 cfs Apr. 29, 1952 (gage height, 14.67 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 U. S. 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.

Revisions (water years).--WSP 1317: 1918.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

3.1	9,820	6.0	23,000
4.0	13,300	7.1	29,300
5.0	17,800		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,700	15,800	14,300	14,100	18,000	15,500	16,200	23,100	27,000	19,200	11,900	12,000
2	13,500	14,700	14,300	14,800	19,200	15,800	17,400	21,800	27,600	18,000	10,800	12,100
3	13,800	13,800	14,300	14,600	19,000	17,000	16,400	19,400	22,600	17,300	10,100	13,300
4	13,600	14,700	14,700	14,000	16,700	15,900	15,800	18,600	19,800	18,600	10,200	13,900
5	13,200	15,600	15,100	14,000	15,400	15,600	17,000	18,600	19,200	18,100	10,900	12,100
6	13,100	14,900	13,900	14,400	15,300	16,000	22,200	20,000	18,600	13,500	11,700	11,100
7	14,500	16,000	13,300	14,900	15,200	15,800	23,800	20,900	17,400	12,200	11,900	11,000
8	15,100	14,300	12,800	14,900	15,000	19,100	22,800	22,100	16,100	13,400	11,100	10,900
9	14,500	13,500	14,000	14,900	14,900	23,700	22,100	22,600	17,400	12,100	9,970	11,600
10	14,800	12,600	13,700	14,700	14,800	28,900	22,200	23,500	19,000	12,500	10,300	13,100
11	14,800	12,600	14,600	14,300	14,900	26,100	22,600	24,700	21,300	11,700	11,100	12,800
12	13,700	13,700	*14,700	14,100	15,400	23,900	22,300	23,900	22,500	10,800	11,000	12,100
13	13,500	12,500	14,800	14,500	17,800	22,100	22,300	23,100	20,700	10,300	11,100	12,100
14	14,100	13,000	14,800	14,100	18,900	21,500	27,000	22,400	19,400	10,100	11,100	11,300
15	14,500	13,500	14,600	13,900	18,600	21,400	28,700	22,000	19,200	10,400	10,700	13,100
16	*15,400	13,900	14,400	13,800	16,900	20,400	27,200	21,900	*20,700	10,500	*10,200	13,500
17	15,200	12,700	13,700	16,300	16,200	20,100	25,700	23,000	22,300	*10,500	10,300	13,800
18	14,700	13,500	14,400	20,300	16,900	19,500	26,900	23,600	21,000	10,000	11,100	15,000
19	15,200	13,700	15,000	16,000	17,000	19,200	28,300	23,400	19,200	9,970	11,100	13,600
20	13,900	*14,400	15,700	15,200	16,600	17,800	*26,800	23,100	20,300	10,200	11,300	12,900
21	14,700	14,800	16,100	*14,700	17,400	18,000	25,000	24,200	19,600	10,100	11,700	*12,400
22	15,200	15,000	15,600	13,900	17,500	17,000	24,300	25,200	18,800	10,600	12,200	13,400
23	15,400	13,500	15,600	14,500	17,200	16,400	24,300	23,700	18,000	11,600	11,900	14,200
24	15,000	13,900	14,600	15,000	17,300	15,400	23,800	22,400	18,300	11,900	11,600	13,500
25	14,800	14,500	14,300	14,800	17,200	14,800	25,300	21,400	19,200	11,500	12,000	14,400
26	14,100	15,200	14,300	14,600	17,100	15,600	26,200	21,600	19,900	10,400	12,500	13,900
27	13,200	15,200	13,900	14,000	*16,800	15,100	23,200	*22,500	20,900	10,400	12,500	12,600
28	13,900	14,700	14,700	13,900	17,000	14,800	24,200	21,500	21,200	10,900	12,600	11,200
29	14,100	13,900	13,700	16,800	-	14,800	25,000	22,400	20,700	11,400	12,200	14,000
30	14,100	15,000	13,400	20,900	-	*14,500	24,000	22,500	17,800	11,200	11,100	13,900
31	14,900	-	13,900	19,100	----	15,400	------	23,500	------	11,400	10,900	------
Total	445,200	425,100	447,200	470,000	470,200	567,100	699,000	692,600	605,700	380,770	349,070	384,800
Mean	14,360	14,170	14,430	15,160	16,790	18,290	23,300	22,340	20,190	12,280	11,260	12,830
Ac-ft	883,000	843,200	887,000	932,200	932,600	‡1,125	‡1,386	‡1,374	‡1,201	755,200	692,400	763,200

Calendar year 1953: **Max** 56,400 **Min** 10,300 **Mean** 18,460 **Ac-ft** 13,360,000
Water year 1953-54: **Max** 28,900 **Min** 9,970 **Mean** 16,260 **Ac-ft** 11,770,000

* **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 1954.

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 Apr. 28 to May 5 (elevation, 3,820.0 ft); minimum observed, 1,290 acre-ft Nov. 21, 22 (elevation, 3,782.9 ft).

1938-54: 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 usable contents, water year October 1953 to September 1954

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	3,793.5	5,790	-
Oct. 31	3,784.1	1,650	-4,140
Nov. 30	3,783.4	1,440	-210
Dec. 31	3,785.2	2,030	+590
Calendar year 1953	-	-	-930
Jan. 31	3,788.7	3,430	+1,400
Feb. 28	3,798.2	8,470	+5,040
Mar. 31	3,808.3	15,370	+6,900
Apr. 30	3,820.0	25,220	+9,850
May 31	3,814.8	20,600	-4,620
June 30	3,812.4	18,590	-2,010
July 31	3,807.02	14,420	-4,170
Aug. 31	3,798.1	8,410	-6,010
Sept. 30	3,789.6	3,840	-4,570
Water year 1953-54	-	-	-1,950

† Elevation at 8 a.m.

Burnt River near Hereford, Oreg.

Location.--Lat 44°30'20", long 118°10'50", 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, 5 miles upstream from Camp Creek, and 7 miles west of Hereford.
Drainage area.--309 sq mi.
Records available.--March 1915 to September 1916, October 1928 to September 1954.
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. Oct. 22, 1928, to June 28, 1932, water-stage recorder at site half a mile downstream from present site at different datum. June 29, 1932, to Sept. 16, 1937, water-stage recorder at site 300 ft upstream from present site at different datum. Sept. 17, 1937, to Sept. 30, 1943, water-stage recorder at present site at datum 3.29 ft higher. Mar. 5, 1939, to Apr. 16, 1943, sharp-crested weir.
Average discharge.--25 years (1929-54), 80.5 cfs (58,280 acre-ft per year).
Extremes.--Maximum discharge during year, 336 cfs Apr. 19 (gage height, 3.82 ft); minimum, 12 cfs Feb. 16-25.
1915-16, 1928-54: Maximum discharge, 2,220 cfs Apr. 17, 1943 (gage height, 7.35 ft, present datum), caused by opening of automatic spillway gates, from rating curve extended above 1,300 cfs by logarithmic plotting; maximum gage height, 7.85 ft Apr. 16, 1943 (present datum), just before concrete control washed out; no flow at times; minimum discharge before construction of Unity Reservoir Dam, 1.6 cfs Aug. 31, 1935.
Remarks.--Records good except those for periods of no gage-height record, which are poor. 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).--WSP 903: 1939.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from debris Oct. 1 to Feb. 11; shifting-control method used June 17 to July 6)

Oct. 1 to Mar. 25		Mar. 26 to Sept. 30	
1.5	12	1.5	11
1.7	20	1.7	19
2.0	38	2.0	34
2.5	81	2.5	75
2.8	120	3.0	142
		3.3	200

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	73	a62	42	29	13	18	134	84	75	105	97
2	104	73	a62	43	29	13	19	114	65	66	118	96
3	102	72	a61	43	30	14	15	116	60	70	114	96
4	100	71	a60	43	30	14	15	*120	60	68	140	96
5	98	70	a60	43	30	14	15	120	*62	68	147	96
6	97	69	a59	43	30	14	15	113	62	66	147	94
7	96	68	58	43	31	14	15	133	63	85	*146	93
8	95	67	a50	43	*32	14	15	158	65	100	127	93
9	92	66	a45	43	32	14	*15	149	62	98	114	92
10	91	64	a40	43	32	14	15	164	65	97	108	91
11	104	62	37	31	22	15	16	151	63	91	106	91
12	108	60	37	24	20	15	16	118	63	90	109	90
13	105	58	37	24	20	15	16	114	66	93	102	90
14	104	58	38	24	20	15	16	119	60	96	105	*88
15	102	55	38	24	21	15	17	137	50	73	104	88
16	100	*54	38	24	15	15	17	132	39	72	*104	87
17	98	a55	39	25	12	16	17	130	105	70	103	87
18	97	a56	39	26	12	16	17	130	130	70	102	86
19	97	a58	39	26	12	16	133	130	105	69	102	94
20	95	a59	40	26	12	38	186	142	102	69	102	103
21	93	a60	40	26	12	28	186	155	99	68	100	102
22	91	a61	41	26	12	*17	186	162	96	67	100	102
23	88	a62	41	27	12	17	186	160	105	66	100	100
24	85	a63	42	27	12	17	186	156	113	64	99	98
25	84	64	42	27	13	25	184	125	103	63	99	97
26	82	a64	42	27	13	15	164	103	102	68	99	96
27	80	a64	42	27	13	14	166	100	102	77	99	94
28	75	a63	42	27	13	16	190	103	*88	75	98	102
29	75	a63	42	27	-	17	186	100	79	73	98	106
30	73	63	42	28		17	178	105	75	88	97	104
31	73	-	42	29	-	16	------	90	-----	102	97	------
Total	2,884	1,895	1,397	981	571	513	2,418	3,983	2,393	2,397	3,391	2,849
Mean	93.0	63.2	45.1	31.6	20.4	16.5	80.6	128	79.8	77.3	109	95.0
Ac-ft	5,720	3,760	2,770	1,950	1,130	1,020	4,800	7,900	4,750	4,750	6,730	5,650

Calendar year 1953: Max 598 Min 29 Mean 128 Ac-ft 92,540
Water year 1953-54: Max 190 Min 12 Mean 70.3 Ac-ft 50,930

* Discharge measurement made on this day.
a No gage-height record, discharge interpolated.

Powder River near Baker, Oreg.

Location.--Lat 44°39'20", long 117°52'30", in NE¼ sec. 36, T. 10 S., R. 39 E., on right bank 700 ft downstream from 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 1954 in reports of Geological Survey. January 1904 to July 1914 and June 1926 to September 1941 in reports of State engineer. Published as "near Baker City" December 1903 to December 1905, and as "at Salisbury" January 1906 to August 1914, June 1926 to September 1951.

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 mile downstream from present site at different datum.

Average discharge.--36 years (1904-13, 1926-28, 1929-54), 112 cfs (81,080 acre-ft per year).

Extremes.--Maximum discharge during year, 432 cfs May 10 (gage height, 3.55 ft); minimum, 8.4 cfs Sept. 28.
1903-14, 1926-54: 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).--WSP 813: 1935. WSP 1093: Drainage area.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 21		Jan. 22 to Sept. 30			
1.2	7.5	1.1	6.0	2.0	98
1.3	13	1.3	13	3.0	301
1.5	30	1.5	28	3.5	420
1.8	70	1.7	52		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	21	47	37	47	108	75	178	154	115	17	13
2	12	21	46	36	46	93	76	162	133	96	17	13
3	12	21	46	35	45	91	a78	154	124	81	15	12
4	14	20	46	35	42	90	a80	*156	117	74	15	12
5	*15	21	46	35	40	90	a90	156	*115	66	*14	13
6	15	23	46	30	38	91	a95	178	108	58	14	12
7	15	22	45	35	36	96	a100	226	115	56	14	11
8	16	22	35	30	35	124	a100	276	112	49	13	10
9	16	*22	36	25	*35	211	a100	347	124	47	13	10
10	15	21	38	25	35	287	a110	408	146	46	13	9.8
11	14	22	38	28	45	224	*a140	405	148	44	*12	9.0
12	13	22	37	30	55	176	150	383	146	42	12	9.0
13	15	23	35	28	70	156	198	347	174	40	13	9.0
14	15	24	37	32	95	142	*322	317	160	40	12	*8.7
15	19	26	37	37	90	133	322	312	158	42	12	8.7
16	18	26	36	40	80	124	283	333	182	38	13	9.0
17	18	a25	36	45	96	120	324	352	162	37	13	10
18	25	a25	38	40	93	106	388	357	150	31	13	9.4
19	27	a26	47	35	78	105	378	378	141	30	13	9.0
20	24	a28	64	30	78	101	308	378	135	27	14	9.0
21	25	a30	*52	35	86	100	274	349	126	25	14	9.0
22	24	35	45	40	81	*98	252	296	112	28	15	8.7
23	23	52	40	45	83	91	260	256	98	28	14	8.7
24	22	43	40	40	98	93	263	226	91	25	15	9.0
25	22	43	40	35	119	91	245	207	90	24	15	9.0
26	22	43	41	38	124	93	241	196	90	23	15	8.7
27	22	47	38	40	110	93	243	188	90	20	15	8.7
28	23	50	38	42	110	93	249	168	*88	20	15	8.7
29	22	51	35	45	-	83	217	156	84	19	14	8.7
30	22	50	30	47	-	75	200	148	86	18	14	8.7
31	22	---	32	49	--	76	------	148	------	18	13	------
Total	579	905	1,267	1,124	1,990	3,654	6,161	8,141	3,759	1,307	431	294.5
Mean	18.7	30.2	40.9	36.3	71.1	118	205	263	125	42.2	13.9	9.82
Ac-ft	1,150	1,800	2,510	2,230	3,950	7,250	12,220	16,150	7,460	2,590	855	584

Calendar year 1953: Max 771 Min 12 Mean 161 Ac-ft 116,700
Water year 1953-54: Max 408 Min 8.7 Mean 81.1 Ac-ft 58,750

Peak discharge (base, 300 cfs).--Mar. 10 (7 p.m.) 319 cfs (3.08 ft); Apr. 18 (1 to 4 p.m.) 400 cfs (3.42 ft); May 10 (3 p.m.) 432 cfs (3.55 ft); May 19 (12 m.) 400 cfs (3.42 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and records for station near Robinette.
Note.--Stage-discharge relation affected by ice Dec. 7-9, 22-25, 27-31, Jan. 7-14, 17-30, Feb. 3-13.

Powder River near Robinette, Oreg.

Location.--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, approximately.

Records available.--September 1928 to September 1954.

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.--26 years, 522 cfs (377,900 acre-ft per year).

Extremes.--Maximum discharge during year, 1,700 cfs May 19 (gage height, 3.18 ft); minimum, 92 cfs Sept. 8, 10, 11 (gage height, 0.25 ft).
1928-54: Maximum discharge, 5,320 cfs May 28, 1948 (gage height, 6.6 ft, from floodmark); minimum observed, 18 cfs Sept. 2-10, 1931.

Remarks.--Records excellent. 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).

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.2	84	1.5	510
.8	163	2.0	790
1.0	290	3.0	1,540

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	171	202	199	199	362	460	388	525	640	616	114	137
2	179	202	202	176	342	415	384	490	595	565	109	133
3	220	202	205	176	330	402	374	*480	565	560	100	114
4	230	199	205	179	322	392	384	485	570	595	100	105
5	233	202	196	221	318	392	470	595	550	628	102	109
6	*230	211	187	279	314	397	525	694	530	590	104	107
7	223	205	174	298	314	392	530	760	525	545	118	100
8	217	199	158	230	*318	424	560	955	495	470	118	98
9	217	*196	185	163	322	646	585	1,170	550	438	118	100
10	214	190	185	179	318	820	545	1,340	634	410	116	100
11	220	193	163	236	306	724	530	1,200	622	374	*109	95
12	217	193	182	243	362	664	540	1,110	658	370	114	102
13	211	199	179	236	388	634	664	990	742	358	128	105
14	202	196	174	290	442	616	913	941	784	334	128	*111
15	211	190	182	286	500	590	838	1,020	1,030	370	122	133
16	211	185	171	275	480	570	820	1,180	1,130	358	126	144
17	205	199	166	334	460	560	955	1,270	1,000	326	141	151
18	220	187	168	322	475	540	1,100	1,330	962	298	149	171
19	275	185	197	290	465	505	1,070	1,500	906	268	153	171
20	268	187	257	182	485	505	962	1,500	844	214	163	163
21	257	185	*243	202	505	500	885	1,470	913	179	185	156
22	250	199	205	322	510	490	838	1,250	899	171	199	146
23	253	211	158	338	500	*475	857	1,100	955	174	196	144
24	257	202	171	253	490	475	814	1,050	934	166	190	141
25	250	196	163	233	495	456	754	1,000	857	158	199	139
26	246	202	196	260	485	446	730	832	899	153	199	144
27	246	223	179	290	485	446	718	712	1,000	156	190	133
28	243	223	161	310	465	442	754	616	802	139	185	124
29	236	202	185	342	-	438	658	575	*676	124	171	128
30	220	202	149	370	--	415	580	590	658	120	156	137
31	205	----	166	406	----	402	------	605	------	118	144	------
Total	7,037	5,967	5,701	8,120	11,558	15,633	20,725	29,335	22,925	10,345	4,446	3,841
Mean	227	199	184	262	413	504	691	946	764	334	143	128
Ac-ft	13,960	11,840	11,310	16,110	22,920	31,010	41,110	58,190	45,470	20,520	8,820	7,620

Calendar year 1953: Max 3,860 Min 139 Mean 810 Ac-ft 586,100
Water year 1953-54: Max 1,500 Min 95 Mean 399 Ac-ft 288.900

Peak discharge (base, 1,100 cfs).--Apr. 19 (4 a.m.) 1,150 cfs (2.52 ft); May 10 (1 a.m.) 1,530 cfs (2.99 ft); May 19 (2:30 a.m.) 1,700 cfs (3.18 ft); June 15 (11:30 p.m.) 1,290 cfs (2.70 ft).
* Discharge measurement made on this day.

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 former Oxbow powerplant and 2½ miles upstream from Indian Creek.

Drainage area.--72,800 sq mi, approximately.

Records available.--May 1923 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 11,696.71 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, 31,400 cfs Apr. 16 (gage height, 13.06 ft); minimum, 9,740 cfs Aug. 10 (gage height, 8.06 ft).

1923-54: Maximum discharge, 89,700 cfs Apr. 28, 1952 (gage height, 23.10 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 except those for period of no gage-height record, which are good. Flow regulated by many reservoirs above station. Diurnal fluctuation caused by Swan Falls power plant. About 2,243,000 acres of land irrigated by diversions from river and its tributaries above station.

Revisions.--Revised figures of discharge, in cubic feet per second, for a period in the water year 1925, superseding those published in WSP 613 are given herewith:

Jan. 1-19, 1925..... †13,500
Jan. 20-26, 1925..... †14,000
† Flat estimate for indicated period

Month	Maximum	Minimum	Mean	Runoff in acre-feet
January 1925.....	27,800	-	14,600	898,000
Water year 1924-25.....	67,600	7,150	20,500	14,800,000
Calendar year 1925.....	67,600	7,150	22,100	16,000,000

Rating table, water year 1953-54 (gage height, in feet, and discharge in cubic feet per second)
(Shifting-control method used Apr. 14 to June 3)

8.1	9,860	10.0	16,500
8.5	11,100	11.0	20,600
9.0	12,800	13.0	30,200

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,900	15,400	15,100	14,200	a19,000	17,000	16,000	24,700	25,600	18,800	11,700	11,300
2	14,300	15,600	14,500	14,900	19,000	15,700	17,500	24,100	28,700	19,500	11,400	12,100
3	13,800	14,100	14,700	15,200	19,300	17,100	*17,500	22,100	27,200	18,200	10,400	12,300
4	13,900	14,000	14,600	14,700	18,700	17,100	16,900	20,500	21,500	18,700	10,000	13,400
5	13,700	15,200	15,400	14,200	16,300	16,000	16,900	20,000	20,600	19,300	10,300	13,800
6	13,400	15,200	14,800	14,500	15,800	16,300	20,300	21,200	19,800	17,000	11,000	11,400
7	13,700	15,400	13,900	15,200	15,700	16,300	24,300	22,500	19,300	13,600	11,700	11,200
8	14,900	15,500	13,300	15,300	15,600	17,000	24,200	23,500	17,900	13,100	11,800	11,000
9	15,300	13,900	13,700	15,300	15,400	21,900	23,200	24,600	17,700	13,500	10,500	11,000
10	14,700	13,400	14,000	15,200	15,400	28,100	23,000	25,400	19,000	12,700	9,890	12,200
11	14,900	12,300	*14,200	15,100	15,200	28,200	23,100	27,000	20,900	12,800	10,500	13,100
12	14,800	13,300	14,900	14,400	15,600	25,200	23,400	26,600	22,900	11,900	10,800	12,800
13	13,400	13,400	14,900	14,500	17,100	23,100	23,400	25,700	23,000	11,000	11,000	12,000
14	13,900	12,700	15,100	15,000	18,700	22,000	26,200	24,600	21,000	10,700	11,100	12,000
15	14,300	13,400	15,000	14,300	19,500	21,900	30,000	24,200	20,500	*10,600	10,800	11,800
16	14,900	13,700	14,700	14,300	18,500	21,200	30,100	24,500	21,000	10,800	10,300	13,600
17	*15,600	13,500	14,200	14,200	17,200	20,600	27,900	24,600	*22,800	10,900	*10,200	13,800
18	15,000	13,100	14,100	20,600	17,000	20,300	28,500	25,700	23,000	10,700	10,500	14,500
19	15,300	*13,500	14,700	18,300	17,700	19,600	*29,700	26,200	21,000	10,400	11,200	14,900
20	14,900	14,100	15,700	16,000	17,500	19,200	29,600	25,800	20,800	10,200	11,300	13,600
21	14,200	14,500	16,700	15,400	17,600	18,400	27,700	25,900	20,900	10,200	11,500	*12,800
22	14,900	15,300	15,900	*15,000	18,100	18,400	26,000	27,100	20,600	10,300	12,100	12,800
23	15,500	14,800	15,800	15,000	18,000	17,100	25,900	26,500	19,500	10,800	12,400	13,700
24	15,400	13,500	15,500	a15,500	17,800	16,800	26,200	24,600	19,100	11,900	12,000	14,200
25	15,100	14,600	14,400	a15,500	18,000	15,700	25,600	23,800	19,700	11,800	12,000	14,000
26	14,700	14,600	14,800	a15,000	*17,700	15,800	27,900	*22,600	20,500	11,100	12,300	14,500
27	13,700	15,800	14,500	a14,500	17,500	16,100	26,400	23,400	21,400	10,400	12,700	13,800
28	13,500	15,100	14,100	a14,500	17,500	15,600	25,200	23,200	21,800	10,400	12,800	12,000
29	14,100	14,900	15,100	a15,500	-	15,600	26,600	22,900	21,700	11,200	12,700	12,000
30	14,300	14,400	13,500	a21,000	------	15,100	26,100	23,200	20,400	11,100	12,100	14,200
31	14,300	------	14,000	a21,000	------	15,400	------	24,100	------	11,100	10,900	------
Total	449,300	428,200	455,800	483,300	486,400	583,800	735,300	750,800	639,800	394,700	349,890	385,800
Mean	14,490	14,270	14,700	15,590	17,370	18,830	24,510	24,220	21,330	12,730	11,290	12,860
Ac-ft	891,200	849,300	904,100	958,600	964,800	‡1,158	‡1,456	‡1,489	‡1,269	782,900	694,000	765,200

Calendar year 1953: Max 59,900 Min 10,600 Mean 19,380 Ac-ft 14,030,000
Water year 1953-54: Max 30,100 Min 9,890 Mean 16,830 Ac-ft 12,180,000

* 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 Weiser.

Imnaha River at Imnaha, Oreg.

Location.--Lat 45°34', long 116°50', in SW¼ sec. 16, T. 1 N., R. 48 E., on left bank at Imnaha, three-eighths of a mile downstream from Sheep Creek.

Drainage area.--640 sq mi, approximately.

Records available.--June 1928 to September 1954.

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.--26 years, 476 cfs (344,600 acre-ft per year).

Extremes.--Maximum discharge during year, 2,160 cfs May 10 (gage height, 4.63 ft); minimum, 82 cfs Dec. 8.
1928-54: Maximum discharge, 5,700 cfs May 28, 1948 (gage height, 7.06 ft); minimum observed, 16 cfs Nov. 22, 1931.

Remarks.--Records excellent. Diversions for irrigation of about 4,000 acres above station. 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).--WSP 883: 1938. WSP 1217: Drainage area.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 8		Dec. 9 to Sept. 30			
1.7	100	1.6	96	3.5	930
1.9	154	2.0	197	4.0	1,390
2.1	216	2.5	372	4.6	2,120
		3.0	615		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	129	129	166	165	*225	254	264	874	832	*916	241	163
2	132	134	163	152	231	228	258	778	742	874	235	158
3	132	*132	157	158	228	244	261	766	712	846	*228	158
4	129	132	163	158	225	241	303	818	730	874	222	158
5	129	134	157	163	228	248	560	1,030	718	946	219	158
6	123	140	160	163	235	254	754	1,260	700	930	212	152
7	121	140	132	165	238	261	712	1,400	694	867	206	147
8	118	132	100	163	248	278	670	1,610	659	778	203	*145
9	118	132	158	137	258	582	676	1,820	724	778	200	145
10	116	129	185	147	264	1,040	620	2,070	1,010	694	188	137
11	116	134	152	165	248	754	604	1,910	1,200	659	185	135
12	121	140	163	135	326	588	654	1,730	1,150	654	182	135
13	118	148	145	103	451	480	790	1,510	1,130	632	185	135
14	116	148	165	163	419	442	1,070	1,390	1,130	604	188	135
15	116	146	174	165	368	410	986	1,400	1,240	658	197	197
16	126	148	165	174	329	*393	938	1,540	1,390	670	200	206
17	126	194	160	219	311	380	1,150	1,660	1,160	604	194	174
18	132	154	158	203	311	352	1,340	1,700	1,040	535	185	177
19	194	137	163	174	278	329	1,310	1,860	1,030	485	185	160
20	157	146	197	130	272	329	1,140	*1,910	978	446	209	155
21	143	137	188	200	268	307	1,040	1,890	1,040	414	222	150
22	140	143	171	219	258	296	1,040	1,580	1,110	385	206	147
23	140	178	*128	206	254	289	1,140	1,370	1,240	360	200	145
24	137	160	147	152	258	296	1,160	1,280	1,290	341	200	142
25	134	154	150	130	264	292	1,170	1,310	1,220	322	209	140
26	134	169	163	140	275	292	*1,190	1,120	1,290	341	197	137
27	137	178	168	171	268	300	1,200	954	1,490	326	191	135
28	137	190	158	185	258	300	1,310	846	1,190	289	182	140
29	134	175	165	194	-	264	1,170	797	1,000	275	171	150
30	132	169	137	194		261	1,030	839	954	261	165	145
31	132		147	209	- ---	272	------	811	------	251	168	------
Total	4,069	4,482	4,905	5,202	7,796	11,256	26,510	41,833	30,793	18,015	6,175	4,561
Mean	131	149	158	168	278	363	884	1,349	1,026	581	199	152
Ac-ft	8,070	8,890	9,730	10,320	15,460	22,330	52,580	82,970	61,080	35,730	12,250	9,050

Calendar year 1953: Max 2,740 Min 100 Mean 600 Ac-ft 434,200
Water year 1953-54: Max 2,070 Min 100 Mean 454 Ac-ft 328,500

Peak discharge (base, 1,300 cfs).--Apr. 19 (4 a.m.) 1,400 cfs (4.01 ft); Apr. 28 (4:30 a.m.) 1,390 cfs (4.00 ft); May 10 (6:30 a.m.) 2,160 cfs (4.63 ft); May 20 (3:30 a.m.) 2,070 cfs (4.56 ft); June 16 (2 to 4 a.m.) 1,540 cfs (4.13 ft); June 27 (7 a.m.) 1,690 cfs (4.26 ft); July 15 (8:30 p.m.) 2,030 cfs (4.53 ft).
* Discharge measurement made on this day.

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Valley Creek at Stanley, Idaho

Location.--Lat 44°13', long 114°56', in sec. 3, T. 10 N., R. 13 E., on left bank 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 1954.

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 datums. May 2, 1921, to Apr. 30, 1949, staff gage at present site and datum.

Average discharge.--34 years (1911-13, 1922-54), 194 cfs (140,400 acre-ft per year).

Extremes.--Maximum discharge during year, 1,240 cfs June 27 (gage height, 3.27 ft); minimum, 59 cfs Nov. 18 (gage height, 0.83 ft).
1910-13, 1921-54: 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 excellent except those for periods of ice effect, which are fair. Diversions for irrigation of about 590 acres above station.

Revisions (water years).--WSP 362: 1911-12.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	68	2.1	475
1.0	82	2.5	680
1.2	120	3.0	990
1.5	212	3.3	1,240
1.8	333		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	92	103	97	b85	b90	84	369	505	647	184	116
2	99	116	*94	94	b85	b80	84	378	421	625	171	114
3	99	99	87	89	b85	b85	87	392	397	595	171	112
4	97	96	94	90	b85	b85	99	421	402	590	165	110
5	96	97	94	89	b85	b85	130	500	485	615	168	110
6	96	105	90	84	b85	b85	136	545	465	642	174	107
7	94	99	82	87	b80	84	123	575	431	620	165	107
8	94	92	84	87	b80	87	123	600	407	590	152	107
9	92	89	94	b82	b80	99	125	642	460	565	141	105
10	92	89	89	b82	b80	110	116	753	510	535	136	105
11	94	101	84	b80	b85	103	116	819	441	520	133	103
12	92	103	94	b75	90	b100	118	801	436	515	146	105
13	92	101	b85	b80	94	99	143	753	455	505	171	103
14	92	101	90	*b80	94	99	177	724	495	510	152	101
15	94	103	96	b80	94	96	184	718	*585	*515	141	114
16	94	97	94	b79	92	96	205	735	789	500	130	120
17	94	96	94	75	92	94	254	777	647	470	128	112
18	94	74	92	75	*92	92	316	801	575	421	128	112
19	97	72	96	b75	b90	87	338	843	545	388	125	107
20	94	84	110	b70	*92	89	320	920	535	351	125	107
21	94	90	99	b75	92	85	307	*1,050	580	329	133	107
22	92	94	b85	b80	b90	85	333	990	647	303	141	105
23	90	110	b80	b85	94	*82	392	862	747	274	128	107
24	94	105	b86	b85	90	85	436	789	843	254	*123	103
25	92	103	b90	b80	92	84	485	765	881	242	123	*101
26	90	107	b92	b80	90	84	530	730	983	242	138	101
27	*92	138	96	b80	90	87	550	669	1,200	235	141	99
28	92	130	b90	b85	92	87	600	565	955	220	128	96
29	92	114	92	89	-	85	*535	510	759	208	123	97
30	92	107	b85	90	------	82	431	500	680	198	118	99
31	90	-----	b95	90	-----	81	-----	465	------	191	118	------
Total	2,898	3,004	2,836	2,569	2,475	2,772	7,877	20,961	18,261	13,415	4,420	3,192
Mean	93.5	100	91.5	82.9	88.4	89.4	263	676	609	433	143	106
Cfsm	0.531	0.568	0.520	0.471	0.502	0.508	1.49	3.84	3.46	2.46	0.812	0.602
In.	0.61	0.63	0.60	0.54	0.52	0.59	1.66	4.43	3.86	2.83	0.93	0.67
Ac-ft	5,750	5,960	5,630	5,100	4,910	5,500	15,620	41,580	36,220	26,610	8,770	6,330

Calendar year 1953: Max 983 Min 65 Mean 215 Cfsm 1.22 In. 16.57 Ac-ft 155,700
Water year 1953-54: Max 1,200 Min 70 Mean 232 Cfsm 1.32 In. 17.87 Ac-ft 168,000

Peak discharge (base, 600 cfs).--Apr. 28 (7 p.m.) 789 cfs (2.69 ft); May 21 (12 m. to 2:30 p.m.) 1,090 cfs (3.13 ft); June 16 (5 to 8 a.m.) 849 cfs (2.76 ft); June 27 (7 to 10 a.m.) 1,240 cfs (3.27 ft).

* Discharge measurement made on this day.
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 1954.

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.--29 years, 647 cfs (468,400 acre-ft per year).

Extremes.--Maximum discharge during year, 4,280 cfs June 27 (gage height, 4.15 ft); minimum recorded, 300 cfs Mar. 2, but may have been less during period of no gage-height record.

1925-54: 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 excellent except those for period of no gage-height record, which are fair. Diversions above station for irrigation of about 6,000 acres.

Rating table, water year 1953-54 (gage height, in feet, and discharge in cubic feet per second)

1.0	320	2.0	1,170
1.2	430	3.0	2,450
1.5	660	4.1	4,190

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	350	424	424	370	370	365	370	1,050	1,600	2,420	660	437
2	360	479	*400	360	365	345	370	1,050	1,410	2,300	644	430
3	365	444	382	360	360	355	370	1,090	1,300	2,180	620	424
4	365	430	400	360	360	355	380	1,160	1,280	2,140	604	424
5	360	437	400	360	360	355	420	1,350	1,460	2,180	588	424
6	365	465	394	350	360	365	472	1,510	1,460	2,240	572	418
7	365	437	370	360	360	365	465	1,630	1,400	2,200	548	406
8	365	424	360	360	360	370	465	1,780	1,290	2,100	532	406
9	360	424	394	350	360	406	465	1,940	1,360	2,020	500	394
10	360	424	382	330	360	424	465	2,250	1,400	1,890	493	388
11	360	444	355	330	350	406	451	2,480	1,290	1,820	479	388
12	360	451	394	330	370	370	451	2,500	1,270	1,780	500	382
13	365	451	350	340	400	360	479	2,440	1,320	1,740	516	382
14	370	437	365	*350	390	360	548	2,370	1,440	1,730	486	376
15	370	444	382	360	390	350	564	2,350	*1,670	*1,770	472	388
16	376	424	382	360	390	370	596	2,420	2,200	1,730	458	406
17	376	424	370	360	380	370	687	2,600	2,000	1,630	451	382
18	376	360	388	360	*365	360	810	2,700	1,840	1,510	451	382
19	388	345	382	370	370	350	830	2,860	1,730	1,400	437	382
20	388	382	412	350	382	360	790	3,150	1,680	1,290	437	376
21	388	394	394	360	382	350	790	*3,590	1,810	1,210	472	376
22	388	412	355	380	365	350	840	3,550	2,040	1,120	486	376
23	400	451	335	390	382	*365	940	3,130	2,390	1,030	458	394
24	430	437	335	380	376	360	1,030	2,810	2,810	950	*458	388
25	424	424	335	380	370	360	1,160	2,690	3,050	900	465	*376
26	418	444	345	370	376	350	1,250	2,560	3,370	880	486	365
27	*418	486	365	380	370	360	1,320	2,340	4,140	840	479	360
28	424	472	365	382	370	370	1,440	2,020	3,660	810	465	355
29	424	437	370	388	-	370	1,340	1,800	3,000	770	451	360
30	418	430	350	382	------	360	*1,190	1,680	2,620	723	451	370
31	418	-----	370	376	------	350	------	1,560	------	696	451	------
Total	11,894	12,937	11,605	11,238	10,393	11,306	21,748	68,410	59,290	47,999	15,570	11,715
Mean	384	431	374	363	371	365	725	2,207	1,976	1,548	502	390
Cfsm	0.718	0.806	0.699	0.679	0.693	0.682	1.36	4.13	3.69	2.89	0.938	0.729
In.	0.83	0.90	0.81	0.78	0.72	0.79	1.51	4.76	4.12	3.34	1.08	0.81
Ac-ft	23,590	25,660	23,020	22,290	20,610	22,430	43,140	135,700	117,600	95,200	30,880	23,240

Calendar year 1953: Max 3,090 Min 306 Mean 710 Cfsm 1.33 In. 18.01 Ac-ft 513,900
Water year 1953-54: Max 4,140 Min 330 Mean 806 Cfsm 1.51 In. 20.45 Ac-ft 583,400

Peak discharge (base, 1,700 cfs).--May 21 (2 to 8 p.m.) 3,710 cfs (3.81 ft); June 16 (7 to 9 a.m.) 2,280 cfs (2.88 ft); June 27 (1:30 p.m.) 4,280 cfs (4.15 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 29 to Jan. 27, Feb. 3-17, Mar. 12 to Apr. 6, except for staff-gage reading Mar. 23; discharge estimated on basis of weather records, 3 discharge measurements, 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 1954.
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.--31 years (1922-24, 1925-54), 946 cfs (684,900 acre-ft per year).
Extremes.--Maximum discharge during year, 6,550 cfs May 21 (gage height, 9.21 ft); minimum, 344 cfs Mar. 2 (gage height, 2.16 ft).
1921-54: Maximum discharge, 8,000 cfs (estimated) June 27, 1927; minimum, 160 cfs (estimated) Nov. 25-30, 1929.
Remarks.--Records excellent. Diversions for irrigation of about 6,000 acres above Stanley.
Revisions.--Revised figures of discharge, in cubic feet per second, for high-water period in the water year 1931, superseding those published in WSP 723 are given herewith:

1931		1931-Con.	
May 12	1,600	May 16	2,100
13	1,750	17	2,000
14	1,900	18	1,900
15	2,000		

Month	Maximum	Minimum	Mean	Per square mile	Runoff	
					Inches	Acre-feet
May 1931	2,100	1,160	1,650	1.96	2.26	101,000
Water year 1930-31	2,120	231	571	.679	9.22	413,000
Calendar year 1931	2,120	212	542	.644	8.73	392,000

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.2	362	6.0	3,070
2.6	559	8.0	5,180
3.0	773	9.2	6,540
4.0	1,410		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	458	518	534	463	473	448	453	1,560	2,510	3,460	930	595
2	478	575	493	443	458	400	458	1,490	2,220	3,270	907	590
3	478	549	473	443	453	414	463	1,530	2,100	3,090	867	575
4	483	528	*508	448	453	419	493	1,630	2,140	2,990	856	569
5	478	539	498	453	448	414	590	2,060	2,480	3,020	856	569
6	478	569	508	438	453	424	622	2,500	2,470	3,050	867	564
7	478	539	473	448	443	438	569	2,740	2,290	2,940	834	549
8	483	518	443	448	443	453	564	3,000	2,100	2,820	795	549
9	483	518	493	434	453	498	575	3,360	2,140	2,670	762	544
10	478	523	493	404	448	539	544	4,040	2,210	2,490	740	539
11	473	544	448	404	434	518	549	4,340	2,100	2,350	729	528
12	473	544	488	409	473	468	585	4,300	2,100	2,280	746	523
13	483	544	448	419	493	453	669	4,150	2,200	2,200	800	523
14	478	534	458	438	488	463	834	4,000	2,410	2,190	751	518
15	478	544	498	438	483	443	873	4,020	*2,750	*2,270	724	534
16	488	523	493	443	473	468	925	4,300	3,440	2,220	691	569
17	488	518	473	*453	473	468	1,150	4,720	3,150	2,090	669	544
18	488	443	468	453	473	458	1,350	4,950	2,880	1,920	664	539
19	498	409	488	463	*443	438	1,400	5,290	2,720	1,800	648	528
20	488	453	534	434	473	453	1,280	5,930	2,680	1,680	643	523
21	493	493	508	443	478	434	1,240	6,470	2,930	1,580	691	523
22	488	518	448	468	448	429	1,340	*6,000	3,350	1,470	729	523
23	513	569	404	488	473	429	1,530	5,200	3,890	1,370	*675	544
24	539	554	404	483	468	448	1,660	4,670	4,430	1,280	643	*544
25	528	539	414	468	468	*443	1,850	4,490	4,640	1,210	627	534
26	523	554	438	453	473	438	1,980	4,190	5,250	1,180	675	528
27	*523	606	458	468	453	458	2,060	3,770	5,950	1,140	664	523
28	523	606	453	473	448	463	2,120	3,260	5,090	1,100	638	513
29	523	559	463	493	-	458	2,050	2,890	4,220	1,040	616	518
30	523	544	424	498	------	443	*1,790	2,680	3,730	1,000	606	534
31	518	-----	458	483	-----	434	-----	2,480	------	965	611	------
Total	15,304	15,974	14,584	13,994	12,940	13,954	32,566	116,010	92,570	64,135	22,654	16,256
Mean	494	523	470	451	462	450	1,086	3,742	3,086	2,069	731	542
Cfsm	0.587	0.633	0.559	0.536	0.549	0.535	1.29	4.45	3.67	2.46	0.869	0.644
In.	0.68	0.71	0.64	0.62	0.57	0.62	1.44	5.13	4.09	2.84	1.00	0.72
Ac-ft	30,360	31,680	28,930	27,760	25,670	27,680	64,590	230,100	183,600	127,200	44,930	32,240

Calendar year 1953: Max 5,640 Min 390 Mean 1,093 Cfsm 1.30 In. 17.64 Ac-ft 791,600
Water year 1953-54: Max 6,470 Min 400 Mean 1,181 Cfsm 1.40 In. 19.06 Ac-ft 854,700

Peak discharge (base, 2,350 cfs).--Apr. 28 (10 p.m.) 2,450 cfs (5.32 ft); May 21 (10 to 12 a.m.) 6,550 cfs (9.21 ft); June 16 (8 a.m.) 3,560 cfs (6.49 ft); June 26 (about 12 p.m.) 6,420 cfs (about 9.10 ft).
* Discharge measurement made on this day.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 5,163.99 ft above mean sea level, datum of 1929.

Average discharge.--26 years, 1,407 cfs (1,019,000 acre-ft per year).

Extremes.--Maximum discharge during year, 9,540 cfs June 27 (gage height, 8.79 ft); minimum, 367 cfs Jan. 21 (gage height, 1.69 ft).
1928-54: Maximum discharge, 10,600 cfs May 28, 1951 (gage height, 8.74 ft); minimum, 160 cfs Dec. 14, 1940.

Remarks.--Records excellent. Diversions for irrigation of about 10,000 acres above station.

Revisions.--WSP 1043: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.9	485	5.0	3,200
2.5	835	6.0	4,600
3.0	1,190	7.0	6,210
4.0	2,070	8.7	9,360

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	764	802	816	728	674	656	628	2,160	3,500	4,920	1,480	921
2	764	861	*770	639	639	562	644	2,050	3,210	4,690	1,430	907
3	776	868	734	686	639	578	644	2,070	3,020	4,420	1,380	887
4	776	828	746	656	644	595	680	2,100	3,000	4,320	1,340	868
5	776	822	734	722	644	606	802	2,520	3,380	4,340	1,330	868
6	770	861	764	686	644	628	900	3,170	3,520	4,450	1,360	861
7	764	835	722	686	612	668	822	3,500	3,330	4,270	1,310	848
8	758	796	628	686	590	662	796	3,840	3,120	4,080	1,270	842
9	758	796	704	668	617	710	816	4,240	3,050	3,370	1,230	835
10	764	796	764	540	650	809	770	5,240	3,250	3,650	1,180	828
11	758	828	639	573	628	764	770	5,730	3,080	3,490	1,150	809
12	758	835	746	600	710	692	816	5,750	3,050	3,410	1,150	802
13	770	842	674	595	746	668	907	5,570	3,150	3,290	1,250	802
14	770	828	674	680	728	674	1,120	5,350	3,370	*3,250	1,200	796
15	764	828	783	698	698	662	1,230	5,360	*3,670	3,400	1,140	790
16	770	816	752	698	686	692	1,270	5,720	4,560	3,400	1,110	868
17	776	802	728	*704	692	686	1,530	6,400	4,330	3,190	1,080	842
18	776	716	704	674	*704	674	1,820	6,770	3,950	2,930	1,060	816
19	790	578	734	680	622	644	1,930	7,310	3,730	2,730	1,040	816
20	783	600	770	562	692	650	1,820	8,330	3,670	2,580	1,020	802
21	783	764	770	551	692	639	1,710	9,300	4,020	2,410	1,060	796
22	783	783	692	728	650	606	1,780	*8,430	4,600	2,250	1,130	796
23	783	861	502	734	680	606	2,000	7,230	5,480	2,120	*1,080	809
24	842	854	507	686	692	639	2,170	6,410	6,350	1,990	1,030	*822
25	842	822	546	622	692	*634	2,410	6,120	6,660	1,890	1,000	809
26	828	822	612	584	698	634	2,580	5,730	7,110	1,830	1,030	802
27	828	868	680	674	656	639	2,710	5,190	8,880	1,810	1,050	796
28	*828	928	662	698	662	650	2,680	4,560	7,400	1,740	1,010	776
29	828	861	686	728	-	650	2,760	4,070	6,010	1,670	977	776
30	822	828	584	734	------	622	*2,490	3,790	5,270	1,610	949	809
31	816	-----	634	710	-----	595	-----	3,510	------	1,550	935	------
Total	24,368	24,329	21,461	20,610	18,681	20,194	44,005	157,520	130,720	95,550	35,761	24,799
Mean	786	811	692	665	667	651	1,467	5,081	4,357	3,082	1,154	827
Cfsm	0.437	0.451	0.384	0.369	0.371	0.362	0.815	2.82	2.42	1.71	0.641	0.459
In.	0.50	0.50	0.44	0.43	0.39	0.42	0.91	3.25	2.70	1.97	0.74	0.51
Ac-ft	48,330	48,260	42,570	40,880	37,050	40,050	87,280	312,400	259,300	189,500	70,930	49,190

Calendar year 1953: Max 8,470 Min 502 Mean 1,611 Cfsm 0.895 In. 12.13 Ac-ft 1,166,000
Water year 1953-54: Max 9,300 Min 502 Mean 1,693 Cfsm 0.941 In. 12.76 Ac-ft 1,266,000

* Discharge measurement made on this day.

Challis Creek near Challis, Idaho

Location.--Lat 44°34', long 114°19', sec. 2, T. 14 N., R. 18 E., on left bank 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 1954.

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.--11 years, 44.6 cfs (32,290 acre-ft per year).

Extremes.--Maximum discharge during year, 204 cfs May 22 (gage height, 5.31 ft); minimum recorded, 8.8 cfs Mar. 2 (gage height, 3.22 ft), but may have been less during period of ice effect.

1943-54: Maximum discharge, 418 cfs June 4, 1948 (gage height, 2.30 ft, site then in use); minimum, 5.7 cfs Mar. 11, 29, 1950.

Remarks.--Records excellent except those below 20 cfs, which are good, and those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.3	10	4.5	104
3.5	17	5.0	162
3.7	30	5.3	198
4.0	55		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	21	18	14	12	12	15	*40	100	82	38	28
2	25	21	18	14	b12	b12	13	46	91	78	38	27
3	27	21	17	14	b12	b11	14	44	87	71	39	27
4	27	20	*15	14	b12	b11	15	42	84	73	41	28
5	26	21	15	15	b12	b12	16	43	92	72	44	27
6	25	21	15	15	b12	13	16	49	91	75	43	29
7	25	20	14	15	b11	14	14	53	88	71	42	27
8	24	20	16	14	b11	16	14	59	85	68	40	27
9	24	21	17	14	b11	19	14	66	90	63	39	27
10	25	21	15	13	b11	15	13	80	92	60	37	26
11	25	21	b14	12	b12	13	14	88	92	56	37	25
12	23	21	b15	12	13	13	15	91	88	55	39	24
13	23	21	15	13	13	b13	16	93	89	54	40	22
14	22	21	b15	13	13	b13	18	93	*92	*65	38	22
15	22	21	15	13	13	b13	18	96	97	75	39	22
16	22	20	15	12	12	13	19	107	102	77	38	19
17	22	20	14	12	*13	13	34	112	96	71	38	18
18	22	16	14	*b12	13	13	41	106	92	67	37	18
19	22	15	15	b12	b11	13	42	117	89	65	36	19
20	22	18	15	b11	12	12	40	136	86	61	34	18
21	23	20	15	b12	12	12	38	154	87	60	37	22
22	23	19	b13	b12	b11	13	38	193	87	60	36	*22
23	22	21	b10	b12	12	13	38	*196	90	57	*35	22
24	22	19	12	b12	13	13	40	179	93	54	34	20
25	23	20	13	b12	13	*13	43	169	95	53	33	19
26	22	20	13	b12	13	13	45	161	114	51	33	19
27	22	20	13	b12	12	13	44	150	120	48	33	19
28	*22	19	14	b12	13	13	44	137	104	45	31	20
29	22	18	14	13	-	13	43	126	91	42	30	21
30	22	18	13	13	---	14	43	117	86	40	30	20
31	21	------	14	13	------	14	------	104	------	39	30	------
Total	722	595	451	399	340	408	817	3,247	2,790	1,908	1,139	684
Mean	23.3	19.8	14.5	12.9	12.1	13.2	27.2	105	93.0	61.5	36.7	22.8
Ac-ft	1,430	1,180	895	791	674	809	1,620	6,440	5,530	3,780	2,260	1,360

Calendar year 1953: Max 306 Min 10 Mean 51.0 Ac-ft 36,890
Water year 1953-54: Max 196 Min 10 Mean 37.0 Ac-ft 26,770

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 24 to Jan. 17; discharge estimated on basis of weather records, 1 discharge measurement, and records for 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 1954.

Gage.--Staff gage read once daily. Datum of gage is 4,636.95 ft above mean sea level, adjustment of 1912.

Average discharge.--24 years (1930-54), 210 cfs (152,000 acre-ft per year).

Extremes.--Maximum discharge observed during year, 362 cfs Nov. 24 (gage height, 2.71 ft); minimum observed, 84 cfs May 10 (gage height, 1.66 ft).
1929-54: 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. Diversions for irrigation of about 12,500 acres above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 3-30; backwater from Salmon River May 20-22)

1.7	81
2.0	136
2.4	247
2.8	400

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	204	288	358	278	281	296	271	*128	136	160	153	182
2	207	288	354	278	281	296	267	126	141	168	153	182
3	210	292	346	278	285	296	267	115	141	158	158	174
4	235	296	*334	271	288	296	270	113	141	160	158	176
5	238	296	334	267	285	296	270	111	146	168	155	174
6	238	307	334	278	288	296	267	95	150	165	155	171
7	241	318	326	288	288	296	261	97	153	163	153	171
8	241	322	322	288	288	296	250	91	148	163	153	171
9	244	354	318	296	288	303	241	89	160	155	150	168
10	244	350	318	281	288	311	228	84	176	153	153	165
11	244	350	311	281	296	303	225	92	168	148	153	165
12	247	346	311	274	300	296	225	94	*163	*150	158	165
13	247	342	307	274	303	296	228	94	165	148	163	165
14	247	342	303	274	303	296	222	95	165	174	158	163
15	261	342	303	*278	303	292	219	95	163	199	158	160
16	261	338	307	281	288	292	216	99	163	204	158	165
17	264	338	311	281	311	292	213	99	163	202	160	158
18	264	334	311	288	311	288	182	102	158	199	158	155
19	264	334	311	285	300	281	176	104	150	193	150	155
20	267	334	314	278	303	274	158	107	146	176	153	155
21	271	334	318	281	303	278	163	110	141	174	*160	158
22	278	330	322	281	303	278	163	114	138	174	165	*160
23	281	354	303	288	*303	274	168	*111	138	171	163	171
24	281	362	300	285	303	274	141	111	136	171	168	171
25	281	354	292	281	303	*267	132	117	136	165	176	171
26	288	358	281	278	303	274	134	119	190	165	182	174
27	292	358	278	278	300	271	132	121	171	163	174	171
28	*292	358	274	278	296	271	130	128	163	165	171	168
29	288	358	274	288	-	271	121	130	163	165	176	171
30	285	358	274	285	---	271	123	132	163	155	179	174
31	285	------	278	285	---	271	------	132	------	153	184	------
Total	7,990	10,035	9,627	8,705	8,292	8,892	6,063	3,355	4,635	5,227	5,008	5,029
Mean	258	334	311	281	296	287	202	108	154	169	162	168
Ac-ft	15,850	19,900	19,090	17,270	16,450	17,640	12,030	6,650	9,190	10,370	9,930	9,970

Calendar year 1953: Max 362 Min 107 Mean 245 Ac-ft 177,100
Water year 1953-54: Max 362 Min 84 Mean 227 Ac-ft 164,300

* Discharge measurement made on this day.

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 downstream from highway bridge at Salmon.

Drainage area.--3,760 sq mi, approximately.

Records available.--April 1912 to September 1916, July 1919 to September 1954.

Gage.--Water-stage recorder. Datum of gage is 3,911.14 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Oct. 21, 1929, staff gage at site 700 ft upstream at different datum.

Average discharge.--37 years (1913-16, 1920-54), 1,875 cfs (1,357,000 acre-ft per year).

Extremes.--Maximum discharge during year, 9,710 cfs June 27 (gage height, 6.89 ft); minimum, 928 cfs Dec. 24 (gage height, 2.67 ft).
1912-16, 1919-54: 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. Diversions above station for irrigation.

Revisions (water years).--WSP 1043: Drainage area. WSP 1317: 1916.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.7	955	5.0	4,750
3.2	1,500	6.0	7,270
4.0	2,700	7.0	10,000

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,060	1,330	1,450	1,190	1,230	1,140	1,040	*2,380	3,890	5,800	1,710	1,180
2	1,050	1,340	1,430	1,260	1,190	1,100	1,060	2,100	3,790	5,470	1,630	1,160
3	1,070	1,390	1,380	1,190	1,150	1,040	1,060	2,010	3,450	5,150	1,550	1,140
4	1,090	1,390	1,360	1,220	1,160	1,070	1,070	2,010	3,290	4,910	1,480	1,110
5	1,080	1,380	1,360	1,200	1,160	1,090	1,110	2,080	3,490	4,800	1,480	1,110
6	1,090	1,390	*1,360	1,230	1,160	1,110	1,220	2,570	3,890	4,910	1,500	1,120
7	1,090	1,420	1,360	1,200	1,160	1,140	1,270	3,190	3,790	4,840	1,480	1,120
8	1,100	1,390	1,300	1,200	1,120	1,160	1,190	3,570	3,610	4,620	1,440	1,120
9	1,100	1,380	1,200	1,220	1,100	1,170	1,160	4,000	3,530	4,420	1,400	1,120
10	1,110	1,380	1,310	1,160	1,130	1,250	1,150	4,730	3,730	4,200	1,360	1,100
11	1,120	1,390	1,310	1,050	1,150	1,310	1,120	5,600	3,770	3,970	1,330	1,070
12	1,120	1,430	1,230	1,110	1,170	1,230	1,110	5,870	3,610	*3,850	1,320	1,050
13	1,110	1,440	1,300	1,090	1,280	1,150	1,150	5,840	*3,650	3,730	1,360	1,040
14	1,110	1,440	1,230	1,130	1,270	1,150	1,240	5,640	3,810	3,670	1,400	1,020
15	1,120	1,420	1,280	*1,230	1,230	1,150	1,430	5,500	4,020	3,830	1,390	1,020
16	1,140	1,400	1,360	1,230	1,200	1,140	1,500	5,640	4,660	4,140	1,380	1,060
17	1,150	1,390	1,320	1,230	1,190	1,160	1,560	6,230	5,050	3,930	1,370	1,110
18	1,160	1,380	1,300	1,230	1,220	1,150	1,870	6,750	4,640	3,630	1,310	1,090
19	1,160	1,280	1,270	1,180	1,180	1,130	2,100	7,170	4,270	3,390	1,260	1,090
20	1,170	1,170	1,310	1,170	1,130	1,100	2,100	7,940	4,100	3,190	1,220	1,080
21	1,170	1,240	1,340	1,040	1,200	1,110	1,940	9,060	4,120	2,970	*1,250	1,060
22	1,180	1,370	1,320	1,120	*1,190	1,100	1,890	9,480	4,510	2,780	1,310	1,060
23	1,190	1,450	1,220	1,280	1,160	1,080	1,980	*8,500	5,150	2,560	1,380	*1,070
24	1,200	1,500	1,040	1,260	1,190	1,070	2,140	7,430	6,130	2,380	1,330	1,100
25	1,270	1,480	1,020	1,180	1,180	1,090	2,300	6,780	6,780	2,210	1,270	1,090
26	1,260	1,450	1,120	1,090	1,180	*1,080	2,560	6,460	7,010	2,120	1,330	1,070
27	1,250	1,460	1,170	1,130	1,180	1,080	2,700	6,020	8,640	2,060	1,360	1,060
28	1,300	1,500	1,220	1,230	1,140	1,100	2,760	5,340	8,950	1,970	1,340	1,050
29	1,300	1,540	1,220	1,250	-	1,100	2,780	4,710	7,320	1,890	1,310	1,060
30	*1,310	1,460	1,200	1,260	-	1,080	2,650	4,330	6,280	1,820	1,260	1,090
31	1,310	- - -	1,110	1,260	- -	1,070	- - - - -	4,060	- - - -	1,730	1,220	- - - - -
Total	35,940	41,980	39,400	36,820	33,000	34,900	50,210	162,990	142,930	110,940	42,730	32,620
Mean	1,159	1,399	1,271	1,188	1,179	1,126	1,674	5,258	4,764	3,579	1,378	1,087
Ac-ft	71,290	83,270	78,150	73,030	65,450	69,220	99,590	323,300	283,500	220,000	84,750	64,700

Calendar year 1953: Max 9,600 Min 980 Mean 2,123 Ac-ft 1,537,000
Water year 1953-54: Max 9,480 Min 1,020 Mean 2,094 Ac-ft 1,516,000

* Discharge measurement made on this day.

Panther Creek near Shoup, Idaho

Location.--Lat 45°19', long 114°23', in sec. 19, T. 23 N., R. 18 E., on left bank 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 1954.

Gage.--Staff gage read twice daily about two days each week Oct. 1 to May 23, and once daily thereafter. Altitude of gage is 3,280 ft (from river-profile map).

Average discharge.--10 years, 253 cfs (183,200 acre-ft per year).

Extremes.--Maximum daily discharge during year, 1,600 cfs May 20; maximum gage height observed, 2.60 ft May 22; minimum discharge observed, 57 cfs Mar. 2 (gage height, 0.10 ft).

1944-54: Maximum discharge observed, 2,640 cfs June 13, 1953 (gage height, 4.30 ft); maximum gage height observed, 4.4 ft Jan. 6, 1947 (backwater from ice); minimum discharge observed, 30 cfs Feb. 10, 1953 (gage height, -0.21 ft).

Remarks.--Records good except those for Apr. 1 to May 23 and those for periods of ice effect or doubtful gage-height record, which are fair. Diversions above station for irrigation of about 1,000 acres.

Revisions (water years).--WSP 1063: 1945.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.1	56	1.6	495
.4	106	2.0	715
.8	198	2.5	1,030
1.2	326	3.3	1,650

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	100	105	100	75	80	70	95	250	d420	500	158	104
2	105	104	90	75	77	62	92	240	d420	481	153	100
3	106	102	85	75	78	64	93	*232	d400	463	148	100
4	108	102	80	80	78	70	110	253	405	418	148	96
5	108	102	*80	85	78	80	130	350	d540	418	144	96
6	106	102	75	85	78	93	144	500	495	409	144	96
7	102	102	72	85	75	93	130	540	431	384	144	96
8	98	100	d70	85	75	93	120	618	427	376	137	95
9	98	100	85	84	75	93	120	700	454	337	137	95
10	98	106	80	80	80	110	112	900	d480	337	137	d94
11	100	106	75	75	85	105	120	816	d520	301	133	d92
12	98	106	80	70	90	100	130	780	563	294	133	d90
13	98	106	85	75	85	91	155	760	d600	*283	d140	d88
14	98	106	85	80	85	95	200	750	*618	287	d140	87
15	98	106	85	90	80	100	200	791	d700	287	d135	87
16	98	100	84	*90	77	102	200	880	d650	337	128	d92
17	98	102	80	85	75	98	238	950	574	d310	124	95
18	98	100	80	85	75	96	310	1,030	542	280	124	95
19	100	85	85	85	70	90	350	1,300	511	d260	120	94
20	100	95	90	80	84	89	290	1,600	490	247	116	92
21	105	104	80	80	80	90	210	1,500	d540	235	d150	91
22	105	110	70	85	*77	92	210	1,110	d600	229	*146	90
23	103	105	60	80	82	93	250	820	d700	218	124	*89
24	102	95	75	82	82	95	287	*767	d720	206	120	87
25	105	95	70	80	80	94	300	761	d700	193	120	87
26	104	110	75	80	80	92	310	686	d720	188	d130	84
27	102	110	75	82	77	*89	322	618	d740	177	d140	80
28	103	110	75	85	80	90	350	563	d660	172	116	80
29	*104	105	75	85	-	80	305	521	574	167	108	d85
30	105	100	65	87	------	72	280	481	563	162	108	87
31	106	-----	75	85	-----	75	-----	436	------	158	106	------
Total	3,159	3,081	2,441	2,535	2,218	2,756	6,163	22,503	16,757	9,114	4,111	2,744
Mean	102	103	78.7	81.8	79.2	88.9	205	726	559	294	133	91.5
Cfsm	0.193	0.195	0.149	0.155	0.150	0.168	0.388	1.37	1.06	0.556	0.251	0.173
In.	0.22	0.22	0.17	0.18	0.16	0.19	0.43	1.58	1.18	0.64	0.29	0.19
Ac-ft	6,270	6,110	4,840	5,030	4,400	5,470	12,220	44,630	33,240	18,080	8,150	5,440

Calendar year 1953: Max 2,640 Min 32 Mean 312 Cfsm 0.590 In. 8.01 Ac-ft 225,600
Water year 1953-54: Max 1,600 Min 60 Mean 213 Cfsm 0.403 In. 5.45 Ac-ft 153,900

* Discharge measurement made on this day.
d Doubtful gage-height record; discharge computed on basis of weather records, adjacent discharge measurements, and records for Big Creek near Big Creek, Johnson Creek at Yellow Pine, and other nearby streams.
Note.--Stage-discharge relation affected by ice about Dec. 11 to Jan. 5, Jan. 10-27, Feb. 7-13.

Salmon River near Shoup, Idaho

Location.--Lat 45°19'30", long 114°26'00", in NE¼SW¼ sec. 14, T. 23 N., R. 17 E., on right bank 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 1954.

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 at site 200 ft downstream from wire-weight gage at datum 1.28 ft higher than present datum.

Average discharge.--10 years, 3,033 cfs (2,196,000 acre-ft per year).

Extremes.--Maximum discharge during year, 12,200 cfs June 28 (gage height, 8.49 ft); minimum, 1,320 cfs Sept. 15 (gage height, 2.15 ft), but may have been less during period of ice effect.
1944-54: Maximum discharge observed, 16,900 cfs June 4, 1948 (gage height, 7.90 ft, site and datum then in use); minimum daily, 800 cfs Jan. 31, 1950, Feb. 1, 1951.

Remarks.--Records excellent except those for periods of ice effect, which are fair. Diversions for irrigation of about 88,000 acres above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.1	1,280	5.0	5,500
2.5	1,640	7.0	9,200
3.0	2,200	9.0	13,200
4.0	3,700		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,520	1,880	2,040	1,600	b1,750	1,640	1,560	3,090	5,280	7,600	1,970	1,530
2	1,540	1,920	2,010	1,760	b1,700	1,560	1,550	2,760	5,140	7,140	1,940	1,500
3	1,540	1,920	1,960	1,810	1,660	1,520	1,580	*2,590	4,760	6,780	1,850	1,450
4	1,600	1,950	1,920	1,780	1,620	1,510	1,620	2,530	4,490	6,360	1,800	1,420
5	1,610	1,940	*1,870	1,810	1,610	1,570	1,690	2,610	4,640	6,180	1,770	1,410
6	1,610	1,970	1,870	1,800	1,610	1,580	1,770	3,090	5,090	6,180	1,830	1,410
7	1,610	1,970	1,850	1,800	1,600	1,620	1,840	3,860	5,210	6,130	1,820	1,400
8	1,600	1,950	1,800	1,760	1,570	1,650	1,800	4,510	5,010	5,900	1,800	1,400
9	1,600	1,930	1,740	1,800	1,520	1,710	1,750	5,210	4,940	5,610	1,750	1,400
10	1,600	1,940	1,770	1,720	1,500	1,800	1,720	6,020	5,320	5,340	1,700	1,400
11	1,620	1,950	1,820	1,540	1,500	1,860	1,680	6,940	5,640	5,000	1,660	1,380
12	1,630	1,970	1,780	1,470	b1,600	1,770	1,660	7,450	5,390	4,760	1,620	1,360
13	1,630	2,010	1,740	b1,500	1,810	1,690	1,730	7,490	5,360	*4,560	1,640	1,360
14	1,620	2,000	1,770	b1,550	1,820	1,660	1,870	7,260	*5,630	4,550	1,700	1,350
15	1,610	1,980	1,780	b1,700	1,740	1,660	1,970	7,100	5,810	4,740	1,740	1,340
16	1,630	1,960	1,850	*b1,800	1,700	1,670	2,100	7,320	6,310	5,250	1,750	1,380
17	1,670	1,970	1,830	b1,800	1,670	1,670	2,230	7,910	6,960	5,180	1,730	1,430
18	1,710	1,950	1,800	b1,800	1,710	1,690	2,540	8,670	6,580	4,780	1,680	1,460
19	1,710	1,850	1,780	b1,700	1,700	1,670	2,890	9,260	6,040	4,420	1,620	1,410
20	1,730	1,710	1,820	b1,700	1,670	1,650	2,950	10,200	5,730	4,130	1,560	1,420
21	1,760	1,760	1,830	b1,500	1,640	1,640	2,740	11,300	5,590	3,810	1,600	1,410
22	1,780	1,930	1,830	b1,600	*1,680	1,640	2,560	12,000	5,810	3,530	*1,690	1,410
23	1,800	2,090	1,660	b1,700	1,670	1,610	2,540	10,900	6,360	3,300	1,740	*1,400
24	1,820	2,100	1,470	b1,650	1,660	1,590	2,740	*9,560	7,280	3,000	1,730	1,420
25	1,850	2,090	1,430	b1,600	1,690	1,590	2,920	8,690	8,080	2,760	1,680	1,430
26	1,870	2,040	1,510	b1,600	1,720	1,610	3,180	8,290	8,540	2,600	1,690	1,400
27	1,860	2,040	1,640	b1,650	1,690	*1,610	3,380	7,830	10,100	2,490	1,760	1,390
28	1,850	2,080	b1,750	b1,750	1,650	1,610	3,550	7,140	11,700	2,360	1,760	1,370
29	*1,870	2,120	b1,700	b1,800	-	1,590	3,440	6,420	9,880	2,250	1,680	1,380
30	1,860	2,080	1,660	b1,800	- - -	1,560	3,410	5,880	8,340	2,160	1,650	1,450
31	1,880	- - - - -	1,610	b1,800	- - - - -	1,560	- - - - -	5,540	- - - - -	2,040	1,590	- - - - -
Total	52,590	59,060	54,890	52,650	46,460	50,760	68,960	209,420	191,010	140,890	53,500	42,270
Mean	1,696	1,969	1,771	1,698	1,659	1,637	2,299	6,755	6,367	4,545	1,726	1,409
Ac-ft	104,300	117,100	108,900	104,400	92,150	100,700	136,800	415,400	378,900	279,500	106,100	83,840

Calendar year 1953: Max 15,600 Min 1,400 Mean 3,113 Ac-ft 2,254,000
Water year 1953-54: Max 12,000 Min 1,340 Mean 2,801 Ac-ft 2,028,000

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

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 1954 (no winter records 1941-45).

Gage.--Water-stage recorder. Altitude of gage is 6,435 ft (by barometer).

Average discharge.--22 years (1928-41, 1945-54), 229 cfs (165,800 acre-ft per year).

Extremes.--Maximum discharge during year, 2,010 cfs May 20 (gage height, 6.07 ft); minimum, 32 cfs Mar. 30 (gage height, 2.17 ft), but may have been less during period of ice effect.

1928-54: 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).

Remarks.--Records excellent except those for period of ice effect, which are fair. No diversion above station.

Revisions.--WSP 783: Drainage area.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.3	48	3.5	350
2.5	80	4.0	560
2.8	140	5.0	1,140
3.0	190	6.0	1,940

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	102	94	91	75	66	62	63	318	700	715	182	120
2	108	112	87	74	66	60	63	321	610	670	177	118
3	106	98	*75	71	66	62	63	328	615	630	174	116
4	104	94	80	72	66	62	68	366	670	615	172	114
5	102	96	80	72	66	62	82	478	735	605	177	114
6	102	100	76	70	64	64	77	610	685	590	180	112
7	100	93	75	72	62	66	75	710	655	550	169	110
8	100	89	75	72	62	66	73	814	610	506	162	110
9	98	91	80	68	63	75	72	970	660	474	159	108
10	98	93	80	68	65	82	68	1,270	685	442	154	108
11	98	104	75	66	68	77	72	1,290	655	414	152	106
12	96	106	85	64	80	74	73	1,250	660	390	152	106
13	96	104	80	68	72	72	91	1,190	710	370	157	104
14	98	98	80	68	70	75	110	1,150	745	370	157	104
15	98	100	85	67	70	70	110	1,180	910	378	150	120
16	98	96	85	67	70	73	122	1,300	*988	*350	145	122
17	96	94	85	66	70	72	152	1,410	856	318	142	116
18	96	65	80	63	70	70	180	1,480	766	297	140	114
19	98	75	85	64	68	68	190	1,610	735	280	138	108
20	96	80	87	60	68	70	187	1,790	760	270	145	106
21	96	85	80	62	70	66	196	1,840	856	261	159	104
22	96	87	76	67	68	68	218	*1,580	964	251	152	102
23	94	93	70	67	68	65	245	1,400	1,110	242	142	100
24	94	93	78	65	*68	*68	264	1,320	1,160	230	138	100
25	94	91	76	63	68	66	307	1,290	1,130	224	*138	*98
26	*93	94	76	64	66	65	336	1,160	1,290	218	157	96
27	93	106	80	66	64	66	374	982	1,290	212	147	96
28	93	102	75	68	64	66	406	844	1,010	204	136	94
29	93	98	75	70	-	65	398	778	850	198	129	98
30	93	94	70	70	------	62	358	750	766	196	125	102
31	91	-----	75	68	-----	62	-----	695	------	185	122	------
Total	3,020	2,825	2,457	2,097	1,888	2,101	5,093	32,474	24,836	11,655	4,729	3,226
Mean	97.4	94.2	79.3	67.6	67.4	67.8	170	1,048	828	376	153	108
Cfsm	0.706	0.683	0.575	0.490	0.488	0.491	1.23	7.59	6.00	2.72	1.11	0.783
In.	0.81	0.76	0.66	0.57	0.51	0.57	1.37	8.75	6.69	3.14	1.27	0.87
Ac-ft	5,990	5,600	4,870	4,160	3,740	4,170	10,100	64,410	49,260	23,120	9,380	6,400

Calendar year 1953: Max 1,810 Min 60 Mean 261 Cfsm 1.89 In. 25.68 Ac-ft 189,100
Water year 1953-54: Max 1,840 Min 60 Mean 264 Cfsm 1.91 In. 25.97 Ac-ft 191,200

Peak discharge (base, 930 cfs).--May 20 (11 p.m.) 2,010 cfs (6.07 ft); June 16 (12 p.m. to 2 a.m.) 1,100 cfs (4.95 ft); June 26 (7 p.m.) 1,510 cfs (5.50 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 18-21, Dec. 3-18, Dec. 21 to Mar. 7, Mar. 12, 13, Apr. 1 (no gage-height record Feb. 2-23; discharge estimated on basis of weather records and records for Johnson Creek at Yellow Pine, Valley Creek at Stanley, and Bear Valley Creek near Cape Horn).

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 1954 (no winter records 1941-45).

Gage.--Water-stage recorder. Altitude of gage is 6,340 ft (by barometer).

Average discharge.--22 years (1928-41, 1945-54), 282 cfs (204,200 acre-ft per year).

Extremes.--Maximum discharge during year, 3,100 cfs May 21 (gage height, 5.26 ft); minimum recorded, 52 cfs Nov. 18 (gage height, 1.07 ft), but may have been less during period of ice effect.

1921-54: 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 excellent except those for periods of ice effect or no gage-height record, which are fair. No regulation or diversion above station.

Revisions.--WSP 573: Drainage area.

Rating table, water year 1953-54, 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	4.0	1,670
1.9	263	5.0	2,730
2.4	500		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	112	121	105	100	100	108	538	1,210	868	185	128
2	121	153	121	105	100	95	106	522	924	792	179	126
3	124	140	*117	100	100	100	106	573	882	714	176	124
4	121	126	106	100	100	100	106	633	945	682	173	124
5	117	121	110	100	100	100	112	847	1,080	651	176	124
6	114	128	115	95	100	100	110	1,070	990	621	173	121
7	112	121	100	100	95	105	119	1,210	931	579	167	121
8	112	114	100	100	95	105	121	1,340	868	522	164	121
9	110	117	115	95	95	115	119	1,470	868	489	158	119
10	112	119	110	95	100	130	121	1,710	1,120	462	153	117
11	112	138	100	95	105	125	124	1,780	1,050	420	151	114
12	112	145	110	90	120	120	128	1,850	952	390	153	114
13	112	145	110	95	110	115	140	1,820	982	367	164	114
14	112	135	110	95	105	115	164	1,800	1,020	381	158	114
15	112	148	110	95	105	110	185	1,840	1,170	440	153	119
16	114	138	110	95	105	115	211	1,940	*1,580	376	151	135
17	114	133	105	90	105	110	255	2,150	1,190	335	148	128
18	112	85	105	90	105	105	308	2,200	1,040	*313	145	130
19	114	85	110	90	105	105	348	2,340	998	300	145	124
20	112	95	125	85	105	105	372	2,580	990	284	145	119
21	112	100	120	90	105	105	372	2,680	1,060	267	164	117
22	112	108	110	95	105	105	386	2,190	1,110	258	170	114
23	110	108	100	95	105	105	430	1,910	1,200	248	156	114
24	110	110	110	90	105	*112	472	1,810	1,260	240	145	112
25	110	110	105	90	105	108	544	1,790	1,230	229	*148	110
26	*108	124	105	95	105	108	603	1,600	1,270	225	173	*108
27	110	135	110	100	100	106	669	*1,420	1,440	215	173	108
28	110	148	105	100	100	106	746	1,220	1,270	208	148	108
29	110	143	105	105	-	108	727	1,120	982	201	143	110
30	110	130	100	105	------	108	627	1,160	889	194	135	112
31	110	-----	105	100	-----	108	-----	1,050	------	191	133	------
Total	3,493	3,714	3,385	2,980	2,885	3,354	8,939	48,163	32,501	12,463	4,905	3,549
Mean	113	124	109	96.1	103	108	298	1,554	1,083	402	158	118
Cfsm	0.628	0.689	0.606	0.534	0.572	0.600	1.66	8.63	6.02	2.23	0.878	0.656
In.	0.72	0.77	0.70	0.62	0.60	0.69	1.85	9.95	6.72	2.57	1.01	0.73
Ac-ft	6,930	7,370	6,710	5,910	5,720	6,650	17,730	95,530	64,460	24,720	9,730	7,040

Calendar year 1953: Max 2,500 Min 72 Mean 344 Cfsm 1.91 In. 25.90 Ac-ft 248,700
Water year 1953-54: Max 2,680 Min 85 Mean 357 Cfsm 1.98 In. 26.93 Ac-ft 258,500

Peak discharge (base, 1,200 cfs).--May 21 (5:30 a.m.) 3,100 cfs (5.26 ft); June 16 (11 a.m. to 1 p.m.) 1,710 cfs (3.99 ft); June 27 (1 p.m.) 1,510 cfs (3.77 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 19-21, 24, 25, Dec. 5 to about Mar. 20. No gage-height record Dec. 31 to Mar. 23; discharge estimated on basis of weather records and records for Middle Fork Salmon River near Cape Horn and other 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 3,950 ft (from river-profile map). Prior to Oct. 22, 1948, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.--10 years, 501 cfs (362,700 acre-ft per year).

Extremes.--Maximum discharge during year, 4,070 cfs May 21 (gage height, 6.20 ft); minimum daily, 80 cfs Dec. 23.
1944-54: 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).

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

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 19 to May 20)

Oct. 1 to May 20				May 21 to Sept. 30			
1.7	67	3.0	681	1.9	156	3.0	790
2.0	125	4.0	1,620	2.1	221	4.0	1,720
2.3	229	6.0	3,840	2.4	368	6.0	3,840
2.6	385			2.7	560		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	160	150	140	115	115	123	139	648	1,150	1,540	362	221
2	170	160	130	110	115	105	131	*567	1,060	1,490	357	217
3	170	153	120	110	110	110	133	529	1,050	1,370	346	210
4	170	150	115	110	110	110	147	536	1,180	1,380	340	214
5	167	150	125	120	110	115	225	770	1,400	1,420	340	214
6	164	153	125	120	110	130	243	1,150	1,310	1,370	340	210
7	160	153	110	120	105	147	213	1,270	1,190	1,260	330	210
8	156	145	105	120	105	147	213	1,440	1,110	1,170	313	207
9	156	147	125	115	105	164	208	1,770	1,160	1,100	303	199
10	153	145	120	110	110	192	196	2,400	1,260	1,010	298	199
11	153	147	110	105	120	174	204	2,100	1,320	987	288	196
12	153	150	120	100	160	156	234	2,000	1,370	942	284	192
13	153	153	125	105	155	147	306	1,890	1,480	906	288	189
14	153	147	125	110	150	145	450	1,770	1,560	854	303	189
15	153	147	125	115	140	139	437	1,830	1,680	915	303	189
16	150	147	120	115	135	142	430	2,160	1,840	951	288	196
17	150	153	120	110	136	139	590	2,580	1,570	830	279	196
18	147	145	115	110	136	136	761	2,710	1,380	742	*264	203
19	150	110	125	110	125	136	806	3,130	1,320	670	260	196
20	150	120	135	105	131	139	656	3,790	1,370	623	260	189
21	153	130	115	105	125	133	552	3,590	1,640	595	303	182
22	153	130	100	110	120	133	552	2,530	1,880	574	293	179
23	153	140	80	115	131	133	664	2,040	2,180	532	274	179
24	150	130	105	110	*128	139	734	1,920	2,270	497	264	176
25	153	130	100	105	125	139	806	1,970	2,070	471	260	176
26	150	150	105	105	125	142	860	1,770	2,160	458	303	173
27	153	160	110	110	120	145	887	1,540	2,230	446	288	173
28	153	170	105	115	125	145	950	*1,350	*2,030	427	260	170
29	*153	160	110	120	-	136	869	1,250	1,620	415	242	176
30	153	150	*90	125	------	125	761	1,220	1,510	398	234	176
31	150	------	105	120	------	131	------	1,150	------	386	230	------
Total	4,812	4,375	3,560	3,475	3,483	4,297	14,357	55,370	46,350	26,729	9,097	5,796
Mean	155	146	115	112	124	139	479	1,786	1,545	862	293	193
Cfsm	0.330	0.311	0.245	0.238	0.264	0.296	1.02	3.80	3.29	1.83	0.623	0.411
In.	0.38	0.35	0.28	0.27	0.28	0.34	1.14	4.38	3.67	2.12	0.72	0.46
Ac-ft	9,540	8,680	7,060	6,890	6,910	8,520	28,480	109,800	91,930	53,020	18,040	11,500

Calendar year 1953: Max 3,730 Min 80 Mean 509 Cfsm 1.08 In. 14.72 Ac-ft 368,800
Water year 1953-54: Max 3,790 Min 80 Mean 498 Cfsm 1.06 In. 14.39 Ac-ft 360,400

Peak discharge (base, 2,000 cfs).--May 10 (10 a.m.) 2,570 cfs (4.79 ft); May 21 (1 to 2 a.m.) 4,070 cfs (6.20 ft); June 24 (2 to 4 a.m.) 2,500 cfs (4.75 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice about Dec. 2 to Feb. 15, Feb. 19, 22, 27, Mar. 2-6. No gage-height record Nov. 19 to Dec. 29; discharge estimated on basis of weather records and records for Johnson Creek at Yellow Pine and other nearby streams.

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 1954.

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.--26 years, 142 cfs (102,800 acre-ft per year).

Extremes.--Maximum discharge during year, 1,340 cfs May 20 (gage height, 6.00 ft); minimum, 24 cfs Nov. 18 (gage height, 2.38 ft), but may have been less during period of ice effect.

1928-54: Maximum discharge observed, 1,560 cfs June 9, 1933 (gage height, 2.60 ft, present datum, site then in use), from rating curve extended above 1,000 cfs; minimum recorded, 14 cfs Nov. 3, 1952 (gage height, 2.23 ft).

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

Revisions (water years).--WSP 1043: 1943.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.4	28	4.0	384
2.6	48	4.5	580
3.0	116	5.0	817
3.5	227	5.8	1,220

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	41	*47	45	40	41	52	325	450	416	84	51
2	42	62	46	45	40	38	54	299	395	377	83	49
3	42	46	41	42	40	44	55	296	395	349	81	48
4	42	44	46	42	40	45	65	318	439	335	79	48
5	41	44	44	42	40	45	134	409	439	329	79	48
6	41	45	45	45	40	45	134	489	406	302	77	48
7	40	41	42	45	40	45	114	555	388	277	76	48
8	39	41	40	45	40	52	110	633	366	257	72	47
9	39	40	45	40	40	84	108	742	384	238	70	47
10	38	41	45	38	42	120	101	877	513	222	67	47
11	38	45	40	40	40	99	105	837	*466	207	65	45
12	39	46	45	35	55	77	128	*837	466	195	65	45
13	39	46	42	38	55	69	190	782	497	186	65	45
14	39	45	44	40	50	69	251	757	522	184	69	44
15	39	44	44	40	46	65	224	767	606	177	65	51
16	39	42	42	40	45	67	238	857	620	166	62	58
17	39	45	41	40	45	65	296	947	534	157	*61	51
18	41	35	41	38	44	62	377	999	489	149	59	52
19	45	30	41	38	44	57	374	1,080	485	140	58	48
20	44	35	56	30	44	59	325	1,210	501	132	62	47
21	45	40	47	35	45	59	302	1,170	551	130	81	46
22	44	40	40	*35	44	56	309	962	589	*126	74	46
23	42	55	30	35	*44	55	346	847	652	118	65	45
24	44	52	40	35	45	56	352	792	*647	114	61	45
25	44	46	40	30	45	59	374	782	615	108	64	44
26	42	55	45	35	45	56	380	*680	675	103	83	44
27	42	81	45	38	42	59	505	593	675	101	76	*42
28	*42	74	42	38	42	58	576	522	559	97	62	40
29	40	54	45	42	-	55	466	489	466	93	58	42
30	40	48	38	42	------	55	384	481	424	90	54	44
31	40	-----	45	42	------	59	------	447	------	88	52	------
Total	1,271	1,403	1,334	1,215	1,222	1,875	7,429	21,781	15,214	5,963	2,129	1,405
Mean	41.0	46.8	43.0	39.2	43.6	60.5	248	703	507	192	68.7	46.8
Cfsm	0.446	0.509	0.467	0.426	0.474	0.658	2.70	7.64	5.51	2.09	0.747	0.509
In.	0.51	0.57	0.54	0.49	0.49	0.76	3.00	8.80	6.15	2.41	0.86	0.57
Ac-ft	2,520	2,780	2,650	2,410	2,420	3,720	14,740	43,200	30,180	11,830	4,220	2,790

Calendar year 1953: Max 1,140 Min 30 Mean 165 Cfsm 1.79 In. 24.38 Ac-ft 119,500
Water year 1953-54: Max 1,210 Min 30 Mean 171 Cfsm 1.86 In. 25.15 Ac-ft 123,500

Peak discharge (base, 600 cfs).--Apr. 28 (2:30 a.m.) 633 cfs (4.62 ft); May 20 (10:30 p.m.) 1,340 cfs (6.00 ft); June 15 (11 p.m.) 713 cfs (4.80 ft); June 26 (5:30 p.m.) 742 cfs (4.86 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 19-21, 23, Dec. 3, 7-14, 17, Dec. 22 to about Feb. 15, Feb. 27, Mar. 1-6, 12-15, 19, 23, 24. No gage-height record Jan. 3-9, 13-21, Jan. 30 to Feb. 22; discharge estimated on basis of weather records and records for Johnson Creek at Yellow Pine and other nearby streams.

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 1954.

Gage.--Water-stage recorder. Datum of gage is 4,657.70 ft above mean sea level, datum of 1929 (preliminary).

Average discharge.--26 years, 332 cfs (240,400 acre-ft per year).

Extremes.--Maximum discharge during year, 4,170 cfs May 20 (gage height, 6.61 ft); minimum, 34 cfs Nov. 19 (gage height, 0.88 ft).
1928-54: 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 excellent except those below 100 cfs, which are good. Small diversion from Johnson Creek basin to Deadwood River basin (see Remarks for Deadwood Reservoir near Lowman).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.0	50	4.0	1,420
1.2	77	5.0	2,300
1.5	135	6.0	3,390
2.0	284	6.5	3,990
3.0	770		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	79	70	91	77	72	74	82	610	1,170	1,220	182	104
2	80	84	84	72	71	64	82	*576	1,030	1,100	175	102
3	80	84	74	74	71	72	86	582	1,040	1,000	167	98
4	80	77	80	72	71	72	94	612	1,230	987	162	98
5	79	74	82	77	71	72	131	814	1,270	981	164	96
6	77	76	80	76	71	74	127	1,040	1,100	909	162	94
7	76	72	68	77	71	76	116	1,210	1,020	831	154	94
8	72	68	65	76	71	80	118	1,430	957	754	147	92
9	72	71	82	68	71	94	118	1,730	1,030	693	142	92
10	72	71	80	64	74	108	110	2,140	*1,300	639	137	89
11	71	77	70	65	72	98	114	1,990	1,280	597	133	87
12	70	80	84	57	96	91	124	2,070	1,250	556	131	86
13	70	84	68	66	94	86	164	1,960	1,340	517	133	86
14	70	80	82	72	87	89	209	1,950	1,430	502	135	86
15	70	77	84	71	82	86	209	2,070	1,640	497	133	89
16	70	76	82	72	80	87	235	2,400	1,720	482	127	98
17	70	79	80	72	82	86	300	2,680	1,350	434	*124	96
18	70	60	77	68	80	86	380	2,800	1,230	384	122	98
19	72	51	84	70	79	84	420	3,170	1,250	349	118	94
20	72	76	96	64	80	86	384	3,670	1,320	323	120	91
21	72	80	86	68	82	84	384	3,350	1,510	*307	142	87
22	72	80	71	71	77	84	425	2,520	1,660	296	137	86
23	70	87	52	72	80	82	507	2,270	1,880	280	129	84
24	70	79	70	70	80	84	566	2,210	*1,850	262	120	82
25	71	80	66	64	*79	82	649	2,160	*1,780	248	122	80
26	70	87	74	65	77	84	682	1,790	1,910	235	147	80
27	71	104	77	70	76	86	808	*1,480	1,910	225	152	79
28	*71	110	72	72	76	84	855	1,300	1,580	215	131	*77
29	70	100	*77	76	-	82	781	1,230	1,280	206	118	80
30	70	94	64	79	------	77	693	1,230	1,200	197	112	82
31	70	-----	76	77	------	80	------	1,140	------	188	108	------
Total	2,249	2,388	2,378	2,194	2,173	2,574	9,953	56,184	41,517	16,414	4,286	2,687
Mean	72.5	79.6	76.7	70.8	77.6	83.0	332	1,812	1,384	529	138	89.6
Cfsm	0.340	0.374	0.360	0.332	0.364	0.390	1.56	8.51	6.50	2.48	0.648	0.421
In.	0.39	0.42	0.42	0.38	0.38	0.45	1.74	9.81	7.25	2.87	0.75	0.47
Ac-ft	4,460	4,740	4,720	4,350	4,310	5,110	19,740	111,400	82,350	32,560	8,500	5,330

Calendar year 1953: Max 3,090 Min 51 Mean 376 Cfsm 1.77 In. 24.01 Ac-ft 272,600
Water year 1953-54: Max 3,670 Min 51 Mean 397 Cfsm 1.86 In. 25.33 Ac-ft 287,600

Peak discharge (base, 1,800 cfs).--May 20 (11 p.m.) 4,170 cfs (6.61 ft); June 16 (1 a.m.) 2,000 cfs (4.65 ft); June 23 (10 p.m.) 2,190 cfs (4.82 ft).
* Discharge measurement made on this day.

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 1954.

Gage.--Staff gage read once daily. Datum of gage is 1,908.92 ft above mean sea level, unadjusted. Since Jan. 13, 1952, supplementary staff gage 3 miles upstream.

Average discharge.--10 years, 10,400 cfs (7,529,000 acre-ft per year).

Extremes.--Maximum discharge during year, 62,300 cfs May 21 (gage height, 23.70 ft, supplementary gage, from graph based on gage readings); minimum observed, 2,440 cfs Jan. 13 (gage height, -0.52 ft, supplementary gage).
1944-54: Maximum discharge observed, 75,300 cfs May 29, 1948 (gage height, 33.50 ft); minimum observed, 1,790 cfs Dec. 27, 1952 (gage height, -1.30 ft, supplementary gage).

Remarks.--Records excellent except those for periods of ice effect or doubtful 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 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,720	4,000	4,460	3,370	4,240	3,880	3,680	15,300	23,200	28,200	6,830	4,720
2	3,740	4,020	4,440	3,440	3,980	3,730	3,640	13,900	21,900	26,900	6,520	4,550
3	3,810	4,020	4,380	3,510	3,580	3,460	3,660	13,000	20,900	25,800	6,360	4,370
4	3,940	4,050	4,280	3,660	3,420	3,270	3,900	12,600	21,200	24,200	6,220	4,180
5	3,920	4,100	4,120	3,720	3,370	3,390	5,020	13,900	22,300	23,200	6,060	4,020
6	3,890	4,120	4,100	3,690	3,460	3,540	6,540	17,100	23,200	22,700	6,060	3,900
7	3,860	4,200	4,100	3,670	3,390	3,700	6,910	21,000	22,800	21,400	6,120	3,850
8	3,760	4,180	3,810	3,620	3,460	3,850	6,540	24,300	21,200	20,400	5,920	3,840
9	3,720	4,150	*3,600	3,620	3,250	4,290	6,290	d29,000	21,600	19,200	5,760	3,830
10	3,670	4,070	3,740	3,430	3,180	5,420	6,080	d38,000	23,400	17,900	5,560	3,780
11	3,640	4,050	3,670	3,260	3,270	6,080	5,740	d41,000	*25,700	16,300	5,480	3,740
12	3,690	4,180	3,640	2,600	3,580	5,610	5,660	d41,000	25,800	15,600	5,310	3,720
13	3,720	4,260	3,670	2,440	4,710	5,270	6,470	40,300	25,900	*15,400	5,260	3,680
14	3,670	4,280	3,570	2,640	4,960	4,580	8,820	37,700	26,300	14,700	5,340	3,670
15	3,670	4,200	3,670	3,110	4,660	4,290	9,640	37,400	27,800	14,900	5,480	3,620
16	3,640	4,180	3,830	3,680	4,240	4,290	9,700	40,600	d31,700	15,400	5,540	3,780
17	3,620	4,260	4,060	3,830	4,010	4,270	10,500	45,700	d31,400	15,600	5,420	3,960
18	3,670	4,200	3,900	*3,960	*4,090	4,290	12,800	*49,400	d28,500	14,200	5,260	4,070
19	3,720	3,930	3,800	3,780	4,110	4,320	14,700	53,800	d26,500	13,300	5,140	4,140
20	3,790	3,420	3,960	3,340	3,830	4,140	14,300	58,300	26,000	12,200	5,030	3,960
21	3,810	3,510	4,270	3,070	3,900	4,090	13,000	61,000	27,200	11,800	5,140	3,860
22	3,860	4,180	4,140	2,830	3,880	3,980	12,100	54,100	29,300	11,100	5,340	3,740
23	3,890	4,440	3,640	3,460	3,830	*3,900	12,500	48,300	32,100	10,500	5,480	3,730
24	3,940	4,620	3,060	3,980	3,900	3,850	14,100	42,100	36,300	9,660	5,370	*3,680
25	3,940	4,360	2,970	3,780	3,960	3,880	15,400	*40,800	38,000	9,240	5,260	3,660
26	3,970	4,440	2,880	b3,600	4,030	3,930	*15,600	38,000	39,500	8,840	5,280	3,660
27	4,000	4,490	3,060	b3,200	4,220	4,030	16,200	33,500	41,200	8,440	5,590	3,610
28	4,020	4,720	3,310	b3,200	3,960	4,140	17,900	29,900	41,600	7,880	*5,480	3,560
29	4,000	4,670	3,380	b3,600	-	4,010	17,900	26,700	36,800	7,700	5,200	3,540
30	3,970	4,590	3,560	4,060	------	3,880	16,600	25,900	31,200	7,510	5,070	3,560
31	*3,970	-----	3,180	4,220	-----	3,700	-----	24,600	------	7,170	4,880	------
Total	118,230	125,890	116,250	107,370	108,470	129,060	301,890	‡1,068.2	850,500	477,340	172,760	115,980
Mean	3,814	4,196	3,750	3,464	3,874	4,163	10,060	34,460	28,350	15,400	5,573	3,866
Cfsm	0.311	0.342	0.306	0.282	0.316	0.339	0.820	2.81	2.31	1.26	0.454	0.315
In.	0.36	0.38	0.35	0.33	0.33	0.39	0.92	3.24	2.58	1.45	0.52	0.35
Ac-ft	234,500	249,700	230,600	213,000	215,100	256,000	598,800	‡2,119	‡1,687	946,800	342,700	230,000

Calendar year 1953 : Max 63,200 Min 2,880 Mean 10,670 Cfsm 0.870 In. 11.80 Ac-ft 7,727,000
Water year 1953-54 : Max 61,000 Min 2,440 Mean 10,110 Cfsm 0.824 In. 11.20 Ac-ft 7,323,000

* Discharge measurement made on this day.
‡ Expressed in thousands.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge computed on basis of weather records and records for station at Whitebird and Little Salmon River at Riggins.

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, 3¼ 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 1954.

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.--9 years (1945-54), 19.5 cfs (14,120 acre-ft per year).

Extremes.--Maximum discharge during year, 213 cfs Apr. 13 (gage height, 4.07 ft); maximum gage height unknown, occurred during period of no gage-height record; minimum discharge, 0.8 cfs Nov. 19 (gage height, 2.19 ft).
1937-38, 1945-54: Maximum discharge, 395 cfs Apr. 27, 1952 (gage height, 5.00 ft); minimum, 0.2 cfs Nov. 19, 20, 1952.

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

Revisions (water years).--WSP 1153: 1948.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Mar. 9				Mar. 10 to Sept. 30			
2.2	1.0	2.8	18	2.2	0.6	2.8	17
2.3	2.3	3.0	30	2.3	1.5	3.0	34
2.4	4.4	3.3	58	2.4	3.3	3.3	70
2.6	10			2.5	5.8	3.6	120
				2.6	8.8	4.0	198
				2.7	12		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	1.6	2.2	2.1	4.0	6.4	15	79	19	7.6	1.9	1.9
2	1.6	1.9	2.3	2.1	4.0	5.6	15	67	17	7.0	1.7	1.9
3	1.6	1.8	2.3	2.1	4.0	5.6	28	*64	15	6.4	1.7	1.9
4	1.8	1.8	2.2	2.2	4.0	5.4	41	63	14	6.1	1.7	1.9
5	1.8	1.9	2.4	2.2	4.0	5.2	99	76	13	5.6	1.7	1.9
6	1.8	2.5	2.3	2.2	4.0	5.8	118	84	12	5.3	1.7	1.9
7	1.8	2.0	2.2	2.2	4.0	6.5	97	88	15	5.0	1.7	1.9
8	1.6	1.8	*2.0	2.2	4.0	13	90	92	14	4.8	1.7	1.9
9	1.6	1.8	2.3	2.1	4.0	50	79	95	14	4.6	1.7	1.7
10	1.6	1.6	2.3	2.1	3.8	90	70	109	*17	4.3	1.5	1.9
11	1.6	1.8	2.2	2.1	3.6	55	73	90	15	4.0	1.4	1.7
12	*1.8	1.8	2.3	2.1	6.0	40	85	76	15	*3.8	1.5	1.7
13	1.8	1.8	2.2	2.1	8.5	30	152	63	16	3.8	1.5	1.9
14	1.8	1.8	2.2	2.1	10	25	186	54	16	3.8	1.4	1.7
15	1.8	1.8	2.3	2.2	9.5	22	154	50	22	4.0	1.5	2.4
16	1.8	*1.9	2.3	2.2	8.5	21	145	48	21	3.8	1.5	6.4
17	1.8	2.3	2.3	2.7	8.0	20	*162	44	17	3.6	1.7	2.9
18	2.2	2.0	2.3	3.1	8.2	19	184	39	14	2.9	1.5	4.6
19	2.2	1.6	2.3	*3.1	7.0	18	176	34	14	2.8	1.5	2.8
20	1.9	1.8	2.8	2.9	7.0	16	154	29	13	2.8	2.2	2.4
21	1.8	1.9	2.8	2.9	7.0	17	143	30	12	2.6	*2.9	2.2
22	1.8	2.2	2.1	2.7	6.5	17	139	24	11	2.9	2.6	2.0
23	1.8	4.2	1.7	2.5	6.5	17	141	20	10	2.8	2.4	*2.0
24	1.8	2.7	1.8	2.5	*6.5	20	139	17	9.9	2.6	2.4	2.0
25	1.8	2.2	2.1	2.7	6.6	24	135	17	9.5	2.6	2.6	2.0
26	1.8	2.2	2.1	3.0	6.8	28	133	17	11	2.6	3.1	1.9
27	1.8	4.7	2.1	2.9	6.4	27	143	17	11	2.8	2.8	1.9
28	1.8	3.6	2.2	3.1	6.6	28	147	15	9.5	2.8	2.4	1.7
29	1.8	2.5	2.2	3.5	-	24	131	14	8.5	2.6	2.0	1.9
30	1.6	2.2	2.1	3.6	------	22	99	16	8.2	2.4	1.9	1.7
31	1.6	-----	2.1	3.9	-----	*21	-----	17	------	2.2	1.9	------
Total	54.9	65.7	69.0	79.4	169.0	704.5	3,473	1,548	413.6	120.9	59.7	66.6
Mean	1.77	2.19	2.23	2.56	6.04	22.7	116	49.9	13.8	3.90	1.93	2.22
Cfsm	0.112	0.139	0.141	0.162	0.382	1.44	7.34	3.16	0.873	0.247	0.122	0.141
In.	0.13	0.15	0.16	0.19	0.40	1.66	8.17	3.64	0.97	0.28	0.14	0.16
Ac-ft	109	130	137	157	335	1,400	6,890	3,070	820	240	118	132

Calendar year 1953: Max 236 Min 1.3 Mean 20.1 Cfsm 1.27 In. 17.29 Ac-ft 14,570
Water year 1953-54: Max 186 Min 1.4 Mean 18.7 Cfsm 1.18 In. 16.05 Ac-ft 13,540

Peak discharge (base, 100 cfs).--Mar. 10 (time and discharge unknown); Apr. 5 (12 p.m.) 130 cfs (3.65 ft); Apr. 13 (9 to 10 p.m.) 213 cfs (4.07 ft); Apr. 18 (7 to 8 p.m.) 202 cfs (4.02 ft); May 10 (4 to 5 a.m.) 118 cfs (3.59 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 18, 19, 22, 23, Dec. 2 to about Mar 25. No gage-height record Jan. 20 to Feb. 23, Mar. 10-30; discharge estimated on basis of 3 discharge measurements, weather records, and records for Weiser River at Tamarack and Little Weiser River near Indian Valley.

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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 1951 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 1,760 ft (from topographic map).

Extremes.--Maximum discharge during year, 5,060 cfs May 20 (gage height, 7.17 ft); minimum, 157 cfs Jan. 12 (gage height, 1.71 ft).
1951-54: Maximum discharge, 5,650 cfs June 13, 1953 (gage height, 7.39 ft); minimum, 136 cfs sometime during period Nov. 21-30, 1952 (gage height, 1.57 ft).
Flood about June 1, 1948, reached a discharge of 9,200 cfs (slope-area determination).

Remarks.--Records excellent. Diversions for irrigation of about 13,600 acres above station.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 12		Feb. 13 to Sept. 30			
1.7	149	1.7	154	4.0	1,300
2.0	251	2.0	250	5.0	2,180
2.4	415	2.5	450	6.0	3,280
2.8	601	3.0	694	7.0	4,760

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	208	175	215	188	446	406	487	1,500	1,810	1,800	316	230
2	212	178	212	184	428	356	496	1,350	1,580	1,670	301	216
3	212	181	208	184	394	360	633	1,290	1,520	1,600	294	213
4	201	178	198	184	368	340	855	1,330	1,810	1,580	290	213
5	195	178	205	191	343	336	1,430	1,660	1,700	1,590	282	210
6	191	191	205	191	318	344	1,980	1,970	1,600	1,470	279	203
7	188	188	198	201	302	336	1,600	2,170	1,550	1,300	268	194
8	181	184	188	198	286	381	1,370	2,500	1,530	1,150	261	194
9	178	181	*191	188	286	1,000	1,290	2,970	1,600	1,070	254	190
10	175	178	205	188	282	1,930	1,140	3,710	2,030	1,000	247	184
11	175	188	188	188	259	1,940	1,050	*3,480	*2,130	934	240	184
12	178	184	195	168	595	1,250	1,070	3,180	2,080	888	233	178
13	178	184	191	165	838	928	1,360	2,910	2,190	844	240	181
14	175	184	191	188	789	811	2,240	2,810	2,230	*795	240	187
15	171	181	191	191	715	730	2,000	3,000	2,660	850	240	251
16	171	181	191	205	623	668	1,750	3,460	3,120	833	243	328
17	171	201	191	368	559	623	1,790	3,710	2,570	741	240	301
18	181	191	188	*372	*633	628	1,950	3,790	2,070	674	233	305
19	198	178	201	330	583	578	2,040	4,150	2,140	613	223	282
20	191	178	278	240	530	573	1,840	4,290	2,230	564	250	261
21	188	181	259	282	520	573	1,680	4,080	2,520	530	290	243
22	188	191	222	298	510	*588	1,640	3,220	2,760	496	279	233
23	188	237	178	338	482	608	1,700	2,900	3,000	468	275	226
24	184	259	191	338	459	648	1,720	*2,920	2,890	432	279	*223
25	181	233	188	306	455	689	1,770	2,890	2,620	410	297	219
26	181	229	191	298	446	689	*1,800	2,290	3,050	393	316	216
27	181	270	191	298	424	628	1,860	1,970	3,080	377	*336	206
28	178	306	188	302	410	679	2,130	1,770	2,470	364	297	203
29	175	251	188	338	-	578	2,010	1,650	1,970	352	272	210
30	175	226	184	406	-	520	1,750	1,740	1,860	332	254	213
31	*175	---	188	460	-----	501	------	1,690	------	324	236	------
Total	5,724	6,045	6,198	7,976	13,283	21,219	46,431	82,350	66,370	26,444	8,305	6,697
Mean	185	202	200	257	474	684	1,548	2,656	2,212	853	268	223
Ac-ft	11,350	11,990	12,290	15,820	26,350	42,090	92,090	163,300	131,600	52,450	16,470	13,280

Calendar year 1953: Max 4,810 Min 171 Mean 834 Ac-ft 603,500
Water year 1953-54: Max 4,290 Min 165 Mean 814 Ac-ft 589,100

Peak discharge (base, 2,000 cfs).--Mar. 10 (11:30 p.m.) 2,320 cfs (5.14 ft); Apr. 6 (12 m.) 2,070 cfs (4.89 ft); Apr. 14 (2:30 p.m.) 2,440 cfs (5.26 ft); Apr. 28 (4 to 6 a.m.) 2,160 cfs (4.98 ft); May 10 (5:30 a.m.) 3,920 cfs (6.47 ft); May 20 (9:30 p.m.) 5,060 cfs (7.17 ft); June 15 (12 p.m.) 3,680 cfs (6:30 ft); June 26 (3 p.m.) 3,860 cfs (6.43 ft).
* Discharge measurement made on this day.

Salmon River at Whitebird, Idaho

Location.--Lat 45°45', long 116°20', in sec. 22, T. 28 N., R. 1 E., on left bank 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 1954.

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, and 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.--42 years, 10,740 cfs (7,775,000 acre-ft per year).

Extremes.--Maximum discharge during year, 71,700 cfs May 21 (gage height, 28.49 ft); minimum, 2,970 cfs Dec. 26 (gage height, 11.78 ft).

1910-17, 1919-54: 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 June 1894, present datum (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).--WSP 753: 1932. WSP 1043: Drainage area.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,170	*4,290	4,900	3,590	4,920	4,500	4,320	17,300	26,400	32,500	7,250	5,100
2	4,220	4,320	4,790	3,920	4,720	4,320	4,360	15,300	24,800	30,700	7,020	4,920
3	4,310	4,430	4,660	4,070	4,410	4,150	4,430	14,000	23,300	28,400	6,830	4,750
4	4,320	4,480	4,540	4,120	4,220	3,880	4,790	13,700	23,400	26,900	6,580	4,610
5	4,290	4,450	4,450	4,140	4,070	3,970	5,800	15,000	24,800	26,100	6,400	4,520
6	4,310	4,430	4,470	4,200	4,050	4,050	8,170	18,900	25,400	25,500	6,380	4,480
7	4,240	4,480	4,410	4,190	4,080	4,200	8,810	23,800	25,300	24,400	6,440	4,430
8	4,170	4,450	*4,290	4,190	4,030	4,390	8,170	28,400	24,300	22,800	6,280	4,360
9	4,120	4,410	4,100	4,170	3,880	5,080	7,830	34,000	23,800	21,200	6,100	4,310
10	4,080	4,310	4,080	4,080	3,780	6,910	7,500	44,000	28,000	19,700	5,920	4,270
11	4,050	4,310	4,320	3,880	3,830	8,280	7,080	47,500	*30,800	18,500	5,740	4,240
12	4,050	4,390	4,240	3,460	4,170	7,460	6,940	47,000	30,400	17,400	5,590	4,150
13	4,070	4,450	4,150	3,010	5,190	6,440	7,790	45,300	30,700	16,500	5,500	4,100
14	4,080	4,560	4,170	3,170	5,920	5,820	10,900	43,200	31,800	*15,800	5,630	4,070
15	4,030	4,540	3,930	3,500	5,720	5,440	12,200	42,400	33,400	16,100	5,780	4,150
16	4,030	4,500	4,240	4,050	5,170	5,290	11,800	45,200	38,400	17,100	5,840	4,390
17	4,030	4,650	4,520	*4,450	4,840	5,210	12,300	51,000	37,300	16,900	5,760	4,630
18	4,070	4,610	4,380	4,660	4,880	5,190	14,600	*55,300	33,700	15,300	5,570	4,740
19	4,170	4,430	4,240	4,470	*4,860	5,120	17,000	59,600	31,500	14,000	5,440	4,740
20	4,220	4,030	4,390	4,000	4,660	5,010	17,100	65,200	30,300	12,900	5,420	4,540
21	4,240	3,720	4,660	3,690	4,610	4,900	15,300	70,500	31,800	12,100	5,740	4,380
22	4,270	4,150	4,690	3,540	4,610	4,830	14,200	63,300	34,800	11,500	6,160	4,320
23	4,290	4,680	4,360	3,810	4,610	*4,770	14,400	54,400	38,800	11,000	6,060	4,260
24	4,290	4.990	3,780	4,500	*4,540	4,790	15,500	*48,800	42,100	10,400	5,960	4,190
25	4,310	4,900	3,240	4,450	4,630	4,810	16,600	46,600	41,800	9,730	5,820	*4,100
26	4,320	4,790	3,100	4,000	4,810	4,860	18,000	42,700	42,800	9,270	5,820	4,100
27	4,340	4,930	3,420	3,610	4,840	4,880	*18,900	38,400	46,500	8,810	*6,120	4,030
28	4,360	5,170	3,720	3,590	4,660	4,970	21,000	34,100	48,700	8,460	6,100	3,970
29	4,360	5,190	3,830	4,030	-	4,840	21,200	30,400	42,900	8,140	5,800	3,980
30	4,380	5,020	4,020	4,610	-----	4,630	19,400	29,100	36,400	7,810	5,440	4,020
31	4,340	-----	3,850	4,810	-----	4,450	-----	27,300	------	7,500	5,240	----
Total	130,530	136,060	129,940	123,960	128,710	157,440	356,390	‡1,211.7	984,400	523,420	185,730	130,850
Mean	4,211	4,535	4,192	3,999	4,597	5,079	11,880	39,090	32,810	16,880	5,991	4,362
Cfsm	0.311	0.335	0.309	0.295	0.339	0.375	0.877	2.88	2.42	1.25	0.442	0.322
In.	0.36	0.37	0.36	0.34	0.35	0.43	0.98	3.33	2.70	1.44	0.51	0.36
Ac-ft	258,900	269,900	257,700	245,900	255,300	312,300	706,900	‡2,403	‡1,953	‡1,038	368,400	259,500

Calendar year 1953: Max 74,100 Min 3,100 Mean 12,270 Cfsm 0.906 In. 12.19 Ac-ft 8,882,000
Water year 1953-54: Max 70,500 Min 3,010 Mean 11,500 Cfsm 0.849 In. 11.53 Ac-ft 8,329,000

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

Deer Creek near Winchester, Idaho

Location.--Lat 46°07', long 116°45', in SE¼ sec. 18, T. 32 N., R. 3 W., on right bank 300 ft downstream from proposed dam site, an eighth of a mile downstream from West Fork, 4½ miles upstream from East Fork, and 10 miles southwest of Winchester.

Drainage area.--14.5 sq mi, approximately.

Records available.--October 1951 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 4,380 ft (by barometer).

Extremes.--Maximum daily discharge during year, 60 cfs Apr. 14; maximum gage height, 3.53 ft Feb. 13 (backwater from ice); minimum discharge, 0.3 cfs Aug. 12 (gage height, 1.64 ft), but may have been less during period of ice effect.

1951-54: Maximum discharge, 146 cfs Apr. 28, 1953 (gage height, 3.21 ft); maximum gage height, 3.60 ft Jan. 23, 1953 (backwater from ice); minimum discharge recorded, 0.2 cfs Sept. 23, Oct. 4, 1952 (gage height, 1.62 ft).

Remarks.--Records excellent except those below 5 cfs, which are good, and those for periods of ice effect or no gage-height record, which are poor.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 10				Apr. 11 to Sept. 30			
1.6	0.2	2.2	15	1.6	0.2	2.0	7.7
1.7	1.0	2.4	26	1.7	.8	2.2	17
1.8	2.4	2.7	56	1.8	2.3	2.4	34
2.0	7.4			1.9	4.6	2.7	68

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	0.7	1.9	1.1	1.4	2.8	7.0	28	13	8.1	0.8	0.8
2	.7	.8	1.9	1.1	1.4	2.6	7.5	25	10	6.2	.7	.6
3	.6	.7	1.9	1.1	1.4	2.6	15	*22	8.9	4.9	.8	.5
4	.6	.6	1.9	1.1	1.4	2.5	30	22	9.7	4.1	1.2	.5
5	.6	.7	1.9	1.1	1.4	2.4	40	23	9.3	3.7	.8	.6
6	.6	*1.1	1.9	1.1	1.4	2.6	45	21	11	3.2	.8	.7
7	.6	.8	*1.9	1.1	1.4	3.2	42	19	19	3.2	.8	.6
8	.6	.7	1.7	1.1	1.4	3.5	38	19	19	3.0	.6	.8
9	.6	.6	1.7	.8	1.4	10	33	19	19	2.8	.4	.7
10	.6	.6	1.7	.8	1.4	25	28	17	19	3.0	.6	.5
11	.6	.6	1.7	.8	1.3	15	27	16	18	3.2	.4	.5
12	.6	.6	1.7	.8	1.3	12	35	14	16	2.5	.4	.5
13	.6	.6	1.7	*.8	3.0	10	45	13	17	2.1	.5	.5
14	.6	.5	1.7	.8	4.0	9	60	11	16	2.1	.7	.5
15	.6	.6	1.7	.8	3.8	8.5	50	10	20	2.3	1.2	.7
16	.6	.8	1.7	.8	3.6	8.0	45	9.3	19	2.1	2.1	.8
17	.6	.9	1.8	.9	3.5	7.5	45	*8.5	*17	2.0	1.2	1.2
18	.8	.9	1.8	1.1	3.5	7.0	50	7.7	16	*1.6	.8	1.1
19	1.1	.8	1.8	1.1	3.2	6.8	50	7.1	14	1.6	.8	1.0
20	.8	.8	2.0	1.1	3.0	6.5	42	6.8	13	1.2	1.8	.8
21	.6	.9	2.0	1.0	3.0	6.5	38	6.8	12	1.5	2.5	.8
22	.7	2.5	1.3	.8	3.0	6.5	36	6.2	11	1.5	1.5	.8
23	.7	5.5	1.1	.7	*2.9	7.0	36	5.5	9.7	1.3	.8	.7
24	.7	4.5	1.1	.7	3.0	7.5	35	4.9	8.9	1.1	1.8	.6
25	.7	4.0	1.3	.8	3.0	8.0	33	6.2	7.7	1.0	1.6	.6
26	.6	3.3	1.3	.9	3.1	8.0	32	6.2	8.9	.8	*1.5	.6
27	.6	4.2	1.3	.9	3.1	8.0	32	6.2	10	.8	1.5	.6
28	.6	3.1	1.3	.9	3.0	8.0	39	4.9	9.3	.8	.8	*.8
29	.7	2.1	1.3	1.0	-	7.6	*36	5.5	7.1	.8	.8	1.0
30	.7	1.9	1.2	1.2	-- ---	7.4	34	12	6.5	.8	.7	.8
31	.7	-----	1.2	1.4	-----	7.0	-----	12	------	.8	.8	------
Total	20.6	46.4	50.4	29.7	68.3	229.0	1,085.5	394.8	395.0	74.1	31.7	21.2
Mean	0.66	1.55	1.63	0.96	2.44	7.39	36.2	12.7	13.2	2.39	1.02	0.71
Cfsm	0.046	0.107	0.112	0.066	0.168	0.510	2.50	0.876	0.910	0.165	0.070	0.049
In.	0.05	0.12	0.13	0.05	0.18	0.59	2.78	1.01	1.01	0.19	0.08	0.05
Ac-ft	41	92	100	59	135	454	2,150	783	783	147	63	42

Calendar year 1953: Max 122 Min 0.5 Mean 10.6 Cfsm 0.731 In. 9.91 Ac-ft 7,670
Water year 1953-54: Max 60 Min 0.4 Mean 6.70 Cfsm .462 In. 6.27 Ac-ft 4,850

Peak discharge (base, 50 cfs).--About Apr. 6 (time and discharge unknown); about Apr. 14 (time and discharge unknown).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 3-5, 7, 8, 16-25, 28, Dec. 1 to about Apr. 10. No gage-height record Jan. 20-27, Mar. 2 to Apr. 28, May 2; discharge estimated on basis of weather records and records for Mud Creek and Weiser River near Tamarack.

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 1954 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.--17 years, 265 cfs (191,900 acre-ft per year).

Extremes.--Maximum discharge during year, 1,310 cfs Apr. 13 (gage height, 3.73 ft); minimum, 13 cfs Dec. 8 (gage height, 0.71 ft), result of freezeup.
1937-54: Maximum discharge, 3,780 cfs Mar. 25, 1952 (gage height, 5.82 ft); minimum, 6 cfs Aug. 10, 12-29, Sept. 1-4, 1940.

Remarks.--Records good except those for period of ice effect, which are fair. No regulation. Several small diversions for irrigation above station.

Rating tables, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-18		Oct. 19 to Sept. 30			
0.8	19	0.8	18	2.0	345
.9	28	.9	26	3.0	840
1.0	40	1.1	51	3.6	1,220
		1.4	120		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	30	62	110	196	260	157	376	240	280	34	30
2	24	30	62	97	178	178	141	350	202	202	*30	26
3	24	29	60	84	164	199	150	340	188	174	30	24
4	24	29	62	89	164	174	213	354	188	154	29	24
5	24	32	66	87	160	182	635	*417	178	138	29	24
6	24	33	64	80	160	185	828	480	185	129	28	24
7	24	33	50	84	168	182	*675	515	224	120	27	23
8	24	32	23	80	185	264	640	595	248	110	25	23
9	23	30	62	51	196	625	690	650	322	104	24	22
10	24	30	80	94	*199	792	590	685	630	102	24	21
11	27	30	59	92	174	600	555	650	645	97	23	20
12	32	30	84	75	282	458	565	590	650	87	22	20
13	28	32	51	59	440	368	952	525	725	80	22	*20
14	26	32	77	87	417	376	1,180	476	710	75	24	22
15	29	30	89	75	340	327	954	466	675	72	36	24
16	32	33	82	80	296	309	822	462	*655	70	36	29
17	30	40	75	77	309	292	846	458	580	66	35	34
18	34	37	80	70	322	240	858	448	510	62	30	35
19	48	30	135	64	276	264	770	444	458	60	27	30
20	43	36	560	b22	280	260	670	422	412	59	35	27
21	37	32	386	*b32	354	232	585	376	372	57	59	25
22	34	44	*224	b85	318	216	555	318	332	*59	50	24
23	30	84	154	b75	322	216	560	288	296	55	38	25
24	30	66	185	b65	368	220	545	264	268	51	*36	24
25	30	55	112	b60	408	188	520	264	240	50	37	24
26	30	59	117	b65	376	202	515	260	224	47	36	23
27	30	68	132	b70	322	192	500	232	228	44	35	21
28	32	77	138	82	300	188	515	216	244	40	32	20
29	32	66	115	138	-	132	466	202	199	40	28	24
30	*30	*60	55	206	-	150	435	220	*188	38	27	25
31	32	-------	92	210	----	157	------	220	------	35	30	------
Total	915	1,249	3,593	2,645	7,674	8,628	18,087	12,563	11,216	2,757	978	737
Mean	29.5	41.6	116	85.3	274	278	603	405	374	88.9	31.5	24.6
Ac-ft	1,810	2,480	7,130	5,250	15,220	17,110	35,880	24,920	22,250	5,470	1,940	1,460

Calendar year 1953: Max 1,940 Min 21 Mean 329 Ac-ft 238,000
Water year 1953-54: Max 1,180 Min 20 Mean 195 Ac-ft 140,900

Peak discharge (base, 1,500 cfs).--No peak above base.
* Discharge measurement made on this day.
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 1954. Published as "at Hilgard" 1903-15.

Gage.--Water-stage recorder. Datum of gage is 2,830.86 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Nov. 6, 1903, to Sept. 30, 1915, staff gages at site 4 miles upstream, just downstream from Fivepoint Creek, at various datums. Feb. 16, 1918, to Nov. 24, 1931, staff gages at site 1 mile downstream from present site at various datums.

Average discharge.--40 years (1905-9, 1910-11, 1912-15, 1918-20, 1921-22, 1925-54), 360 cfs (260,600 acre-ft per year).

Extremes.--Maximum discharge during year, 2,220 cfs Apr. 14 (gage height, 5.22 ft); minimum, 20 cfs Sept. 11, 12.
1903-15, 1918-23, 1925-54: 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 or no gage-height record, which are fair. Some discharge measurements made at cable 3 miles upstream from station. Diversions for irrigation of about 400 acres above station.

Revisions (water years).--WSP 768: 1933.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	20	3.0	485
1.7	45	4.0	1,120
2.0	103	5.0	2,000
2.5	258		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	34	85	151	319	390	247	510	302	327	34	32
2	27	34	89	126	298	290	222	480	258	258	*32	28
3	28	31	87	126	294	302	229	450	240	215	31	26
4	29	30	82	121	302	262	298	465	233	195	30	24
5	29	32	87	121	311	258	833	*540	229	172	30	24
6	28	35	89	108	302	266	1,240	626	229	163	29	24
7	28	37	69	129	327	258	*1,030	668	286	149	28	23
8	27	35	48	129	358	354	938	752	319	135	27	23
9	27	34	58	92	362	854	994	833	380	124	26	22
10	26	34	119	a130	*354	1,220	868	882	722	121	26	21
11	29	34	189	a130	302	917	812	840	770	119	24	20
12	35	34	119	a110	400	686	826	752	770	106	23	20
13	34	35	98	a85	632	552	1,500	662	875	96	24	*21
14	31	35	101	a120	596	552	2,000	590	854	89	27	21
15	34	35	132	b110	505	480	1,550	568	805	85	35	22
16	35	35	106	a110	435	445	1,310	562	*784	78	44	26
17	35	42	111	a95	435	425	1,330	552	698	72	39	30
18	37	45	121	a85	485	349	1,370	540	608	67	35	32
19	50	37	210	a80	410	385	1,220	540	546	63	34	30
20	51	38	758	a36	405	380	1,030	505	495	61	39	27
21	44	38	515	*b28	552	344	896	450	445	58	59	24
22	39	47	*336	b120	520	319	826	395	400	*61	58	23
23	35	98	244	b110	505	319	833	344	358	58	44	23
24	32	87	244	b100	535	323	791	315	319	51	*42	23
25	32	67	185	b90	596	282	746	319	294	50	41	23
26	32	69	176	132	557	298	722	319	274	48	41	22
27	32	87	198	143	475	294	698	290	282	44	39	21
28	34	106	176	151	440	294	704	266	298	41	35	21
29	34	89	160	222	-	229	632	251	247	39	32	23
30	*34	*78	92	311	---	236	579	286	*233	37	30	27
31	34	------	106	332	------	247	------	278	------	35	32	------
Total	1,029	1,472	5,190	3,933	12,012	12,810	27,274	15,830	13,553	3,217	1,070	726
Mean	33.2	49.1	167	127	429	413	909	511	452	104	34.5	24.2
Ac-ft	2,040	2,920	10,290	7,800	23,830	25,410	54,100	31,400	26,880	6,380	2,120	1,440

Calendar year 1953: Max 3,100 Min 22 Mean 492 Ac-ft 355,800
Water year 1953-54: Max 2,000 Min 20 Mean 269 Ac-ft 194,600

Peak discharge (base, 1,900 cfs).--Apr. 14 (2:30 a.m.) 2,220 cfs (5.22 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 at Hilgard.
b Stage-discharge relation affected by ice.

Catherine Creek near Union, Oreg.

Location.--Lat 45°09'20", long 117°46'40", 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 1954.

Gage.--Water-stage recorder. Datum of gage is 3,081.76 ft above mean sea level, datum of 1929, supplementary adjustment of 1947 (Oregon State Highway Department benchmark). Prior to Nov. 28, 1938, staff gages at several sites within 1¾ miles of present site at various datums. Nov. 28, 1938, to May 16, 1939, water-stage recorder at site 400 ft downstream from present site at datum 4.29 ft lower.

Average discharge.--30 years (1911-12, 1918-19, 1925-44, 1945-54), 120 cfs (86,880 acre-ft per year).

Extremes.--Maximum discharge during year, 548 cfs May 9 (gage height, 2.74 ft); minimum, 22 cfs Sept. 27, 28 (gage height, 0.65 ft).
1906-7, 1911-12, 1915, 1918-19, 1925-54: 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, which are fair. Diversions above station for irrigation of about 200 acres; some water diverted into Big Creek, in Powder River basin.

Rating tables, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 18				May 19 to Sept. 30			
0.6	25	1.7	195	0.6	17	2.0	275
.9	50	2.0	275	1.1	80	2.5	445
1.3	107	2.7	530	1.5	152		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	34	42	b38	47	54	51	180	200	144	46	32
2	35	36	42	b36	47	46	50	170	185	133	*46	29
3	35	34	40	b38	47	54	50	175	180	123	45	29
4	36	34	38	b38	47	52	54	198	180	118	45	29
5	35	38	38	36	49	50	74	*254	170	118	44	29
6	34	39	40	35	51	50	88	284	168	109	43	23
7	34	37	b36	37	54	50	*86	320	175	104	41	27
8	34	35	b32	37	60	60	87	377	178	98	40	27
9	34	34	b36	b34	62	120	87	449	190	94	39	26
10	33	34	41	b36	*62	149	81	503	210	92	38	26
11	33	34	b34	36	60	120	82	465	205	89	38	26
12	34	34	b36	b34	66	97	95	421	212	83	36	26
13	34	34	b34	b32	67	84	222	374	218	84	38	*26
14	33	34	41	b34	67	78	278	*352	220	89	38	25
15	34	34	39	b36	62	74	235	360	240	92	39	27
16	34	36	39	37	57	71	232	377	*250	84	40	32
17	33	38	38	45	58	68	278	394	230	77	39	33
18	46	34	38	b42	58	65	296	413	210	70	36	34
19	46	34	48	b38	55	60	269	433	200	66	38	30
20	40	35	60	b30	55	62	228	417	195	65	50	29
21	40	34	51	*b44	57	58	218	366	200	65	49	27
22	38	38	*b34	b46	52	58	225	311	210	*62	41	27
23	37	41	b32	42	52	58	248	284	218	58	40	27
24	37	38	b34	b36	56	61	248	275	210	57	*43	26
25	36	39	b36	b32	60	60	248	272	200	54	40	26
26	36	46	b38	b36	63	61	248	245	202	52	39	25
27	36	57	b40	b38	61	62	242	218	198	52	36	24
28	36	49	b38	b40	57	60	245	198	173	50	34	26
29	36	43	b38	41	-	52	228	195	*154	49	33	28
30	*35	*42	b34	45	-------	52	202	210	146	48	32	27
31	34	-------	b38	46	-------	52	------	210	-------	46	32	------
Total	1,112	1,129	1,205	1,175	1,589	2,098	5,275	9,700	5,927	2,525	1,238	833
Mean	35.9	37.6	38.9	37.9	56.8	67.7	176	313	198	81.5	39.9	27.8
Ac-ft	2,210	2,240	2,390	2,330	3,150	4,160	10,460	19,240	11,760	5,010	2,460	1,650

Calendar year 1953: Max 780 Min 26 Mean 161 Ac-ft 116,600
Water year 1953-54: Max 503 Min 24 Mean 92.6 Ac-ft 67,060

Peak discharge (base, 500 cfs).--May 9 (9 p.m.) 548 cfs (2.74 ft). 11.97
* Discharge measurement made on this day.
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 S., R. 45 E., on left bank 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 1954. Prior to October 1952, records published separately as East Fork Wallowa River near Joseph and Wallowa Falls powerplant tailrace near Joseph.

Gage.--Water-stage recorder and concrete control. Datum of gage is 4,517.69 ft above mean sea level, datum of 1929 (Pacific Power & Light Co's. benchmark). Prior to Apr. 8, 1950, staff gage at same site and datum.

Average discharge.--30 years, 20.7 cfs (14,990 acre-ft per year).

Extremes.--Maximum discharge during year, 81 cfs June 26; minimum daily, 11 cfs Mar. 3.
1924-54: Maximum discharge, 450 cfs July 25, 1937 (no flow in powerplant tailrace), from rating curve extended above 80 cfs by logarithmic plotting; minimum daily, 6.6 cfs Feb. 13, 1927.

Remarks.--Records good. All records presented herein include flow in Wallowa Falls powerplant tailrace of Pacific Power & Light Co. The water is diverted at dam on East Fork Wallowa River into a conduit 1 mile above powerhouse and discharged into West Fork a quarter of a mile downstream.

Revisions (water years).--WSP 1217: Drainage area. WSP 1247: 1931, 1937(M), 1948-49, records for river station; 1948, records for tailrace station.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	17	16	14	*13	13	12	15	33	*71	28	18
2	17	17	16	14	14	13	12	15	32	67	27	18
3	18	*15	16	13	13	11	12	15	32	62	*26	18
4	18	17	16	14	13	12	13	17	33	64	26	18
5	18	17	16	14	13	12	13	18	31	71	25	18
6	18	16	15	14	13	12	12	20	30	72	24	17
7	17	16	16	14	13	12	12	22	29	73	24	17
8	17	16	16	14	13	13	13	25	29	69	23	17
9	17	16	15	14	13	16	12	27	37	65	23	*17
10	17	16	15	14	13	14	12	27	49	63	22	18
11	18	16	15	14	12	13	12	25	42	63	20	16
12	18	16	15	12	13	13	12	26	42	64	21	17
13	18	16	15	13	13	13	17	26	43	64	21	17
14	17	16	15	13	13	13	15	25	43	65	21	16
15	18	16	14	13	13	*13	12	30	49	65	20	20
16	17	18	15	13	13	13	14	38	47	62	20	18
17	17	17	15	14	13	13	17	41	45	59	19	18
18	19	16	15	14	13	13	17	45	44	56	20	17
19	18	16	17	14	13	13	16	48	45	53	20	17
20	18	16	16	14	13	13	16	50	46	49	21	16
21	18	16	15	14	13	12	16	47	48	46	22	16
22	17	17	*15	14	13	12	16	*44	51	43	21	17
23	17	18	14	14	13	12	16	45	55	40	21	17
24	17	17	14	14	13	12	16	46	58	37	21	16
25	17	18	14	14	13	12	17	44	60	36	20	16
26	17	16	14	14	13	12	*16	41	69	34	19	16
27	17	17	14	14	13	12	17	39	73	33	19	16
28	17	16	14	14	13	12	17	38	67	32	18	16
29	17	16	14	14	-------	12	16	38	60	31	18	16
30	17	16	14	14		12	16	38	62	29	18	16
31	17	--	14	14	- - -	12	------	36	------	28	18	------
Total	539	493	465	427	364	390	434	1,011	1,384	1,666	666	510
Mean	17.4	16.4	15.0	13.8	13.0	12.6	14.5	32.6	46.1	53.7	21.5	17.0
Cfsm	1.74	1.64	1.50	1.38	1.30	1.26	1.45	3.26	4.61	5.37	2.15	1.70
In.	2.00	1.83	1.73	1.59	1.35	1.45	1.61	3.76	5.15	6.20	2.48	1.90
Ac-ft	1,070	978	922	847	722	774	861	2,010	2,750	3,300	1,320	1,010

Calendar year 1953: Max 149 Min 10 Mean 27.0 Cfsm 2.70 In. 36.61 Ac-ft 19,530
Water year 1953-54: Max 73 Min 11 Mean 22.9 Cfsm 2.29 In. 31.05 Ac-ft 16,560

* Discharge measurement made on this day.

Diversions from Wallowa Lake, Oreg.

The following canals divert from Wallowa Lake:

Joseph powerplant trailrace diverts at Wallowa Lake Dam in NW¼ sec. 5, T. 3 S., R. 45 E., for generation of power at Joseph. The diversion is measured at the powerplant in NE¼NE¼ sec. 31, T. 2 S., R. 45 E., and is returned to Wallowa River at Joseph. Records published as presented herein October 1952 to September 1954. Records published separately October 1950 to September 1952 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.

Silver Lake Canal diverts at Wallowa Lake Dam in NW¼ sec. 5, T. 3 S., R. 45 E. for irrigation of about 4,900 acres northeast of Joseph. Records published as presented herein October 1952 to September 1954. Prior to October 1952, published separately as follows: July to December 1905 (gage heights and discharge measurements only), May to September 1915 and October 1950 to September 1952 in reports of Geological Survey. Published as Silver Lake ditch near Joseph in 1905 and 1915. June to August 1915 (monthly discharge only), November 1926 to September 1941 in reports of State engineer. October 1941 to September 1950 in files of State engineer.

Diversion, in acre-feet, water year October 1953 to September 1954

Month	Joseph powerplant tailrace	Silver Lake Canal
October	2,960	827
November	2,230	316
December	2,300	266
Calendar year 1953	36,210	17,820
January	2,140	228
February	1,710	170
March	2,760	239
April	3,540	346
May	5,310	3,180
June	781	2,460
July	6,340	5,720
August	6,190	4,850
September	2,320	1,030
Water year 1953-54	38,580	19,630

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.

Drainage area.--52 sq mi, approximately.

Records available.--November 1903 to July 1906 (gage heights only), January 1912 to March 1914, May to September 1915 (gage heights and change in contents only), and October 1950 to September 1954 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, 35,480 acre-ft July 21 (gage height, 22.40 ft); minimum observed, 18,940 acre-ft Sept. 29, 30 (gage height, 12.15 ft).
1925-54: 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 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 1953 to September 1954

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	21.30	33,670	-
Oct. 31	20.75	32,770	-900
Nov. 30	21.00	33,180	+410
Dec. 31	21.00	33,180	0
Calendar year 1953	-	-	+7,540
Jan. 30	20.95	33,100	-80
Feb. 28	21.10	33,340	+240
Mar. 31	20.80	32,850	-490
Apr. 30	21.10	33,340	+490
May 31	19.00	29,920	-3,420
June 30	21.80	34,490	+4,570
July 31	19.65	30,980	-3,510
Aug. 31	12.55	19,580	-11,400
Sept.30	12.15	18,940	-640
Water year 1953-54	-	-	-14,730

† Gage height at 7 a.m.

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 1954 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. Published as "near Joseph" 1904-5, 1907-11, 1937-49, and as "below Wallowa Lake near Joseph" 1931-36.
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 site at various datums.
Average discharge.--27 years (1927-54), 122 cfs (88,320 cfs acre-ft per year), adjusted for storage and diversion.
Extremes.--Maximum discharge during year, 438 cfs May 20 (gage height, 3.41 ft); no flow part of each day Jan. 28, 29.
1903-15, 1926-54: Maximum discharge, 850 cfs June 12, 13, 1912 (gage height, 3.60 ft, site and datum then in use); no flow at times.
Remarks.--Records good except those for periods of no gage-height record and those below 20 cfs, which are poor. Monthly discharges adjusted for storage in Wallowa Lake (see preceding page) and diversions from Wallowa Lake by Silver Lake Canal and Joseph powerplant tailrace (see following page). City of Joseph diverts less than 1 cfs from Wallowa Lake for municipal supply.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

0.9	1	2.0	114
1.0	4	2.5	205
1.1	8	3.0	325
1.2	14	3.5	465
1.5	42		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	8	11	11	6	5	5	6	270	362	282	22
2	10	8	*11	11	6	5	5	6	248	360	280	16
3	10	8	11	11	6	5	5	6	*223	352	295	16
4	10	8	11	11	6	5	6	6	209	312	300	16
5	10	8	11	11	6	5	10	6	197	308	*280	16
6	10	8	11	11	6	5	10	6	170	352	250	16
7	10	10	11	11	6	5	11	41	179	384	235	16
8	10	12	11	11	6	5	11	103	157	372	232	15
9	10	12	11	11	6	5	11	96	144	345	199	*34
10	11	12	11	11	*6	5	11	128	127	302	205	52
11	11	12	11	*11	6	5	11	168	84	219	217	15
12	11	12	11	11	6	5	11	162	64	203	217	14
13	11	12	11	11	6	5	11	155	68	205	179	13
14	11	12	11	11	6	5	11	155	71	213	112	13
15	*11	12	11	11	6	*5	11	217	62	183	85	13
16	12	11	11	11	6	5	11	268	*62	110	92	13
17	12	11	11	11	6	5	*11	285	69	76	72	14
18	12	11	11	12	6	5	11	340	95	82	50	14
19	12	11	11	12	6	5	11	393	104	90	48	14
20	12	11	11	12	6	5	5	432	111	92	47	14
21	12	11	11	11	6	5	2	435	150	127	38	15
22	12	11	11	5	6	5	2	423	224	191	32	15
23	12	11	11	4	6	*5	2	399	272	187	32	15
24	12	11	11	8	6	5	3	399	318	219	42	14
25	10	11	11	8	6	5	5	396	340	280	40	14
26	10	11	11	8	6	5	2	355	387	288	35	14
27	10	11	11	8	5	5	3	328	426	285	30	14
28	10	11	11	5	5	5	3	305	411	285	25	14
29	10	11	11	3	-	5	6	305	414	308	20	14
30	10	11	11	6	-------	5	6	295	372	318	16	14
31	8	-------	11	6	-------	5	-------	272	-------	292	16	-------
Total	332	319	341	295	166	155	223	6,891	6,028	7,702	4,003	499
Mean	10.7	10.6	11.0	9.5	5.9	5.0	7.4	222	201	248	129	16.6
Ac-ft	659	633	676	585	329	307	442	13,670	11,960	15,280	7,940	990
Adjusted†												
Mean	57.7	60.3	52.9	46.8	44.1	45.8	81.0	305	332	388	123	62.2
Cfsm	1.11	1.16	1.02	0.900	0.848	0.881	1.56	5.87	6.38	7.46	2.37	1.20
In.	1.28	1.29	1.17	1.04	0.88	1.02	1.74	6.76	7.13	8.59	2.73	1.33
Ac-ft	3,550	3,590	3,250	2,880	2,450	2,820	4,820	18,740	19,770	23,830	7,580	3,700

Observed

Calendar year 1953:	Max 534	Min 3	Mean 73.6	Ac-ft 53,310			
Water year 1953-54:	Max 435	Min 2	Mean 73.8	Ac-ft 53,470			

Adjusted

Calendar year 1953:	Mean 159	Cfsm 3.06	In. 41.43	Ac-ft 114,900			
Water year 1953-54:	Mean 134	Cfsm 2.58	In. 34.96	Ac-ft 96,950			

* Discharge measurement made on this day.
† Adjusted for change in contents in Wallowa Lake and diversions at Joseph powerplant tailrace and Silver Lake Canal.
Note.--No gage-height record Oct. 21 to Nov. 3, Aug. 25-29; dischsrge interpolated or estimated on basis of recorded range in stage.

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 1954.

Gage.--Water-stage recorder. Altitude of gage is 4,500 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.--27 years (1927-54), 70.7 cfs (51,180 acre-ft per year).

Extremes.--Maximum discharge during year, 458 cfs May 19 (gage height, 3.04 ft); minimum, 16 cfs Jan. 20, Mar. 2.
1915, 1924-54: Maximum discharge, 1,110 cfs June 9, 1948 (gage height, 3.55 ft); maximum gage height, 3.60 ft July 12, 1953; minimum discharge, 3.4 cfs Feb. 10, 1938, Feb. 6, 1946, probably caused by temporary storage behind ice jam upstream.

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

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 19				May 20 to Sept. 30			
1.5	16	2.2	98	1.7	21	2.2	85
1.7	23	2.5	182	1.8	29	2.5	175
1.8	31	2.9	370	2.0	51	2.9	365
2.0	58						

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	25	22	22	18	18	18	58	134	242	81	43
2	31	*25	21	21	18	17	18	55	119	238	81	41
3	30	25	21	22	18	18	18	56	*119	256	79	41
4	29	25	21	22	18	18	19	71	122	275	74	40
5	29	25	21	21	18	18	20	98	116	332	72	40
6	29	25	21	21	19	18	20	105	110	300	68	39
7	28	24	20	22	19	18	19	115	105	265	66	38
8	28	24	19	21	19	19	20	150	100	251	64	37
9	27	24	21	19	19	23	20	172	116	233	64	36
10	27	24	21	20	19	22	19	209	154	228	63	36
11	28	24	20	*21	*19	21	20	205	147	242	62	35
12	28	24	21	20	22	20	20	190	158	260	60	34
13	27	23	20	20	20	19	27	179	172	246	62	34
14	27	24	21	20	20	21	29	190	175	260	58	33
15	28	23	21	20	20	21	29	212	211	251	57	34
16	27	25	21	20	19	21	29	265	*207	242	52	33
17	27	23	21	20	20	21	41	290	179	220	51	33
18	30	22	21	19	19	20	50	315	172	199	*50	32
19	29	21	23	19	19	20	52	370	168	187	52	31
20	29	21	24	17	19	21	48	360	175	175	60	*31
21	27	21	22	19	19	20	48	300	207	*154	54	31
22	26	25	*19	20	18	*20	49	*238	246	134	51	30
23	26	23	19	19	18	19	54	228	295	128	51	30
24	26	21	20	19	18	20	*58	242	275	125	51	29
25	26	22	20	18	18	19	62	260	265	122	50	29
26	26	23	21	19	18	19	65	211	310	119	47	28
27	26	23	21	19	18	19	67	183	332	113	46	28
28	27	23	22	19	18	19	65	168	265	108	45	29
29	26	23	22	19	-	18	63	168	228	100	45	29
30	25	22	21	18	------	18	62	158	228	90	44	29
31	25	-----	22	18	-----	18	-----	147	------	85	44	------
Total	856	702	650	614	527	603	1,129	5,968	5,610	6,180	1,804	1,013
Mean	27.6	23.4	21.0	19.8	18.8	19.5	37.6	193	187	199	58.2	33.8
Cfsm	0.890	0.755	0.677	0.639	0.606	0.629	1.21	6.23	6.03	6.42	1.88	1.09
In.	1.03	0.84	0.78	0.74	0.63	0.72	1.35	7.16	6.73	7.41	2.16	1.22
Ac-ft	1,700	1,390	1,290	1,220	1,050	1,200	2,240	11,840	11,130	12,260	3,580	2,010

Calendar year 1953: Max 730 Min 19 Mean 90.2 Cfsm 2.91 In. 39.46 Ac-ft 65,290
Water year 1953-54: Max 370 Min 17 Mean 70.3 Cfsm 2.27 In. 30.77 Ac-ft 50,910

Peak discharge (base, 400 cfs).--May 19 (11 p.m.) 458 cfs (3.04 ft); June 27 (2 a.m.) 419 cfs (2.99 ft).

* Discharge measurement made on this day.

Lostine River near Lostine, Oreg.

Location.--Lat 45°26', long 117°25', in NW¼ sec. 34, T. 1 S., R. 43 E., on left bank 3½ miles south of Lostine and 9 miles upstream from mouth. Prior to Dec. 16, 1953, at site 85 ft downstream.

Drainage area.--70 sq mi, approximately.

Records available.--August 1912 to March 1914, April to September 1915, July 1925 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 3,650 ft (by barometer). Aug. 24, 1912, to Sept. 25, 1915, staff gage at site 500 ft upstream at different datum. July 21, 1925, to Sept. 30, 1929, water-stage recorder at site 100 ft upstream from present site at datum about 1.5 ft higher than present datum. Oct. 1, 1929, to Dec. 15, 1953, water-stage recorder at site 85 ft downstream from present site at datum 1.00 ft higher than present datum.

Average discharge.--27 years (1912-13, 1928-54), 188 cfs (136,100 acre-ft per year).

Extremes.--Maximum discharge during year, 1,340 cfs June 27 (gage height, 5.63 ft); maximum gage height, 5.78 ft May 18 (backwater from debris); minimum discharge, 11 cfs Mar. 2.

1912-14, 1915, 1925-54: Maximum discharge observed, 2,540 cfs May 27, 1913 (gage height, 6.60 ft, site and datum then in use); minimum recorded, 10 cfs Nov. 28-30, 1936.

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 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 16, 17; backwater from debris Feb. 25 to May 18, Sept. 7-13)

Oct. 1 to Dec. 15		Dec. 16 to Sept. 30			
0.1	29	0.7	25	3.0	410
.4	59	1.0	57	4.0	690
		1.5	125	5.0	1,040
		2.0	210	5.3	1,170

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	35	42	35	34	40	41	166	342	714	151	52
2	40	35	41	34	*34	27	34	154	308	687	146	50
3	40	35	38	34	33	b30	36	159	*314	729	146	49
4	40	*35	37	37	33	35	55	195	352	841	137	50
5	38	35	37	37	33	40	88	306	330	1,030	126	52
6	37	35	37	36	33	42	97	356	322	928	122	47
7	36	35	35	37	33	41	84	402	300	796	119	47
8	35	35	34	36	34	46	84	522	282	693	118	46
9	35	35	39	32	35	76	83	627	318	633	114	46
10	35	35	37	41	34	90	79	723	452	564	113	45
11	35	35	35	*38	34	83	78	639	438	570	107	45
12	*35	35	35	30	53	71	84	582	458	624	104	44
13	36	35	35	33	47	65	166	519	500	606	106	43
14	38	34	35	b35	43	70	197	528	537	*621	102	42
15	39	34	34	37	42	61	166	654	*720	654	100	45
16	40	36	*34	38	41	58	173	675	690	597	97	52
17	41	38	34	41	43	57	226	838	522	513	86	49
18	43	35	33	36	42	*52	228	936	458	442	*76	51
19	47	35	44	35	42	49	216	1,160	452	394	74	46
20	40	35	60	b30	44	49	182	*1,140	502	362	103	*45
21	38	36	*49	30	44	47	166	988	681	310	103	43
22	38	59	*34	*47	42	47	177	747	858	252	84	42
23	35	52	33	41	*42	44	200	693	1,060	230	78	40
24	35	45	b35	34	44	45	*210	738	1,050	230	80	40
25	35	41	b35	b30	44	42	220	754	992	226	79	40
26	35	42	b36	b35	45	42	232	591	1,100	220	69	38
27	35	52	b35	b40	42	46	232	498	1,140	206	65	37
28	35	49	b35	*45	42	44	230	404	848	199	60	38
29	35	45	35	44	-	40	208	382	699	180	55	41
30	35	43	25	41		37	189	382	684	170	51	41
31	35	---	b30	37	--	41	------	362	----	159	55	------
Total	1,161	1,164	1,138	1,136	1,112	1,557	4,461	17,820	17,709	15,380	3,026	1,346
Mean	37.5	38.8	36.7	36.6	39.7	50.2	149	575	590	496	97.6	44.9
Ac-ft	2,300	2,310	2,260	2,250	2,210	3,090	8,850	35,350	35,130	30,510	6,000	2,670

Calendar year 1953: Max 1,420 Min 25 Mean 217 Ac-ft 157,200
Water year 1953-54: Max 1,160 Min 25 Mean 184 Ac-ft 132,900

Peak discharge (base, 1,100 cfs).--May 19 (11 p.m.) 1,300 cfs (5.56 ft); June 27 (3 a.m.) 1,340 cfs (5.63 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Oct. 1-11, Oct. 20 to Nov. 3, Dec. 13-15; discharge estimated on basis of records for Hurricane Creek near Joseph and Bear Creek near Wallowa.

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 30 ft downstream from unused bridge, 3 miles southwest of Wallowa, and 4½ miles upstream from mouth.

Drainage area.--68 sq mi, approximately.

Records available.--April to September 1915, April 1924 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 3,250 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 above intakes of two irrigation ditches with a combined capacity of about 3 cfs, at different datum.

Average discharge.--25 years (1929-54), 109 cfs (78,910 acre-ft per year).

Extremes.--Maximum discharge during year, 781 cfs May 19 (gage height, 2.99 ft); minimum daily, 10 cfs Oct. 3-17, 23-29.
1915, 1924-54: 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, Nov. 29, 1952.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of 43 acres above station. Water for irrigation of about 440 acres in Lostine River basin diverted from Little Bear Creek, a tributary above station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	8	1.7	87
1.1	12	2.0	154
1.3	28	2.5	370
1.5	54	3.0	770

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	11	41	b30	33	54	36	146	221	301	35	20
2	11	13	39	29	32	48	36	132	202	267	30	19
3	10	11	38	29	30	47	39	138	*214	277	*29	19
4	10	11	35	29	30	44	44	161	238	296	27	18
5	10	13	32	28	32	43	73	254	214	332	26	18
6	10	14	33	28	33	44	91	310	202	286	24	18
7	10	13	29	29	34	46	94	354	191	242	23	17
8	10	12	b28	29	38	54	96	430	184	214	21	17
9	10	12	b26	b28	43	98	98	532	229	195	19	16
10	10	12	b25	28	47	135	92	540	337	170	19	16
11	10	12	b25	27	48	130	91	465	348	161	18	16
12	*10	12	b25	*b25	64	112	91	400	354	164	18	16
13	10	12	a25	b26	73	101	195	364	354	151	19	16
14	10	12	a25	b27	75	91	286	364	348	*146	20	15
15	10	12	a25	b28	70	84	242	412	*444	140	23	18
16	10	15	a25	29	64	80	225	479	444	135	24	18
17	10	14	a25	28	64	75	272	532	359	123	20	18
18	14	13	a30	b25	60	68	310	580	315	105	19	18
19	14	13	a40	b22	57	65	291	710	296	94	20	18
20	11	13	a60	b20	57	60	238	*870	305	87	35	17
21	11	13	*72	b22	*57	57	206	532	376	82	40	16
22	11	36	64	b25	54	*53	206	430	444	73	33	16
23	10	29	56	b23	54	50	221	388	486	65	27	16
24	10	*22	54	b22	56	48	*221	400	465	59	34	*16
25	10	21	47	b20	59	46	221	400	430	56	35	15
26	10	24	44	b22	64	44	221	310	472	51	33	14
27	10	43	40	28	60	46	217	246	444	48	29	13
28	10	50	38	35	57	43	210	217	354	44	25	13
29	10	46	35	34	-	39	187	214	296	43	24	13
30	11	44	b30	34	------	41	167	221	296	39	22	13
31	11	------	b30	34	------	38	------	221	------	36	22	------
Total	325	578	1,141	843	1,445	1,982	5,017	11,552	9,862	4,482	793	493
Mean	10.5	19.3	36.8	27.2	51.6	63.9	167	373	329	145	25.6	16.4
Ac-ft	645	1,150	2,260	1,670	2,870	3,930	9,950	22,910	19,560	8,890	1,570	978

Calendar year 1953: Max 625 Min 7 Mean 121 Ac-ft 87,380
Water year 1953-54: Max 710 Min 10 Mean 106 Ac-ft 76,380

Peak discharge (base, 600 cfs).--May 9 (8:30 p.m.) 700 cfs (2.91 ft); May 19 (9 p.m.) 781 cfs (2.99 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Hurricane Creek near Joseph and Lostine River near Lostine.

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 and at mile 81.4 (Geological Survey river-profile survey).

Drainage area.--2,555 sq mi.

Records available.--October 1926 to September 1954.

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.--28 years, 2,042 cfs (1,478,000 acre-ft per year).

Extremes.--Maximum discharge during year, 7,020 cfs May 19 (gage height, 5.19 ft); minimum, 442 cfs Oct. 9 (gage height, 1.14 ft).
1926-54: Maximum discharge, 19,900 cfs May 28, 1948 (gage height, 9.76 ft); minimum, 225 cfs Dec. 19, 1935.

Remarks.--Records excellent. Many diversions for irrigation of about 95,000 acres above station, chiefly in vicinity of La Grande, Enterprise, and Wallowa; one transbasin diversion from Sheep Creek in Imnaha River basin for irrigation of about 5,200 acres in Wallowa Valley. Flow slightly regulated by Wallowa Lake (see p. 242).

Revisions (water years).--WSP 1093: 1927-29, 1932-33, 1936, 1938, 1939(M), 1943.

Rating tables, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 18

1.1	410	3.5	3,440
1.8	1,040	5.0	6,600
2.5	1,800		

May 19 to Sept. 30

1.2	535
1.8	1,040

Note.--Same as preceding table above 1.8 ft.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	458	584	860	860	1,760	1,660	1,310	2,860	3,140	2,950	670	734
2	466	602	840	869	1,630	1,490	1,270	2,660	2,920	2,830	649	710
3	466	602	850	860	*1,540	1,420	1,290	2,560	2,850	2,760	621	678
4	490	584	878	898	1,470	1,340	1,470	2,620	2,920	2,880	614	670
5	490	*593	860	992	1,440	1,310	2,680	3,170	2,780	3,190	621	670
6	482	629	898	1,040	1,400	1,300	3,700	3,640	2,660	3,040	*607	656
7	474	611	869	1,070	1,380	1,300	3,520	4,040	2,730	2,760	587	*628
8	474	602	831	1,110	1,410	1,420	3,420	4,720	2,680	2,430	580	621
9	474	584	784	1,020	1,440	2,160	3,600	5,570	2,800	2,270	561	607
10	482	575	888	1,010	1,440	3,270	3,210	6,290	3,720	2,130	548	594
11	498	584	860	974	1,370	3,210	2,990	6,070	4,100	1,970	554	580
12	507	584	860	926	1,760	2,780	2,880	5,680	4,180	2,000	574	561
13	507	584	840	831	2,080	2,430	4,390	5,250	4,300	1,970	587	568
14	507	584	850	878	2,120	2,200	5,610	4,980	4,300	1,880	635	568
15	516	575	850	926	1,960	2,010	5,230	5,040	4,870	2,220	694	574
16	516	593	869	945	1,790	1,880	4,980	5,500	5,120	1,970	795	656
17	516	647	860	1,170	1,730	1,800	5,180	5,870	4,490	1,900	750	663
18	575	602	860	1,110	1,800	1,700	5,480	6,090	4,020	1,680	734	678
19	683	575	1,150	992	1,720	1,620	5,230	6,710	3,800	1,520	726	649
20	629	593	2,070	728	1,750	1,630	4,720	6,670	3,620	1,370	860	621
21	620	593	2,070	784	2,190	1,610	4,340	6,120	3,840	1,260	990	614
22	629	774	1,740	974	2,190	1,530	4,140	4,930	4,060	1,150	890	600
23	620	992	1,420	1,140	2,040	1,480	4,100	4,410	4,510	1,040	840	587
24	620	850	1,260	1,010	1,990	*1,470	3,960	4,220	4,450	970	890	568
25	611	802	1,140	840	2,000	1,430	3,820	4,240	*4,040	920	960	568
26	602	812	1,070	850	2,030	1,410	3,760	3,720	4,180	900	890	548
27	593	898	983	916	1,900	1,480	3,660	3,210	4,510	860	880	542
28	584	964	1,000	1,340	1,790	1,540	*3,640	2,830	3,840	813	822	542
29	584	898	1,030	1,680	-	1,430	3,380	2,570	3,100	742	777	568
30	575	869	*907	1,800	--	1,320	3,160	2,970	2,950	686	750	568
31	575	------	850	1,850	-----	1,320	------	2,990	------	670	759	------
Total	16,823	20,339	32,097	32,393	49,120	53,950	110,120	138,200	111,480	55,731	22,415	18,391
Mean	543	678	1,035	1,045	1,754	1,740	3,671	4,458	3,716	1,798	723	613
Ac-ft	33,370	40,340	63,660	64,250	97,430	107,000	218,400	274,100	221,100	110,500	44,460	36,480

Calendar year 1953: Max 9,540 Min 442 Mean 2,620 Ac-ft 1,897,000
Water year 1953-54: Max 6,710 Min 458 Mean 1,811 Ac-ft 1,311,000

Peak discharge (base, 5,000 cfs).--Apr. 14 (2:30 a.m.) 5,740 cfs (4.61 ft); May 19 (3 a.m.) 7,020 cfs (5.19 ft); June 16 (3 a.m.) 5,400 cfs (4.45 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., on downstream side of left end of bridge at Troy, 100 ft downstream from Wenaha River and at mile 45.4 (Geological Survey river-profile survey).

Drainage area.--3,275 sq mi.

Records available.--August 1944 to September 1954.

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.--10 years, 3,316 cfs (2,401,000 acre-ft per year).

Extremes.--Maximum discharge during year, 10,800 cfs Apr. 14 (gage height, 7.17 ft); minimum, 722 cfs Oct. 2 (gage height, 2.24 ft).
1944-54: Maximum discharge observed, 30,000 cfs Dec. 15, 1946 (gage height, 11.20 ft, present datum); minimum, 434 cfs Nov. 29, 1952 (gage height, 1.71 ft), result of freezeup.

Remarks.--Records excellent except those for period of doubtful gage-height record, which are good. Many diversions for irrigation of about 95,000 acres above station, chiefly in vicinity of La Grande, Enterprise, and Wallowa; one transbasin diversion from Sheep Creek in Imnaha River basin for irrigation of about 5,200 acres in Wallowa Valley. Flow slightly regulated by Wallowa Lake (see p. 242).

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.2	690	5.0	4,450
3.0	1,440	6.0	7,000
4.0	2,690	7.0	10,200

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	738	860	1,340	1,280	2,980	2,630	2,020	4,280	4,160	3,680	d950	1,020
2	730	*860	1,300	1,280	*2,800	2,400	1,970	4,010	3,930	*3,570	d900	995
3	738	869	1,300	1,260	2,630	2,240	2,080	3,890	3,830	3,480	d900	950
4	754	860	1,350	1,310	2,470	2,110	2,550	3,930	3,850	3,510	*851	941
5	770	869	1,360	1,460	2,370	2,020	4,520	4,450	3,790	3,720	860	932
6	770	932	1,410	1,640	2,270	2,020	6,060	4,920	3,680	3,770	851	923
7	762	950	1,410	1,700	2,190	2,020	5,560	5,320	3,750	3,460	815	896
8	762	923	1,340	1,790	2,230	2,160	5,160	6,040	3,720	3,180	797	860
9	754	914	1,330	1,740	2,280	3,410	5,590	6,830	3,790	3,060	779	*860
10	762	905	1,480	1,630	2,290	5,420	5,070	7,630	4,560	2,920	770	842
11	770	905	1,450	1,550	2,180	5,090	4,690	7,540	4,880	2,790	770	833
12	770	923	1,460	1,500	2,690	4,260	4,720	6,940	4,920	2,720	779	806
13	770	923	1,460	1,350	3,680	3,720	7,390	6,390	5,040	2,700	797	806
14	770	932	1,420	1,370	3,620	3,340	9,880	6,040	5,020	2,660	869	788
15	770	914	1,430	1,400	3,260	3,120	8,380	5,980	5,640	2,860	923	797
16	770	950	1,430	1,430	2,920	*2,880	7,780	6,390	5,930	2,720	1,060	950
17	770	1,020	1,410	1,550	2,720	2,790	8,200	6,800	5,260	2,700	1,060	968
18	824	986	1,420	1,650	2,800	2,630	8,620	7,000	4,810	2,440	1,010	986
19	950	941	1,570	1,510	2,680	2,480	8,050	7,750	4,600	2,280	1,010	968
20	950	923	3,430	1,220	2,620	2,420	7,180	7,720	4,410	d2,000	1,120	905
21	923	959	3,320	1,130	3,190	2,410	6,500	7,180	4,600	d1,800	1,310	878
22	905	1,240	2,820	1,420	3,620	2,310	6,220	*5,930	4,780	d1,700	1,230	878
23	905	1,560	2,360	1,680	3,340	2,270	6,200	5,290	5,140	d1,500	1,130	860
24	905	1,350	*2,020	1,590	3,190	2,250	5,950	5,040	5,020	d1,400	1,170	815
25	905	1,250	1,780	1,440	3,260	2,230	5,690	5,070	4,690	d1,300	1,240	806
26	896	1,320	1,650	1,330	3,240	2,200	5,520	4,690	4,860	d1,300	1,210	788
27	887	1,430	1,530	1,410	3,080	2,270	*5,340	4,220	5,020	d1,200	1,180	788
28	878	1,540	1,440	1,740	2,830	2,320	5,260	3,830	4,390	d1,200	1,130	788
29	869	1,410	1,480	2,340	-	2,190	4,920	3,620	3,810	d1,100	1,080	806
30	860	1,340	1,410	2,680		2,080	4,650	3,930	3,700	d1,000	1,040	788
31	860		1,280	2,960	----	2,050	------	3,950	------	d950	1,040	------
Total	25,447	31,758	51,190	49,340	79,430	83,740	171,720	172,600	135,580	74,670	30,631	26,221
Mean	821	1,059	1,651	1,592	2,837	2,701	5,724	5,568	4,519	2,409	988	874
Ac-ft	50,470	62,990	101,500	97,860	157,500	166,100	340,600	342,300	268,900	148,100	60,760	52,010

Calendar year 1953: Max 12,800 Min 707 Mean 3,523 Ac-ft 2,550,000
Water year 1953-54: Max 9,880 Min 730 Mean 2,554 Ac-ft 1,849,000

Peak discharge (base, 7,000 cfs).--Apr. 14 (12:30 a.m.) 10,800 cfs (7.17 ft); May 10 (8:30 a.m) 7,900 cfs (6.30 ft); May 19 (8 to 9 a.m.) 8,140 cfs (6.38 ft).
* Discharge measurement made on this day.
d Doubtful gage-height record; discharge computed on basis of records for station at Rondowa.

Asotin Creek near Asotin, Wash.

Location.--Lat 46°19'30", long 117°12'30", in SE¼ sec. 19, T. 10 N., R. 45 E., on left bank half a mile upstream from the Washington Water Power Co.'s diversion for water supply and irrigation, 5 miles upstream from George Creek, and 8 miles west of Asotin.

Drainage area.--156 sq mi.

Records available.--March 1904 to November 1906, August 1910 to October 1911, August 1928 to September 1954. Published as "at Shelman's Ranch, near Asotin" 1904-5.

Gage.--Staff gage read twice daily. Altitude of gage is 1,380 ft (from topographic map). Prior to Jan. 11, 1934, staff gages within a quarter of a mile of present site at different datums.

Average discharge.--26 years (1928-54), 66.0 cfs (47,780 acre-ft per year).

Extremes.--Maximum discharge observed during year, 315 cfs Feb. 13 (gage height, 2.18 ft); maximum gage height observed, 2.20 ft Jan. 21 (backwater from ice); minimum discharge observed, 35 cfs Oct. 6 (gage height, 0.75 ft).

1904-6, 1910-11, 1928-54: 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. Several diversions for irrigation and domestic use. No regulation.

Cooperation.--Gage-height record furnished by the Washington Water Power Co.

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from ice Jan. 18-20)

0.7	31
1.0	64
1.5	153
2.1	300

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	38	46	48	73	100	60	114	*118	68	41	*41
2	38	38	47	48	78	86	60	103	110	66	42	41
3	37	*38	44	47	78	82	66	103	101	63	42	41
4	36	38	43	48	78	74	78	107	114	60	42	41
5	36	40	42	49	78	76	135	122	103	58	42	41
6	36	41	44	52	81	72	173	131	101	56	42	42
7	36	40	42	56	82	68	160	147	103	54	42	41
8	36	40	40	*58	96	68	145	171	98	54	41	40
9	36	40	*42	58	101	94	145	202	96	59	40	40
10	36	40	46	55	96	168	133	232	101	58	38	40
11	36	40	47	55	91	151	124	225	103	58	40	40
12	36	40	47	51	198	131	122	210	105	55	38	40
13	36	40	47	51	300	112	155	182	112	*51	40	40
14	37	40	48	52	225	103	225	168	105	52	42	40
15	36	40	51	50	173	96	202	166	118	51	44	44
16	36	44	51	50	143	91	178	190	124	50	50	47
17	37	47	51	50	127	88	188	208	110	49	46	51
18	39	42	52	47	120	*81	250	228	105	48	44	42
19	40	41	55	45	107	78	230	245	100	47	44	40
20	40	40	124	45	100	78	198	245	93	47	49	40
21	40	40	98	55	131	76	173	220	91	49	51	39
22	38	52	81	63	131	72	162	182	86	48	46	39
23	38	59	72	58	125	68	160	160	82	47	43	38
24	38	47	66	55	125	67	157	151	81	44	55	38
25	38	46	60	52	127	68	153	162	78	44	49	38
26	37	48	58	51	125	67	149	153	76	44	49	38
27	38	49	55	51	112	66	149	133	76	42	46	38
28	37	49	52	61	*105	63	141	122	74	42	43	39
29	37	46	52	63	-	56	*131	112	68	42	42	40
30	38	46	50	60	-	60	122	125	68	42	41	40
31	37	-	49	63	-	60	------	124	------	42	44	------
Total	1,154	1,289	1,702	1,646	3,406	2,620	4,524	5,143	2,900	1,590	1,358	1,219
Mean	37.2	43.0	54.9	53.1	122	84.5	151	166	96.7	51.3	43.8	40.6
Ac-ft	2,290	2,560	3,380	3,260	6,760	5,200	8,970	10,200	5,750	3,150	2,690	2,420

Calendar year 1953: Max 268 Min 35 Mean 77.1 Ac-ft 55,830
Water year 1953-54: Max 300 Min 36 Mean 78.2 Ac-ft 56,630

* Discharge measurement made on this day.

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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 1954.

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 at different datum.

Average discharge.--25 years (1929-54), 3,578 cfs (2,590,000 acre-ft per year).

Extremes.--Maximum discharge during year, 29,900 cfs May 21 (gage height, 12.24 ft); minimum, 378 cfs Nov. 21 (gage height, 2.53 ft), but may have been less during period of ice effect.
1929-54: 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 period of ice effect, which are good. Small diversions from headwaters.

Revisions.--WSP 1043: Drainage area.

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 7-16)

2.5	389	6.0	5,440
3.0	748	8.0	11,400
4.0	1,810	10.0	19,500
5.0	3,360	12.0	28,800

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	490	450	732	666	1,010	1,450	1,260	6,400	10,300	11,300	1,450	870
2	567	531	723	648	1,010	1,280	1,220	5,920	9,220	10,700	1,380	817
3	560	*539	*707	628	972	1,120	1,240	5,920	9,130	9,910	1,320	791
4	524	490	707	628	963	1,140	1,560	6,400	10,400	9,780	1,260	782
5	504	470	699	732	963	1,160	2,760	10,200	11,700	9,950	1,230	774
6	484	504	682	870	972	1,210	3,840	11,500	10,500	9,350	1,220	774
7	463	539	658	834	972	1,280	3,450	12,700	9,680	8,540	1,160	740
8	450	510	567	852	1,010	1,490	3,270	14,500	8,940	7,620	1,110	715
9	450	477	612	808	1,070	2,160	3,430	18,100	8,810	6,760	1,050	699
10	444	463	765	765	1,090	3,080	3,110	24,100	9,130	6,070	1,010	682
11	438	463	707	723	1,050	2,780	2,910	21,000	11,500	5,580	982	666
12	438	470	732	589	1,190	2,340	3,130	20,000	12,500	5,300	954	643
13	438	470	757	463	1,570	2,020	4,650	*18,200	14,000	5,050	954	635
14	438	470	707	612	1,570	1,850	7,280	17,200	*13,600	4,610	1,000	620
15	432	457	791	*748	1,440	1,690	6,450	18,000	13,700	*5,120	1,110	620
16	432	470	791	691	1,320	1,610	6,100	21,500	15,000	4,580	1,050	658
17	432	612	748	680	1,260	1,610	7,880	23,500	12,200	4,330	1,030	732
18	432	575	707	710	1,350	1,570	11,600	24,200	10,500	3,730	982	880
19	457	470	765	620	1,300	1,490	10,000	26,400	10,000	3,320	916	843
20	470	413	1,410	400	1,250	1,450	8,020	27,500	10,200	3,010	1,010	740
21	470	426	1,410	450	*1,320	1,420	6,920	26,500	11,900	2,820	1,350	691
22	477	674	1,070	600	1,380	1,380	6,920	19,400	14,300	2,740	1,250	666
23	463	934	843	850	1,330	1,380	7,940	*16,300	16,000	2,460	*1,120	651
24	457	723	612	750	1,450	*1,430	8,170	15,800	15,800	2,280	1,110	635
25	450	643	666	700	1,600	1,430	8,230	16,200	13,900	2,140	1,140	620
26	450	825	757	700	1,820	1,440	8,940	14,100	15,200	2,020	1,290	*612
27	450	1,030	748	740	1,730	1,510	8,970	12,100	16,400	1,900	1,400	597
28	450	1,110	723	800	1,580	1,450	9,650	10,300	14,100	1,800	1,160	597
29	450	825	748	843	-	1,330	8,470	9,620	11,000	1,690	1,010	635
30	450	732	682	889	------	1,260	*7,360	11,400	10,000	1,610	934	651
31	450	-----	635	972	-----	1,260	-----	10,100	------	1,540	907	-----
Total	14,360	17,765	23,861	21,961	35,542	49,070	174,730	495,060	359,610	157,610	34,849	21,036
Mean	463	592	770	708	1,269	1,583	5,824	15,970	11,990	5,084	1,124	701
Cfsm	0.242	0.310	0.403	0.371	0.664	0.829	3.05	8.36	6.28	2.66	0.588	0.367
In.	0.28	0.35	0.46	0.43	0.69	0.96	3.40	9.64	7.00	3.07	0.68	0.41
Ac-ft	28,480	35,240	47,330	43,560	70,500	97,330	346,600	981,900	713,300	312,600	69,120	41,720

Calendar year 1953: Max 25,500 Min 380 Mean 3,578 Cfsm 1.87 In. 25.43 Ac-ft 2,590,000
Water year 1953-54: Max 27,500 Min 400 Mean 3,851 Cfsm 2.02 In. 27.37 Ac-ft 2,788,000

Peak discharge (base, 18,000 cfs).--May 10 (10:30 a.m.) 25,600 cfs (11.36 ft); May 21 (2 a.m.) 29,900 cfs (12.24 ft); June 24 (4 a.m.) 18,000 cfs (9.66 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 17-28.

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 1954.

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.--25 years (1929-54), 2,702 cfs (1,956,000 acre-ft per year).

Extremes.--Maximum discharge during year, 24,500 cfs May 21 (gage height, 11.08 ft); minimum, 270 cfs Nov. 21 (gage height, 1.58 ft).
1929-54: 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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

1.5	240	5.0	4,790
1.7	345	7.0	9,590
2.0	560	9.0	15,800
2.5	1,000	11.0	23,900
3.0	1,560		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	345	318	664	544	828	1,100	1,050	*4,850	9,620	8,730	1,230	783
2	397	390	656	528	810	960	1,020	4,600	8,520	8,260	1,180	720
3	397	*410	608	520	774	891	1,070	4,640	8,210	7,640	1,120	688
4	364	358	*592	528	747	855	1,440	5,150	9,130	7,420	1,080	672
5	340	323	568	672	729	873	3,030	8,470	9,980	7,490	1,080	672
6	323	371	552	619	712	900	3,800	9,480	9,270	7,120	1,090	680
7	312	404	536	774	720	940	3,240	10,400	8,570	6,560	1,030	664
8	301	371	459	837	765	1,170	3,000	11,600	7,790	5,830	960	624
9	296	340	488	765	774	1,850	3,050	13,600	7,640	5,250	920	608
10	296	323	680	696	783	2,680	2,760	17,800	7,770	4,710	882	584
11	290	323	592	640	747	2,310	2,580	16,300	9,950	4,320	846	568
12	290	323	600	528	1,000	1,960	2,740	15,800	10,500	4,070	819	544
13	296	328	600	459	1,490	1,720	4,100	*14,300	11,800	3,840	801	536
14	296	323	560	536	1,450	1,560	6,030	13,600	*11,200	3,580	819	512
15	290	323	624	*568	1,310	1,430	5,300	14,200	11,400	*4,190	837	512
16	290	334	608	552	1,160	1,360	5,110	17,400	11,900	3,630	940	576
17	290	504	568	520	1,090	1,360	6,510	19,200	9,810	3,280	837	747
18	290	504	552	544	1,180	1,290	8,920	20,400	8,490	2,970	810	920
19	318	384	624	512	1,070	1,220	7,840	22,200	8,030	2,710	783	819
20	328	312	1,300	410	1,040	1,190	6,300	23,000	7,970	2,490	882	704
21	328	285	1,140	450	*1,160	1,170	5,590	22,400	8,810	2,480	1,140	640
22	334	584	864	540	1,230	1,160	5,760	16,500	10,300	2,420	1,030	608
23	328	765	672	664	1,190	1,140	6,680	*13,900	11,700	2,120	*980	584
24	312	560	568	624	1,260	*1,170	6,800	13,500	11,800	1,950	1,030	560
25	306	520	528	568	1,380	1,170	6,850	13,800	10,300	1,820	1,060	536
26	306	783	608	576	1,450	1,180	7,260	12,000	11,100	1,720	1,180	*520
27	306	940	592	600	1,320	1,280	7,190	10,300	13,000	1,610	1,250	504
28	306	970	576	624	1,200	1,180	7,120	8,810	11,300	1,520	1,090	504
29	306	680	624	756	-	1,090	6,280	8,160	8,780	1,440	920	528
30	306	616	552	756	------	1,050	5,500	10,000	7,950	1,380	837	520
31	306	-----	536	819	-----	1,040	-----	9,130	------	1,310	828	------
Total	9,793	13,969	19,691	18,929	29,369	40,249	143,920	405,490	292,590	123,860	30,291	18,637
Mean	316	466	635	611	1,049	1,298	4,797	13,080	9,753	3,995	977	621
Cfsm	0.268	0.395	0.538	0.518	0.889	1.10	4.07	11.1	8.27	3.39	0.828	0.526
In.	0.31	0.44	0.62	0.60	0.93	1.27	4.54	12.78	9.22	3.90	0.95	0.59
Ac-ft	19,420	27,710	39,060	37,550	58,250	79,830	285,500	804,300	580,300	245,700	60,080	36,970

Calendar year 1953: Max 17,800 Min 275 Mean 2,594 Cfsm 2.20 In. 29.84 Ac-ft 1,878,000
Water year 1953-54: Max 23,000 Min 285 Mean 3,142 Cfsm 2.66 In. 36.15 Ac-ft 2,275,000

Peak discharge (base, 12,000 cfs).--May 10 (2 p.m.) 18,400 cfs (9.64 ft); May 21 (3:30 a.m.) 24,500 cfs (11.08 ft); June 16 (3:30 a.m.) 13,000 cfs (8.09 ft); June 27 (10:30 a.m.) 13,600 cfs (8.30 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 1954.

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 and at datum 6.14 ft lower.

Average discharge.--10 years, 253 cfs (183,200 acre-ft per year).

Extremes.--Maximum discharge during year, 1,180 cfs May 10 (gage height, 4.51 ft); minimum, 16 cfs Nov. 19 (gage height, 1.27 ft).
1944-54: Maximum discharge observed, 3,700 cfs May 29, 1948 (gage height, 13.06 ft, site and datum then in use); minimum daily, 10 cfs Nov. 28, 29, 1952.

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

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	22	3.0	368
1.6	38	3.5	585
1.8	62	4.0	870
2.0	96	4.5	1,190
2.5	217		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*26	31	65	48	53	65	80	470	624	313	61	53
2	47	*37	57	48	53	55	82	424	521	265	59	49
3	49	39	47	48	52	60	100	416	470	237	57	47
4	36	34	50	48	51	60	185	448	457	220	50	47
5	31	34	47	50	50	64	370	629	466	204	50	48
6	28	37	*45	53	50	70	466	590	466	190	50	47
7	26	39	40	56	50	80	342	634	555	180	49	45
8	24	36	37	50	50	90	338	717	526	169	47	42
9	24	34	40	48	50	110	345	834	507	162	45	39
10	24	34	45	46	50	150	283	1,100	535	152	41	38
11	24	34	47	46	48	150	286	969	565	144	41	37
12	24	34	47	42	54	130	342	*888	*507	134	39	36
13	25	33	45	40	60	120	715	768	521	125	40	35
14	25	33	46	45	65	110	943	695	526	123	64	34
15	25	32	50	45	60	105	668	668	497	206	76	35
16	24	33	55	*45	60	105	651	700	618	201	62	47
17	26	42	52	44	63	100	822	673	507	187	57	52
18	26	39	50	42	68	100	1,120	656	462	142	53	64
19	26	22	54	38	65	100	962	*646	424	*121	48	52
20	32	32	65	35	*64	100	734	624	400	108	56	44
21	34	41	70	40	64	95	624	618	375	104	125	40
22	35	41	60	40	64	95	646	545	348	108	*125	39
23	32	54	50	43	66	*95	728	453	329	98	82	38
24	32	57	42	43	72	95	684	404	310	89	76	37
25	31	56	45	43	75	95	656	400	289	83	98	*36
26	31	72	48	43	74	100	673	404	310	78	125	36
27	31	104	48	45	74	90	706	393	448	73	123	35
28	31	106	48	48	72	80	*822	358	424	68	82	36
29	31	85	48	48	-	70	668	335	320	65	67	47
30	31	65	45	50	------	75	560	690	286	61	59	52
31	31	-----	48	52	------	80	------	545	------	61	56	------
Total	922	1,370	1,536	1,412	1,677	2,894	16,601	18,694	13,593	4,471	2,063	1,287
Mean	29.7	45.7	49.5	45.5	59.9	93.4	553	603	453	144	66.5	42.9
Cfsm	0.114	0.175	0.190	0.174	0.230	0.358	2.12	2.31	1.74	0.552	0.255	0.164
In.	0.13	0.20	0.22	0.20	0.24	0.41	2.37	2.66	1.94	0.64	0.29	0.18
Ac-ft	1,830	2,720	3,050	2,800	3,330	5,740	32,930	37,080	26,960	8,870	4,090	2,550

Calendar year 1953: Max 1,330 Min 20 Mean 215 Cfsm 0.824 In. 11.17 Ac-ft 155,500
Water year 1953-54: Max 1,120 Min 22 Mean 182 Cfsm 0.697 In. 9.48 Ac-ft 132,000

Peak discharge (base, 1,300 cfs).--No peak above base.
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 19, 20, Dec. 6 to Apr. 1, Apr. 5.

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 of Grangeville.

Drainage area.--865 sq mi.

Records available.--November 1910 to September 1916, April 1923 to September 1954.

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 Oct. 15, 1944, chain or staff gage at present datum.

Average discharge.--35 years (1912-16, 1923-54), 836 cfs (605,200 acre-ft per year).

Extremes.--Maximum discharge during year, 3,710 cfs May 10 (gage height, 7.19 ft, caused by momentary release from powerplant pondage); maximum natural discharge, 3,550 cfs May 10 (gage height, 7.07 ft), occurred just prior to release; minimum, 1 cfs Dec. 2, 3 (gage height, 1.63 ft); minimum daily, 75 cfs Jan. 13.

1910-16, 1923-54: Maximum discharge observed, 12,600 cfs May 29, 1948 (gage height, 12.50 ft); no flow part of day Aug. 27, 1947; minimum daily, 29 cfs Nov. 23, 27, 29, 1952.

Remarks.--Records excellent except those below 200 cfs, which are good. Diurnal fluctuation at low stages caused by powerplant just above station. No diversion for irrigation.

Cooperation.--Water-stage recorder inspected by employees of Washington Water Power Co. in connection with a Federal Power Commission project.

Revisions.--WSP 633: Drainage area.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.4	63	4.5	960
2.7	118	5.0	1,340
3.0	199	6.0	2,270
3.5	394	7.0	3,460
4.0	649		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	131	*134	239	175	212	257	268	1,360	2,290	1,660	288	229
2	197	161	217	161	212	199	250	1,230	2,020	1,560	284	219
3	214	167	195	164	202	219	257	1,200	1,890	1,390	264	209
4	182	158	181	161	199	216	418	1,250	1,860	1,280	261	209
5	166	141	187	166	196	225	886	1,720	1,880	1,200	261	206
6	149	144	166	175	199	239	1,330	1,700	1,800	1,120	254	202
7	135	168	153	184	199	246	974	1,860	2,090	1,030	254	193
8	131	141	*137	181	199	288	872	2,130	2,080	953	222	187
9	127	143	149	169	202	380	933	2,540	1,990	892	229	175
10	125	140	181	158	206	573	796	3,360	2,780	846	216	175
11	124	135	193	164	187	552	730	3,160	2,940	796	212	169
12	117	136	181	124	219	466	815	*2,980	*2,710	747	209	161
13	126	132	169	75	276	399	1,420	2,640	2,840	700	206	158
14	123	130	175	170	276	385	2,380	2,480	2,670	666	250	166
15	121	129	206	*161	254	349	1,750	2,470	2,540	846	295	166
16	120	138	232	161	246	349	1,560	2,660	2,730	834	295	206
17	119	193	212	172	243	341	1,910	2,700	2,360	802	276	225
18	118	191	209	164	291	324	2,470	2,700	2,140	649	246	303
19	134	138	206	153	*272	299	2,380	2,780	2,040	*578	225	243
20	161	116	257	111	243	307	1,900	2,790	1,950	536	239	196
21	165	158	295	130	257	295	1,610	2,820	1,910	526	*385	187
22	156	163	250	170	257	284	1,670	2,360	1,900	521	461	175
23	154	255	256	200	254	272	1,740	2,020	1,900	490	*328	166
24	146	219	134	190	276	*295	1,710	1,880	1,800	446	315	166
25	138	202	150	170	328	280	1,660	1,940	1,650	422	376	*161
26	137	264	187	160	315	303	1,740	1,800	1,770	399	399	161
27	143	341	184	168	307	291	1,800	1,690	2,400	376	466	153
28	145	398	193	181	272	288	*2,110	1,550	2,460	341	341	153
29	142	271	196	190	-	216	1,800	1,420	1,860	332	272	184
30	142	239	153	199	------	236	1,580	2,210	1,640	320	246	202
31	143	-----	175	209	-----	254	-----	2,090	------	303	250	------
Total	4,431	5,445	6,018	5,116	6,799	9,627	41,619	67,490	64,910	23,561	8,829	5,705
Mean	143	182	194	165	243	311	1,387	2,177	2,164	760	285	190
Cfsm	0.165	0.210	0.224	0.191	0.281	0.360	1.60	2.52	2.50	0.879	0.329	0.220
In.	0.19	0.23	0.26	0.22	0.29	0.41	1.79	2.90	2.79	1.01	0.38	0.25
Ac-ft	8,790	10,800	11,940	10,150	13,490	19,090	82,550	133,900	128,700	46,730	17,510	11,320

Calendar year 1953: Max 4,470 Min 108 Mean 750 Cfsm 0.867 In. 11.76 Ac-ft 543,000
Water year 1953-54: Max 3,360 Min 75 Mean 684 Cfsm 0.791 In. 10.72 Ac-ft 495,000

Peak discharge (base, 3,200 cfs).--May 10 (12 m.) 3,550 cfs (7.07 ft); June 10 (12 p.m.) 3,230 cfs (6.82 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 1954.

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 gages at site 300 ft downstream at same datum.

Average discharge.--44 years, 8,073 cfs (5,845,000 acre-ft per year).

Extremes.--Maximum discharge during year, 58,800 cfs May 21 (gage height, 14.48 ft); minimum, 520 cfs Jan. 21 (gage height, 2.62 ft).
1910-54: Maximum discharge, 99,000 cfs May 29, 1948 (gage height, 19.22 ft); minimum, 179 cfs about Dec. 1, 1952 (gage height, 1.98 ft).

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 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

2.8	645	7.0	9,820
3.0	830	8.0	13,700
3.5	1,400	10.0	24,200
4.0	2,150	12.0	38,200
5.0	4,060	15.0	63,500
6.0	6,620		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,040	1,010	1,820	1,520	2,590	3,320	2,820	13,700	23,900	21,900	3,140	2,080
2	1,150	*1,080	1,870	1,520	2,550	2,970	2,820	12,600	21,300	21,800	2,970	1,930
3	1,280	1,230	1,740	1,480	2,390	2,610	2,770	12,500	20,100	19,600	2,860	1,840
4	1,230	1,170	1,680	1,460	2,270	2,480	3,400	12,700	21,600	19,000	2,750	1,760
5	1,150	1,070	1,640	1,560	2,240	2,500	6,090	19,800	24,400	19,000	2,700	1,780
6	1,080	1,080	*1,630	1,960	2,240	2,610	10,100	23,500	22,900	18,400	2,700	1,760
7	1,050	1,200	1,590	1,980	2,200	2,720	9,110	25,800	21,900	16,800	2,630	1,740
8	1,010	1,210	1,440	2,060	2,240	2,990	8,090	29,200	20,500	15,000	2,430	1,640
9	996	1,100	1,350	2,000	2,300	4,330	8,470	34,800	19,500	13,500	2,320	1,590
10	974	1,050	1,640	1,840	2,390	6,910	7,810	46,800	20,400	12,200	2,240	1,530
11	952	1,040	1,790	1,730	2,300	6,710	7,080	43,200	25,200	11,200	2,130	1,490
12	941	1,050	1,630	1,560	2,410	5,630	7,230	41,300	26,800	10,500	2,060	1,440
13	941	1,050	1,790	1,190	3,680	4,880	9,680	37,200	30,300	10,000	2,010	1,390
14	941	1,040	1,640	*1,230	3,930	4,370	17,400	*34,800	*29,500	9,250	2,130	1,390
15	941	1,030	1,730	1,590	3,620	4,020	15,400	35,400	28,400	*10,300	2,250	1,390
16	930	1,050	1,850	1,630	3,240	3,790	13,700	41,900	31,900	9,530	2,500	1,430
17	931	1,340	1,780	1,560	3,050	3,720	16,700	47,000	26,400	8,800	2,320	1,670
18	930	1,460	1,670	1,500	3,380	3,600	23,700	48,400	22,600	7,750	2,200	2,200
19	974	1,260	1,670	1,520	3,220	3,420	23,000	52,300	21,100	6,940	2,100	2,130
20	1,050	1,040	2,720	996	3,010	3,300	18,200	54,700	20,600	6,340	2,150	1,840
21	1,050	974	3,460	654	*3,140	3,300	15,400	54,700	22,500	5,980	2,810	1,640
22	1,070	1,190	2,680	1,450	3,460	3,240	14,800	*41,200	26,600	6,030	3,140	1,530
23	1,060	2,220	2,150	1,950	3,300	3,160	17,000	33,700	30,200	5,390	2,730	1,480
24	1,030	1,920	1,640	1,880	3,380	*3,200	17,600	32,100	31,200	4,880	2,610	1,430
25	996	1,560	1,460	1,640	3,870	3,220	17,400	33,300	26,800	4,580	*2,770	1,390
26	985	1,800	1,630	1,490	4,060	3,220	18,900	29,600	28,000	4,330	2,940	*1,390
27	996	2,410	1,740	1,490	4,000	3,340	15,800	25,600	32,900	4,080	3,440	1,350
28	996	3,010	1,640	1,610	3,620	3,360	20,000	22,000	30,600	3,850	3,090	1,310
29	996	2,250	1,730	1,880	-	3,010	18,000	19,800	23,700	3,640	2,540	1,400
30	996	1,850	1,630	2,180	------	2,840	*15,700	24,200	20,500	3,440	2,240	1,450
31	985	-----	1,500	2,390	-----	2,810	-----	22,600	------	3,280	2,180	------
Total	31,650	41,744	55,930	50,500	84,080	111,580	387,170	‡1,006.4	752,300	317,290	79,080	48,390
Mean	1,021	1,391	1,804	1,629	3,003	3,599	12,910	32,460	25,080	10,240	2,551	1,613
Cfsm	0.211	0.287	0.372	0.336	0.619	0.742	2.66	6.69	5.17	2.11	0.526	0.333
In.	0.24	0.32	0.43	0.39	0.64	0.86	2.97	7.72	5.77	2.43	0.61	0.37
Ac-ft	62,780	82,800	110,900	100,200	166,800	221,300	767,900	‡1,996	‡1,492	629,300	156,900	95,980

Calendar year 1953: Max 50,000 Min 911 Mean 7,549 Cfsm 1.56 In. 21.13 Ac-ft 5,466,000
Water year 1953-54: Max 54,700 Min 654 Mean 8,126 Cfsm 1.68 In. 22.75 Ac-ft 5,883,000

Peak discharge (base, 28,200).--May 10 (3 p.m.) 49,900 cfs (13.46 ft); May 21 (7 a.m.) 58,800 cfs (14.48 ft); June 16 (9 a.m.) 33,700 cfs (11.40 ft); June 27 (10 a.m.) 34,300 cfs (11.49 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 1954.

Gage.--Water-stage recorder. Altitude of gage is 2,240 ft (from river-profile map).

Average discharge.--10 years, 2,909 cfs (2,106,000 acre-ft per year).

Extremes.--Maximum discharge during year, 20,800 cfs May 19 (gage height, 9.31 ft); minimum, 455 cfs Nov. 4, 19, Jan. 12 (gage height, 2.45 ft), but may have been less during period of ice effect.

1944-54: Maximum discharge, 27,400 cfs May 29, 1948 (gage height, 11.13 ft); minimum daily, 180 cfs Nov. 29, 1952.

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

Cooperation.--Water-stage recorder inspected by U. S. Forest Service ranger at Bungalow ranger station.

Rating table, water year 1953-54, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.4	420	4.0	2,610
2.7	660	5.0	5,070
3.0	980	7.0	11,800
3.5	1,680	9.0	19,500

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	554	514	815	690	1,200	1,180	1,200	*4,870	8,940	7,380	1,430	958
2	597	710	*760	633	1,200	992	1,150	4,750	8,080	6,740	1,380	914
3	538	538	700	642	1,160	950	1,360	4,980	8,150	6,330	1,340	881
4	506	*490	690	680	1,100	940	2,030	5,690	8,830	6,150	1,300	892
5	490	506	660	837	1,100	940	4,640	8,660	8,900	6,120	1,310	1,050
6	476	597	700	958	1,050	1,030	4,530	9,720	8,630	5,780	1,370	969
7	476	651	642	870	1,050	1,110	3,670	10,500	8,120	5,450	1,260	881
8	476	562	606	892	1,090	1,340	3,210	10,600	7,480	4,900	1,200	859
9	476	538	760	815	1,130	2,490	3,270	11,600	7,350	4,560	1,160	837
10	476	530	1,050	740	1,140	3,670	2,860	14,900	7,680	4,150	1,130	826
11	476	554	771	680	1,220	2,760	2,670	14,200	8,900	3,840	1,100	815
12	476	554	771	520	1,400	2,240	2,970	13,700	9,420	3,620	1,080	793
13	483	538	720	580	1,900	1,900	5.040	12,900	10,200	3,430	1,050	793
14	483	538	720	720	1,800	1,680	7,220	*12,600	9,500	3,360	1,040	771
15	483	522	793	720	1,500	1,540	5,780	13,200	*10,100	3,600	1,050	782
16	483	588	740	740	1,330	1,490	5,780	15,400	10,100	*3,100	1,200	969
17	490	859	690	750	1,200	1,490	8,080	16,700	8,760	2,860	1,100	1,100
18	490	606	642	760	1,200	1,430	10,000	17,600	7,750	2,670	1,060	1,500
19	514	506	804	700	1,110	1,340	8,390	18,900	7,350	2,470	1,020	1,100
20	530	514	2,330	500	1,140	1,330	6,640	18,900	7,220	2,330	1,480	947
21	546	538	1,400	600	1,340	1,310	5,960	18,500	7,680	2,510	1,430	881
22	530	700	1,050	950	1,500	1,300	6,390	15,300	8,460	2,410	1,200	848
23	506	892	760	1,100	1,380	1,330	7,420	13,700	9,220	2,140	1,140	826
24	490	730	720	1,000	1,440	1,440	7,520	13,400	8,870	2,010	*1,240	815
25	490	710	815	850	*1,660	*1,420	7,620	13,400	8,360	1,900	1,370	804
26	490	1,180	782	800	1,650	1,490	7,780	11,800	8,730	1,820	1,440	782
27	490	1,130	690	820	1,430	1,490	7,620	10,200	9,600	1,730	1,310	*760
28	490	1,080	700	900	1,310	1,370	7,190	8,900	8,970	1,650	1,100	793
29	490	804	700	1,000	-	1,230	6,240	8,460	7,320	1,580	1,020	826
30	506	750	642	1,050	------	1,190	5,480	9,460	6,930	1,520	969	771
31	514	-----	660	1,100	-----	1,220	-----	8,730	------	1,480	1,030	------
Total	15,515	19,929	25,283	24,597	36,730	46,632	159,710	372,220	255,600	109,590	37,309	26,743
Mean	500	664	816	793	1,312	1,504	5,324	12,010	8,520	3,535	1,204	891
Cfsm	0.502	0.667	0.819	0.796	1.32	1.51	5.35	12.1	8.55	3.55	1.21	0.895
In.	0.58	0.74	0.94	0.92	1.37	1.74	5.96	13.90	9.54	4.09	1.39	1.00
Ac-ft	30,770	39,530	50,150	48,790	72,850	92,490	316,800	738,300	507,000	217,400	74,000	53,040

Calendar year 1953: Max 12,100 Min 476 Mean 2,395 Cfsm 2.40 In. 32.64 Ac-ft 1,734,000
Water year 1953-54: Max 18,900 Min 476 Mean 3,096 Cfsm 3.11 In. 42.17 Ac-ft 2,241,000

Peak discharge (base, 9,000 cfs).--Apr. 18 (2 a.m.) 10,900 cfs (6.74 ft); May 19 (11:30 p.m.) 20,800 cfs (9.31 ft); June 15 (11 p.m.) 11,900 cfs (7.00 ft); June 27 (9 a.m.) 10,100 cfs (6.51 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 12 to Feb. 2, Feb. 12-15, Mar. 3-6.

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 1954.

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 at site 300 ft upstream at different datum.

Average discharge.--28 years, 5,560 cfs (4,025,000 acre-ft per year).

Extremes.--Maximum discharge during year, 37,700 cfs May 20 (gage height, 20.60 ft); minimum, 955 cfs Oct. 17 (gage height, 2.54 ft).
1926-54: 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 computed from graph based on Telemark gage readings, which are good, and those for periods of no gage-height record, which are fair. No regulation or diversion above station.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 17)

2.4	960	9.0	8,820
3.0	1,320	11.0	12,400
4.0	2,120	13.0	16,600
5.0	3,150	16.0	24,000
7.0	5,730	20.0	35,800

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,090	1,030	1,980	a1,850	g3,040	4,270	3,600	11,100	16,700	12,600	2,700	1,990
2	1,200	1,110	2,020	a1,800	a3,000	3,740	3,440	*10,400	15,100	12,200	2,620	1,850
3	1,210	1,280	1,850	a1,700	g2,820	3,310	3,570	10,800	14,600	11,300	2,550	1,770
4	1,120	*1,110	1,790	g1,770	a2,700	3,180	5,420	11,100	15,700	10,900	2,470	1,730
5	1,060	1,010	*1,740	a2,000	g2,560	3,130	10,200	15,800	15,900	11,000	2,400	1,750
6	1,050	1,070	1,760	a2,500	a2,520	3,190	15,200	19,100	15,500	10,700	2,430	1,930
7	1,020	1,330	1,830	g2,710	a2,440	3,270	11,800	20,700	15,500	10,300	2,440	1,790
8	1,010	1,360	1,610	g2,930	g2,460	3,540	10,000	23,000	14,400	9,400	2,300	1,690
9	1,000	1,170	1,550	a2,700	2,730	6,260	10,700	24,400	13,600	8,680	2,210	1,630
10	990	1,080	2,280	a2,400	2,730	11,700	9,260	28,500	13,600	8,010	2,140	1,610
11	985	1,080	2,350	g2,190	2,570	9,650	8,230	27,100	14,900	7,500	2,080	1,570
12	975	1,160	1,920	*1,950	3,130	7,400	8,510	26,600	15,800	7,000	2,020	1,530
13	980	1,120	1,840	1,670	a5,400	6,190	13,100	24,200	17,900	6,670	1,980	1,520
14	980	1,080	1,750	1,710	a6,600	5,440	21,300	23,400	17,100	6,340	1,950	1,500
15	970	1,060	1,810	2,010	g5,520	4,970	16,900	*23,600	16,900	6,540	1,940	1,500
16	965	1,100	1,850	1,920	g4,630	4,750	14,600	27,400	*18,800	*6,120	2,020	1,690
17	960	1,970	1,790	g1,870	g4,370	4,880	17,900	30,900	16,300	5,560	2,210	1,860
18	975	1,770	1,730	1,900	a4,500	4,670	22,600	32,600	14,500	5,170	2,090	2,930
19	1,040	1,320	1,990	1,880	g4,240	4,330	20,500	35,300	13,400	4,800	1,960	2,840
20	1,090	1,130	6,740	1,550	a4,000	4,120	17,500	35,700	12,900	4,530	2,290	2,110
21	1,110	1,090	5,450	1,280	a4,800	4,140	15,000	34,500	13,000	4,420	3,750	1,850
22	1,110	1,350	3,430	1,420	*6,850	4,200	14,400	*29,100	14,100	4,670	2,620	1,730
23	1,050	1,910	2,620	a2,000	6,000	4,290	16,400	25,100	15,500	4,150	2,290	1,670
24	1,000	1,990	2,120	a2,400	5,560	4,450	17,000	24,000	15,600	3,860	2,250	1,620
25	985	1,690	1,980	g1,940	5,900	*4,490	16,900	24,600	14,600	3,640	*2,800	1,570
26	980	2,030	1,980	g1,850	5,910	4,450	17,100	22,100	14,800	3,460	2,750	1,540
27	980	2,720	1,870	a1,750	5,300	4,790	16,600	19,300	16,000	3,270	2,950	*1,520
28	980	3,320	1,770	g1,690	4,680	4,700	16,300	16,900	16,200	3,140	2,440	1,510
29	980	2,370	1,780	g2,210	-	4,160	14,400	15,400	13,500	3,010	2,120	1,570
30	985	1,870	1,660	a2,700	------	3,860	12,500	16,600	12,200	2,900	1,960	1,590
31	1,020	-----	g1,670	a3,000	-----	3,700	-----	16,100	------	2,790	1,940	------
Total	31,850	44,680	68,510	63,250	116,960	149,220	400,930	705,400	454,600	204,630	72,670	52,960
Mean	1,027	1,489	2,210	2,040	4,177	4,814	13,360	22,750	15,150	6,601	2,344	1,765
Cfsm	0.421	0.610	0.906	0.836	1.71	1.97	5.48	9.32	6.21	2.71	0.961	0.723
In.	0.49	0.68	1.04	0.96	1.78	2.27	6.11	10.75	6.93	3.12	1.11	0.81
Ac-ft	63,170	88,620	135,900	125,500	232,000	296,000	795,200	‡1,399	901,700	405,900	144,100	105,000

Calendar year 1953: Max 22,500 Min 960 Mean 5,353 Cfsm 2.19 In. 29.78 Ac-ft 3,876,000
Water year 1953-54: Max 35,700 Min 960 Mean 6,481 Cfsm 2.66 In. 36.05 Ac-ft 4,692,000

Peak discharge (base, 18,000 cfs).--Apr. 14 (9 a.m.) 22,600 cfs (15.49 ft); Apr. 18 (11:30 a.m.) 24,100 cfs (16.07 ft); May 20 (7 a.m.) 37,700 cfs (20.60 ft); June 16 (9 a.m.) 20,200 cfs (14.56 ft).

* 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 Bungalow ranger station and Clearwater River at Spalding and at Kamiah.

g Computed from graph based on once-daily Telemark gage readings.

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, approximately

Records available.--October 1945 to September 1954.

Gage.--Wire-weight gage read once daily. Datum of gage is 1,198.2 ft above mean sea level, unadjusted.

Average discharge.--9 years, 429 cfs (310,600 acre-ft per year).

Extremes.--Maximum discharge during year, 3,090 cfs Mar. 10 (gage height, 8.55 ft, from graph based on gage readings); minimum observed, 6.9 cfs Aug. 15, 16; minimum gage height observed, 4.21 ft Aug. 13.
1945-54: Maximum discharge, 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 good except those for period of ice effect, which are poor. No regulation or diversion.

Revisions (water years).--WSP 1093: 1946(M)

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

4.1	5.5	5.5	250
4.3	10	6.0	500
4.5	22	7.0	1,260
4.7	42	8.0	2,350
4.9	74	9.0	4,120
5.1	122		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	13	67	96	1,040	627	345	380	94	54	11	18
2	13	14	74	94	760	500	326	*335	85	74	11	24
3	14	15	74	94	602	452	446	317	78	60	10	18
4	14	17	81	106	512	396	894	308	69	45	10	15
5	14	*15	*74	429	506	375	1,400	326	76	37	11	14
6	13	19	81	725	402	390	2,360	326	89	33	9.6	14
7	13	20	89	767	424	370	1,610	340	173	30	9.6	14
8	12	38	67	1,250	464	500	1,310	365	322	29	9.0	12
9	13	26	87	809	476	1,540	1,310	360	212	26	9.3	12
10	12	21	270	512	506	2,590	1,300	385	192	27	9.0	12
11	12	21	229	375	452	1,660	1,020	360	134	26	8.4	11
12	11	21	212	236	795	1,030	958	326	128	33	8.7	11
13	12	22	182	222	2,250	816	1,470	254	106	37	7.3	10
14	12	22	182	*205	2,040	683	2,550	212	96	33	7.1	10
15	12	20	202	205	1,470	608	1,730	176	89	31	6.9	11
16	12	19	179	179	1,050	596	1,290	182	*112	26	6.9	15
17	11	30	151	163	1,190	648	1,220	*182	112	*22	7.8	17
18	12	74	125	b140	1,600	578	1,240	173	94	22	9.9	20
19	14	44	192	b120	1,060	488	1,160	157	81	21	10	22
20	14	31	2,340	b100	918	488	1,090	139	70	20	13	27
21	18	27	1,150	b120	1,830	608	902	125	64	21	20	22
22	15	38	488	b160	*2,400	746	795	114	58	20	52	18
23	16	131	258	b300	1,550	781	788	101	52	22	37	18
24	15	99	218	476	1,420	739	760	99	47	20	34	15
25	15	76	166	375	1,410	648	641	101	44	19	*33	16
26	13	69	145	290	1,270	*602	584	122	41	17	35	15
27	13	112	122	240	934	548	614	142	41	14	28	15
28	13	128	114	512	767	464	648	119	51	14	30	*14
29	14	112	114	1,610	-	407	560	119	62	14	22	14
30	12	74	109	1,110	------	407	470	83	51	12	20	14
31	13	-----	96	1,180	-----	396	-----	85	------	11	18	------
Total	411	1,368	7,938	13,200	30,098	21,681	31,791	6,813	2,923	870	514.5	468
Mean	13.3	45.6	256	426	1,075	699	1,060	220	97.4	28.1	16.6	15.6
Cfsm	0.029	0.099	0.557	0.926	2.34	1.52	2.30	0.478	0.212	0.061	0.036	0.034
In.	0.03	0.11	0.64	1.07	2.43	1.75	2.57	0.55	0.24	0.07	0.04	0.04
Ac-ft	815	2,710	15,740	26,180	59,700	43,000	63,060	13,510	5,800	1,730	1,020	928

Calendar year 1953: Max 3,660 Min 7.3 Mean 363 Cfsm 0.789 In. 10.69 Ac-ft 262,600
Water year 1953-54: Max 2,590 Min 6.9 Mean 323 Cfsm 0.702 In. 9.54 Ac-ft 234,200

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

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 Lapwai Creek, three-eighths of a mile northwest of Spalding Post Office, and 2,300 ft downstream from bridge on U. S. Highway 95.

Drainage area.--9,570 sq mi, approximately

Records available.--March 1926 to September 1954.

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 at site 2,300 ft upstream at datum 772.49 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Average discharge.--28 years, 14,850 cfs (10,750,000 acre-ft per year).

Extremes.--Maximum discharge during year, 104,000 cfs May 20 (gage height, 17.67 ft); minimum, 1,760 cfs Jan. 22 (gage height, 2.31 ft), but may have been less during period of ice effect.

1926-54: Maximum discharge, 177,000 cfs May 29, 1948 (gage height, 23.76 ft); maximum gage height, 25.6 ft Jan. 5, 1928 (present site and datum), from floodmark (ice jam); minimum daily discharge, 500 cfs Jan. 9, 1937, Dec. 1, 1952.

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.

Rating table, water year 1953-54, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-3, July 30 to Aug. 25)

2.4	1,880	8.0	21,200
3.0	2,780	10.0	33,000
4.0	4,890	12.0	47,000
5.0	7,780	14.0	64,300
6.0	11,400	17.2	98,200

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,090	2,200	4,050	3,520	8,080	9,480	7,450	27,000	40,900	33,600	6,120	4,270
2	2,140	2,200	4,330	3,640	8,180	8,370	7,260	*24,600	37,700	35,400	5,880	4,110
3	2,360	2,480	4,130	3,560	7,390	7,320	7,190	24,000	35,300	32,000	5,710	3,900
4	2,380	2,590	3,940	3,560	6,700	6,760	9,410	24,500	36,400	30,500	5,490	3,750
5	2,260	*2,360	*3,790	4,240	6,350	6,610	16,200	32,600	39,700	30,400	5,350	3,750
6	2,210	2,280	3,770	5,450	6,060	6,730	30,700	42,500	39,000	29,900	5,230	3,900
7	2,140	2,480	3,810	6,090	5,950	6,880	26,900	46,600	38,100	28,100	5,350	3,880
8	2,080	2,800	3,600	6,820	6,060	7,230	22,200	51,600	37,700	25,700	5,080	3,620
9	2,040	2,580	3,330	6,580	6,320	10,900	23,400	58,600	34,600	23,200	4,890	3,430
10	2,010	2,360	3,790	5,670	6,400	22,200	21,400	74,500	34,300	21,300	4,720	3,330
11	2,010	2,280	4,920	5,040	5,920	21,200	18,800	77,000	38,800	19,600	4,510	3,230
12	1,980	2,300	4,310	4,440	6,550	16,400	18,400	72,700	43,000	18,100	4,360	3,110
13	1,970	2,340	4,070	*3,790	12,800	13,600	23,400	65,300	47,300	17,200	4,250	3,060
14	1,980	2,300	4,020	3,410	15,000	11,800	45,400	61,000	48,000	16,200	4,140	3,000
15	1,970	2,270	3,920	3,850	12,700	10,600	39,400	*60,900	45,600	16,400	4,320	3,040
16	1,960	2,280	4,130	4,200	10,600	10,100	32,900	69,800	*51,300	16,800	4,540	3,130
17	1,960	2,910	4,090	4,000	9,880	10,000	35,600	81,800	45,000	*14,900	4,800	3,540
18	1,970	3,750	3,830	3,850	11,000	9,800	47,500	85,900	38,900	13,800	4,600	4,440
19	2,020	3,150	3,900	b3,500	10,300	9,120	49,100	93,400	35,300	12,400	4,430	5,750
20	2,150	2,610	10,000	b2,700	9,260	8,680	40,300	97,600	34,100	11,400	4,630	4,580
21	2,260	2,320	12,700	b2,000	10,900	8,750	33,800	*97,100	35,000	10,700	6,670	3,920
22	2,300	2,440	8,470	b2,200	*14,800	8,980	31,700	78,800	39,500	11,000	6,380	3,580
23	2,280	3,710	6,230	b4,200	13,000	8,980	34,500	62,900	44,500	10,200	5,610	3,370
24	2,220	4,840	4,960	b5,400	12,100	9,050	36,200	57,500	46,800	9,230	5,230	3,290
25	2,150	3,900	4,160	b4,800	12,700	9,190	35,900	58,800	42,100	8,680	5,540	3,190
26	2,120	3,580	4,020	b4,000	12,800	*9,020	36,800	54,100	41,400	8,180	*5,870	3,110
27	2,120	5,220	4,110	4,070	12,000	9,340	36,700	47,000	47,400	7,750	6,380	3,070
28	2,120	6,460	3,940	4,400	10,600	9,660	37,500	40,000	48,400	7,290	6,120	*2,960
29	2,110	5,840	3,810	6,380	-	8,680	35,100	35,900	39,800	6,910	5,090	3,000
30	2,110	4,330	3,850	7,290	------	7,910	30,600	39,300	33,800	6,700	4,470	3,130
31	2,140	-----	3,580	7,940	-----	7,620	-----	40,100	------	6,440	4,240	------
Total	65,610	93,160	145,560	140,590	270,400	310,960	871,710	‡1,783.4	‡1,219.7	539,980	160,000	107,440
Mean	2,116	3,105	4,695	4,535	9,657	10,030	29,060	57,530	40,660	17,420	5,161	3,581
Cfsm	0.221	0.324	0.491	0.474	1.01	1.05	3.04	6.01	4.25	1.82	0.539	0.374
In.	0.25	0.36	0.57	0.55	1.05	1.21	3.39	6.93	4.74	2.10	0.62	0.42
Ac-ft	130,100	184,800	288,700	278,900	536,300	616,800	‡1,729	‡3,537	‡2,419	‡1,071	317,400	213,100

Calendar year 1953: Max 75,600 Min 1,880 Mean 14,010 Cfsm 1.46 In. 19.86 Ac-ft 10,140,000
Water year 1953-54: Max 97,600 Min 1,960 Mean 15,640 Cfsm 1.63 In. 22.19 Ac-ft 11,320,000

Peak discharge (base, 50,000 cfs).--Apr. 18 (6 p.m.) 53,000 cfs (12.74 ft); May 20 (11 a.m. to 12:30 p.m.) 104,000 cfs (17.67 ft); June 16 (12 m.) 55,200 cfs (12.99 ft); June 27 (9 p.m.) 50,700 cfs (12.46 ft).

* Discharge measurement made on this day.

‡ Expressed in thousands.

b Stage-discharge relation affected by ice.

Note.--Discharge July 30 to Aug. 25 computed from graph based on readings at wire-weight gage 2,300 ft upstream and records for stations upstream.

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 1954 in reports of Geological Survey. October 1909 to September 1953 (monthly discharge only) in State Water-Supply Bulletin 6. Prior to October 1935, published as "at Riparia." Gage-height records collected at Riparia, 1900-1916 (fragmentary), 1935-48, are contained in reports of U. S. Weather Bureau.

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 Riparia 66 miles downstream at different datum.

Extremes.--Maximum discharge during year, 210,000 cfs May 21 (gage height, 30.94 ft); minimum, 17,200 cfs Sept. 30 (gage height, 10.13 ft); minimum daily, 20,500 cfs Sept. 10.

1909-54: Maximum discharge, 369,000 cfs May 29, 1948 (gage height, 40.36 ft, from high-water mark in 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 U. S. Weather Bureau (discharge, 409,000 cfs).

Remarks.--Records excellent. Over 2,840,000 acres are irrigated above station from numerous large irrigation projects. Regulation from many storage reservoirs upstream and diurnal fluctuation during low-water periods from powerplant on Clearwater River at Lewiston, Idaho. Records of chemical analyses and water temperature for the water year 1954 are given in WSP 1353.

Revisions (water years).--WSP 463: 1916. WSP 933: 1937.

Rating table, water year 1953-54 (gage height, in feet, and discharge, in cubic feet per second)

11.0	20,500	21.0	87,700
13.0	29,600	26.0	143,000
16.0	47,700	31.0	211,000

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22,300	22,700	25,900	23,900	40,000	37,100	31,400	80,200	*104,000	94,000	26,600	*22,500
2	23,100	23,800	26,600	24,000	37,400	34,800	31,600	73,500	98,700	94,300	26,600	22,500
3	22,300	23,900	26,000	24,900	37,000	32,100	33,000	70,100	96,000	88,000	25,700	22,700
4	22,400	*23,100	25,800	25,300	35,700	32,600	35,100	67,800	93,400	82,600	24,400	22,500
5	22,600	23,000	25,500	25,200	34,000	31,600	42,600	73,000	92,300	82,600	23,600	23,300
6	21,900	24,000	26,100	26,500	31,300	30,700	63,300	87,700	92,400	82,200	23,700	23,600
7	21,600	23,700	25,500	27,800	30,600	31,500	68,000	98,300	90,700	76,200	24,400	21,600
8	21,600	24,900	*24,600	*29,300	30,500	32,000	65,400	110,000	89,800	69,000	24,800	21,100
9	22,600	24,300	23,400	29,300	30,600	36,900	65,100	124,000	83,800	64,200	24,300	20,600
10	22,800	22,600	23,700	28,200	30,400	60,400	62,100	147,000	83,900	60,600	22,900	20,500
11	22,600	21,800	25,500	27,200	29,800	69,600	58,400	165,000	97,000	56,900	21,900	21,200
12	23,000	20,900	25,600	26,300	30,100	62,100	57,200	161,000	104,000	53,700	22,100	22,000
13	22,500	22,200	25,700	24,700	38,700	54,700	61,200	152,000	110,000	51,100	22,300	21,800
14	21,400	22,400	25,600	24,000	46,100	49,000	93,300	143,000	112,000	*48,400	22,200	20,700
15	21,800	21,200	25,700	24,700	45,400	45,500	95,400	139,000	109,000	46,900	22,700	20,900
16	22,100	22,500	25,500	24,900	42,500	43,800	88,300	147,000	118,000	49,200	23,000	21,000
17	22,700	22,700	25,700	25,500	38,400	42,400	88,100	165,000	117,000	47,700	23,000	23,000
18	23,400	23,800	25,200	26,800	38,600	*41,400	100,000	176,000	108,000	45,300	22,500	24,400
19	23,100	23,400	24,800	33,000	37,900	40,100	107,000	*188,000	99,200	41,800	22,300	27,400
20	23,600	22,500	30,900	28,100	37,000	38,600	100,000	199,000	93,800	38,500	22,900	25,300
21	23,300	22,200	39,200	24,400	37,800	37,800	90,200	204,000	94,400	36,400	24,800	24,000
22	22,700	22,900	35,200	24,500	43,800	37,000	83,000	190,000	101,000	35,700	26,000	22,800
23	23,300	25,200	31,400	25,400	42,700	36,800	83,200	162,000	109,000	34,600	25,900	22,400
24	23,900	26,800	28,900	27,400	41,000	35,600	85,700	146,000	115,000	33,400	25,600	22,900
25	23,700	25,000	27,000	27,400	41,200	35,100	86,200	141,000	113,000	33,000	25,400	23,000
26	23,400	25,500	24,900	27,000	41,900	33,900	88,000	134,000	111,000	31,900	26,000	22,900
27	23,100	26,600	25,200	26,000	40,900	34,300	91,000	120,000	121,000	30,000	26,600	23,300
28	22,100	29,600	25,000	26,000	39,800	35,300	91,000	109,000	128,000	28,500	27,200	22,400
29	21,800	29,000	24,600	27,900	-	33,800	90,900	98,700	118,000	27,800	26,200	20,700
30	22,400	27,000	25,500	31,500		32,500	*87,300	98,000	102,000	27,800	25,000	20,800
31	22,300	-	24,000	38,200	-	*31,400	------	100,000	------	27,200	23,600	------
Total	701,400	719,200	824,200	835,300	‡1,051.1	‡1,230.4	‡2,223	‡4,069.3	‡3,105.4	‡1,619.5	754,200	673,800
Mean	22,630	23,970	26,590	26,950	37,540	39,690	74,100	131,300	103,500	52,240	24,330	22,460
Ac-ft	‡1,391	‡1,427	‡1,635	‡1,657	‡2,085	‡2,440	‡4,409	‡8,071	‡6,159	‡3,212	‡1,496	‡1,336

Calendar year 1953: Max 226,000 Min 20,900 Mean 52,880 Ac-ft 38,280,000
Water year 1953-54: Max 204,000 Min 20,500 Mean 48,790 Ac-ft 35,320,000

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

Union Flat Creek near Colfax, Wash.

Location.--Lat 46°49'00", long 117°26'05", in SW¼SW¼ sec. 5, T. 15 N., R. 43 E., on right bank 5½ miles southwest of Colfax.

Drainage area.--189 sq mi.

Records available.--July 1953 to September 1954.

Gage.--Water-stage recorder. Altitude of gage is 1,865 ft (from topographic map).

Extremes.--1953: Maximum discharge during period July to September, 2.4 cfs Aug. 27 (gage height, 1.34 ft); minimum, 0.2 cfs Aug. 22, 23, Sept. 16; minimum gage height, 1.07 ft Aug. 22.

1953-54: Maximum discharge during water year, 509 cfs Dec. 19 (gage height, 4.83 ft), from rating curve extended above 180 cfs; maximum gage height, 4.96 ft Jan. 28 (ice jam); minimum discharge, 0.2 cfs Aug. 6-15; minimum gage height, 0.88 ft Aug. 13-15.

Remarks.--Records good except those below 10 cfs, which are fair, and those for period of ice effect, which are poor. Small diversions above station for irrigation. No known regulation.

Discharge, in cubic feet per second, 1953

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	-	0.8	1.8	9	-	1.9	0.6	17	-	0.5	0.3	25	1.2	1.5	0.4
2	-	.8	1.3	10	-	1.5	.5	18	-	.4	.3	26	1.2	1.6	.5
3	-	.8	1.0	11	-	1.5	.5	19	-	.4	.3	27	1.2	2.1	.7
4	-	1.3	.8	12	-	1.2	.5	20	-	.4	.3	28	*1.1	1.5	.8
5	-	1.2	.8	13	-	1.0	.5	21	*1.2	.4	.3	29	1.0	1.8	*.9
6	-	1.0	.7	14	-	.9	.4	22	1.1	.3	.4	30	1.0	2.1	.9
7	-	1.0	.7	15	-	.6	.3	23	1.1	.2	.4	31	1.0	1.9	-
8	-	1.5	.7	16	-	.5	.3	24	1.2	.7	.4				
Total													-	33.3	18.3
Mean													-	1.07	0.61
Runoff in acre-feet													-	66	36

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	3.2	8.1	21	*175	32	23	14	8.7	4.2	0.5	1.5
2	1.0	3.2	9.5	20	156	27	22	14	7.4	4.2	.4	1.3
3	1.0	*2.8	14	21	130	25	24	14.5	6.8	4.2	.4	1.3
4	1.0	2.6	17.5	36	115	26	24	14.5	9.4	3.8	.4	1.1
5	1.0	2.8	13.5	64	101	26	31	14	8.0	3.4	.3	1.1
6	1.0	3.2	17.5	59	88	27	59	12.5	8.4	2.8	.3	1.1
7	1.0	3.4	17	*55	82	27	41	11	20	2.3	.3	1.1
8	1.2	3.4	*12.5	52	74	35	30	10.5	16	2.2	.3	1.1
9	1.2	3.4	23	49	67	53	31	11	*13.5	2.3	.2	1.0
10	1.1	3.2	*32	35	58	74	31	10	11	3.4	.2	.9
11	1.2	3.4	30	33	43	56	24	10.5	9.4	3.2	.2	.8
12	1.2	4.1	23	24	67	39	23	11.5	8.7	2.6	.2	.7
13	1.2	4.1	21	20	133	32	29	10.5	9.0	*2.2	.2	.7
14	1.2	4.1	23	26	83	30	43	9.8	8.0	2.0	.2	.6
15	1.5	4.3	20	23	64	*29	34	9.1	9.4	1.9	.3	1.1
16	1.5	5.5	22	20	50	28	25	8.4	9.4	1.6	.3	2.8
17	1.8	5.8	18.5	18	58	28	22	8.0	8.7	1.3	.4	5.0
18	2.1	4.6	16.5	16	71	31	21	7.4	7.7	1.1	.4	2.8
19	2.6	4.9	48	15	56	31	20	6.8	6.8	1.2	.5	2.3
20	2.6	4.9	93	15	53	30	19.5	6.8	6.2	1.2	1.1	2.2
21	2.4	5.2	58	15	94	53	19	5.9	5.9	1.1	1.1	2.0
22	2.6	13	34	18	107	80	17	5.6	5.3	1.1	1.8	1.8
23	3.2	11.5	25	25	*60	58	15.5	5.6	4.6	1.0	1.1	1.8
24	2.6	10	29	35	55	43	15	5.3	4.2	1.0	1.6	1.5
25	2.6	9.2	24	50	49	34	14.5	7.4	4.0	.8	1.9	1.4
26	2.8	7.4	22	70	39	28	*14	11	4.0	.9	1.6	1.5
27	3.0	7.7	23	60	35	28	17	13.5	4.2	.8	1.5	1.4
28	3.0	7.4	25	130	35	26	18.5	9.4	3.8	.6	1.5	1.4
29	3.0	7.4	23	*176	-	25	18	7.7	3.8	.6	1.2	1.3
30	3.0	7.4	24	186		23	15.5	7.4	3.8	.5	1.0	1.3
31	3.2	--	21	191	---	24	------	7.7	------	.5	*1.5	-----
Total	58.8	163.1	787.6	1,578	2,198	1,108	740.5	301.3	236.1	60.0	22.9	45.9
Mean	1.90	5.44	25.4	50.9	78.5	35.7	24.7	9.72	7.87	1.94	0.74	1.53
Ac-ft	117	324	1,560	3,130	4,360	2,200	1,470	598	468	119	45	91

Calendar year 1953: Max - Min - Mean - Ac-ft -
Water year 1953-54: Max 191 Min 0.2 Mean 19.9 Ac-ft 14,480

Peak discharge (base, 400 cfs).--Dec. 19 (11:20 p.m.) 509 cfs (4.83 ft); Jan. 28 (4.30 p.m.) about 500 cfs.

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 16-28.

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, approximately.

Records available.--April to August 1897 (gage heights only), September 1897 to April 1907, June 1908 to March 1916, February 1951 to September 1954 (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 datums. Feb. 8 to Mar. 28, 1951, staff gage at present site and datum.

Extremes.--Maximum discharge during year, 4,260 cfs Jan. 31 (gage height, 9.59 ft); minimum, 21 cfs Aug. 9, 10 (gage height, 3.44 ft).
1897-1916, 1951-54: Maximum discharge, 29,800 cfs Mar. 2, 1910 (gage height, 22.00 ft, from graph based on gage readings, site and datum then in use); no flow for part of June 25, 1910.

Remarks.--Records good except those below 100 cfs, which are fair, and those for period of ice effect, which are poor. No regulation. Diversions above station for irrigation, domestic and municipal use.

Revisions (water years).--WSP 1217: Drainage area. WSP 1287: 1897-1904, 1910(M), 1915-16(M).

Rating table, water year 1953-54, except period of ice effect (gage height, in feet and discharge, in cubic feet per second)

3.4	18	5.4	380
3.6	34	6.0	640
3.9	64	7.0	1,250
4.3	117	8.3	2,460
4.8	210		

Discharge, in cubic feet per second, water year October 1953 to September 1954

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	58	159	288	2,360	1,410	660	640	240	127	40	56
2	32	60	147	291	2,220	1,240	645	580	238	130	40	57
3	34	60	157	288	*1,760	1,100	615	526	228	125	36	61
4	35	61	155	274	1,490	998	630	491	248	117	36	55
5	36	62	210	303	1,360	938	680	475	256	123	28	54
6	38	64	210	776	1,270	878	836	459	240	119	29	56
7	38	64	*201	*926	1,170	860	1,310	479	240	105	34	53
8	38	*66	203	1,150	1,150	860	1,280	508	253	98	34	47
9	38	68	201	1,500	1,190	998	1,140	518	309	89	27	52
10	38	70	195	1,060	1,220	1,720	1,170	555	*522	94	23	54
11	38	71	439	824	1,090	2,380	1,090	590	443	110	28	49
12	40	71	447	665	926	2,110	980	600	401	98	31	41
13	43	70	401	536	2,200	1,680	926	570	356	88	31	35
14	44	71	324	467	2,480	1,420	1,070	531	318	82	28	45
15	43	72	274	467	2,110	*1,270	1,830	471	297	79	25	38
16	44	79	280	479	1,760	1,130	1,570	415	285	83	25	53
17	44	91	274	333	1,610	1,080	1,290	380	266	78	28	71
18	44	91	253	333	1,810	1,030	1,120	356	280	*71	29	73
19	50	94	246	*280	1,940	986	1,140	359	272	64	42	83
20	57	91	731	220	1,770	920	1,120	330	243	60	38	70
21	56	101	1,630	200	1,810	884	1,060	309	224	64	33	67
22	54	131	1,260	190	3,020	1,160	926	321	210	65	39	67
23	53	140	752	240	3,000	1,190	830	294	192	57	39	71
24	53	150	545	490	2,360	1,120	770	266	184	53	37	75
25	55	199	435	650	2,120	1,030	752	258	166	48	39	72
26	57	215	387	680	2,040	914	*710	266	161	54	44	72
27	58	190	348	610	1,830	848	695	282	147	51	48	65
28	58	155	333	580	1,590	812	685	303	142	52	60	63
29	57	136	318	*1,100	-	794	770	297	135	45	55	74
30	57	140	327	2,260		730	715	261	130	45	51	68
31	58		300	2,450	-	680	------	248	------	45	*60	------
Total	1,422	2,981	12,142	20,910	50,656	35,170	29,105	12,938	7,626	2,519	1,137	1,797
Mean	45.9	99.4	392	675	1,809	1,135	970	417	254	81.3	36.7	59.9
Ac-ft	2,820	5,910	24,080	41,470	100,500	69,760	57,730	25,660	15,130	5,000	2,260	3,560

Calendar year 1953: Max 5,330 Min 25 Mean 648 Ac-ft 469,300
Water year 1953-54: Max 3,020 Min 23 Mean 489 Ac-ft 353,900

Peak discharge (base, 3,700 cfs).--Jan. 31 (3:50 p.m.) 4,260 cfs (9.59 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 19-28.

Snake River at South Boundary, Yellowstone Park, Wyo.

Location.--Lat 44°08', long 110°40', a quarter of a mile downstream from Lewis River, half a mile north of the south boundary of Yellowstone National Park, and 25 miles north of Moran.

Drainage area.--485 sq mi (revised).

Records available.--June 1913 to July 1925 (discontinued). Irrigation seasons only 1917, 1922-25. Monthly discharge only for some periods, published in WSP 1317.

Gage.--Chain gage. Altitude of gage is 6,880 ft (from topographic map). August 1918 to June 1921, auxiliary chain gage and July 1921 to July 1925, auxiliary water-stage recorder at site 2½ miles downstream at different datum.

Average discharge.--7 years (1913-16, 1917-21), 858 cfs (621,200 acre-ft per year).

Extremes.--1913-25: Maximum discharge recorded, 6,280 cfs June 12, 1923 (gage height, 7.45 ft); minimum, 160 cfs Oct. 26-31, 1915 (gage height, 1.40 ft).

Remarks.--No regulation or diversion above station.

Revisions.--Revised figures of discharge, in cubic feet per second, for ice affected periods in the water years 1914-18, 1920-21, superseding those published in WSP 413, 443, 463, 483, 513, and 533, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1914		1916		1916-Con.	
Jan. 20-27	†390	Feb. 1	240	Dec. 9-15	†400
28	380	2	240		
29	360	3	240	1918	
30	340	4	250	Jan. 10	380
31	320	5	260	11-31	†360
Mar. 1-19	†320	6	270		
Dec. 6-31	†310	7	290	1920	
		8	310	Dec. 10-31	†326
1915		9	330		
Dec. 3-31	†250	10-14	†350	1921	
				Feb. 1-15	†320

† Each day during indicated periods.

Month	Maximum	Minimum	Mean	Runoff in acre-feet
January 1914	416	320	397	24,400
February	-	-	a320	a17,800
March	351	-	327	20,100
Water year 1913-14	5,690	320	‡1,020	‡739,000
December 1914	330	-	311	19,100
Calendar year 1914	5,690	-	‡1,030	‡744,000
January 1915	-	-	a300	a18,400
February	-	-	a300	a16,700
Water year 1914-15	3,070	271	776	562,000
December 1915	-	-	249	15,300
Calendar year 1915	3,070	-	709	514,000
January 1916	-	-	a240	a14,800
February	394	240	332	19,100
Water year 1915-16	-	160	‡1,050	‡766,000
December 1916	439	-	‡401	‡24,600
Calendar year 1916	-	-	‡1,100	‡797,000
January 1918	496	-	387	23,800
February	-	-	a360	a20,000
Water year 1917-18	-	279	‡1,030	‡746,000
Calendar year 1918	-	-	‡1,030	‡744,000
December 1919	-	-	a240	a14,800
Calendar year 1919	3,980	-	‡519	‡376,000
Water year 1919-20	5,100	185	‡746	‡542,000
December 1920	-	-	326	20,000
Calendar year 1920	5,100	185	‡774	‡562,000
January 1921	-	-	a320	a19,700
February	-	287	309	17,200
Water year 1920-21	5,580	287	‡838	‡607,000

‡ Not previously published; partly estimated (Dec. 9-15, 1916 revised).
a Monthly figure only revised; revised daily figures not available.

Snake River near Swan Valley, Idaho

Location.--Lat 43°27'45", long 111°24'50", in NE¼ sec. 32, T. 2 N., R. 43 E., 1½ miles downstream from Rainy Creek and 4 miles northwest of Swan Valley.

Drainage area.--5,488 sq mi.

Records available.--April 1903 to December 1912, May to July 1934 (discontinued). Published as South Fork Snake River near Lyon, 1903-10, and as Snake River near Lyon, 1911-12.

Gage.--Water-stage recorder. Altitude of gage is 5,235 ft (from river-profile survey). Prior to Sept. 12, 1904, staff gage in near vicinity of described site at different datum. Sept. 12, 1904, to Dec. 31, 1911, staff or chain gages 1 mile upstream at different datums.

Average discharge.--8 years (1903-11), 7,554 cfs, unadjusted (5,469,000 acre-ft per year).

Extremes.--1903-11, 1934: Maximum discharge observed, 44,000 cfs June 19, 1909 (gage height, 10.9 ft, site and datum then in use); minimum observed, 1,700 cfs Mar. 12-13, 1906 (gage height, 0.40 ft, site and datum then in use).

Revisions.--The maximum discharge observed for the water year 1904 has been revised to 37,200 cfs May 25, 1904 (gage height, 9.05 ft), superseding figure published in WSP 135.

Remarks.--Area irrigated above station was about 52,000 acres in 1903, increasing to about 82,000 acres by 1911. Flow regulated by storage in Jackson Lake beginning in 1906 (see p.

Cooperation.--Records for 1934 furnished by Bureau of Reclamation.

Revisions.--Figures of discharge, in cubic feet per second, some of which have been revised, for periods in the water years 1903-5, and 1912, superseding those published in WSP 100, 135, 178, and 332, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1911		1911-Con.		1911-Con.	
Dec. 1	2,400	Dec. 11	5,200	Dec. 21	2,030
2	2,400	12	5,700	22	2,030
3	2,400	13	6,400	23	2,030
4	2,400	14	6,300	24	2,030
5	2,400	15	5,800	25	2,030
6	2,650	16	5,100	26	2,030
7	3,000	17	4,300	27	2,030
8	3,650	18	3,300	28	2,030
9	4,300	19	2,800	29	2,700
10	4,700	20	2,030	30	4,000
				31	4,000

Month	Maximum	Minimum	Mean	Runoff in acre-feet
December 1911	6,400	2,030	3,350	206,000
Calendar year 1911	37,100	-	7,740	5,607,000

Discharge, in cubic feet per second, 1903

Day	Apr.	May	June	July	Day	Apr.	May	June	July	Day	Apr.	May	June	July
1	2,800	3,000	9,780	15,900	11	2,800	5,200	19,200	11,600	21	2,900	8,150	19,200	9,280
2	2,800	3,000	11,300	15,400	12	2,800	5,530	18,800	11,100	22	2,900	8,150	19,100	9,080
3	2,800	3,000	12,900	15,000	13	2,800	6,810	19,200	11,100	23	2,970	8,150	19,100	8,920
4	2,800	3,160	14,200	14,500	14	2,800	8,000	19,800	10,700	24	3,200	8,150	19,000	8,730
5	2,800	3,500	14,600	14,100	15	2,800	10,500	20,800	10,500	25	3,290	8,150	18,900	8,570
6	2,800	3,680	15,000	13,600	16	2,800	10,900	21,000	10,300	26	3,740	8,150	18,400	8,390
7	2,800	3,960	16,100	13,200	17	2,800	10,200	21,200	10,100	27	4,120	8,000	17,800	8,240
8	2,800	4,260	17,300	12,800	18	2,800	8,920	21,000	9,850	28	3,830	8,150	17,400	8,060
9	2,800	4,570	18,300	12,400	19	2,820	8,300	20,200	9,670	29	3,120	8,450	16,800	7,760
10	2,800	4,880	19,200	12,000	20	2,860	8,150	19,400	9,460	30	3,100	8,760	16,400	7,450
										31	-	8,920	-	7,280
Total											89,250	210,700	531,380	335,040
Mean											2,975	6,797	17,710	10,810
Runoff in acre-feet											177,000	417,900	‡1,054	664,500

‡ Expressed in thousands.

Note.--Figures of discharge for the period Apr. 1 to June 24 not previously published (gage-heights only, Apr. 21 to June 24).

Snake River near Swan Valley, Idaho--Continued

Discharge, in cubic feet per second, April to September 1904

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							3,360	12,900	31,300	21,000	9,420	5,290
2							3,360	12,900	31,600	20,200	9,250	5,290
3							3,360	12,900	28,700	19,800	8,920	5,180
4							3,390	14,800	26,500	19,500	8,600	5,180
5							3,440	14,800	27,600	19,200	8,300	5,010
6							3,440	15,000	27,100	18,500	8,000	4,760
7							3,530	15,100	27,100	17,800	7,700	4,510
8							3,620	14,000	26,000	17,300	7,420	4,480
9							3,620	12,900	26,000	16,800	7,140	4,450
10							3,720	14,600	28,200	16,400	6,220	4,420
11							3,760	15,400	28,700	15,400	6,340	4,390
12							3,950	16,400	27,100	15,400	6,220	4,360
13							4,460	17,100	25,400	14,800	6,100	4,360
14							4,880	18,000	26,000	14,400	6,100	4,340
15							5,420	19,200	27,100	14,000	6,100	4,220
16							5,980	19,200	28,200	13,800	6,220	4,220
17							6,600	19,800	28,700	13,100	6,220	4,200
18							7,700	21,200	28,200	12,800	6,220	4,080
19							8,600	23,800	28,400	12,500	6,100	4,080
20							9,780	26,500	28,700	12,200	6,100	4,060
21							8,920	27,100	28,700	12,100	5,860	3,970
22							7,850	29,000	28,200	11,900	5,750	3,950
23							7,140	32,500	27,600	11,700	5,640	4,030
24							7,850	36,300	26,800	11,500	5,310	4,030
25							8,150	37,200	28,700	11,100	5,420	4,010
26							9,250	33,100	22,300	10,900	5,420	3,890
27							11,100	28,200	21,800	10,700	5,530	3,890
28							13,300	28,200	21,200	10,700	5,750	3,890
29							13,100	29,900	20,200	10,300	5,640	3,890
30							13,100	29,600	20,800	9,960	5,530	3,790
31							------	29,900	------	9,600	5,420	------
Total							195,730	677,500	802,900	445,360	203,960	130,220
Mean							6,524	21,850	26,760	14,370	6,579	4,341
Ac-ft							388,200	‡1,344	‡1,593	883,400	404,500	258,300

Calendar year 1903: Max - Min - Mean - Ac-ft -
Water year 1903-4: Max 37,200 Min 2,960 Mean 8,376 Ac-ft 6,081,000

‡ Expressed in thousands.

Discharge, in cubic feet per second, October 1904 to March 1905

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,870	3,060	2,640			2,740						
2	3,870	3,060	2,640			2,740						
3	3,760	3,060	2,570			2,740						
4	3,760	2,990	2,510			2,740						
5	3,740	2,990	2,390			2,740						
6	3,640	2,960	2,390			2,740						
7	3,620	2,910	2,570			2,740						
8	3,620	2,910	2,640			2,740						
9	3,510	2,910	2,570			2,740						
10	3,870	2,870	2,510			2,740						
11	3,870	2,840	2,570			2,740						
12	3,850	2,770	2,570			2,740						
13	3,620	2,770	2,640			2,740						
14	3,570	2,840	2,640			2,740						
15	3,480	2,770	2,640			2,780						
				‡2,540	‡2,400							
16	3,480	2,840	2,570			2,780						
17	3,480	2,840	2,570			2,860						
18	3,390	2,840	2,570			2,930						
19	3,390	2,840	2,570			2,930						
20	3,390	2,810	2,570			2,930						
21	3,300	2,770	2,570			2,930						
22	3,300	2,770	2,570			2,860						
23	3,300	2,730	2,510			2,780						
24	3,220	2,700	2,510			2,780						
25	3,220	2,700	2,570			2,720						
26	3,220	2,700	2,450			2,720						
27	3,220	2,700	2,210			2,930						
28	3,220	2,700	2,210			2,860						
29	3,140	2,700	2,570		-	2,780						
30	3,140	2,700	2,640			2,780						
31	3,140		2,640		---	2,780	------		------			------
Total	108,200	85,050	78,790	78,740	67,200	86,490						
Mean	3,490	2,835	2,542	2,540	2,400	2,790						
Ac-ft	214,600	168,700	156,300	156,200	133,300	171,600						

Calendar year 1904: Max 37,200 Min 2,210 Mean 8,229 Ac-ft 5,974,000
Water year 1904-5: Max 17,800 Min - Mean ‡4,687 Ac-ft ‡3,393,000

‡ Not previously published; discharge estimated on basis of weather records and records for other Snake River stations.

Warm River at Warm River, Idaho

Location.--Lat 44°07', long 111°19', in SE¼ sec. 12 (revised), T. 9 N., R. 43 E., a quarter of a mile upstream from Robinson Creek, half a mile upstream from mouth, and half a mile northeast of Warm River Railroad station.

Drainage area.--178 sq mi (revised).

Records available.--January 1912 to March 1915, April 1918 to October 1933 (discontinued).

Gage.--Staff gage. Altitude of gage is 5,270 ft (from river-profile map).

Average discharge.--16 years (1912-14, 1918-32), 229 cfs (165,800 acre-ft per year).

Extremes.--1912-14, 1918-32: Maximum discharge observed, 900 cfs June 2, 1912 (gage height, 1.94 ft); minimum observed, 123 cfs Dec. 19, 1924 (gage height, 1.00 ft).
Revisions.--The maximum discharge observed for the water year 1919 has been revised to 435 cfs Apr. 24-29, 1919, superseding figure published in WSP 513.

Remarks.--No regulation. Except during snow melting period flow of stream is supplied from springs.

Revisions.--Revised figures of discharge, in cubic feet per second, for periods in the water year 1919, superseding those published in WSP 513, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1918		1919-Con.		1919-Con.		1919-Con.	
Oct. 2	236	Apr. 20	310	May 3	359	June 1	305
3	232	21	334	4	334	2	305
4	228	22	334	5	334	3	305
Oct. 5 to	†225	23	384	6	334	4	300
Nov. 20		24	435	7	310	14	291
		25	435	8	310	17	277
1919		26	435	9	310	18	272
Jan. 10	b218	27	435	10	310	19	268
11	b218	28	435	11	334	20	263
Apr. 16	240	29	435	12	334	21	263
17	286	30	410	13	334	June 23 to	†218
18	286	May 1	384	14-30	†310	July 9	
19	286	2	384	31	305		

† Each day during indicated periods.
b Stage-discharge relation affected by ice.

Month	Maximum	Minimum	Mean	Runoff in acre-feet
October 1918	240	225	226	13,900
November	225	218	223	13,200
January 1919	218	197	217	13,400
April	435	218	305	17,900
May	384	305	321	19,700
June	305	218	267	15,900
July	218	214	215	13,200
Water year 1918-19	435	197	237	172,000
Calendar year 1919	435	193	232	168,000

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Snake River below Blackfoot Bridge, near Blackfoot, Idaho

Location.--Lat 43°11', long 112°23', in NE¼ sec. 5, T. 3 S., R. 35 E., three-quarters of a mile downstream from Blackfoot Bridge and 2 miles west of Blackfoot.

Drainage area.--9,950 sq mi.

Records available.--May 1924 to September 1932, discontinued (no winter records).

Gage.--Water-stage recorders. Altitude of gage is 4,462 ft (from river-profile map). Auxiliary gage on a smaller channel in sec. 6, T. 3 S., R. 35 E.

Extremes.--1924-32: Maximum discharge, 33,500 cfs (estimated) July 1, 1927; channel dry on many days.

Remarks.--Discharge regulated by upstream storage and diversions.

Revisions.--Revised figures of discharge, in cubic feet per second, for periods in the water year 1929, superseding those published in WSP 693, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1929		1929-Con.		1929-Con.	
July 8	3,200	Sept. 7	2,200	Sept.24	2,600
9	2,800	8	2,200	25	3,300
10	2,200	9	2,200	26	3,350
11	1,800	10	2,000	27	3,100
12	1,300	11	1,700	28	3,100
Sept. 3	1,600	12	1,500	29	3,000
4	1,800	13	1,200	30	2,700
5	2,200	14	900		
6	2,400	15	700		

Month	Maximum	Minimum	Mean	Runoff in acre-feet
July 1929.....	6,500	2	‡1,770	‡109,000
September.....	3,350	0	1,620	96,400

‡ Not previously published; partly estimated.

Blackfoot River near Presto, Idaho

Location.--Lat 43°15', long 112°09', in sec. 17, T. 2 S., R. 37 E., at James Just ranch, 14 miles northeast of Blackfoot and 2 miles east of former Presto Post Office.
Drainage area.--926 sq mi.
Records available.--March 1903 to December 1909 (discontinued). (March 1903 to May 1904, December 1904 to March 1905, monthly discharge only, published in WSP 1317.)
Gage.--Staff gage. Altitude of gage is 4,650 ft (estimated from known elevation 7 miles downstream).
Average discharge.--6 years (1903-9), 355 cfs (257,000 acre-ft per year).
Extremes.--1903-9: Maximum discharge observed, 2,370 cfs Apr. 17, 18, 1907 (gage height, 8.7 ft); minimum observed, 64 cfs Aug. 4-6, 1905.
Remarks.--Between this station and the one near Shelley, 5 miles upstream, 4 canals divert about 50 cfs during the irrigation season.
Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1904, 1906-7, 1909-10, superseding those published in WSP 178, 252 and 272, and figures of discharge for March 1903 to May 1904, not previously published, are given herein.

1905		1909	
Dec. 6	b150	Jan. 23	b290
9-31	†b130	24	b240
1906		25	b190
Mar. 1-7	†145	26-31	†b180
15-19	†b135		

† Each day during indicated periods.
b Stage-discharge relation affected by ice.

Month	Maximum	Mean	Runoff in acre-feet
December 1905	166	133	8,200
Calendar year 1905	606	188	136,400
January 1906	-	‡135	8,300
February	-	‡145	8,050
March	349	157	9,630
Water year 1905-6	1,350	273	197,500
January 1909	-	218	13,400
February	-	‡190	10,600
Water year 1908-9	1,960	470	341,000
December 1909	-	‡320	19,700
Calendar year 1909	1,960	503	365,000

‡ Only monthly figure revised; daily figures not available.

Discharge, in cubic feet per second, March to September 1903

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						160	412	789	434	121	94	94
2						160	348	725	434	121	94	107
3						160	307	675	434	121	94	107
4						160	307	638	412	121	94	107
5						160	269	625	412	107	94	107
6						160	288	600	390	107	94	121
7						160	288	600	369	107	94	121
8						160	327	625	369	107	94	121
9						160	348	600	369	107	94	135
10						160	369	600	369	107	94	135
11						160	434	575	369	107	94	135
12						160	390	550	348	107	94	135
13						160	348	550	348	107	94	150
14						160	348	503	327	107	94	150
15						160	348	503	307	107	94	150
16						160	412	480	288	94	94	150
17						160	526	480	269	94	94	150
18						160	575	503	269	94	94	150
19						160	600	503	233	94	94	150
20						160	650	526	233	94	94	150
21						160	725	550	199	94	94	150
22						160	802	550	182	94	94	150
23						216	842	575	166	94	94	150
24						166	870	550	166	94	94	150
25						199	896	550	150	94	94	150
26						251	924	550	135	94	94	150
27						216	966	503	135	94	94	150
28						269	896	480	135	94	94	150
29						348	870	480	135	94	94	150
30						434	816	457	135	94	94	150
31						434	------	434	------	94	94	------
Total						6,053	16,501	17,329	8,521	3,165	2,914	4,125
Mean						195	550	559	284	102	94.0	138
Ac-ft						12,000	32,700	34,400	16,900	6,280	5,780	8,180

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

Note.--Stage-discharge relation affected by ice Mar. 1-22.

Blackfoot River near Presto, Idaho--Continued

Discharge, in cubic feet per second, October 1903 to June 1904

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	166	166	182			180	216	1,360	816			
2	182	166	216			180	199	1,400	870			
3	182	166	233			180	216	1,370	842			
4	199	166	199			180	216	1,530	829			
5	199	166	199			180	233	1,690	776			
6	199	166	175			199	251	1,630	789			
7	199	166	175			216	251	1,660	750			
8	199	166	175			269	251	1,740	750			
9	199	166	175			269	269	1,750	712			
10	199	182	175			233	269	1,850	688			
11	199	182	175			216	288	1,530	675			
12	182	182	175			216	348	1,520	625			
13	182	199	175			233	412	1,460	600			
14	182	216	175			216	538	1,520	550			
15	182	216	175			216	662	1,490	503			
				165	170							
16	182	216	175			216	938	1,460	434			
17	182	216	175			216	994	1,390	434			
18	182	199	175			233	1,060	1,360	412			
19	182	199	175			269	1,300	1,290	390			
20	182	199	175			307	1,660	1,250	348			
21	182	199	175			269	1,710	1,290	307			
22	182	199	175			269	1,480	1,250	288			
23	182	199	175			251	1,340	1,180	288			
24	182	199	175			251	1,220	1,160	269			
25	166	182	175			233	1,180	1,130	269			
26	166	182	175			251	1,190	1,090	251			
27	166	182	175			251	1,320	1,060	233			
28	166	182	175			233	1,360	994	233			
29	166	182	175		-	233	1,330	938	233			
30	166	182	175			216	1,270	883	233			
31	166	--	175		-----	216	-----	842	-----			-----
Total	5,650	5,588	5,579	5,115	4,930	7,097	23,971	41,867	15,397			
Mean	182	186	180	165	170	229	799	1,350	513			
Ac-ft	11,200	11,100	11,100	10,100	9,780	14,100	47,500	83,000	30,500			

Calendar year 1903: Max - Min - Mean - Ac-ft -
Water year 1903-4: Max 1,750 Min - Mean 360 Ac-ft 261,100

Note.--Stage-discharge relation affected by ice Dec. 6 to Mar. 5.

Discharge, in cubic feet per second, October 1906 to April 1907

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	199	231			220	340	361					
2	199	223			220	329	371					
3	208	231			220	280	382					
4	199	231			220	280	528					
5	208	235			220	299	702					
6	208	235			220	262	715					
7	208	218			220	253	665					
8	208	218			220	244	690					
9	199	226			220	244	753					
10	190	226			280	226	899					
11	208	226			280	253	1,140					
12	208	244			290	244	1,410					
13	208	235			271	226	1,540					
14	221	226			280	235	1,700					
15	206	235			262	209	2,080					
			205	190								
16	213	235			244	226	2,310					
17	221	190			244	226	2,370					
18	213	190			226	262	2,370					
19	213	190			235	271	2,320					
20	216	190			226	280	2,310					
21	216	190			414	280	2,240					
22	233	190			392	309	2,100					
23	224	190			403	319	1,940					
24	233	190			403	382	1,830					
25	216	190			382	425	1,710					
26	216	190			392	340	1,600					
27	224	190			382	340	1,560					
28	216	190			382	329	1,700					
29	216	190			-	319	1,470					
30	216	190				340	1,410					
31	224				-- -	350	-----		-----			-----
Total	6,587	6,335	6,355	5,890	7,968	8,922	43,176					
Mean	212	211	205	190	285	288	1,440					
Ac-ft	13,100	12,600	12,600	11,700	15,800	17,700	85,600					

Calendar year 1906: Max 1,350 Min - Mean 291 Ac-ft 210,500
Water year 1906-7: Max 2,370 Min - Mean 515 Ac-ft 373,400

Note.--Stage-discharge relation affected by ice Nov. 17 to Feb. 9.

Snake River at Montgomery Ferry, near Minidoka, Idaho

Location.--Lat 42°37', long 113°35', in sec. 19, T. 9 S., R. 25 E., 10 miles southwest of Minidoka, 4 miles east of Rupert, and 7 miles downstream from Minidoka Dam (completed in 1907).

Drainage area.--15,730 sq mi, approximately.

Records available.--August 1895 to September 1910, discontinued (October to December 1896, January to March 1898, October 1899 to December 1902, November 1906 to February 1907, monthly discharge only, published in WSP 1317). Published as Snake River near Minidoka, 1904-10.

Gage.--Staff gage. Altitude of gage is 4,129 ft (from river-profile survey).

Average discharge.--11 years (1895-1906), 7,900 cfs.

Extremes.--1895-1910: Maximum discharge 47,500 cfs May 29, 30, 1897 (gage height, 12.6 ft); minimum observed, 1,640 cfs Sept. 7, 1906 (gage height, 0.6 ft), but may have been less between November 1906 and February 1907 due to closing gates in Minidoka Dam.
Revisions.--The maximum discharge observed for the water year 1896 has been revised to 44,700 cfs June 23, 1896, superseding figure published in 18th Annual Report, Part 4.

Remarks.--Diversions for irrigation upstream of about 174,000 acres in 1895 and about 700,000 acres in 1910.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1896, 1898-99, 1903-4, 1909-10, superseding those published in 18th, 20th, and 21st Annual Reports, and WSP 100, 135, 272, and 292, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1898		1898-Con.		1898-Con.		1903	
Oct. 1	4,100	Oct. 19	5,280	Nov. 6	5,600	Mar. 1-8	†5,000
2	4,140	20	5,280	7	5,600	Dec. 21-31	†b5,400
3	4,360	21	5,280	8	5,580		
4	4,400	22	5,350	9	5,580	1904	
5	4,450	23	5,450	10	5,580	Feb. 1-19	†5,000
6	4,490	24	5,450	11	5,580		
7	4,540	25	5,450	12	5,560	1908	
8	4,680	26	5,620	13	5,560	Dec. 16-31	†b5,560
9	4,830	27	5,620	14	5,560		
10	4,880	28	5,620	15	5,560	1909	
11	5,110	29	5,620	16	5,540	Dec. 18	b7,400
12	5,110	30	5,620	17	5,540	19	b6,900
13	5,110	31	5,620	18	5,730	20	b6,500
14	5,110	Nov. 1	5,600	19	5,730	21	b6,200
15	5,110	2	5,600	20-30	†5,000	22	b5,900
16	5,110	3	5,600			23-31	†b5,600
17	5,110	4	5,600	1899			
18	5,280	5	5,600	Feb. 1-19	†4,800	1910	
						Feb. 25	b5,300

† Each day.
b Stage-discharge relation affected by ice.

Month	Maximum	Minimum	Mean	Runoff in acre-feet
October 1898	5,620	4,100	5,070	312,000
November	5,730	-	5,380	320,000
Calendar year 1898	26,400	-	‡7,750	‡5,621,000
February 1899	5,380	-	4,920	273,000
Water year 1898-99	39,200	4,100	10,100	7,271,000
Calendar year 1899	39,200	-	‡10,300	‡7,475,000
March 1903	7,070	-	5,310	326,000
Water year 1902-3	23,000	2,640	‡6,900	‡4,996,000
December 1903	6,240	-	5,720	352,000
Calendar year 1903	23,000	2,640	7,160	5,181,000
February 1904	6,680	-	5,360	308,000
Water year 1903-4	38,000	4,100	9,860	7,159,000
Calendar year 1904	38,000	4,100	9,900	7,190,000
December 1908	6,780	5,560	5,990	368,000
Calendar year 1908	30,000	1,880	8,390	6,091,000
Water year 1908-9	37,900	5,440	11,000	7,982,000
December 1909	9,250	-	7,310	449,000
Calendar year 1909	37,900	5,560	11,300	8,156,000
February 1910	7,780	-	‡5,560	‡309,000
Water year 1909-10	28,000	1,810	‡8,540	‡6,180,000

‡ Not previously published; partly estimated.

Snake River at Montgomery Ferry, near Minidoka, Idaho.--Continued

Discharge, in cubic feet per second, April to August 1896

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							6,600	7,660	30,000	29,400	7,570	
2							6,500	7,660	32,600	28,000	7,450	
3							6,440	7,660	33,800	26,700	7,310	
4							6,380	7,660	34,800	26,000	6,970	
5							6,320	8,140	36,000	25,300	6,720	
6							5,810	8,390	37,200	24,300	6,510	
7							5,430	8,900	38,400	23,100	6,510	
8							5,330	10,500	38,400	21,900	6,280	
9							5,140	12,300	38,200	21,000	6,170	
10							5,240	12,500	36,700	19,800	5,950	
11							5,330	12,500	36,000	18,600	5,750	
12							5,520	12,500	36,900	17,700	5,640	
13							5,620	12,100	38,900	16,800	5,640	
14							5,710	11,700	40,600	16,600	5,640	
15							5,910	11,200	41,600	16,400	5,430	
16							5,710	11,000	42,100	16,800	5,240	
17							6,010	10,700	42,300	17,000	5,240	
18							6,320	10,500	42,600	16,500	5,050	
19							6,320	10,300	43,000	16,300	5,050	
20							6,210	10,000	43,800	15,400	5,050	
21							5,810	9,710	44,200	14,500	5,050	
22							5,620	9,440	44,500	13,300	5,050	
23							5,520	9,440	44,700	12,500	5,050	
24							5,520	10,700	43,700	11,700	5,050	
25							5,520	12,100	42,200	10,800	5,240	
26							5,620	14,300	39,900	9,980	5,240	
27							5,710	16,900	37,700	9,660	5,050	
28							5,810	18,500	35,000	9,110	5,050	
29							6,420	20,500	32,800	8,560	5,050	
30							7,310	23,500	30,900	8,190	5,050	
31								26,900		7,830	5,050	
Total							176,710	375,860	‡1,159.5	529,730	177,100	
Mean							5,890	12,100	38,600	17,100	5,710	
Ac-ft							350,000	746,000	‡2,300	‡1,050	351,000	

Calendar year 1895: Max - Min - Mean - Ac-ft -
Water year 1895-96: Max 44,700 Min - Mean 9,500 Ac-ft 6,894,000

‡ Expressed in thousands.

Discharge, in cubic feet per second, July to September 1898

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										16,300	4,790	2,840
2										14,600	4,590	2,990
3										13,500	4,380	3,170
4										12,000	4,360	3,270
5										11,600	4,240	3,370
6										10,900	4,050	3,380
7										10,300	3,840	3,400
8										9,980	3,740	3,410
9										9,800	3,560	3,430
10										9,460	3,540	3,620
11										9,000	3,350	3,640
12										8,980	3,250	3,680
13										8,820	3,160	3,690
14										9,330	3,140	3,710
15										9,570	2,980	3,730
16										9,550	2,960	3,760
17										9,110	2,940	3,790
18										8,660	2,930	3,830
19										8,520	2,920	3,690
20										8,360	2,900	3,730
21										7,950	2,880	3,760
22										7,450	2,870	3,790
23										6,970	2,860	3,830
24										6,610	2,840	3,860
25										6,170	2,840	3,900
26										5,950	2,840	3,930
27										5,730	2,840	3,960
28										5,620	2,840	4,000
29										5,410	2,840	4,030
30										5,200	2,840	4,070
31										5,000	2,840	
Total										276,400	102,950	109,260
Mean										8,920	3,320	3,640
Ac-ft										548,000	204,000	217,000

Calendar year 1897: Max - Min - Mean - Ac-ft -
Water year 1897-98: Max 26,400 Min - Mean ‡7,740 Ac-ft ‡5,611,000

‡ Not previously published; partly estimated.

Medicine Lodge Creek near Argora, Idaho

Location.--Lat 44°19', long 112°34', in sec. 34, T. 12 N., R. 33 E., on left bank at Albano Ranch, 2½ miles southeast of Argora and 7¾ miles upstream from Middle Creek.

Drainage area.--160 sq mi, approximately.

Records available.--November 1938 to October 1943 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 5,944 ft above mean sea level, from river-profile-survey map. Prior to Mar. 21, 1940, staff gage at same site and datum.

Extremes.--1938-43: Maximum discharge observed, 166 cfs Mar. 22, 1939 (gage height, 1.80 ft, from rating curve extended above 50 cfs; minimum not determined.

Remarks.--Several diversions for irrigation above station.

Revisions.--Revised figures of discharge, in cubic feet per second, for the winter period, in the water year 1941, superseding those published in WSP 933, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1940		1940-Con.		1941-Con.	
Nov. 11	11	Dec. 11	12	Jan. 6	16
12	11	12	9	7	18
13	14	13	9	8	21
14	20	15	9	9	25
15	22	16	9	30	24
19	20	17	9	31	20
20	21	18	10	Feb. 1	17
21	18	19	13	2	16
22	16	20	20	3	15
23	15	21	25	4	16
24	16			5	16
25	23	1941		6	18
26	25	Jan. 1	28	7	20
27	32	2	14	8	22
28	32	3	13	15	26
29	32	4	13		
Dec. 10	15	5	15		

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
November 1940	605	32	11	20.2	1,200
December	737	32	9	23.8	1,460
Calendar year 1940	8,659	38	9	23.7	17,170
January 1941	752	32	18	24.3	1,490
February	659	34	18	23.5	1,310
Water year 1940-41	12,669	68	9	34.7	25,120

Big Wood River at Gooding, Idaho

Location.--Lat 42°57', long 114°43', in NE¼NE¼ sec. 31, T. 5 S., R. 15 E., on left bank 30 ft downstream from highway bridge and half a mile north of Gooding.
Drainage area.--2,190 sq mi, approximately.
Records available.--June 1896 to October 1899 (published as Malade River at Toponis) and April 1921 to September 1948 (no winter records), discontinued.
Gage.--Water-stage recorder. Datum of gage is 3,536.20 ft above mean sea level, unadjusted. June 2, 1896, to Oct. 14, 1899, staff or wire-weight gage at approximately same location at different datum.
Extremes.--1896, 1898-99, 1921-48: Maximum discharge observed, 5,940 cfs June 5, 19, 1896 (gage height, 9.6 ft, datum then in use); no flow for long periods in each year.
Revisions.--The maximum discharge observed for the water year 1898 has been revised to 1,270 cfs June 30, 1898 (gage height, 4.90 ft), superseding figure published in 20th Annual Report, Part 4.
Remarks.--Many diversions above and below station for irrigation. Flow regulated by Magic Reservoir and affected since 1930 by deliveries from Snake River through Milner-Gooding Canal.
Revisions.--Revised figures of discharge for the water years 1897 and 1898, superseding those published in the 19th and 20th Annual Reports, are given herewith:

Discharge, in cubic feet per second, 1897

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	-	420	76	0	11	1,360	270	41	0	21	-	195	26	9
2	-	420	76	0	12	1,270	270	26	0	22	-	195	15	4
3	-	420	76	0	13	930	270	26	0	23	-	165	9	9
4	-	550	76	0	14	695	230	15	0	24	-	195	4	4
5	-	695	76	0	15	850	195	41	0	25	-	165	0	15
6	1,910	770	58	0	16	695	195	26	0	26	-	118	0	15
7	1,910	620	58	0	17	550	195	41	0	27	-	118	0	15
8	1,910	480	41	0	18	420	230	26	1	28	-	96	0	26
9	1,810	360	41	0	19	270	195	26	9	29	-	96	0	26
10	1,540	270	41	0	20	-	165	26	9	30	-	96	0	15
										31	-	*76	0	-
Total											-	8,735	967	157
Mean											-	282	31.2	5.2
Runoff in acre-feet											-	17,330	1,920	311

* Discharge measurement made on this day.

Discharge, in cubic feet per second, March to August 1898

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						-	58	550	480	1,180	1	
2						-	58	550	620	1,180	0	
3						-	58	550	770	635	0	
4						-	58	550	850	635	0	
5						-	58	550	1,010	580	0	
6						-	41	420	1,180	480	-	
7						-	41	310	930	385	-	
8						-	41	230	770	340	-	
9						-	41	270	695	300	-	
10						-	58	165	550	300	-	
11						-	118	230	550	260	-	
12						-	310	165	620	260	-	
13						76	480	230	695	225	-	
14						76	550	270	695	225	-	
15						76	550	310	770	190	-	
16						76	480	310	770	190	-	
17						*76	480	*310	695	190	-	
18						76	480	310	770	190	-	
19						58	550	310	1,010	190	-	
20						58	695	310	930	190	-	
21						58	695	310	620	130	-	
22						58	695	310	770	103	-	
23						58	620	360	850	60	-	
24						58	695	420	1,180	42	-	
25						58	550	480	850	42	-	
26						58	1,010	480	850	42	-	
27						58	695	360	850	12	-	
28						58	550	360	850	12	-	
29						58	550	420	1,090	12	-	
30						58	550	480	1,270	5	-	
31						58	------	480	------	3	-	------
Total						-	11,815	11,360	24,540	8,588	-	
Mean						-	394	366	818	277	-	
Ac-ft						-	23,430	22,530	48,670	17,030	-	

Calendar year	: Max	Min	Mean	Ac-ft
Water year	: Max	Min	Mean	Ac-ft

* Discharge measurement made on this day.

Bruneau River near Grand View, Idaho

Location.--Lat 42°56', long 115°57', in SE¼ sec. 35, T. 5 S., R. 4 E., on left bank 0.8 mile downstream from diversion dam for Grand View Canal, 1 mile upstream from mouth, and 8½ miles southeast of Grand View.

Drainage area.--2,650 sq mi, approximately (revised).

Records available.--January 1895 to December 1903 (gage heights only January to March 1900, June 1900 to April 1901, July 1901 to April 1902, July 1902 to February 1903, July to December 1903), May 1909 to September 1916, December 1944 to October 1949 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 2,372.3 ft above mean sea level, datum of 1929 (from stadia level circuit by Topographic Branch in 1945). Prior to Dec. 22, 1944, staff gages at several sites 2,000 ft upstream at different datums.

Extremes.--Maximum and minimum discharge observed for the water years 1895-99 are contained in the following table:

Water year	Maximum			Minimum		
	Date	Discharge (cfs)	Gage height (feet)	Date	Discharge (cfs)	Gage height (feet)
1895	May 6-10, 1895	960	3.25	-	-	-
1896	June 2, 1896	3,680	6.70	Sept. 9-12, 1896	28	1.15
1897	Mar. 26, 27, 1897	3,920	7.00	Aug. 21, 1897	19	1.05
1898	Apr. 17, 1898	1,040	3.35	Sept.13-24, 1898	19	1.05
1899	Apr. 14, June 21, 1899	2,480	5.20	Oct. 1-4, 1898	34	1.20

1895-1903, 1909-16, 1945-49: Maximum discharge, 5,700 cfs Mar. 2, 1910 (gage height, 10.1 ft, from floodmark, site and datum then in use), from rating curve extended above 1,200 cfs; minimum, 0.9 cfs Sept. 30, Oct. 7-9, 1947; minimum gage height, 0.42 ft Sept. 3, 4, 1947.

Remarks.--Diversions for irrigation of about 21,900 acres above station.

Revisions.--Revised figures of discharge for the water years 1895-1900, superseding those published in Bulletin 140, and 18th, 19th, 20th, and 21st Annual Reports are given herein:

Discharge, in cubic feet per second, January to September 1895

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				86	93	128	300	661	542	223	55	47
2				89	93	128	300	588	450	223	55	55
3				111	104	134	300	640	425	206	*47	47
4				82	169	134	300	731	400	188	47	47
5				63	93	131	300	780	400	188	47	55
6				44	82	136	292	960	400	172	40	63
7				30	104	136	292	960	425	156	40	63
8				104	128	156	292	960	425	128	40	63
9				63	104	162	300	960	400	142	40	55
10				82	104	162	300	960	400	128	40	63
11				104	63	162	300	885	400	128	34	63
12				104	63	159	300	780	400	128	34	63
13				116	82	169	300	780	400	116	34	63
14				116	93	169	300	815	400	116	34	55
15				116	89	172	300	885	400	104	34	55
16				128	82	182	300	885	350	93	34	55
17				134	93	182	300	885	350	72	34	55
18				134	82	178	350	829	325	72	34	63
19				109	82	182	360	829	280	82	34	63
20				104	93	188	300	829	280	82	34	63
21				116	104	188	350	829	260	82	34	63
22				128	63	195	400	822	260	82	34	55
23				128	47	198	425	745	260	63	28	55
24				104	47	198	425	710	260	63	28	55
25				128	47	216	425	745	260	63	34	55
26				104	63	260	510	640	260	63	40	55
27				104	104	253	575	640	223	63	40	63
28				93	128	260	608	608	223	63	40	63
29				93	-	260	640	608	223	55	34	63
30				104	-	300	675	608	223	47	34	55
31				93	---	300	------	608	------	47	47	------
Total				3,114	2,499	5,778	11,119	24,165	10,304	3,438	1,184	1,738
Mean				100	89.2	186	371	780	343	111	38.2	57.9
Ac-ft				6,180	4,960	11,500	22,100	47,900	20,400	6,810	2,350	3,450

Calendar year	: Max	Min	Mean	Ac-ft	
Water year	: Max	Min	Mean	Ac-ft	

* Discharge measurement made on this day.

Bruneau River near Grand View, Idaho--Continued

Discharge, in cubic feet per second, water year October 1895 to September 1896

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	82	142	116	142	142	425	710	3,440	850	116	34
2	63	82	128	116	142	142	400	710	3,680	780	116	34
3	63	82	128	116	142	142	400	745	3,120	710	104	34
4	55	93	128	116	142	142	375	710	3,040	640	93	34
5	55	93	128	104	142	142	375	710	2,600	608	82	34
6	55	93	128	104	142	156	375	1,000	2,320	575	82	34
7	55	93	128	104	142	156	400	960	2,280	542	82	34
8	55	93	128	116	142	156	480	920	2,160	542	72	34
9	55	93	128	116	128	156	510	885	2,080	480	72	28
10	55	104	128	116	128	156	542	780	2,320	425	63	28
11	55	104	128	116	128	142	542	780	2,480	400	55	28
12	55	104	128	116	128	142	480	780	2,240	375	55	28
13	55	116	128	116	128	142	400	885	2,040	400	55	34
14	55	116	128	116	128	142	640	780	*2,000	375	55	34
15	55	116	128	116	128	142	1,410	745	2,040	350	47	34
16	55	116	128	116	128	142	1,220	745	2,000	300	40	34
17	63	116	128	116	104	142	920	640	2,080	260	40	34
18	63	128	128	128	104	142	780	575	2,000	223	47	34
19	63	128	142	128	116	142	710	542	2,000	223	47	40
20	63	128	142	142	116	156	675	510	1,760	206	47	34
21	63	128	*128	142	128	156	608	510	1,680	188	47	34
22	63	128	128	142	128	206	608	510	1,520	172	47	34
23	72	128	128	142	128	400	710	510	1,370	172	47	*63
24	72	128	128	142	128	425	710	*710	1,300	142	47	40
25	72	128	116	142	128	608	710	745	1,220	142	40	55
26	72	128	116	142	128	920	710	920	1,110	128	40	47
27	72	128	116	142	128	1,040	780	1,370	1,040	116	34	47
28	72	142	104	142	128	1,180	885	1,520	1,000	104	34	47
29	72	142	104	142	128	1,040	780	1,920	920	104	34	47
30	72	142	104	142		780	710	2,560	885	116	34	55
31	72		104	142		675		3,120		156	34	
Total	1,930	3,402	3,878	3,896	3,752	10,354	19,270	29,507	59,725	10,804	1,808	1,131
Mean	62.3	113	125	126	129	334	642	952	1,990	349	58.3	37.7
Ac-ft	3,830	6,750	7,690	7,730	7,440	20,500	38,200	58,500	118,000	21,400	3,590	2,240

Calendar year 1895: Max 960 Min 28 Mean 199 Ac-ft 144,000
Water year 1895-96: Max 3,680 Min 28 Mean 408 Ac-ft 296,000

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1896 to September 1897

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	82	72	104	116	128	350	2,160	1,880	400	63	28
2	47	82	223	104	116	128	325	2,120	1,680	400	63	28
3	47	82	206	93	116	128	350	2,240	1,520	400	82	28
4	47	93	188	93	116	128	325	2,320	1,260	375	82	28
5	47	104	188	93	128	128	542	2,400	1,220	375	63	28
6	47	104	188	93	206	128	1,150	2,560	1,150	350	55	28
7	47	104	188	104	575	142	1,340	2,720	1,070	300	55	28
8	47	104	156	93	300	142	1,110	2,800	1,150	280	47	28
9	47	104	142	93	242	128	850	2,520	1,110	280	47	34
10	40	104	142	93	206	116	1,220	2,080	1,220	260	47	34
11	47	142	128	82	156	116	1,840	1,920	1,110	260	47	34
12	47	223	128	82	156	116	2,320	1,880	1,040	223	47	34
13	47	188	156	82	156	104	1,920	1,800	1,000	206	47	34
14	55	156	156	104	128	82	2,000	1,840	1,000	223	47	34
15	55	156	156	104	104	93	2,000	1,960	1,000	223	55	40
16	55	142	172	104	156	104	2,040	2,000	960	223	40	40
17	55	142	156	104	128	116	2,160	2,040	885	206	40	40
18	55	172	142	104	116	116	2,400	2,160	850	188	40	40
19	55	172	142	82	116	116	2,720	2,320	780	188	40	47
20	55	156	128	82	116	116	3,120	2,440	710	188	40	47
21	55	156	128	104	116	116	2,920	2,600	640	172	19	47
22	55	142	128	128	116	104	2,440	2,840	542	156	23	47
23	63	172	116	128	128	104	1,920	2,720	510	116	23	47
24	63	172	93	116	116	104	1,520	2,840	510	104	23	47
25	63	223	93	116	116	116	1,300	2,680	510	104	23	47
26	63	400	116	104	116	3,920	1,370	2,400	450	116	23	47
27	72	325	104	104	116	3,920	1,520	2,080	450	93	28	47
28	63	172	104	82	116	1,520	2,000	2,400	450	82	23	47
29	72	63	104	93	-	1,220	2,160	2,080	480	72	28	47
30	82	55	104	104		640	2,320	1,920	450	72	28	47
31	82		104	128		480		1,920		72	28	
Total	1,722	4,492	4,351	3,100	4,393	14,619	49,552	70,760	27,587	6,707	1,316	1,152
Mean	55.5	150	140	100	157	472	1,650	2,280	920	216	42.5	38.4
Ac-ft	3,420	8,910	8,630	6,150	8,710	29,000	98,300	140,000	54,700	13,300	2,610	2,280

Calendar year 1896: Max 3,680 Min 28 Mean 412 Ac-ft 299,000
Water year 1896-97: Max 3,920 Min 19 Mean 520 Ac-ft 376,000

Bruneau River near Grand View, Idaho--Continued

Discharge, in cubic feet per second, water year October 1897 to September 1898

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	47	104	142	116	93	300	172	850	608	206	28	23
2	47	116	128	116	104	400	172	780	575	206	28	23
3	47	128	128	116	116	350	188	780	542	188	28	23
4	55	116	116	104	116	260	223	745	542	156	28	23
5	55	104	116	104	116	260	260	745	542	156	28	23
6	55	104	116	116	128	280	223	640	510	156	28	23
7	63	128	142	116	142	325	350	608	450	156	28	23
8	63	116	156	116	142	350	450	575	425	142	28	23
9	63	116	156	116	142	400	375	542	450	142	28	23
10	82	104	142	116	142	450	400	542	510	128	23	23
11	93	116	156	116	128	350	710	575	510	142	23	23
12	93	128	156	82	142	260	850	640	510	128	23	23
13	104	128	156	63	156	223	850	675	510	128	23	19
14	93	128	172	72	206	223	885	710	575	116	23	19
15	104	128	172	72	223	206	960	780	608	116	23	19
16	104	128	156	82	920	206	1,000	815	575	104	23	19
17	116	128	128	156	920	188	1,040	780	608	93	23	19
18	116	128	142	156	480	172	1,000	780	640	93	23	19
19	104	128	128	156	260	172	1,000	850	640	82	23	19
20	104	142	156	156	260	188	920	780	640	82	23	19
21	104	142	128	156	223	188	885	780	575	93	23	19
22	104	142	142	142	206	172	920	675	510	72	23	19
23	104	172	128	142	188	156	920	640	450	47	23	19
24	116	172	128	128	188	156	885	640	400	47	23	19
25	116	156	128	104	172	156	885	608	375	47	23	23
26	116	156	142	104	172	172	885	608	350	40	23	23
27	116	142	128	82	223	188	960	608	300	40	23	23
28	116	128	156	82	223	156	1,000	640	260	40	23	23
29	116	116	142	82	-	156	920	780	223	40	23	23
30	116	128	128	82		172	920	780	223	40	23	23
31	116		128	82		188	------	640	------	34	23	------
Total	2,848	3,872	4,342	3,433	6,531	7,423	21,208	21,591	14,636	3,260	758	642
Mean	91.9	129	140	111	233	239	707	696	488	105	24.4	21.4
Ac-ft	5,650	7,680	8,610	6,810	13,000	14,700	42,100	42,800	29,000	6,470	1,500	1,270

Calendar year 1897: Max 3,920 Min 19 Mean 521 Ac-ft 377,000
Water year 1897-98: Max 1,040 Min 19 Mean 248 Ac-ft 180,000

Discharge, in cubic feet per second, water year October 1898 to September 1899

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	63	128	82	156	128	400	920	1,480	1,340	188	72
2	34	63	142	82	156	128	450	850	1,520	1,300	172	63
3	34	72	128	82	128	188	450	780	1,720	1,220	156	72
4	34	72	128	82	104	188	450	710	2,040	1,150	156	63
5	47	72	116	82	47	128	450	640	2,040	1,110	142	63
6	47	72	104	93	40	142	510	640	2,200	1,000	172	63
7	47	72	104	93	34	142	575	745	2,280	960	188	63
8	47	63	82	93	34	128	640	1,000	2,160	920	156	63
9	40	63	63	104	82	350	850	1,150	2,120	885	156	63
10	47	63	63	104	116	450	1,070	1,520	2,080	780	172	63
11	55	63	55	104	450	350	1,920	2,040	2,120	780	156	72
12	55	63	55	93	350	223	1,920	2,200	2,240	710	156	72
13	55	63	47	93	188	188	2,320	2,320	2,440	640	142	63
14	55	63	47	93	156	188	2,480	2,320	2,440	640	142	72
15	55	63	47	104	156	156	2,320	2,160	2,160	608	128	72
16	55	63	47	1,450	156	156	2,160	1,960	2,000	575	116	72
17	55	72	55	480	156	172	2,320	1,840	2,040	510	104	63
18	55	93	55	350	142	172	2,320	1,520	2,120	480	116	63
19	55	93	63	350	128	223	1,840	1,370	2,320	450	116	72
20	55	104	63	223	142	206	1,680	1,300	2,320	425	116	72
21	55	104	82	172	350	188	1,450	1,180	2,480	400	104	72
22	63	93	82	188	400	188	1,520	1,110	2,320	375	116	72
23	63	82	82	156	223	188	1,840	1,070	2,000	325	104	72
24	63	82	82	156	156	172	1,840	1,150	1,760	300	116	72
25	72	82	63	142	156	780	1,760	1,300	1,680	300	104	72
26	82	82	72	156	142	1,840	1,760	1,480	1,720	260	104	72
27	82	72	72	156	128	1,070	1,370	1,520	1,600	242	104	82
28	63	82	82	156	128	780	1,300	1,410	1,520	223	93	82
29	63	104	82	156	-	640	1,150	1,450	1,370	223	93	82
30	63	128	82	156		510	1,000	1,410	1,340	206	82	82
31	63		82	156		450	------	1,640	------	188	82	------
Total	1,693	2,326	2,455	5,987	4,604	10,812	42,115	42,705	59,630	19,525	4,052	2,101
Mean	54.6	77.5	79.2	193	164	349	1,400	1,380	1,990	630	131	70.0
Ac-ft	3,360	4,610	4,870	11,900	9,130	21,400	83,500	84,700	118,000	38,700	8,040	4,170

Calendar year 1898: Max 1,040 Min 19 Mean 235 Ac-ft 170,000
Water year 1898-99: Max 2,480 Min 34 Mean 542 Ac-ft 392,000

Bruneau River near Grand View, Idaho--Continued

Discharge, in cubic feet per second, October to December 1899

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	128	128									
2	82	128	128									
3	82	128	116									
4	82	128	116									
5	82	128	116									
6	82	142	104									
7	82	142	104									
8	93	142	116									
9	93	128	116									
10	93	128	116									
11	82	142	116									
12	93	142	116									
13	93	142	128									
14	104	128	128									
15	116	156	116									
16	116	142	116									
17	128	128	128									
18	128	128	128									
19	128	128	116									
20	128	128	104									
21	142	128	93									
22	142	128	93									
23	128	128	82									
24	128	128	82									
25	128	128	82									
26	142	128	82									
27	142	128	93									
28	142	128	82									
29	142	128	93									
30	128	128	104									
31	128		116									
Total	3,451	3,966	3,358									
Mean	111	132	108									
Ac-ft	6,840	7,870	6,660									

Calendar year 1899: Max 2,480 Min 34 Mean 554 Ac-ft 401,000
Water year : Max Min Mean Ac-ft

Boise River near Boise, Idaho
(Formerly published as Boise River below Moore Creek, near Arrowrock)

Location.--Lat 43°35', long 115°59', in sec. 21, T. 3 N., R. 4 E., on left bank a quarter of a mile downstream from Moore Creek and 3 miles southwest of Arrowrock.

Drainage area.--2,650 sq mi, approximately; at sites prior to March 1905, 2,680 sq mi, approximately.

Records available.--January 1895 to September 1916 (discontinued). Published as Boise River near Highland, 1905-15, and as Boise River below Moore Creek, near Arrowrock, 1916.

Gage.--Water-stage recorder. Altitude of gage is 2,880 ft (from topographic map). Prior to Mar. 18, 1905, staff gages at sites about 8 miles downstream at different datums. Mar. 18, 1905, to Mar. 20, 1915, staff gages and Mar. 21 to Aug. 24, 1915, water-stage recorder, at sites within 2 miles downstream at different datums.

Average discharge.--17 years (1895-96, 1897-1903, 1905-6, 1907-16), 3,010 cfs (2,179,000 acre-ft per year).

Extremes.--Maximum and minimum discharge observed during the water years 1895 to 1901, some of which have been revised, are contained in the following table. They supersede figures published in the reports indicated.

WSP	Water year	Maximum observed			Minimum observed	
		Date	Discharge (cfs)	Gage height (feet)	Date	Discharge (cfs)
(a)	1895†	May 6, 27, 1895	*7,880	6.00	Sept. 1-3, 1895	830
(a)	1896	June 14, 1896	*35,500	10.0	Jan. 16, 1896	620
(b)	1897‡	Apr. 19, 1897	29,500	9.3	Jan. 17-19, 1897	570
(c)	1898	Apr. 28, 1898	*7,960	4.50	Feb. 3, 7, 1898	**660
(d)	1899	May 10, 1899	19,000	7.50	Oct. 1, 1898	*867
(e)	1900	May 11, 12, 1900	*12,000	6.5	Sept.3, 1900	802
75	1901	May 16, 17, 1901	*13,900	7.20	Aug. 25-27, Sept.12, 1901	740

* Revised.
** May have been less during period of no gage-height record.
† Period Jan. 1 to Sept. 30, 1895.
‡ Period Oct. 1, 1896, to Apr. 19, 1897, June 17 to Sept. 30, 1897.
a 18th Ann. Rept., Pt. 4.
b 19th Ann. Rept., Pt. 4.
c 20th Ann. Rept., Pt. 4.
d 21st Ann. Rept., Pt. 4.
e 22nd Ann. Rept., Pt. 4.

1895-1916: Maximum discharge observed, 35,500 cfs (revised) June 14, 1896; minimum observed, 432 cfs Nov. 14, 1915.

Remarks.--A few small ranch diversions above station. Flow regulated by Arrowrock reservoir after Feb. 21, 1915 (see p.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1895-1901 (complete tables) and for a period in water year 1904, superseding those published in the 18th to 22nd Annual Reports Part 4 of each), and WSP 75 and 135 are given herein.

Sept. 2-10, 1904..... e750

e Average for period indicated.

Month	Maximum	Minimum	Mean	Runoff in acre-feet
September 1904.....	930	-	814	48,500

Boise River near Boise, Idaho--Continued

Discharge, in cubic feet per second, January to September 1895

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				1,470	1,240	1,470	2,470	6,810	4,470	3,590	1,280	830
2				1,410	1,240	1,530	2,350	6,190	4,100	3,430	1,210	830
3				1,280	1,260	1,490	2,460	7,150	3,930	3,430	1,210	830
4				1,320	1,180	1,410	2,560	7,510	3,930	3,430	1,210	890
5				1,330	1,140	1,370	2,330	6,490	4,100	3,120	1,210	890
6				1,240	1,190	1,320	2,210	7,880	3,930	3,120	1,140	890
7				1,180	1,190	1,330	2,120	7,510	4,100	3,430	1,140	890
8				980	1,180	1,350	2,250	7,150	3,930	3,430	1,140	890
9				1,100	1,180	1,410	2,520	6,810	3,760	3,270	1,070	890
10				1,240	1,210	1,510	2,830	6,190	3,590	3,270	1,070	950
11				1,280	1,100	1,640	3,020	5,640	3,430	3,120	1,070	1,070
12				1,330	1,010	1,610	3,240	5,640	3,430	3,120	1,070	1,070
13				1,510	1,100	1,550	3,510	5,640	3,760	3,120	1,070	1,070
14				1,650	1,180	1,490	3,680	6,490	3,590	3,120	1,070	1,070
15				1,490	1,070	1,410	3,850	6,810	3,760	3,120	1,070	1,140
16				1,450	1,100	1,370	4,020	6,810	3,590	3,120	1,010	1,140
17				1,430	1,180	1,350	4,200	6,490	3,430	2,830	1,010	1,070
18				1,370	1,210	1,370	4,370	6,190	3,120	1,870	950	1,010
19				1,330	1,180	1,390	4,510	6,190	2,970	1,870	950	950
20				1,280	1,220	1,390	4,680	6,490	3,120	1,770	950	1,010
21				1,240	1,210	1,390	4,890	6,810	3,270	1,680	950	950
22				1,220	1,210	1,390	4,470	6,190	3,590	1,680	890	950
23				1,240	1,290	1,390	4,890	5,640	4,100	1,510	890	950
24				1,210	1,350	1,430	5,380	5,380	4,100	1,430	890	950
25				1,140	1,390	1,550	5,910	5,130	4,100	1,350	890	1,010
26				1,040	1,430	1,740	6,810	6,490	4,100	1,350	890	1,010
27				1,070	1,450	2,060	6,490	7,880	3,930	1,350	890	950
28				950	1,450	3,000	6,840	6,810	3,930	1,280	950	950
29				1,100	-	3,430	6,220	5,640	3,930	1,350	890	950
30				1,140	-	2,860	6,490	4,890	3,760	1,350	890	950
31		---		1,280	------	2,590	------	4,670	------	1,280	890	------
Total				39,300	34,140	51,590	121,570	197,610	112,850	76,190	31,810	29,000
Mean				1,270	1,220	1,660	4,050	6,370	3,760	2,460	1,030	967
Ac-ft				78,100	67,800	102,000	241,000	392,000	224,000	151,000	63,300	57,500

Calendar year	: Max	Min	Mean	Ac-ft	
Water year	: Max	Min	Mean	Ac-ft	

Note.--No gage-height record Apr. 14-20; discharge estimated.

Discharge, in cubic feet per second, water year October 1895 to September 1896

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	950	950	950	950	1,590	1,510	3,760	5,640	27,000	9,080	2,190	1,210
2	950	950	950	1,070	1,350	1,350	2,970	4,890	27,000	11,500	1,870	1,210
3	950	950	770	720	1,350	1,350	2,830	5,640	32,100	12,500	2,190	1,070
4	950	950	720	720	1,070	1,280	2,830	7,880	29,500	12,500	1,770	1,010
5	890	890	720	720	1,070	1,350	2,970	7,880	27,000	11,500	1,680	950
6	890	890	950	720	950	1,070	2,970	6,490	24,500	11,000	1,680	950
7	890	720	950	720	950	1,070	4,100	6,810	24,500	10,500	1,590	950
8	890	890	950	950	1,070	1,210	4,470	7,150	25,300	9,980	1,590	890
9	950	950	950	950	1,070	1,350	3,760	6,490	23,700	9,080	1,590	890
10	950	950	890	950	1,070	1,210	4,890	5,910	25,300	8,660	1,510	890
11	950	950	1,010	950	1,010	1,280	3,930	6,190	22,900	8,260	1,510	950
12	950	950	1,010	1,070	1,070	1,280	3,930	5,910	22,900	8,260	1,350	950
13	950	950	1,010	950	1,070	1,350	6,810	5,380	29,500	7,510	1,280	890
14	950	950	770	720	1,010	1,350	11,000	4,890	35,500	7,150	1,210	950
15	890	1,010	830	720	1,070	1,350	7,150	4,890	32,100	6,490	1,210	950
16	890	1,010	670	620	1,070	1,350	6,190	4,890	32,100	5,910	1,210	950
17	890	1,010	620	1,010	1,010	1,280	5,910	4,670	32,100	4,890	1,210	890
18	890	950	620	1,280	1,010	1,350	4,890	4,470	31,200	4,470	1,070	890
19	950	950	620	1,350	1,070	1,350	4,470	4,280	30,400	4,100	1,070	830
20	950	950	620	1,430	1,070	1,590	3,930	4,280	27,000	3,120	1,010	890
21	890	950	620	1,870	1,070	2,430	3,760	4,100	27,000	2,560	1,010	890
22	890	890	670	1,870	1,140	2,970	4,890	4,890	22,900	1,870	950	830
23	890	770	670	1,870	1,140	3,120	5,130	7,150	19,000	2,560	1,010	890
24	950	770	770	1,350	1,140	4,100	5,130	11,000	15,500	3,120	1,010	1,010
25	950	770	830	1,280	1,210	4,100	5,910	12,500	14,300	3,120	950	1,070
26	950	890	950	1,510	1,210	6,490	7,150	14,900	14,300	2,310	1,010	1,040
27	890	950	950	1,680	1,280	8,260	5,640	14,900	27,000	2,080	950	1,010
28	890	770	770	1,770	1,770	6,810	5,380	19,000	11,500	1,870	1,010	1,010
29	890	950	815	1,680	1,870	6,190	5,640	19,700	9,520	2,310	1,010	950
30	890	1,010	860	1,680	-	4,100	5,130	23,700	9,520	2,310	1,070	890
31	920	- -	905	1,590	- -	3,930	------	31,200	------	2,190	1,210	------
Total	28,520	27,490	25,390	36,720	33,830	78,780	147,520	277,670	732,140	192,760	40,980	28,750
Mean	920	916	819	1,180	1,170	2,540	4,920	8,960	24,400	6,220	1,320	958
Ac-ft	56,600	54,500	50,400	72,600	67,300	156,000	293,000	551,000	‡1,450	382,000	881,200	57,000

Calendar year 1895:	Max	7,880	Min	620	Mean	2,120	Ac-ft	1,538,000
Water year 1895-96:	Max	35,500	Min	620	Mean	4,510	Ac-ft	3,270,000

‡ Expressed in thousands.

Boise River near Boise, Idaho--Continued

Discharge, in cubic feet per second, water year October 1896 to September 1897

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	890			1,070	1,010	890	2,560		-	3,460	1,380	860
2	950			1,010	950	890	2,190		-	4,080	1,380	990
3	830			1,010	830	1,010	2,080		-	3,600	1,250	990
4	830			950	830	1,070	2,190		-	3,260	1,320	990
5	890			950	1,010	1,070	2,080		-	3,260	1,320	1,120
6	830			890	1,070	1,010	2,430		-	3,070	*1,320	1,120
7	950			890	1,010	1,070	2,430		-	2,880	1,320	1,120
8	890			950	1,350	1,140	2,310		-	2,810	1,250	990
9	830			950	1,350	1,070	2,970		-	2,420	1,250	990
10	830			1,010	1,210	1,010	3,590		-	2,290	1,180	1,120
11	890			890	1,140	1,010	4,890		-	2,360	1,180	1,120
12	830			830	1,140	890	6,490		-	2,360	1,180	1,120
13	830			720	1,070	770	7,880		-	2,290	1,120	1,250
14	830			620	1,070	890	8,660		-	2,290	1,120	1,250
15	890	900	850	620	1,070	890	14,300		-	2,290	1,120	1,120
16	830			620	1,010	890	19,000		-	2,160	1,060	1,120
17	830			570	1,010	1,070	26,200		5,100	2,160	*990	1,120
18	890			570	950	1,070	27,000		4,530	2,290	990	990
19	890			570	950	1,010	29,500		3,900	2,160	925	990
20	830			720	890	950	-		3,900	1,900	925	990
21	830			830	830	950	-		3,740	1,840	860	1,120
22	890			830	890	1,010	-		3,900	1,640	795	1,120
23	890			950	890	1,210	-		4,530	1,900	860	1,120
24	890			770	890	1,510	-		3,740	1,840	860	1,120
25	830			720	830	1,870	-		3,600	1,770	860	*1,120
26	830			720	770	3,120	-		3,600	1,640	990	860
27	950			620	770	3,430	-		3,740	1,640	990	860
28	950			620	830	3,120	-		3,600	1,580	990	860
29	950			830	-	2,970	-		3,460	1,510	990	860
30	830			950	-	2,690	-		3,460	1,380	990	860
31	1,010			1,010	----	2,430	------		------	1,440	860	------
Total	27,110	27,000	26,350	25,260	27,620	43,980	-	-	-	71,570	33,625	31,260
Mean	875	900	850	815	986	1,420	-	-	-	2,310	1,080	1,040
Ac-ft	53,800	53,600	52,300	50,100	54,800	87,300	-	-	-	142,000	66,400	61,900

Calendar year 1896: Max 35,500 Min - Mean 4,510 Ac-ft 3,270,000
Water year 1896-97: Max - Min - Mean - Ac-ft -

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1897 to September 1898

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	860	1,060			660	1,450	1,320	7,300	5,180	3,170	1,100	867
2	925	1,060			660	1,580	1,450	7,000	5,060	2,980	1,220	867
3	925	1,040			660	1,580	1,450	7,000	5,060	2,390	*1,100	927
4	925	990			660	1,580	1,200	6,120	4,580	2,390	1,100	927
5	925	1,020			660	1,840	1,080	4,820	4,370	2,200	1,100	927
6	925	1,000			660	1,970	1,200	4,370	4,580	2,390	1,100	927
7	990	990			660	1,970	1,450	4,580	4,160	2,200	1,100	927
8	925	990			760	1,840	1,320	4,580	3,950	2,200	1,100	927
9	925	1,020			860	1,840	1,320	4,580	4,160	2,390	1,100	927
10	990	1,040			960	1,970	1,710	5,060	4,820	2,390	1,100	986
11	1,060	1,060			990	2,230	1,840	5,060	5,180	2,200	1,100	986
12	1,120	1,060			1,020	2,100	2,100	5,060	5,580	2,390	1,050	986
13	1,120	1,040			1,050	1,970	3,070	6,120	6,120	2,060	1,050	986
14	1,060	1,020			1,080	1,580	4,290	6,120	6,400	2,060	1,050	986
15	1,060	990			1,200	1,710	4,680	6,400	*7,000	1,940	986	986
16	1,060	1,010	1,000	660	1,320	1,580	*5,310	6,260	7,000	1,820	986	986
17	990	1,030			1,450	1,450	5,740	6,260	7,000	1,700	867	986
18	990	1,250			1,390	1,450	5,740	5,300	6,700	1,640	867	*927
19	1,060	1,220			1,330	1,450	4,680	5,060	6,700	1,580	986	867
20	925	1,190			1,260	1,450	4,680	5,300	6,400	1,520	986	867
21	990	1,160			1,200	1,580	4,890	5,300	6,400	1,460	986	867
22	990	1,120			1,200	1,450	4,890	5,180	6,400	1,400	986	867
23	990	1,160			1,200	1,320	4,890	5,180	6,400	1,340	867	986
24	1,120	1,200			1,200	1,200	4,890	5,180	6,120	1,280	*867	927
25	*1,250	1,250			1,200	1,200	5,100	5,180	5,580	1,220	867	986
26	1,250	1,180			1,280	1,200	5,960	5,300	4,820	1,160	867	927
27	1,120	1,120			1,360	1,200	6,960	5,300	4,820	1,100	867	927
28	1,060	1,060			1,450	1,200	7,960	5,440	3,950	1,100	867	927
29	1,060	990			-	1,320	7,600	7,300	3,760	1,100	867	986
30	1,060	990				1,450	7,300	6,400	3,360	1,160	927	986
31	1,060				----	1,450	------	5,710	------	1,100	867	------
Total	31,710	32,310	31,000	20,460	29,380	49,160	116,070	173,820	161,610	57,030	30,883	28,158
Mean	1,020	1,080	1,000	660	1,049	1,586	3,869	5,607	5,387	1,840	996	939
Ac-ft	62,900	64,100	61,500	40,600	58,300	97,500	230,000	345,000	321,000	113,000	61,300	55,900

Calendar year 1897: Max - Min - Mean - Ac-ft -
Water year 1897-88: Max 7,960 Min - Mean 2,090 Ac-ft 1,510,000

* Discharge measurement made on this day.

Note.--Gage read twice weekly during November, January and February; no readings during December; discharge interpolated or estimated on basis of records for Bruneau River at Grandview.

Boise River near Boise, Idaho--Continued

Discharge, in cubic feet per second, water year October 1898 to September 1899

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	867	1,160	1,220	2,580	1,220	1,580	2,780	6,120	10,200	11,300	2,390	1,340
2	927	1,160	1,220	2,580	1,220	1,580	2,980	5,300	10,500	10,200	*2,060	1,340
3	986	1,220	1,220	2,580	1,100	1,580	2,980	5,060	12,800	10,200	2,060	1,340
4	986	1,220	1,220	2,580	1,100	1,580	*3,170	4,820	13,900	9,800	2,060	1,340
5	986	1,160	1,580	2,580	1,220	1,460	3,760	5,300	13,900	8,690	2,060	1,280
6	986	1,160	1,820	2,780	1,220	1,460	3,760	5,850	11,300	7,960	2,060	1,220
7	986	1,160	2,060	2,780	1,100	1,460	3,760	9,060	10,500	7,780	2,200	1,220
8	986	1,160	2,580	2,780	1,340	1,460	4,580	9,800	10,500	8,320	2,390	1,220
9	986	1,160	2,390	2,780	1,580	1,340	5,580	13,500	9,800	7,780	2,390	1,220
10	1,100	1,160	2,390	2,780	1,940	1,340	7,000	19,000	10,200	7,600	2,060	1,220
11	1,160	1,160	2,390	2,780	1,580	1,340	7,600	17,200	11,600	*7,300	1,940	1,220
12	1,100	986	2,390	2,780	1,580	1,400	8,320	14,200	13,900	7,000	1,940	1,100
13	1,100	986	2,390	2,780	1,580	1,400	8,140	13,500	10,200	6,700	1,760	1,100
14	1,160	986	2,200	2,780	1,340	1,340	7,450	12,800	11,300	6,120	1,700	*1,100
15	1,100	986	2,200	2,980	1,460	1,340	7,300	11,300	10,500	5,580	1,700	1,220
16	1,100	986	2,580	2,980	1,460	1,340	10,170	*10,200	11,300	5,060	1,700	1,280
17	1,100	1,100	2,580	2,980	1,580	1,340	8,500	9,800	13,900	4,820	1,700	1,160
18	1,100	1,280	2,580	2,980	1,580	1,580	8,690	9,060	16,100	4,580	1,580	1,100
19	1,100	1,220	2,580	2,980	1,580	1,940	7,000	7,600	17,200	4,480	1,520	1,100
20	1,100	1,280	2,580	2,980	1,580	2,060	6,700	7,300	18,700	4,160	1,580	1,100
21	1,100	1,220	2,580	2,980	1,460	2,060	6,700	7,300	15,000	4,160	1,700	1,100
22	1,100	1,220	2,390	2,980	1,460	1,820	7,960	8,320	11,300	3,760	1,820	1,050
23	1,160	1,100	2,390	2,780	1,340	1,820	10,910	9,060	10,500	3,560	1,820	1,050
24	1,160	1,100	2,390	2,780	1,220	*1,940	13,130	9,800	12,000	2,980	1,700	1,050
25	1,100	1,100	2,390	2,780	1,220	3,760	11,280	10,900	12,000	2,980	1,580	1,050
26	1,100	1,100	2,780	2,780	1,340	2,130	11,650	9,800	11,300	2,780	*1,460	986
27	1,160	1,100	3,170	2,060	1,460	2,580	9,060	9,060	10,500	2,580	1,400	986
28	1,160	1,100	3,170	1,580	1,460	2,780	7,960	*10,300	11,300	2,580	1,220	986
29	1,160	1,100	2,780	1,340	-	2,780	7,300	10,500	12,200	2,390	1,220	986
30	1,160	1,160	2,780	1,220		2,780	6,700	11,300	11,300	2,490	1,100	986
31	1,160	- -	2,580	1,220	- - -	2,580	- - - - - -	10,900	- - - - - -	2,390	1,100	- - - - - -
Total	33,436	33,990	71,570	80,300	39,320	56,950	212,870	304,010	365,700	178,080	54,970	34,450
Mean	1,080	1,130	2,310	2,590	1,400	1,840	7,100	9,810	12,200	5,740	1,770	1,150
Ac-ft	66,300	67,400	142,000	159,000	77,800	113,000	422,000	603,000	726,000	353,000	109,000	68,400

Calendar year 1898: Max 7,960 Min - Mean 2,210 Ac-ft 1,598,000
Water year 1898-99: Max 19,000 Min 867 Mean 4,020 Ac-ft 2,907,000

* Discharge measurement made on this day.

Discharge, in cubic feet per second, water year October 1899 to September 1900

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	986	1,340	2,060	1,940	1,790	1,910	5,060	6,390	6,120	2,180	930	810
2	986	1,340	1,700	2,060	1,790	2,040	6,660	6,660	6,120	2,040	920	810
3	986	1,220	1,520	2,060	1,790	2,040	7,450	6,920	6,660	1,980	905	802
4	986	1,340	1,280	1,940	1,790	2,180	6,920	7,450	6,920	1,910	905	810
5	986	1,340	1,220	2,060	1,680	2,040	6,660	7,450	7,180	1,680	895	930
6	986	1,340	1,220	2,060	1,520	2,330	7,180	8,780	*7,850	1,620	905	990
7	986	1,340	1,340	2,060	1,570	2,720	7,720	9,300	7,450	1,570	*895	905
8	1,050	1,460	1,340	1,940	1,570	2,980	7,450	10,100	6,920	1,460	895	855
9	1,050	1,400	1,460	1,700	1,680	3,910	6,660	10,400	6,920	1,460	895	855
10	1,050	1,340	1,580	1,700	1,570	4,230	6,660	11,400	6,120	1,520	830	870
11	1,050	1,520	1,580	1,940	1,460	4,810	5,860	12,000	5,330	1,520	822	905
12	1,100	1,760	1,460	2,390	1,460	5,990	6,390	12,000	4,940	1,520	855	822
13	1,100	1,820	1,460	2,390	1,460	5,990	7,180	8,510	4,940	*1,460	870	822
14	1,160	1,700	1,460	3,170	1,460	5,860	6,120	8,510	*4,940	1,410	880	810
15	1,160	1,580	1,340	5,060	1,460	5,860	5,600	8,780	4,810	1,270	845	830
16	1,160	1,700	1,340	4,780	1,460	6,120	6,120	8,780	5,730	1,270	830	810
17	1,220	1,640	1,580	4,200	1,360	6,120	5,860	8,510	4,810	1,230	845	822
18	1,460	1,580	1,580	3,260	1,460	6,390	*6,120	8,240	4,230	1,190	830	830
19	1,880	1,580	1,820	2,590	1,460	6,390	6,120	8,510	4,230	1,160	822	870
20	2,060	1,580	1,820	2,880	1,460	6,120	6,120	8,240	4,230	1,160	830	*855
21	2,390	1,460	1,580	2,240	1,680	6,120	6,120	7,980	4,460	1,080	822	845
22	2,060	1,460	1,580	2,040	2,480	6,120	6,120	7,720	4,340	1,080	822	830
23	1,940	1,460	1,580	2,040	2,330	6,660	6,120	7,450	3,910	1,050	855	845
24	1,820	1,340	1,820	2,040	2,180	6,660	6,120	7,450	3,710	1,050	880	830
25	1,580	1,340	1,580	1,680	2,040	6,660	6,120	7,180	3,520	1,120	905	855
26	1,460	1,340	1,580	1,680	2,180	6,920	5,860	7,180	3,330	1,120	870	870
27	1,460	1,340	1,580	1,680	2,040	6,660	5,860	6,920	2,980	1,050	855	*880
28	1,460	1,460	1,820	1,680	2,040	5,330	5,860	6,920	*2,810	*1,050	855	880
29	1,460	1,820	1,820	1,680	-	5,330	5,860	6,660	2,480	990	822	870
30	1,460	2,060	1,580	1,680		5,060	6,120	6,660	2,330	978	830	880
31	1,340		1,820	1,680	-	5,060	- - - - - -	6,390	- - - - - -	960	830	- - - - - -
Total	41,832	45,000	48,500	72,300	48,220	152,610	190,070	255,440	150,320	42,138	26,750	25,598
Mean	1,350	1,500	1,560	2,330	1,720	49,200	6,340	8,240	5,010	1,360	863	853
Ac-ft	83,000	89,200	95,900	143,000	95,500	303,000	377,000	507,000	298,000	83,600	53,100	50,800

Calendar year 1899: Max 19,000 Min 986 Mean 4,010 Ac-ft 2,900,000
Water year 1899-1900: Max 12,000 Min 802 Mean 3,010 Ac-ft 2,180,000

* Discharge measurement made on this day.

Boise River near Boise, Idaho--Continued

Discharge, in cubic feet per second, water year October 1900 to September 1901

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	880	1,120	1,050	990	1,020	3,710	1,910	9,300	7,740	2,880	1,060	770
2	930	1,120	1,050	990	930	4,340	2,110	10,900	7,740	2,880	1,060	770
3	930	1,120	990	1,120	990	4,020	2,330	10,200	7,740	2,880	1,060	770
4	930	1,120	1,050	1,080	1,020	3,710	2,260	10,900	*7,070	2,880	1,050	830
5	1,050	1,120	1,050	1,130	930	2,980	2,180	12,000	6,400	2,430	1,010	830
6	1,120	1,120	1,050	1,270	1,020	2,810	2,180	11,100	5,720	2,300	955	800
7	990	1,050	1,050	1,160	960	3,150	2,180	10,900	5,500	2,300	860	800
8	960	1,050	1,050	1,120	960	3,150	2,180	10,600	5,050	2,300	758	800
9	930	1,050	1,050	1,120	905	2,810	2,260	11,000	4,830	2,180	758	800
10	930	1,020	990	1,120	990	2,640	2,640	11,400	4,600	2,180	758	770
11	930	990	990	1,050	990	2,560	3,330	12,100	4,380	2,070	800	770
12	930	960	930	1,050	1,050	2,330	4,120	12,200	4,270	1,970	830	740
13	920	990	930	1,050	1,050	2,040	4,810	13,000	3,930	1,970	818	770
14	920	990	990	1,120	1,020	2,040	5,600	13,300	3,710	1,870	830	770
15	905	990	1,050	1,190	1,120	2,040	5,330	13,300	3,710	1,780	800	770
16	905	990	1,050	1,050	2,330	2,040	4,810	13,900	3,930	1,780	830	800
17	880	990	1,120	1,050	1,980	2,480	5,060	13,900	4,380	1,690	818	770
18	905	1,050	1,050	990	1,680	2,480	5,330	13,600	4,600	1,640	800	800
19	1,020	1,050	1,050	990	2,040	2,480	6,120	12,400	4,830	1,600	800	770
20	1,020	960	1,050	1,050	2,040	2,640	6,920	10,500	5,280	1,600	818	770
21	1,360	930	1,460	1,080	1,850	2,810	6,920	9,870	5,500	1,540	830	830
22	1,190	960	1,360	1,120	1,620	3,710	7,320	8,800	5,280	1,510	830	860
23	1,410	990	1,120	1,080	1,790	3,330	7,980	8,020	4,830	1,560	800	920
24	1,230	1,050	1,050	1,050	1,680	2,980	9,040	7,520	*4,380	1,600	800	990
25	1,120	1,050	1,120	1,020	1,910	2,980	8,110	7,740	3,710	1,560	740	990
26	1,120	1,080	1,050	990	1,790	2,560	*8,380	8,410	3,060	1,510	770	976
27	1,120	1,120	1,050	990	3,910	*2,480	7,450	8,640	2,880	1,350	740	976
28	1,070	990	930	990	4,120	2,330	7,180	9,080	2,720	1,200	788	890
29	1,080	930	880	930	-	2,110	7,720	9,080	2,880	1,130	770	890
30	1,050	990	930	930	-	2,040	8,780	8,640	3,060	1,080	800	860
31	1,050	------	990	990	------	2,040	------	8,190	------	1,060	770	------
Total	31,785	30,940	32,530	32,860	43,695	85,820	152,540	330,490	143,710	58,200	26,111	24,852
Mean	1,030	1,030	1,050	1,060	1,560	2,770	5,080	10,700	4,790	1,880	842	828
Ac-ft	63,300	61,300	64,600	65,200	86,700	170,000	303,000	656,000	285,000	116,000	51,800	49,300

Calendar year 1900: Max 11,960 Min 802 Mean 2,900 Ac-ft 2,100,000
Water year 1900-1901: Max 13,900 Min 740 Mean 2,720 Ac-ft 1,970,000

* Discharge measurement made on this day.

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Lake Fork Payette River near McCall, Idaho

Location.--Lat 44°54', long 116°03', in sec. 13, T. 18 N., R. 3 E., on left bank a quarter of a mile downstream from outlet to Little Payette Lake and 3 miles east of McCall.

Drainage area.--64 sq mi, approximately.

Records available.--September 1909 to October 1914 (discontinued).

Gage.--Staff gage. Altitude of gage is 5,100 ft (by barometer).

Average discharge.--5 years (1909-14), 183 cfs (132,500 acre-ft per year).

Extremes.--1909-14: Maximum discharge observed, 1,900 cfs May 28, 1913 (gage height, 6.1 ft); minimum observed, 4 cfs (revised) Sept. 30, 1911.

Revisions.--Figures of minimum discharge observed for the water years 1911 and 1912 have been revised to 4 cfs Sept. 30, 1911, and 6 cfs Oct. 1, 1912 superseding those published in WSP 312 and 332, respectively.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1911-12, superseding those published in WSP 312 and 332, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1911		1911-Con.		1911-Con.		1911-Con.	
Aug. 1	70	Sept. 9	26	Oct. 17	28	Nov. 24	32
3	65	10	26	18	28	25	32
4	63	11	26	19	20	26	33
5	62	12	20	20	19	27	33
6	59	13	20	21	18	28	33
7	54	14	20	22	18	29	32
8	51	15	18	23	18	30	32
9	50	16	18	24	18	Dec. 1	32
10	47	17	14	25	19	2	32
11	47	18	14	26	19	3	31
12	43	19	15	27	20	4	31
13	42	20	15	28	20	5	31
14	41	21	15	29	18	6	31
15	39	22	15	30	18	7	30
16	38	23	15	31	17	8	30
17	37	24	15	Nov. 1	17	9	30
18	36	25	15	2	18	10	30
19	35	26	14	3	18	11	29
20	34	27	15	4	19	12	29
21	33	28	9	5	19	13	29
22	31	29	6	6	19	14	29
23	31	30	4	7	18	15	28
24	30	Oct. 1	6	8	18	16	28
25	28	2	20	9	18	17	28
26	28	3	22	10	18	18	28
27	26	4	20	11	17	19	28
28	24	5	20	12	20	20	28
29	24	6	19	13	24	21	28
30	24	7	19	14	24	22	28
31	24	8	20	15	30	23	28
Sept. 1	22	9	25	16	30	24	28
2	21	10	28	17	33	25	28
3	21	11	28	18	33	26	28
4	20	12	30	19	42	27	27
5	20	13	30	20	33	28	27
6	19	14	30	21	33	29	27
7	18	15	30	22	33	30	27
8	26	16	30	23	33	31	27

Month	Maximum	Minimum	Mean	Per square mile	Runoff	
					Inches	Acre-feet
August 1911.....	70	24	41.4	0.650	0.75	2,550
September.....	26	4	17.4	.273	.30	1,040
Water year 1910-11.....	1,760	4	200	3.14	42.60	145,000
October 1911.....	30	6	21.8	.342	.39	1,340
November.....	42	17	26.5	.416	.46	1,570
December.....	32	27	28.9	.454	.52	1,780
Calendar year 1911.....	1,760	4	190	2.98	40.39	137,000
Water year 1911-12.....	1,600	6	167	2.62	35.68	121,000

Shafer Creek near Horseshoe Bend, Idaho

Location.--Lat 43°49', long 116°10', in sec. 36, T. 6 N., R. 2 E., on left bank 600 ft downstream from Cottonwood Creek and 6 miles south of Horseshoe Bend.

Drainage area.--28 sq mi, approximately.

Records available.--November 1911 to September 1912 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 3,940 ft (from topographic map).

Extremes.--1911-12: Maximum discharge, 510 cfs June 11, 1912 (gage height, 9.5 ft, from floodmark), from rating curve extended above 125 cfs on basis of logarithmic plotting; minimum daily, 1.2 cfs Aug. 27-29, 1912.

Remarks.--No regulation or diversion above station.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1912, superseding those published in WSP 332, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1912		1912-Con.		1912-Con.	
Feb. 2	5	Feb. 15	22	Mar. 2	18
3	4	16	27	3	20
4	5	21	26	4	17
5	6	22	18	5	15
6	7	23	19	6	13
7	6	24	25	7	13
9	16	25	20	8	13
10	37	26	17	9	12
11	30	27	14	10	13
12	20	28	12	11	13
13	18	29	12	13	12
14	17	Mar. 1	15	14	13
				15	13

Month	Maximum	Minimum	Mean	Runoff in acre-feet
February 1912	41	4	18.5	1,060
March	50	12	21.6	1,330

Yankee Fork Salmon River near Clayton, Idaho

Location.--Lat 44°17', long 114°44', in sec. 17, T. 11 N., R. 15 E., on right bank, half a mile upstream from mouth and 17 miles west of Clayton.

Drainage area.--195 sq mi.

Records available.--May 1921 to February 1949 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 5,950 ft (by barometer). Prior to Dec. 14, 1937, staff gage at site 2,000 ft downstream at different datums. Dec. 14, 1937, to Apr. 13, 1938, staff gage at described site and datum.

Average discharge.--27 years (1921-48), 197 cfs (142,600 acre-ft per year).

Extremes.--1921-49: Maximum discharge observed, 3,360 cfs June 12, 1921 (gage height, 6.79 ft, site and datum then in use), from rating curve extended above 2,300 cfs; minimum, 10 cfs (estimated) Dec. 5, 6, 1927.

Remarks.--No regulation or diversion above station.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water years 1922 and 1928, superseding those published in WSP 553, 673, are given herewith:

Date	Discharge	Date	Discharge
1922		1922-Con.	
May 1	130	May 7	250
2	150	8	290
3	170	9	290
4	200		
5	210	1928	
6	250	Mar. 21-29	e93

e Average for period indicated.

Month	Maximum	Minimum	Mean	Per square mile	Runoff	
					Inches	Acre-feet
May 1922	1,770	130	684	3.51	4.04	42,000
Water year 1921-22	2,730	-	‡250	1.28	‡17.42	‡181,000
Calendar year 1922	2,730	-	249	1.28	17.33	180,000
March 1928	-	-	65.0	.333	.38	4,000
Water year 1927-28	2,520	-	246	1.26	17.17	179,000
Calendar year 1928	2,520	-	243	1.25	16.94	176,000

‡ Not previously published; partly estimated.

Grande Ronde River at Zindel, Wash.

Location.--Lat 46°03'50", long 116°59'40", in SE¼ sec. 23, T. 7 N., R. 46 E., on left bank just downstream from Zindel Ferry, 1½ miles downstream from Joseph Creek, 2 miles upstream from mouth, and 12 miles southeast of Anatone.

Drainage area.--3,950 sq mi, approximately.

Records available.--June 1904 to December 1912 (discontinued).

Gage.--Staff gage read once or twice daily. Altitude of gage is 840 ft (from topographic map).

Average discharge.--8 years, 3,270 cfs (2,367,000 acre-ft per year).

Extremes.--1904-12: Maximum discharge, 34,600 cfs Mar. 4, 1910 (gage height, 10.7 ft, from graph based on gage readings); minimum observed, 280 cfs (revised) Jan. 11-14, 1909, result of freezeup.

Revisions.--The minimum discharge observed for the water year 1909 has been revised to 280 cfs Jan. 11-14, 1909, superseding figure published in WSP 312.

Remarks.--Numerous diversions for irrigation above station. No regulation.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1909, superseding those published in WSP 312, are given herewith:

1909	
Jan. 11	280
12	280
13	280
14	280

Month	Maximum	Minimum	Mean	Runoff in acre-feet
January 1909	4,630	280	1,460	89,800
Water year 1908-9	11,800	280	2,530	1,830,000
Calendar year 1909	11,800	280	2,630	1,900,000

Tucannon River near Pomeroy, Wash.

Location (revised).--Lat 46°26'30", long 117°44'50", in sec. 13, T. 11 N., R. 40 E., on left abutment of highway bridge at Marengo, 7½ miles southwest of Pomeroy and 14 miles upstream from Petaha Creek.

Drainage area.--160 sq mi (revised).

Records available.--August 1913 to June 1915, March 1924 to September 1930 (discontinued).

Gage.--Staff gage read once or twice daily. Altitude of gage is 1,470 ft (from topographic map). Aug. 31, 1913, to June 30, 1915, at datum about 2.27 ft higher.

Average discharge.--7 years (1913-14, 1924-30), 130 cfs (94,120 acre-ft per year).

Extremes.--1913-15, 1924-30: Maximum discharge, 1,740 cfs (revised) Jan. 13, 1928 (gage height, 6.46 ft, revised, from graph based on gage readings); minimum observed, 25 cfs Dec. 24, 1914 (gage height, 1.2 ft).

Revisions.--Figures of maximum discharge for the water years 1915 and 1928 have been revised to 307 cfs May 20, 1915 (gage height, 3.07 ft, from graph based on gage readings) and 1,740 cfs Jan. 13, 1928 (gage height, 6.46 ft, from graph based on gage readings), superseding figures published in WSP 413 and 673, respectively.

Remarks.--Several small diversions for irrigation above station.

Revisions (water years).--WSP 413: 1914. Revised figures of discharge, in cubic feet per second, for the water year 1930, superseding those published in WSP 708, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1930		1930-Con.		1930-Con.	
Jan. 9	55	Jan. 17	51	Jan. 25	60
10	52	18	54	26	60
11	50	19	56	27	60
12	44	20	60	28	60
13	43	21	60	29	130
14	43	22	60	30	120
15	45	23	60	31	180
16	48	24	60		

Note.--Stage-discharge relation affected by ice Jan. 9-31.

Month	Maximum	Minimum	Mean	Runoff in acre-feet
January 1930	180	43	66.5	4,090
Water year 1929-30	345	41	95.7	69,300

Tucannon River near Starbuck, Wash.

Location (revised).--Lat 46°30'20", long 118°01'00", in sec. 23, T. 12 N., R. 38 E., on left bank three-quarters of a mile downstream from Petaha Creek and 5½ miles east of Starbuck.

Drainage area.--409 sq mi.

Records available.--October 1914 to September 1917, August 1928 to September 1931 (discontinued).

Gage.--Staff gage read once or twice daily. Altitude of gage is 795 ft (from topographic map). Nov. 8, 1914, to Sept. 30, 1917, staff gage at site a quarter of a mile upstream at different datum. Aug. 9, 1928, to Mar. 8, 1930, staff gages at described site at different datum.

Average discharge.--6 years (1914-17, 1928-31), 164 cfs (118,700 acre-ft per year).

Extremes.--1914-17, 1928-31: Maximum discharge, 6,000 cfs Feb. 2, 1930 (gage height, 8.08 ft, from floodmarks), from rating curve extended above 350 cfs on basis of slope-area determination of peak flow; minimum, 15 cfs July 11, 12, 1930 (gage height, 1.12 ft).

Revisions.--The maximum discharge for the 1915 water year has been revised to 975 cfs Feb. 1, 1915 (gage height, 4.2 ft, from graph based on gage readings), superseding figure published in WSP 413.

Remarks.--Many small diversions for irrigation above station.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1930, superseding figures published in WSP 708, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge
1930		1930-Con.		1930-Con.	
Jan. 8	50	Jan. 19	35	Jan. 30	70
9	42	20	40	31	130
10	35	21	45	Feb. 2	a500
11	30	22	48	3	a350
12	25	23	48	4	a200
13	21	24	50	5	a210
14	21	25	50	6	a210
15	21	26	50	7	a220
16	21	27	50	8	a230
17	22	28	50		
18	28	29	50		

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

Note.--Stage-discharge relation affected by ice Jan. 8-31.

Month	Maximum	Minimum	Mean	Runoff in acre-feet
January 1930.....	130	21	49.3	3,030
February.....	740	172	293	16,300
Water year 1929-30.....	740	15	102	74,100
Calendar year 1930.....	740	15	105	75,800

Measurements of streamflow in the Snake River basin made at points other than regular gaging stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements when correlated with the simultaneous discharge of a nearby stream where continuous records are available will give a picture of the low-flow potentiality of stream.

Determinations of peak flow at points other than regular gaging stations are given in a separate table on page 291.

Miscellaneous discharge measurements in Snake River basin during water year October 1953 to September 1954

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
			Henrys Fork basin, Idaho	
June 11	Teton River.....	Henrys Fork.....	On line between secs. 19 and 30, T. 3 N., R. 46 E., 100 ft downstream from Moose Creek, 200 ft upstream from String Canal, and 3½ miles southeast of Victor.	84
July 28	....do.....	....do.....	....do.....	96
Aug. 13	....do.....	....do.....	....do.....	79
3	Teton Creek.....	Teton River.....	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.	83
24	....do.....	....do.....	....do.....	37
June 21	Horseshoe Creek...	....do.....	In sec. 27, T. 5 N., R. 44 E., 90 ft upstream from bridge on old railroad grade, 4 miles upstream from mouth, and 7½ miles west of Driggs.	19
July 23	Teton River.....	Henrys Fork.....	NW¼NE¼ sec. 29, T. 7 N., R. 44 E., about 300 ft upstream from power-plant diversion tunnels.	634
			Blackfoot River basin, Idaho	
Oct. 25	Dry Valley Creek..	Blackfoot River...	SE¼ sec. 5, T. 8 S., R. 44 E., above mouth of Maybe Creek, 15 miles northeast of Soda Springs.	0
June 12	....do.....	....do.....	....do.....	.35
Oct. 25	Maybe Creek.....	Dry Valley Creek..	SE¼ sec. 10, T. 8 S., R. 44 E., 2.9 miles above mouth and 17 miles northeast of Soda Springs.	.18
June 12	....do.....	....do.....	....do.....	.62
Oct. 25	....do.....	....do.....	NE¼ sec. 10, T. 8 S., R. 44 E., 2.3 miles above mouth and 17 miles northeast of Soda Springs.	.33
June 12	....do.....	....do.....	....do.....	.87
Oct. 25	....do.....	....do.....	NE¼ sec. 9, T. 8 S., R. 44 E., 1.5 miles above mouth and 16 miles northeast of Soda Springs.	.10
June 12	....do.....	....do.....	....do.....	.61
Oct. 25	....do.....	....do.....	SE¼ sec. 5, T. 8 S., R. 44 E., at mouth, 15 miles northeast of Soda Springs.	.12
June 12	....do.....	....do.....	....do.....	.49
			Tributaries between Portneuf River and Salmon Falls Creek, Idaho	
Mar. 30	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. and 3½ miles north of Kimberly.	23.9
30	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.	44.3
30	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.	8.50
29	Unnamed spring....	....do.....	Near center of sec. 31, T. 9 S., R. 18 E., on north bank of Snake River, ½ mile above Shoshone powerplant.	2.15
29	....do.....	....do.....	Outlet to river in NW¼SW¼ sec. 31, T. 9 S., R. 18 E., on north bank of Snake River, just above Shoshone Falls, on D. T. Heter property.	4.98
29	....do.....	....do.....	SW¼NW¼ sec. 34, T. 9 S., R. 17 E., on north side of Snake River, 200 yds below Rim to Rim Bridge and 2 miles north of Twin Falls.	1.04
29	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.	*243
29	Sunnybrook Spring.	....do.....	SE¼SE¼ sec. 19, T. 9 S., R. 17 E., 3/8 mile above point of entry to river.	*13.9
Apr. 3	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.	2.52
Mar. 30, Apr. 1	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.	495
1	Niagara Springs...	....do.....	E½NE¼ sec. 10, T. 9 S., R. 15 E., 4½ miles above Devils Washboard Falls and 6 miles northeast of Buhl.	*321
5	Clear Lakes Outlet	....do.....	SW¼SE¼ sec. 2, T. 9 S., R. 14 E., at Clear Lakes plant of Idaho Power Co., 4½ miles north of Buhl.	*528

* Discharge represents actual net spring flow adjusted for diversions and surface flow.

Miscellaneous discharge measurements in Snake River basin during water year October 1953 to September 1954--Continued

Tributaries between Portneuf River and Salmon Falls Creek, Idaho--Continued

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
Apr. 7	Deep Creek.....	Snake River.....	SW¼ sec. 20, T. 9 S., R. 14 E., 125 ft below U. S. Highway 30 and 4½ miles northwest of Buhl.	189
May 13	....do.....	....do.....	....do.....	54.0
June 15	....do.....	....do.....	....do.....	260
July 22	....do.....	....do.....	....do.....	54.9
Apr. 6	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
6	Banbury Springs...	....do.....	SE¼NW¼ sec. 33, T. 8 S., R. 14 E., at footbridge over outlet to Snake River 7 miles northwest of Buhl.	*128
6	Unnamed spring....	....do.....	SE¼SW¼ sec. 28, T. 8 S., R. 14 E., on east side Snake River, 0.35 mile above Blind Canyon Spring and 7 miles northwest of Buhl.	4.48
6	Blind Canyon Spring.	....do.....	NE¼SW¼ sec. 28, T. 8 S., R. 14 E., just upstream from Box Canyon and 7½ miles northwest of Buhl.	*16.4

* Discharge represents actual net spring flow adjusted for diversions and surface flow.

Salmon Falls Creek basin, Idaho

Feb. 18	Salmon Falls Creek	Snake River.....	NW¼ sec. 6, T. 14 S., R. 15 E., 2 miles below dam of Salmon River Canal Co., and 8 miles northwest of Rogerson.	8.60
June 15	....do.....	....do.....	....do.....	10.4
Sept.23	....do.....	....do.....	....do.....	6.73
Feb. 19	....do.....	....do.....	SE¼ sec. 19, T. 11 S., R. 14 E., at Roseworth Crossing, 5 miles south of Castleford.	13.7
May 12	....do.....	....do.....	....do.....	8.46
July 20	....do.....	....do.....	....do.....	9.73
Oct. 27	....do.....	....do.....	NE¼ sec. 20, T. 10 S., R. 13 E., at Castleford Crossing, 4½ miles northwest of Castleford.	39.6
Nov. 17	....do.....	....do.....	....do.....	42.4
Feb. 19	....do.....	....do.....	....do.....	38.9
May 12	....do.....	....do.....	....do.....	37.6
July 20	....do.....	....do.....	....do.....	33.5
Oct. 30	....do.....	....do.....	NW¼ sec. 1, T. 10 S., R. 13 E., 6 miles west of Buhl.	108
Nov. 18	....do.....	....do.....	....do.....	103
Feb. 20	....do.....	....do.....	....do.....	90.3
May 12	....do.....	....do.....	....do.....	97.2
July 20	....do.....	....do.....	....do.....	94.6
Nov. 18	....do.....	....do.....	NE¼ sec. 14, T. 9 S., R. 13 E., at sheep bridge, 7½ miles northwest of Buhl.	138
Feb. 20	....do.....	....do.....	....do.....	129
May 12	....do.....	....do.....	....do.....	114
July 21	....do.....	....do.....	....do.....	124
Nov. 17	....do.....	....do.....	NE¼ sec. 1, T. 9 S., R. 13 E., at sheep bridge, 1 mile above diversion dam and 7½ miles northwest of Buhl.	164
July 21	....do.....	....do.....	....do.....	135
Oct. 30	....do.....	....do.....	NE¼ sec. 30, T. 8 S., R. 14 E., 150 ft above U. S. Highway 30, 9 miles northwest of Buhl.	182
Nov. 17	....do.....	....do.....	....do.....	160
Feb. 19	....do.....	....do.....	....do.....	125
May 13	....do.....	....do.....	....do.....	116

Tributaries and diversions between Salmon Falls Creek and Malad River, Idaho

Apr. 5	Sand Springs Creek	Snake River.....	SE¼ sec. 17, T. 8 S., R. 14 E., 100 ft upstream from Hy Berkowitz house and 7 miles southeast of Hagerman.	*99.0
May 13	....do.....	....do.....	....do.....	*99.8
Nov. 19	Thousand Springs..	....do.....	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.	b1,430
Mar. 31	....do.....	....do.....	....do.....	b1,320
May 13	....do.....	....do.....	....do.....	b875
Apr. 3	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 mouth of Lewis Creek, 100 ft below small unnamed spring entering from right, and 5 miles southeast of Hagerman.	*64.9
3	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 3¾ miles southeast of Hagerman.	*47.3
2	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.	*10.1

* Discharge represents actual net spring flow adjusted for diversions and surface flow.
b Discharge obtained by measuring Snake River above and below spring outlets and adjusting for surface flow.

Miscellaneous discharge measurements in Snake River basin during water year October 1953 to September 1954--Continued

Big Wood River basin, Idaho

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
June 17	Big Wood River....	Malad River.....	Sec. 6, T. 5 N., R. 17 E., 1¼ miles below Boulder Creek and 9 miles northwest of Ketchum.	365
Sept.25	....do.....	....do.....	....do.....	67.5
June 17	Warm Springs Creek	Big Wood River....	Sec. 15, T. 4 N., R. 17 E., ¼ mile above gaging station and 2½ miles west of Ketchum.	129
July 22	Big Wood River....	Malad River.....	Sec. 32, T. 3 N., R. 18 E., 1,000 ft below Deer Creek and 2 miles north of Hailey.	382
Sept.24	....do.....	....do.....	....do.....	142
July 22	Diversion ditch...	Big Wood River....	Sec. 9, T. 2 N., R. 18 E., 1/8 mile below heading at Hailey.	9.70
May 22	Camas Creek.....	....do.....	Sec. 13, T. 1 S., R. 15 E., 500 ft below Elk Creek, 3½ miles above Willow Creek and 1½ miles southwest of Blaine.	151
22	Willow Creek.....	Camas Creek.....	Sec. 9, T. 1 S., R. 16 E., ¾ mile above mouth and 2 miles southeast of Blaine.	58.6
June 18	Richfield Canal...	Big Wood River....	Sec. 29, T. 2 S., R. 18 E., 3/8 mile below heading at district gage and 17 miles northwest of Richfield.	383
18	Big Wood River....	Malad River.....	SE¼ sec. 30, T. 2 S., R. 18 E., ¼ mile below Richfield Canal, 2¼ miles below gaging station below Magic Dam, and 17 miles northwest of Richfield.	211
Aug. 28	Little Wood River.	....do.....	Sec. 26, T. 2 N., R. 20 E., ½ mile below High Five Creek, 1 mile above gaging station at Campbell Ranch, and 13 miles northwest of Carey.	33.2
29	....do.....	....do.....	SE¼ sec. 18, T. 1 N., R. 21 E., 750 ft below highway bridge and Fish Creek and 8 miles northwest of Carey.	74.4
May 21	Silver Creek.....	Little Wood River.	NW¼ sec. 36, T. 1 S., R. 20 E., 500 ft above highway bridge and 1½ miles east of Picabo.	103
Sept.25	....do.....	....do.....	NE¼ sec. 35, T. 1 S., R. 20 E., 1½ miles east of Picabo.	163
May 4	Little Wood River.	Malad River.....	Sec. 20, T. 4 S., R. 20 E., 1½ miles above gaging station near Richfield and 2½ miles east of Richfield.	89.9
June 19	Malad River.....	Snake River.....	Sec. 30, T. 6 S., R. 14 E., 1,000 ft above Thorpe-Justus canal heading, 2½ miles below gaging station near Gooding and 8 miles southwest of Gooding.	323
Nov. 21	Malad Springs.....	Malad 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.	*1,260
Apr. 2	....do.....	....do.....	....do.....	*1,210

* Discharge represents actual net spring flow adjusted for diversions and surface flow.

Tributaries between Malad River and Bruneau River, Idaho

June 26	Rattlesnake Creek.	Snake River.....	Sec. 14, T. 2 S., R. 7 E., at Orchard, 10 miles northeast of Mountain Home.	0
Feb. 2	....do.....	....do.....	NW¼ sec. 16, T. 3 S., R. 7 E., above Mountain Home Reservoir, 4 miles northeast of Mountain Home.	0
June 26	....do.....	....do.....	....do.....	0
26	Canyon Creek.....	....do.....	SE¼ sec. 11, T. 2 S., R. 6 E., 3 miles below Syrup Creek and 8½ miles north of Mountain Home.	a85

a Estimated.

Bruneau River basin, Idaho

June 17	Jarbidge River....	Bruneau River.....	Sec. 15, T. 16 S., R. 9 E., ¾ mile above East Fork Jarbidge River and 12 miles west of Three Creek.	92.5
Oct. 19	Bruneau River.....	Snake River.....	Sec. 33, T. 12 S., R. 7 E., 1,000 ft above Indian Hot Springs, ½ mile below Jarbidge River, and 12 miles east of Grasmere.	49.6
June 23	....do.....	....do.....	....do.....	249
Oct. 19	Indian Hot Springs	Bruneau River.....	Sec. 33, T. 12 S., R. 7 E., 50 ft upstream from mouth and 12 miles east of Grasmere.	4.33
June 23	....do.....	....do.....	....do.....	4.21
24	Sheep Creek.....	....do.....	Sec. 5, T. 15 S., R. 6 E., at B. Ross Ranch, 9½ miles southeast of Tindall.	4.90
24	....do.....	....do.....	Sec. 15, T. 14 S., R. 6 E., at highway bridge, 8 miles southeast of Tindall.	6.06
24	Mary's Creek.....	Sheep Creek.....	Sec. 29, T. 13 S., R. 5 E., ½ mile west of Tindall and 1 mile above Tindall Ranch and site of former gaging station.	2.28
24	....do.....	....do.....	Sec. 11, T. 13 S., R. 5 E., at highway bridge, 4 miles northeast of Tindall.	1.31
Nov. 5	East Fork Bruneau River.	Bruneau River.....	NE¼ sec. 13, T. 14 S., R. 10 E., below diversions to John Salls Ranch, 10 miles north of Three Creek.	8.01
Dec. 3	....do.....	....do.....	....do.....	18.0
Jan. 12	....do.....	....do.....	....do.....	8.10
Feb. 15	....do.....	....do.....	....do.....	12.4

Miscellaneous discharge measurements in Snake River basin during water year October 1953 to September 1954--Continued

Bruneau River basin, Idaho--Continued

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
Mar. 22	East Fork Bruneau River.	Bruneau River.....	NE¼ sec. 13, T. 14 S., R. 10 E., below diversions to John Salls Ranch, 10 miles north of Three Creek.	12.6
Apr. 22	....do.....	....do.....	....do.....	14.6
May 12	....do.....	....do.....	....do.....	8.76
June 16	....do.....	....do.....	....do.....	28.3
July 20	....do.....	....do.....	....do.....	1.29
Aug. 11	....do.....	....do.....	....do.....	2.10
Sept.23	....do.....	....do.....	....do.....	2.73
Nov. 5	....do.....	....do.....	SW¼ sec. 23, T. 11 S., R. 9 E., at road crossing at Clover Flat Ranch, 28 miles northwest of Three Creek (flow includes diversions to Clover Flat Ranch).	8.20
Dec. 3	....do.....	....do.....	....do.....	4.82
Jan. 12	....do.....	....do.....	....do.....	8.18
Feb. 15	....do.....	....do.....	....do.....	11.8
Mar. 22	....do.....	....do.....	....do.....	13.3
Apr. 21	....do.....	....do.....	....do.....	18.8
May 11	....do.....	....do.....	....do.....	8.29
June 17	....do.....	....do.....	....do.....	28.5
July 19	....do.....	....do.....	....do.....	a.6
Aug. 11	....do.....	....do.....	....do.....	a.2
Sept.23	....do.....	....do.....	....do.....	1.73

a Estimated.

Owyhee River basin, Oreg.

Nov. 20	Crooked Creek.....	Owyhee River.....	At former gaging station near Rome....	26.3
Apr. 21	....do.....	....do.....	....do.....	25.2
May 24	....do.....	....do.....	....do.....	18.9
July 14	....do.....	....do.....	....do.....	24.2

Boise River basin, Idaho

Oct. 22	Boise River.....	Snake River.....	NW¼ sec. 11, T. 2 N., R. 3 E., ½ mile below Lucky Peak Dam and 8 miles below Moore Creek.	70.7
Dec. 7	....do.....	....do.....	....do.....	142
Jan. 15	....do.....	....do.....	....do.....	124
28	....do.....	....do.....	....do.....	192
Mar. 1	....do.....	....do.....	....do.....	2,340
24	....do.....	....do.....	....do.....	1,840
Apr. 21	....do.....	....do.....	....do.....	7,800
May 17	....do.....	....do.....	....do.....	6,760
June 19	....do.....	....do.....	....do.....	3,650
July 29	....do.....	....do.....	....do.....	4,140
Aug. 27	....do.....	....do.....	....do.....	2,080
Sept.30	....do.....	....do.....	....do.....	2,950
Feb. 1	....do.....	....do.....	NE¼ sec. 25, T. 4 N., R. 1 E., 1,000 ft downstream from Strawberry Glen Bridge and 5 miles northwest of Boise.	412

Malheur River basin, Oreg.

Feb. 23	Warm Springs Creek	North Fork Malheur River.	Near line between secs. 1 and 2, T. 19 S., R. 37 E., 2½ miles northeast of Beulah.	11.1
Apr. 20	....do.....	....do.....	....do.....	6.43
July 8	....do.....	....do.....	....do.....	2.59
Aug. 27	....do.....	....do.....	....do.....	2.54

Burnt River basin, Oreg.

Oct. 6	North Fork Burnt River.	Burnt River.....	Sec. 3, T. 11 S., R. 36 E., at road bridge 9 miles southwest of Sumpter.	0.8
Apr. 14	Middle Fork Burnt River.	....do.....	NW¼ sec. 22, T. 12 S., R. 36 E., at highway bridge 7 miles northwest of Unity.	9.5

Powder River basin, Oreg.

Sept. 3	Powder River.....	Snake River.....	At former gaging station near Haines..	6.88
Jan. 5	Wolf Creek.....	Powder River.....	At former gaging station near North Powder.	3.55
Sept. 3	....do.....	....do.....	....do.....	1.42
Aug. 5	Eagle Creek.....	....do.....	Sec. 7, T. 8 S., R. 45 E., above Skull Creek, 6 miles northwest of Newbridge.	128
Sept.14	....do.....	....do.....	Sec. 20, T. 8 S., R. 45 E., 4 miles northwest of Newbridge.	91.1

Imnaha River basin, Oreg.

Nov. 3	Imnaha River.....	Snake River.....	At former gaging station above Gumboot Creek.	67.7
Sept. 8	....do.....	....do.....	....do.....	118

Grande Ronde River basin, Oreg.

July 29	Grande Ronde River	Snake River.....	Sec. 36, T. 3 S., R. 35 E., above Meadow Creek, 2 miles northeast of Starkey.	26.4
Sept. 3	Indian Creek.....	Grande Ronde River	At former gaging station near Imbler..	7.34
Apr. 6	Phillips Creek....	....do.....	SE¼NW¼ sec. 16, T. 1 N., R. 39 E., at highway bridge, 1 mile west of Elgin.	145

Miscellaneous discharge measurements in Snake River basin during water year October 1953 to September 1954--Continued

Grande Ronde River basin, Oreg.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
Sept. 7	Lookingglass Creek	Grande Ronde River	Mouth, near Rondowa.....	65.0
Aug. 6	Minam River.....	Wallowa River.....	Mouth, at Minam.....	170

Palouse River basin, Wash.

Mar. 16	South Fork Palouse River.	Palouse River.....	South central part of sec. 16, T. 14 N., R. 45 E., 2½ miles southeast of Pullman.	14.6
16	Paradise Creek....	South Fork Palouse River.	SE¼ sec. 3, T. 14 N., R. 45 E., 2½ miles east of Pullman.	7.20
17	....do.....	....do.....	SW¼ sec. 4, T. 14 N., R. 45 E., at former gaging station, 1 mile southeast of Pullman.	6.68
17	South Fork Palouse River.	Palouse River.....	NE¼ sec. 6, T. 14 N., R. 45 E., at former gaging station at State Street crossing, at Pullman.	28.4
16	Missouri Flat Creek.	South Fork Palouse River.	NE¼ sec. 29, T. 15 N., R. 45 E., above small tributary, at Kitsmiller.	3.34
17	....do.....	....do.....	NE¼ sec. 6, T. 14 N., R. 45 E., at site of former gaging station at State Street crossing at Pullman.	4.00
16	Fourmile Creek....	....do.....	NW¼NE¼ sec. 32, T. 16 N., R. 45 E., about 500 ft below county bridge and 4½ miles northeast of Albion.	10.5
17	....do.....	....do.....	SW¼NE¼ sec. 33, T. 16 N., R. 43 E., at site of former gaging station, ¾ mile north of Shawnee.	17.0

The following table contains determinations of peak discharge made at crest stage by indirect methods at points other than regular gaging stations in the area covered by this report.

Miscellaneous determinations of peak discharge during water year October 1953 to September 1954

Date	Stream	Tributary to--	Locality	Discharge (cfs)
June 26	Wildhorse Creek...	East Fork Big Lost River.	In NE¼ sec. 28, T. 6 N., R. 20 E. (unsurveyed), 0.7 mile above Wildhorse Park, 5 miles south of Wildhorse ranger station, and 25 miles west of Mackay, Idaho.	3,490
26	Fall Creek.....	Wildhorse Creek...	In SE¼ sec. 10, T. 6 N., R. 20 E. (unsurveyed), 0.5 mile above mouth, 2½ miles southeast of Wildhorse ranger station, and 23 miles west of Mackay, Idaho.	2,160
Aug. 24	Clayton Gulch.....	Alpowa Creek.....	NW¼SE¼ sec. 16, T. 11 N., R. 44 E., 1 mile east of Alpowa School and 12 miles west of Clarkston, Wash.	1,600
19	Unnamed stream....	Mud Lake.....	NW¼ sec. 24, T. 20 N., R. 39 E., about 3 miles east of Lamont, Wash.	1,140

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U. S. GOVERNMENT PRINTING OFFICE : 1956 O - 388996