Surface Water Supply of the United States 1953

Part 13. Snake River Basin

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

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

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PREFACE

This report was prepared by the Geological Survey in cooperation with the States of Idaho, Oregon, Utah, Washington, and Wyoming, and with other agencies, by personnel of the Water Resources Division, 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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Lynn Crandall ---------- Idaho Falls, Idaho
T. R. Newell ---------- Boise, Idaho
K. N. Phillips ---------- Portland, Oreg.
F. M. Veatch ---------- Tacoma, Wash.
M. T. Wilson ---------- Salt Lake City, Utah

CALENDAR FOR WATER YEAR 1953

OCTOBER 1952

S	M	T	W	T	F	S
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5	6	7	8	9	10	11
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NOVEMBER 1952

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DECEMBER 1952

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JANUARY 1953

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FEBRUARY 1953

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MARCH 1953

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APRIL 1953

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MAY 1953

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JUNE 1953

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JULY 1953

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AUGUST 1953

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SEPTEMBER 1953

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SURFACE WATER SUPPLY OF SNAKE RIVER BASIN, 1953

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, 1953. Since 1888, when the United States Geological Survey first studied streamflow in relation to problems of irrigation, similar measurements have been made at more than 12,800 gaging stations in the 48 States and at many others in the Territories of Alaska and Hawaii. On September 30, 1953, 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 1953 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, T. B. Murray, director, succeeded by Ross Leonard; Idaho Water District 41; T. C. Woods, watermaster; and Crane Creek Administration Board, F. R. Robinson, president.

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.

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 17 gaging stations, of which 10 were in Idaho, 3 in Oregon, and 4 in Wyoming.

Assistance was also furnished by the Forest Service of the Department of Agriculture and the 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	207 Federal Building.
Wyoming e/	Denver, Colo.	Denver Federal Center.

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

b/ Stations on Snake River between Irwin and Milner, stations on tributaries of Snake River above American Falls Reservoir, diversions from Snake River at and above Milner, and Grassy Lake, Jackson Lake, 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 and Jordan Creek above Lone Tree Creek, near Jordan Valley.

e/ Except for Pacific Creek near Moran, Buffalo Fork near Moran, Gros Ventre River at Kelly, Hoback River near Jackson, Grassy Lake, Jackson Lake, and Snake River at Moran 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 curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs, and by other methods), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating 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, SNAKE RIVER NEAR MURPHY, 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 1953 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). 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 values for the maximum day and the minimum day for each month are underlined. If the value is repeated, it is underlined only on the first day of its occurrence.

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

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

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

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

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

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

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

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

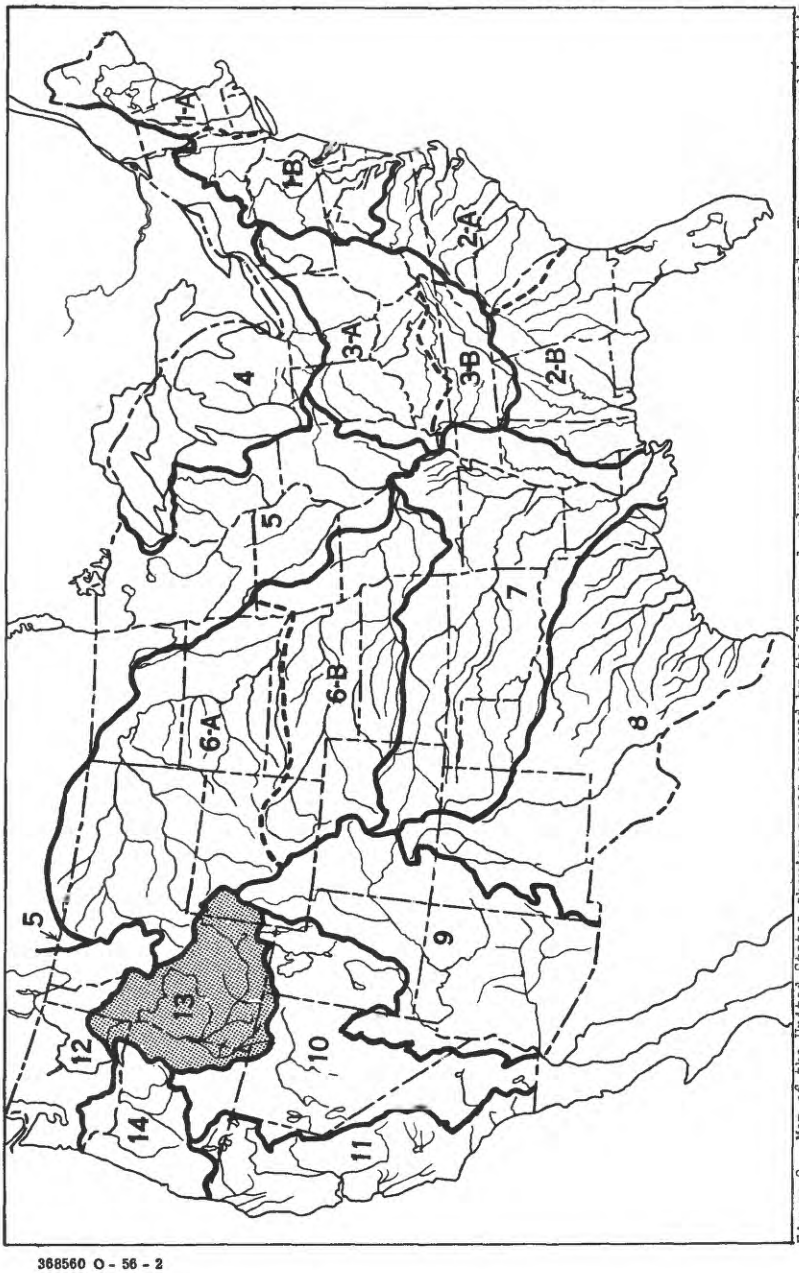

Figure 2.--Map of the United States showing areas covered by the 18 annual volumes on surface-water supply. The area covered by this report is shaded.

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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, 1899-1953

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

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 1952 to September 1953 by agencies other than the Geological Survey. The records of these stations are not contained in publications of the Geological Survey, nor have they been published elsewhere.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
American Falls Reservoir, inflow to.	Near American Falls, Idaho.....	1927-28, 1932-53	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.	1951-53	Oregon State engineer.
Do.....	NW¼ sec. 13, T. 13 S., R. 36 E., 200 ft below Whited Reservoir, 2¾ miles west of Unity, Oreg.	1951-53	Do.
Malheur River.....	SW¼ sec. 32, T. 20 S., R. 41 E., near Namorf, Oreg.	1931-53†	Do.
Do.....	SW¼ sec. 21, T. 18 S., R. 45 E., below Nevada Dam, near Vale, Oreg.	1936-42, 1944-53†	Do.
Snake River tributaries..	Near Irwin, Idaho.....	1940-53‡	Idaho Water District 36.
Teton basin tributaries..	Near Driggs, Idaho.....	1934-53‡	Do.

† Records for some earlier years published in water-supply papers of the Geological Survey.
‡ Fragmentary.
Note.--Of the records for the stations operated by the Oregon State engineer, those for 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 1942-53 have not been published. Records for the stations operated by Idaho Water District 36 are published in the annual reports of that organization.

HYDROLOGIC CONDITIONS

The water year 1953 was characterized by normal to well above normal runoff over most of the Snake River basin. No noteworthy floods occurred during the water year although runoff for months of June and July were in general the highest for several years. For two key gaging stations in the area covered by this report, a comparison of monthly and annual mean discharges during the 1953 water year with the median discharge for the 25-year period 1921-45 is shown in figure 3 below.

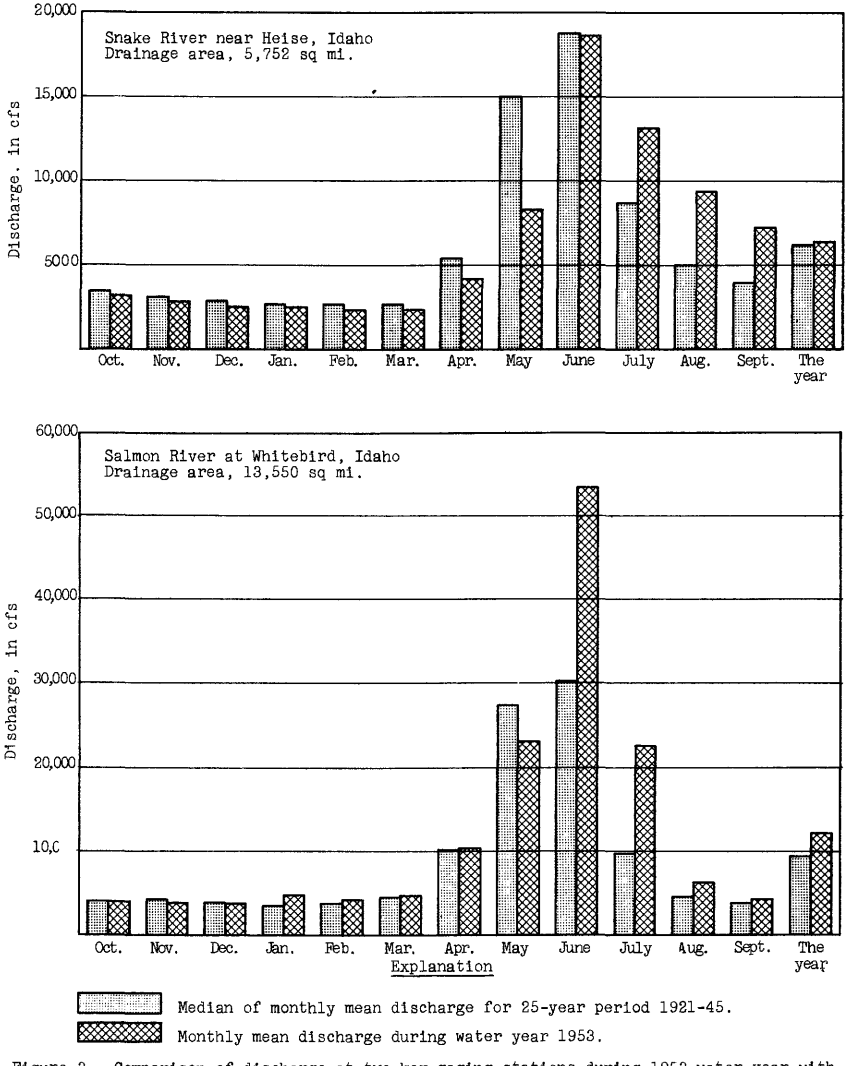

Figure 3.--Comparison of discharge at two key gaging stations during 1953 water year with median discharge for 25-year period.

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 1953 (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, 851,330 acre-ft July 1 (elevation, 6,769.17 ft); minimum, 232,430 acre-ft Sept. 30 (elevation, 6,742.49 ft).
1908-53: 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.

Usable contents at 8 a.m., in acre-feet, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	282,360	302,050	317,680	348,170	388,910	417,740	442,820	488,090	599,280	851,330	676,760	424,730
2	283,190	302,480	318,110	348,600	389,800	419,540	443,730	490,390	608,830	850,820	665,840	417,970
3	284,030	302,900	318,540	349,920	390,910	420,900	444,410	492,240	620,530	849,790	657,120	411,460
4	284,450	303,540	319,180	350,570	392,460	421,800	445,090	494,550	629,650	849,790	648,400	404,530
5	285,300	303,960	319,610	351,450	393,570	422,480	445,700	497,320	638,780	849,790	638,300	397,150
6	285,720	304,600	320,250	352,110	395,140	423,150	446,910	501,240	649,620	849,790	634,460	390,240
7	286,150	305,240	321,750	353,420	396,700	423,830	448,050	506,550	658,090	849,790	636,380	382,270
8	286,780	306,300	323,900	354,740	397,820	424,280	450,320	511,660	666,810	849,020	628,920	376,950
9	287,420	306,300	324,970	356,280	398,710	424,960	451,000	516,540	675,790	847,740	617,670	369,870
10	288,060	306,730	326,260	358,250	399,830	425,410	451,460	520,730	686,280	846,210	606,200	362,850
11	288,900	307,160	327,990	359,570	400,730	426,090	451,910	523,520	699,460	844,930	595,730	355,400
12	289,540	307,810	329,290	360,660	401,170	426,540	452,600	526,300	714,190	843,920	585,290	346,650
13	290,180	308,450	330,160	362,200	401,620	427,210	453,960	527,700	733,920	840,350	575,570	336,450
14	290,810	309,090	331,030	363,950	402,290	427,660	455,320	527,930	751,760	837,300	565,440	327,550
15	291,240	309,950	331,680	365,270	404,080	428,340	455,780	527,230	768,200	833,740	556,020	318,750
16	291,870	311,240	332,330	366,140	404,970	429,020	456,230	522,580	782,720	829,920	546,870	310,600
17	292,300	311,670	332,980	367,460	406,990	429,700	456,920	517,470	796,260	824,830	539,150	302,690
18	292,930	312,100	333,850	369,870	408,550	430,150	457,370	514,220	810,920	818,490	531,190	295,050
19	293,570	312,530	335,370	373,630	409,450	431,720	458,050	516,540	825,090	808,900	524,210	287,840
20	294,420	313,170	336,680	376,070	410,120	433,300	459,190	522,580	835,260	799,800	517,470	279,630
21	295,050	313,810	338,400	376,950	410,560	434,660	460,550	527,000	842,640	789,490	510,500	273,140
22	295,690	314,240	339,270	377,620	411,240	435,330	461,700	533,070	849,020	780,210	502,400	267,280
23	296,330	314,670	340,140	378,500	411,910	436,010	463,530	537,510	850,560	770,440	494,550	261,440
24	296,960	315,320	340,790	379,830	412,580	436,910	465,600	542,190	851,070	760,230	486,470	256,480
25	297,810	315,750	341,440	381,160	413,690	437,810	467,660	546,400	850,300	749,770	477,970	251,100
26	298,450	316,180	342,090	382,490	414,590	438,720	470,180	550,150	849,530	738,120	470,640	246,340
27	299,080	316,390	342,960	383,380	415,490	439,410	473,390	554,370	849,530	728,480	462,850	241,200
28	299,720	316,820	343,830	384,260	416,610	440,090	477,050	559,790	849,790	718,370	455,100	236,300
29	300,360	317,030	344,700	385,370	-	440,770	481,860	569,450	850,050	708,540	447,360	232,840
30	301,210	317,250	345,780	386,480	-	441,230	485,060	580,310	851,070	698,720	439,860	232,430
31	301,630	-	347,300	388,030	-	441,910	-	589,800	-	687,250	431,950	-

Monthly elevation and usable contents, water year October 1952 to September 1953

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	6,744.87	281,730	-
Oct. 31	6,745.81	301,630	+19,900
Nov. 30	6,746.54	317,250	+15,620
Dec. 31	6,747.93	347,300	+30,050
Calendar year 1952	-	-	-343,120
Jan. 31	6,749.78	388,030	+40,730
Feb. 28	6,751.06	416,610	+28,580
Mar. 31	6,752.18	441,910	+25,300
Apr. 30	6,754.07	485,060	+43,150
May 31	6,758.55	589,800	+104,740
June 30	6,769.16	851,070	+261,270
July 31	6,762.60	687,250	-163,820
Aug. 31	6,751.74	431,950	-255,300
Sept.30	6,742.49	232,430	-199,520
Water year 1952-53	-	-	-49,300

† 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 1953. 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.--50 years, 1,431 cfs.

Extremes.--Maximum discharge during year, 7,030 cfs July 30, 31 (gage height, 8.49 ft); minimum daily, 5 cfs Oct. 14 to Dec. 31.
1903-53: 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 probably considerably higher than that of July 12, 1918.

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

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

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet pser second)
(Shifting-control method used Sept. 1-29)

1.0	3	3.5	860
1.1	8	4.0	1,210
1.3	28	5.0	2,110
1.6	70	6.0	3,250
2.0	168	7.0	4,670
2.5	345	8.0	6,300
3.0	580	9.0	8,050

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	5	5	6	6	7	7	23	38	4,610	7,000	4,520
2	38	5	5	6	6	7	7	23	38	4,550	6,720	4,430
3	34	5	5	6	6	7	7	24	38	3,720	5,990	4,460
4	34	5	5	6	6	7	7	26	38	3,300	5,980	4,430
5	34	5	5	6	6	7	7	27	39	3,300	4,120	4,240
6	33	5	5	6	6	7	7	27	40	3,300	112	4,220
7	33	5	5	6	6	7	7	26	40	3,300	3,060	4,190
8	33	5	5	6	6	7	7	26	40	3,300	6,710	4,060
9	32	5	5	6	6	7	7	23	40	3,290	6,880	4,240
10	30	5	5	6	6	7	7	22	40	3,280	6,620	4,560
11	30	5	5	6	6	7	7	22	41	3,380	6,250	4,800
12	*26	5	5	6	6	7	7	163	41	3,790	6,270	5,650
13	14	5	5	6	6	7	7	887	644	3,780	6,100	5,600
14	5	5	5	6	6	7	7	1,660	1,040	3,840	5,990	5,330
15	5	5	5	6	6	7	7	3,680	1,050	4,010	5,700	4,930
16	5	5	5	6	6	7	7	5,030	1,060	4,240	5,280	4,780
17	5	5	5	6	6	7	7	5,010	1,060	4,800	4,840	4,730
18	5	5	5	6	6	7	7	3,410	1,380	5,960	*4,430	4,600
19	5	5	5	6	6	7	7	1,590	2,320	6,950	4,440	4,360
20	5	5	5	6	6	7	7	1,100	2,330	6,640	4,300	4,060
21	5	5	5	6	6	7	7	618	2,340	6,180	4,640	3,740
22	5	5	5	6	6	7	8	48	*4,410	6,400	4,920	3,390
23	5	5	5	6	6	7	8	47	5,980	6,690	4,930	3,100
24	5	5	5	6	6	7	10	44	6,120	6,860	4,920	2,880
25	5	5	5	6	6	7	13	40	5,060	6,900	4,800	2,930
26	5	5	5	6	6	7	13	41	4,070	6,910	4,680	*2,760
27	5	5	5	6	6	7	13	41	3,770	6,760	4,740	2,980
28	5	5	5	6	6	7	17	39	3,740	6,540	4,740	2,340
29	5	5	5	6	-	7	21	39	3,580	6,620	4,730	1,290
30	5	5	5	6	-	7	24	38	3,700	6,900	4,720	25
31	5	-	5	6	-	7	-	38	-	7,000	4,670	-
Total	499	150	155	186	168	217	274	23,832	54,147	157 100	159,282	117,625
Mean	16.1	5.0	5.0	6.0	6.0	7.0	9.1	769	1,805	5 068	5,138	3,921
Ac-ft	990	298	307	369	333	430	543	47,270	107,400	311,600	31,5900	233,300

Calendar year 1952: Max 7,440 Min 5 Mean 2,104 Ac-ft 1,527,000
Water year 1952-53: Max 7,000 Min 5 Mean 1,407 Ac-ft 1,019,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 9, 10, 22-27, Dec. 1 to Mar. 13 (no gage-height record for many days; discharge computed on basis of gate operation at lake outlet). Discharge computed from stage-gage readings Oct. 12 to May 11.

Pacific Creek near Moran, Wyo.

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

Drainage area.--160 sq mi.

Records available.--July to November 1906 (gage heights only), July 1917 to September 1918 (no winter records), September 1944 to September 1953.

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.--9 years (1944-53), 273 cfs.

Extremes.--Maximum discharge during year, 2,760 cfs June 15 (gage height, 4.78 ft); minimum daily, 24 cfs Nov. 29.
1917-18, 1944-53: Maximum discharge observed, 3,030 cfs June 15, 1918 (gage height, 3.98 ft site and datum then in use); minimum daily, that of Nov. 29, 1952.

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

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54	42	27	43	43	36	55	225	1,080	928	111	72
2	52	38	28	42	42	34	54	200	1,240	851	132	87
3	52	35	29	45	43	32	52	196	1,280	790	137	92
4	52	35	31	43	44	37	54	*217	1,080	713	116	80
5	52	35	32	40	44	35	55	294	1,210	668	107	68
6	52	37	33	43	43	34	55	472	*1,050	605	103	66
7	52	36	*34	44	43	36	58	632	1,230	560	98	62
8	51	34	38	43	43	34	57	605	1,300	*504	*94	61
9	51	34	39	45	43	38	52	544	1,340	458	94	60
10	48	34	40	46	38	*37	52	428	1,880	458	88	58
11	48	34	42	47	35	39	50	360	2,180	458	88	57
12	48	34	43	46	33	39	*50	312	2,280	386	85	55
13	48	34	42	47	37	40	48	289	2,290	353	85	54
14	48	34	40	46	42	38	52	283	2,440	312	83	54
15	44	35	37	44	43	37	54	329	2,420	283	88	54
16	45	34	35	41	41	40	54	428	2,180	258	123	54
17	45	34	38	43	39	38	75	614	2,140	238	101	61
18	44	34	42	46	38	36	90	770	2,100	221	94	*62
19	44	34	43	48	36	39	90	851	2,000	208	90	58
20	44	34	44	48	33	40	96	862	1,750	185	85	55
21	44	34	44	*47	33	39	111	780	1,600	169	83	54
22	*45	32	38	44	34	38	127	632	1,550	162	83	52
23	44	29	35	46	37	38	146	536	1,530	156	80	52
24	44	28	31	44	35	40	156	504	1,470	151	78	52
25	44	27	28	42	34	42	189	442	1,200	146	75	52
26	44	27	29	44	36	45	263	488	1,100	137	75	50
27	43	26	31	42	38	47	340	578	1,010	130	75	50
28	43	25	34	40	40	50	360	873	962	127	75	48
29	42	24	37	42	-	53	306	1,100	962	127	73	47
30	43	26	40	43	-	55	263	862	950	125	72	47
31	42	-	42	43	-	57	-	840	-	118	70	-
Total	1,452	979	1,126	1,367	1,090	1,243	3,464	16,546	46,804	10,985	2,841	1,774
Mean	46.8	32.6	36.3	44.1	38.9	40.1	115	534	1,560	354	91.6	59.1
Cfsm	0.292	0.204	0.227	0.276	0.243	0.251	0.719	3.34	9.75	2.21	0.572	0.369
In.	0.34	0.23	0.26	0.32	0.25	0.29	0.80	3.85	10.88	2.55	0.66	0.41
Ac-ft	2,880	1,940	2,230	2,710	2,160	2,470	6,870	32,820	92,830	21,790	5,640	3,520

Calendar year 1952: Max 2,240 Min 24 Mean 292 Cfsm 1.82 In. 24.83 Ac-ft 211,800
Water year 1952-53: Max 2,440 Min 24 Mean 246 Cfsm 1.54 In. 20.84 Ac-ft 177,900

Peak discharge (base, 1,300 cfs).--June 3 (2 a.m.) 1,470 cfs (3.86 ft); June 15 (3 a.m.) 2,760 cfs (4.78 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 3, 4, 9-12, 19, Nov. 22 to about Mar. 30 (no gage-height record Nov. 26 to Dec. 6, Jan. 2-20, Jan. 22 to Mar. 9, Mar. 13-30; discharge estimated on basis of 3 discharge measurements, weather records, and records for stations on nearby streams).

Buffalo Fork near Moran, Wyo.

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

Drainage area.--378 sq mi.

Records available.--July to November 1906 (gage heights only), July 1917 to September 1918 (no winter records), September 1944 to September 1953.

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 and at different datum. July 9, 1917, to Sept. 30, 1918, staff gages at sites within 500 ft upstream from present site and at different datums.

Average discharge.--9 years (1944-53), 611 cfs.

Extremes.--Maximum discharge during year, 4,810 cfs June 19 (gage height, 5.89 ft); minimum daily, 105 cfs Nov. 29, Dec. 26, Feb. 12; minimum gage height, 0.81 ft sometime during period Nov. 7 to Dec. 6.

1917-18, 1944-53: Maximum discharge observed, 5,840 cfs June 13, 1918 (gage height, 6.78 ft, datum then in use), from discharge measurement; minimum recorded, 86 cfs Dec. 17, 1946 (gage height, 0.95 ft), but may have been less during periods of ice effect.

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

Rating table, water year 1952-53, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 25 to Sept. 30)

1.0	148	3.0	1,300
1.5	317	4.0	2,370
2.0	543	5.7	4,560
2.5	865		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	206	177	120	120	130	130	160	345	1,520	2,730	523	268
2	206	162	130	120	130	130	155	313	1,720	2,620	565	283
3	199	160	135	120	130	120	152	290	1,660	2,570	604	341
4	199	155	135	120	130	130	152	*290	1,370	2,530	507	290
5	193	155	135	120	130	130	155	325	1,470	2,530	473	272
6	190	155	140	120	130	130	160	426	1,290	2,390	444	265
7	190	160	*140	120	130	130	165	587	1,340	2,350	454	257
8	190	160	140	125	130	130	150	570	1,490	*2,160	*412	254
9	190	155	140	130	120	130	145	502	1,530	2,080	404	254
10	190	150	142	130	115	*130	140	426	*2,120	2,060	386	250
11	190	148	143	130	110	130	137	382	2,720	1,920	378	247
12	190	145	143	130	105	130	*138	345	2,970	1,720	365	243
13	190	150	145	130	120	130	138	329	3,470	1,650	349	240
14	187	155	148	130	135	130	138	325	3,910	1,570	345	236
15	177	160	140	120	130	130	140	345	3,800	1,510	345	233
16	187	160	140	120	130	130	145	412	3,530	1,470	365	233
17	187	160	142	120	130	130	152	533	3,700	1,310	345	240
18	183	160	145	120	130	130	160	701	3,960	1,160	329	*243
19	187	160	148	120	120	130	160	858	4,450	1,010	329	226
20	193	160	148	120	115	130	174	873	4,110	970	325	219
21	190	160	148	*120	110	130	206	835	3,470	897	317	212
22	*187	160	148	120	120	130	261	670	3,280	776	317	212
23	187	155	130	125	120	130	329	576	3,360	727	306	212
24	183	150	120	125	110	130	337	538	3,440	695	298	209
25	180	135	108	125	110	130	357	487	2,780	682	290	203
26	180	130	105	130	120	130	426	533	2,360	639	283	199
27	180	120	110	130	120	140	497	610	2,100	616	283	199
28	174	110	120	130	130	140	492	1,090	2,070	604	279	196
29	174	105	120	130	-	140	440	1,790	2,240	604	272	196
30	180	110	120	130	-	150	365	1,350	2,480	570	268	196
31	174	-	120	130	-	160	-	1,160	-	543	268	-
Total	5,813	4,482	4,148	3,860	3,440	4,100	6,726	18,816	79,710	45,663	11,428	7,128
Mean	188	149	134	125	123	132	224	607	2,657	1,473	369	238
Cfsm	0.497	0.394	0.354	0.331	0.325	0.349	0.593	1.61	7.03	3.90	0.976	0.630
In.	0.57	0.44	0.41	0.38	0.34	0.40	0.66	1.85	7.84	4.49	1.12	0.70
Ac-ft	11,530	8,890	8,230	7,660	6,820	8,130	13,340	37,320	158,100	90,570	22,670	14,140

Calendar year 1952: Max 4,150 Min 105 Mean 596 Cfsm 1.58 In. 21.46 Ac-ft 432,700
Water year 1952-53: Max 4,450 Min 105 Mean 535 Cfsm 1.42 In. 19.20 Ac-ft 387,400

Peak discharge (base, 3,100 cfs).--June 19 (2 p.m.) 4,810 cfs (5.89 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 3 to Apr. 17 (no gage-height record Nov. 3 to Dec. 6, Jan. 17-20, Feb. 16 to Mar. 9; discharge estimated on basis of weather records, 4 discharge measurements, and records for Gros Ventre River at Kelly and Hoback River near Jackson).

Gros Ventre River at Kelly, Wyo.

Location.--Lat 43°37'20", long. 110°37'30", in NW¼ sec. 11, T. 42 N., R. 115 W., on 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 1953.

Gage.--Staff gage read once daily. Altitude of gage is 6,750 ft (from topographic map). June 16 to Sept. 30, 1918, staff gage at site 1 mile upstream at different datum. Oct. 1, 1944, to Aug. 8, 1949, wire-weight gage on bridge 25 ft downstream at present datum. Aug. 9, 1949, to June 25, 1953, staff gage 10 ft upstream at present datum.

Average discharge.--9 years (1944-53), 481 cfs.

Extremes.--Maximum discharge observed during year, 3,140 cfs June 15 (gage height, 5.95 ft); minimum observed, 104 cfs Nov. 29 (gage height, 0.34 ft).
1918, 1944-53: Maximum discharge observed, 6,220 cfs June 16, 1918 (gage height, 9.95 ft, site and datum then in use); minimum observed, 102 cfs Dec. 16, 1944; minimum gage height observed, that of Nov. 29, 1952.
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 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 25				June 26 to Sept. 30			
0.3	99	3.0	927	0.5	135	2.0	588
.6	142	4.0	1,550	1.0	239	3.0	1,110
1.0	225	6.0	3,190	1.5	385	3.5	1,450
2.0	492						

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	193	168	112	144	147	140	174	400	1,100	1,200	337	167
2	193	168	120	125	149	139	176	343	1,340	1,200	331	167
3	191	160	126	144	151	139	168	315	1,440	1,200	364	177
4	189	153	129	142	153	146	170	*299	1,260	1,170	385	181
5	187	149	132	146	151	142	172	312	*1,240	1,140	350	184
6	182	151	136	147	160	151	172	359	1,340	1,110	312	177
7	180	153	140	147	147	136	180	456	1,190	*1,030	*289	163
8	180	155	*142	149	149	134	166	551	1,160	995	312	157
9	180	149	142	151	a140	136	170	565	1,130	968	244	153
10	178	146	144	151	132	*144	153	558	1,160	914	251	155
11	178	142	144	153	123	144	147	462	1,760	914	239	157
12	180	142	146	153	115	142	*149	419	2,150	835	228	153
13	180	144	149	153	146	146	149	378	2,650	809	216	151
14	180	149	151	156	160	136	151	356	2,990	773	207	149
15	180	153	147	153	155	160	151	338	3,140	768	205	148
16	174	158	•142	156	149	140	151	343	2,840	733	205	157
17	172	156	146	149	144	140	149	392	2,610	683	207	163
18	174	155	147	153	147	153	153	456	2,540	612	203	163
19	174	155	151	156	135	142	155	548	2,730	566	198	*165
20	176	156	151	*153	123	146	158	627	2,700	492	198	153
21	*172	156	153	148	116	146	172	678	2,070	415	192	151
22	176	156	153	142	129	145	207	678	1,750	378	190	151
23	176	156	139	147	131	144	264	595	1,630	371	190	149
24	176	136	129	147	120	143	315	627	1,630	360	194	148
25	174	132	108	146	116	142	325	511	1,450	350	192	149
26	172	125	108	146	144	142	348	462	*1,420	337	186	146
27	170	120	118	147	139	147	381	477	1,180	324	181	146
28	168	112	125	149	142	151	427	544	1,110	350	177	144
29	168	104	140	142	-	155	448	1,070	1,110	364	175	140
30	166	108	140	147	-	160	422	1,220	1,140	385	173	142
31	170	-	142	147	-	170	-	1,010	-	364	169	-
Total	5,509	4,367	4,252	4,589	3,913	4,501	6,523	16,349	52,960	22,110	7,300	4,706
Mean	178	146	137	148	140	145	217	527	1,765	713	235	157
Cfsm	0.286	0.235	0.220	0.238	0.225	0.233	0.349	0.847	2.84	1.15	0.378	0.252
In.	0.33	0.26	0.25	0.27	0.23	0.27	0.39	0.98	3.17	1.33	0.44	0.28
Ac-ft	10,930	8,660	8,430	9,100	7,760	8,930	12,940	32,430	105,000	43,850	14,480	9,330

Calendar year 1952: Max 2,960 Min 104 Mean 445 Cfsm 0.715 In. 9.72 Ac-ft 323,200
Water year 1952-53: Max 3,140 Min 104 Mean 376 Cfsm 0.605 In. 8.20 Ac-ft 271,800

* 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 1953.

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.--8 years (1945-53), 733 cfs.

Extremes.--Maximum discharge observed during year, 4,080 cfs June 14, 19 (gage height, 6.04 ft); minimum daily, 138 cfs Nov. 29; minimum gage height, 2.22 ft Feb. 10, 25. 1917-18, 1944-53: 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 table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.1	145	4.0	1,460
2.4	235	5.0	2,550
2.7	391	6.0	3,980
3.0	600	6.1	4,150
3.5	1,000		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	271	248	b153	213	195	186	285	795	1,600	2,290	691	332
2	262	220	b160	202	198	177	266	707	1,690	2,270	683	356
3	262	202	b163	228	195	156	258	*691	1,800	2,180	771	344
4	262	198	b170	192	205	180	280	739	1,700	2,130	699	338
5	271	216	174	202	189	177	311	835	*1,850	2,090	615	332
6	253	235	205	209	192	161	296	1,010	1,850	2,020	570	322
7	262	216	216	213	171	171	290	1,250	1,740	*1,830	*556	311
8	253	213	*209	202	195	166	253	1,160	1,910	1,760	556	322
9	258	192	220	205	189	*183	266	1,090	1,760	1,710	526	301
10	253	198	213	213	152	177	248	886	2,070	1,680	505	290
11	266	205	220	205	b150	189	*258	803	2,620	1,560	484	301
12	244	216	235	195	b145	189	253	731	3,010	1,540	498	301
13	253	240	231	202	b160	192	258	675	3,550	1,500	470	290
14	253	231	220	198	171	183	253	660	4,080	1,430	456	280
15	244	244	205	183	189	180	240	707	3,810	1,400	443	280
16	228	220	174	171	171	195	253	779	3,650	1,340	512	290
17	244	202	220	195	183	189	271	954	3,620	1,250	477	280
18	256	216	213	205	189	174	296	1,040	3,880	1,120	443	271
19	253	231	231	209	166	192	311	1,250	4,080	1,060	470	*266
20	248	213	228	*198	b152	198	344	1,440	3,490	1,040	417	253
21	*253	235	240	195	b142	198	430	1,220	2,900	971	430	253
22	248	220	213	174	b152	189	660	1,060	2,750	878	410	262
23	244	213	b190	198	161	183	869	1,070	2,900	827	404	262
24	244	174	b170	180	b152	198	835	1,090	3,010	819	391	262
25	235	b160	b145	171	152	205	946	1,090	2,500	795	379	253
26	235	b158	b145	189	168	216	1,060	1,480	2,200	771	391	253
27	235	b153	b170	174	186	224	1,270	1,290	1,960	731	379	253
28	228	b145	b185	166	195	240	1,140	1,400	2,020	715	362	253
29	228	b138	205	189	-	253	1,070	1,960	2,180	803	367	244
30	235	b145	209	192	-	262	886	1,600	2,200	755	350	244
31	235	-	216	189	-	271	-	1,330	-	715	344	-
Total	7,718	6,097	6,148	6,057	4,865	6,054	14,656	32,792	78,380	41,980	15,049	8,599
Mean	249	203	198	195	174	195	489	1,058	2,613	1,354	485	287
Cfsm	0.441	0.360	0.351	0.346	0.309	0.346	0.867	1.88	4.63	2.40	0.860	0.509
In.	0.51	0.40	0.41	0.40	0.32	0.40	0.97	2.16	5.17	2.77	0.99	0.57
Ac-ft	15,310	12,090	12,190	12,010	9,650	12,010	29,070	65,040	155,500	83,270	29,850	17,060

Calendar year 1952: Max 3,720 Min 138 Mean 744 Cfsm 1.32 In. 17.95 Ac-ft 540,200
Water year 1952-53: Max 4,080 Min 138 Mean 626 Cfsm 1.11 In. 15.07 Ac-ft 453,100

* 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 to September 1953. 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. March 1937 to March 1939 at site 6½ miles downstream.

Extremes.--Maximum discharge during period July to September, 11,100 cfs July 19 (gage height, 7.23 ft); minimum, 2,310 cfs Sept. 30 (gage height, 3.50 ft).
1937-39, 1953: Maximum discharge, 18,600 cfs June 23, 1938 (gage height, 8.73 ft, site and datum then in use); minimum, 898 cfs Jan. 5, 1938 (gage height, 0.30 ft, site and datum then in use), caused by ice jam upstream.

Remarks.--Records excellent. Flow partly regulated by Jackson Lake (see p. 13). Some diversions from tributaries above station.

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

Rating table, July 17 to Sept. 30, 1953 (gage height, in feet, and discharge, in cubic feet per second)

3.5	2,310	6.0	7,400
4.0	3,150	7.0	10,400
5.0	4,960	7.3	11,400

Discharge, in cubic feet per second, July to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										-	9,920	6,140
2										-	10,100	6,140
3										-	9,860	6,160
4										-	8,810	6,140
5										-	9,050	5,970
6										-	*5,890	5,770
7										-	3,560	5,730
8										-	6,240	5,650
9										-	9,050	5,520
10										-	9,140	5,730
11										-	8,600	*5,920
12										-	8,450	6,310
13										-	8,250	6,920
14										-	8,100	6,770
15										-	8,050	6,510
16										-	7,820	6,180
17										*9,540	7,320	6,110
18										9,820	6,790	6,060
19										10,700	6,560	5,850
20										11,000	6,410	5,630
21										*10,500	6,280	5,310
22										9,980	6,610	5,030
23										10,100	6,690	4,770
24										10,200	6,660	4,460
25										10,200	6,560	4,340
26										10,200	6,340	4,310
27										10,100	6,310	4,250
28										9,820	6,310	4,320
29										9,760	6,310	*3,830
30										9,890	6,260	3,120
31										9,920	6,240	-
Total										-	228,540	164,950
Mean										-	7,372	5,498
Ac-ft										-	453,300	327,200

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

* Discharge measurement made on this day.

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 September 1953.

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, 5,477 cfs.

Extremes.--Maximum discharge observed during year, 22,100 cfs June 19 (gage height, 9.09 ft); minimum observed, 1,240 cfs Dec. 27 (gage height, 2.83 ft).
1944-53: Maximum discharge observed, 24,500 cfs July 2, 1950, June 18, 1951; maximum gage height observed, 9.71 ft June 18, 1951; minimum daily discharge, 1,050 cfs Jan. 25-31, 1949; minimum gage height observed, 2.29 ft Mar. 6, Apr. 3, 1945.

Remarks.--Records good except those for periods of ice effect or 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.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,990	2,090	1,470	1,520	1,570	1,430	2,030	3,700	8,510	15,300	10,300	6,710
2	2,480	2,050	1,480	1,520	1,570	1,440	1,920	3,520	9,530	15,300	10,200	6,570
3	2,440	2,030	1,480	1,530	1,550	1,400	1,810	*3,470	9,330	14,500	10,100	6,730
4	2,420	1,990	1,480	1,550	1,540	1,440	1,900	3,680	9,270	13,300	9,370	6,680
5	2,440	1,940	1,480	1,550	1,550	1,450	2,010	3,930	10,500	13,100	9,730	6,710
6	2,400	1,920	1,500	1,590	1,570	1,470	1,970	4,590	*9,800	12,900	5,100	6,400
7	2,330	1,940	1,520	1,610	1,550	1,480	1,900	4,810	9,460	*12,700	*4,050	6,290
8	2,330	1,920	*1,520	1,590	1,520	1,500	1,810	5,350	9,900	12,300	5,750	6,120
9	2,270	1,900	1,540	1,630	1,470	1,500	1,790	4,950	9,630	11,800	9,530	6,010
10	2,230	1,900	1,600	1,680	1,450	1,520	1,770	4,450	11,400	11,900	8,940	6,290
11	2,190	1,880	1,620	1,730	1,450	*1,540	*1,700	4,070	14,700	11,500	8,870	6,400
12	2,230	1,840	1,620	1,730	1,450	1,540	1,720	3,770	16,900	11,400	9,040	7,050
13	2,190	1,880	1,620	1,750	1,450	1,570	1,660	3,770	18,500	11,100	9,000	7,410
14	2,190	1,880	1,620	1,730	1,450	1,520	1,640	4,760	20,200	10,700	8,670	7,200
15	2,170	1,900	1,620	1,730	1,450	1,450	1,610	5,550	21,500	10,700	8,190	6,880
16	2,150	1,820	1,620	1,720	1,450	1,520	1,750	5,750	20,600	10,600	7,970	6,680
17	2,170	1,800	1,620	1,680	1,450	1,550	1,820	9,170	20,700	10,400	7,720	6,620
18	2,190	1,800	1,620	1,700	1,400	1,450	1,920	9,900	20,800	10,900	7,200	6,590
19	2,210	1,800	1,620	1,680	1,400	1,500	2,010	8,900	22,100	11,200	7,260	*6,290
20	2,190	1,780	1,620	*1,660	1,350	1,540	2,250	7,910	21,100	11,700	6,940	6,070
21	2,170	1,780	1,650	1,610	1,350	1,540	2,900	7,690	18,300	10,800	6,940	5,680
22	2,190	1,750	1,680	1,550	1,400	1,520	3,860	6,150	17,100	10,500	7,320	5,400
23	2,150	1,700	1,600	1,550	1,350	1,450	4,280	5,350	18,000	10,700	7,230	5,150
24	2,150	1,550	1,450	1,540	1,350	1,480	4,230	4,810	20,200	10,600	7,170	5,050
25	*2,130	1,550	1,350	1,540	1,350	1,550	4,230	a4,800	*19,300	10,600	7,110	4,900
26	2,130	1,520	1,260	1,520	1,400	1,730	4,180	a4,800	15,500	10,500	a7,000	4,660
27	2,130	1,500	1,240	1,520	1,400	1,720	4,230	a5,700	14,200	10,500	a6,950	4,660
28	2,150	1,450	1,520	1,540	1,420	1,820	4,160	a6,700	13,800	10,200	6,910	a4,660
29	2,150	1,450	1,520	1,540	-	1,900	4,090	8,130	13,800	10,200	6,820	3,950
30	2,110	1,450	1,520	1,520	-	1,960	4,000	8,130	13,900	10,300	6,760	2,950
31	2,090	-	1,520	1,540	-	2,050	-	7,470	-	10,400	6,760	-
Total	69,760	53,760	47,580	49,850	40,680	48,570	77,150	175,730	458,530	358,600	240,900	178,760
Mean	2,250	1,792	1,535	1,608	1,452	1,567	2,572	5,669	15,280	11,570	7,771	5,959
Ac-ft	138,400	106,600	94,370	98,880	80,650	96,340	153,000	348,600	909,500	711,300	477,800	354,600

Calendar year 1952: Max 22,600 Min 1,240 Mean 6,077 Ac-ft 4,411,000
Water year 1952-53: Max 22,100 Min 1,240 Mean 4,931 Ac-ft 3,570,000

* Discharge measurement made on this day.
a Doubtful or no gage-height record; discharge estimated on basis of weather records and records for stations at Moran and near Irwin.
Note.--Stage-discharge relation affected by ice Nov. 17 to Dec. 26, Dec. 28 to Jan. 3, Feb. 10 to Mar. 2, Mar. 4.

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 1953 (no winter records 1933-35, 1936-37).

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

Average discharge.--17 years (1935-36, 1937-53), 38.0 cfs.

Extremes.--Maximum discharge during year, 275 cfs June 15 (gage height, 2.78 ft); minimum daily, 7.4 cfs Dec. 26, 27.
1932-53: 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 WSP 1217).

Revisions.--WSP 1123: Drainage area.

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 11-13)

Oct. 1 to June 13				June 14 to Sept. 30			
1.3	6.8	1.8	48	1.4	8	2.0	88
1.4	11	2.0	78	1.6	21	2.8	280
1.6	26	3.0	265	1.8	47		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	11	8.0	8.4	10	10	11	56	*112	86	26	15
2	13	11	8.0	8.4	10	9.2	11	48	117	86	28	15
3	13	11	7.6	8.6	10	9.2	12	43	112	86	26	15
4	13	12	7.6	8.6	10	9.0	12	46	115	84	25	15
5	13	12	7.6	9.0	10	8.9	12	56	130	88	25	14
6	13	12	8.0	9.2	10	8.9	11	81	124	86	23	14
7	13	13	8.0	9.2	10	9.3	11	89	126	*86	23	13
8	13	13	8.0	9.2	9.6	8.9	11	84	126	77	22	13
9	13	13	8.4	9.2	9.6	9.3	11	78	126	70	21	15
10	13	12	8.4	9.2	9.4	8.1	11	67	141	77	21	14
11	13	13	9.0	9.0	9.4	8.1	10	*61	165	73	21	14
12	13	12	9.0	9.0	9.6	7.6	9.7	55	185	66	20	14
13	13	11	9.0	8.8	10	7.6	9.7	54	225	62	*20	14
14	13	*11	9.0	8.6	10	7.6	9.7	52	*255	60	20	14
15	13	11	8.8	8.2	10	7.6	*9.7	56	260	58	21	14
16	12	11	9.0	*8.6	10	*8.1	10	62	250	55	20	14
17	12	11	*9.2	9.0	10	7.6	11	70	238	53	19	*14
18	12	11	9.2	9.0	10	7.6	10	80	215	51	19	13
19	12	11	9.0	9.0	9.6	7.6	10	78	200	46	19	13
20	12	11	8.8	9.0	9.0	7.6	14	88	185	44	18	13
21	12	11	8.6	9.4	9.4	7.6	32	84	168	41	17	13
22	12	11	8.4	9.6	9.4	9.7	48	83	158	39	17	12
23	*12	10	8.0	10	10	8.5	65	84	150	36	16	12
24	12	10	7.8	10	11	8.1	73	89	139	33	16	12
25	12	10	7.8	10	*11	8.9	80	80	114	31	15	12
26	12	9.0	7.4	9.6	11	9.3	100	83	99	31	16	12
27	12	9.0	7.4	9.2	11	9.7	104	92	84	31	15	12
28	12	8.6	7.6	10	10	10	117	105	86	31	15	12
29	12	8.6	7.8	10	-	12	91	114	92	28	15	12
30	12	8.0	8.0	10	-	12	75	105	86	27	15	12
31	12	-	8.2	10	-	11	-	102	-	28	15	-
Total	387	328.2	256.6	285.0	279.0	274.6	1,001.8	2,325	4,585	1,750	609	401
Mean	12.5	10.9	8.28	9.19	9.96	8.86	33.4	75.0	153	56.5	19.6	13.4
Ac-ft	768	651	509	565	553	545	1,990	4,610	9,090	3,470	1,210	795

Calendar year 1952: Max 301 Min 5.0 Mean 42.1 Ac-ft 30,610
Water year 1952-53: Max 260 Min 7.4 Mean 34.2 Ac-ft 24,760

Peak discharge (base, 170 cfs).--June 15 (9:30 a.m.) 275 cfs (2.78 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 2-5, 9-12, Dec. 17 to Mar. 4. No gage-height record Nov. 15 to Dec. 16 (stage-discharge relation affected by ice during most of period); discharge estimated on basis of 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 1953.

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.--20 years, 44.3 cfs.

Extremes.--Maximum discharge during year, 335 cfs June 17 (gage height, 2.70 ft); minimum, 11 cfs Dec. 12 (gage height, 1.17 ft).
1933-53: 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 period 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 1952-53 (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	2.8	338

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	20	16	16	16	15	18	34	*68	181	70	40
2	24	20	16	16	16	14	18	31	72	178	70	40
3	24	20	17	16	16	14	18	30	72	168	67	39
4	23	20	17	16	16	14	18	31	73	163	64	39
5	23	20	17	16	16	14	18	36	81	158	62	37
6	23	20	17	16	16	14	18	37	80	152	61	36
7	23	20	17	17	16	14	18	41	83	*150	60	36
8	23	20	17	17	16	14	18	43	89	139	58	36
9	23	20	16	17	16	14	18	43	94	124	57	35
10	23	20	16	18	16	14	18	41	112	121	55	35
11	22	20	16	17	16	14	18	*40	160	116	54	34
12	22	20	16	17	16	14	18	37	208	112	53	34
13	22	20	16	17	16	14	17	35	256	107	51	34
14	22	*20	16	18	16	14	17	34	*302	103	*50	34
15	22	20	16	17	16	13	*17	34	302	98	50	33
16	22	20	16	*17	16	*13	17	34	281	94	48	33
17	22	20	*16	16	16	13	18	35	302	90	48	*33
18	22	19	16	16	16	13	18	37	314	89	48	31
19	22	19	16	16	16	13	18	42	305	87	48	31
20	21	19	16	16	16	14	20	45	296	83	47	30
21	21	18	16	16	16	13	22	46	264	81	46	30
22	22	18	16	16	16	13	27	a43	244	80	45	30
23	*22	18	16	16	16	13	30	a44	244	76	45	30
24	21	18	16	16	16	13	31	a43	242	76	45	29
25	20	18	16	16	*16	14	34	a42	244	74	43	29
26	20	18	16	16	15	15	36	a45	211	74	43	29
27	20	18	16	16	15	16	39	a50	202	74	43	28
28	20	16	16	16	15	17	40	a58	191	74	43	28
29	20	16	16	16	-	18	39	a64	184	73	42	28
30	20	16	16	16	-	18	36	a63	181	72	41	28
31	20	-	16	16	-	18	-	a63	-	72	40	-
Total	678	571	502	508	445	444	692	1,301	5,757	3,339	1,597	989
Mean	21.9	19.0	16.2	16.4	15.9	14.3	23.1	42.0	192	108	51.5	33.0
Ac-ft	1,340	1,130	996	1,010	883	881	1,370	2,580	11,420	6,620	3,170	1,960

Calendar year 1952: Max 290 Min 14 Mean 50.4 Ac-ft 36,550
Water year 1952-53: Max 314 Min 13 Mean 46.1 Ac-ft 33,360

Peak discharge (base, 140 cfs).--June 17 (2:30 p.m.) 335 cfs (2.70 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 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 1953.

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

Average discharge.--10 years, 90.1 cfs.

Extremes.--Maximum discharge during year, 555 cfs June 19 (gage height, 3.18 ft), from rating curve extended above 360 cfs; minimum daily, 31 cfs Mar. 15, 18, Apr. 5.
1943-53: 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, see Remarks for this station in WSP 1217).

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 13 to July 31)

1.7	26	2.5	161
1.9	41	3.0	346
2.2	93	3.5	590

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	49	44	42	39	34	34	50	*106	333	113	64
2	52	48	44	42	39	36	34	46	117	328	111	64
3	52	49	45	42	39	36	33	45	115	324	108	64
4	52	49	47	42	39	36	33	50	111	324	104	62
5	51	49	47	49	39	35	31	54	122	320	102	62
6	52	49	47	47	38	35	34	58	122	315	100	60
7	51	49	47	47	38	36	34	62	119	*306	97	60
8	51	49	47	47	37	35	34	64	117	298	95	59
9	51	49	45	48	39	36	34	62	126	285	93	59
10	51	49	47	49	38	35	33	60	154	268	91	57
11	51	49	47	45	38	36	33	*57	249	249	87	57
12	48	49	47	51	37	35	34	*54	324	235	87	55
13	52	49	45	49	36	35	34	54	392	221	85	55
14	51	*51	45	45	37	36	32	54	*445	210	*83	55
15	51	49	48	47	36	31	*32	54	*416	197	83	55
16	51	49	47	*48	37	*37	33	55	369	184	83	54
17	49	49	*47	48	36	36	33	57	416	176	81	54
18	51	51	45	47	36	31	33	59	445	170	79	*55
19	47	51	42	48	36	35	34	62	475	161	79	55
20	52	47	47	45	36	34	36	69	426	154	79	54
21	49	47	42	45	36	35	38	66	351	149	77	55
22	49	49	47	45	35	32	42	62	355	142	77	55
23	*49	51	44	44	36	33	48	60	369	139	75	55
24	49	49	47	44	*36	34	50	62	374	137	73	54
25	49	49	43	42	36	34	52	60	315	135	73	54
26	48	48	43	45	35	34	56	60	315	130	71	54
27	51	48	43	41	34	34	60	68	302	128	69	52
28	48	45	43	41	35	34	60	91	311	126	69	51
29	49	44	43	40	-	34	58	108	324	126	68	51
30	49	44	42	40	-	35	52	93	333	122	66	51
31	49	-	42	40	-	33	-	89	-	122	66	-
Total	1,557	1,457	1,399	1,395	1,033	1,072	1,184	1,945	8,515	6,516	2,624	1,692
Mean	50.2	48.6	45.1	45.0	36.9	34.6	39.5	62.7	284	210	84.6	56.4
Ac-ft	3,090	2,890	2,770	2,770	2,050	2,130	2,350	3,860	16,890	12,920	5,200	3,360

Calendar year 1952: Max 410 Min 30 Mean 90.1 Ac-ft 65,390
Water year 1952-53: Max 475 Min 31 Mean 83.3 Ac-ft 60,280

Peak discharge (base, 390 cfs).--June 14 (5 a.m.) 515 cfs (3.10 ft); June 19 (3:30 a.m.) 555 cfs (3.18 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Nov. 27 to Dec. 8, Dec. 25 to Jan. 3, Apr. 17 to May 10; discharge estimated on basis of weather records, recorded range in stage, and records for nearby stations.

Salt River at Wyoming-Idaho State line

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

Drainage area.--890 sq mi.

Records available.--April 1934 to September 1953.

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

Average discharge.--19 years, 731 cfs.

Extremes.--Maximum discharge during year, 1,430 cfs June 3 (gage height, 3.04 ft); minimum daily, 414 cfs Mar. 3, 5, 6.
1934-53: 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 no gage-height record, which are good. Some diurnal fluctuation at low flow caused by many small powerplants 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 table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

1.6	390
2.0	575
3.0	1,390

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	614	608	560	520	485	429	647	897	1,160	654	647	582
2	608	608	540	500	490	424	647	833	*1,190	647	654	620
3	608	594	540	520	505	414	640	785	1,370	634	696	634
4	608	601	530	520	510	417	675	755	1,280	614	689	634
5	608	601	540	510	505	414	718	778	1,240	594	668	640
6	601	614	540	520	505	414	696	857	1,230	*594	668	640
7	608	627	540	520	495	417	675	988	1,220	601	668	661
8	608	620	530	520	490	417	627	945	1,370	601	661	654
9	614	614	520	520	485	420	620	873	1,280	601	661	654
10	614	608	530	505	470	420	588	817	1,240	647	647	647
11	620	608	520	505	456	424	575	762	1,220	668	634	634
12	614	608	520	515	470	424	569	*732	1,240	634	620	634
13	614	*614	520	515	456	429	557	710	1,260	627	*620	620
14	614	608	515	510	456	424	*551	710	1,220	640	627	608
15	620	620	515	*505	460	424	551	710	*1,230	640	640	601
16	634	601	*515	495	447	424	575	725	1,180	640	661	601
17	634	588	521	505	456	*429	661	762	1,080	640	675	*620
18	634	594	521	545	452	420	689	1,020	996	634	682	620
19	634	594	515	608	442	420	725	1,050	979	634	682	614
20	634	594	515	563	438	429	762	1,250	945	627	675	627
21	634	594	515	557	456	429	849	1,210	873	601	668	614
22	*634	588	515	533	465	420	988	1,170	841	582	654	608
23	634	563	515	521	434	429	1,080	1,160	793	575	640	594
24	627	569	495	515	*424	429	1,070	1,200	718	582	634	582
25	627	575	485	505	417	438	1,060	1,170	703	575	627	582
26	627	540	480	500	424	456	1,090	1,100	696	569	614	575
27	627	540	490	500	420	470	1,160	1,110	696	575	594	575
28	620	560	510	495	424	500	1,170	1,180	689	594	601	582
29	620	580	520	500	-	527	1,100	1,260	689	647	588	569
30	620	580	520	500	-	582	988	1,230	675	647	588	569
31	614	-	520	490	-	608	-	1,150	-	640	582	-
Total	19,227	17,813	16,112	16,037	12,937	13,721	23,303	29,899	31,303	19,158	19,965	18,395
Mean	620	594	520	517	462	443	777	964	1,043	618	644	613
Ac-ft	38,140	35,330	31,960	31,810	25,660	27,220	46,220	59,300	62,090	38,000	39,600	36,490

Calendar year 1952: Max 3,320 Min 434 Mean 874 Ac-ft 634,500
Water year 1952-53: Max 1,370 Min 414 Mean 652 Ac-ft 471,800

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 26 to Dec. 15, Dec. 26 to Jan. 14; discharge estimated on basis of weather records, recorded range in stage, and records for nearby stations.

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 1953. 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, 26,000 cfs June 19 (gage height, 11.96 ft); minimum, 1,660 cfs Dec. 26 (gage height, 4.60 ft).
1934-36, 1939-41, 1949-53: Maximum discharge, 28,800 cfs May 29, 1951 (gage height, 12.69 ft); minimum daily determined, 1,520 cfs Jan. 3, Mar. 15, 1941.
Flood during early June 1894 probably much higher than that of May 29, 1951.

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

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

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 28 to Sept. 30)

4.7	1,720	8.0	9,600
5.0	2,110	9.0	13,000
5.5	2,960	10.0	16,900
6.0	4,050	11.0	21,400
7.0	6,610	12.0	26,200

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,310	2,570	2,010	2,170	2,080	1,980	2,770	5,510	10,200	16,000	11,400	7,630
2	2,980	2,540	b2,100	2,110	2,100	2,000	2,680	4,990	11,400	16,800	11,600	7,660
3	2,920	2,490	b2,100	2,140	2,160	1,920	2,610	4,630	13,500	16,300	11,600	7,660
4	2,860	2,450	b2,050	2,140	2,230	1,920	2,680	4,660	12,300	15,200	10,700	7,550
5	2,830	2,490	*b2,000	2,120	2,220	1,920	2,850	5,070	12,200	14,700	10,500	7,460
6	2,810	2,490	b2,050	2,140	2,170	1,890	2,850	5,920	12,600	14,400	8,740	7,200
7	2,790	2,500	b2,150	2,170	2,120	1,890	2,750	6,970	11,900	14,000	5,480	7,140
8	2,790	2,490	2,240	2,160	2,110	1,900	2,630	7,110	12,900	13,600	7,230	7,090
9	2,750	2,400	2,170	2,120	2,070	1,920	2,500	6,810	12,500	13,300	10,400	6,950
10	2,750	2,360	2,160	2,280	1,930	1,960	2,420	6,110	13,400	*13,000	10,600	6,970
11	2,750	2,340	2,220	2,290	1,890	1,970	2,400	5,460	15,900	12,900	10,300	7,200
12	2,730	2,390	2,220	2,260	1,980	1,970	2,390	5,040	18,700	12,400	9,950	7,430
13	2,720	2,440	2,230	2,280	1,980	2,000	2,360	4,760	20,800	12,400	9,860	8,050
14	2,700	2,450	2,230	2,320	2,000	1,970	2,360	5,300	23,900	12,000	*9,660	7,990
15	2,660	2,490	2,200	2,220	2,030	1,900	2,290	6,260	25,500	11,900	9,630	7,720
16	2,680	2,450	2,120	2,120	1,970	1,900	2,320	8,380	24,500	11,800	9,540	7,400
17	2,680	2,390	2,160	2,180	1,980	1,930	2,560	10,400	*23,200	11,600	9,060	7,320
18	2,680	2,400	2,180	2,310	1,970	1,900	2,770	11,800	23,700	11,700	8,620	7,260
19	2,680	2,390	2,230	2,490	1,920	1,900	2,880	11,100	25,100	12,300	8,290	7,060
20	2,700	2,370	2,240	2,320	1,820	1,970	3,160	11,000	25,200	12,900	8,140	6,830
21	2,700	2,390	2,290	2,240	1,850	1,970	3,870	9,790	22,300	12,300	7,900	6,560
22	2,660	2,320	2,240	2,160	1,960	1,940	4,960	8,840	20,000	11,700	8,170	6,240
23	2,640	2,160	*2,230	2,160	1,900	*1,930	5,900	7,460	21,600	11,600	8,320	*5,870
24	2,630	2,080	2,040	2,140	1,880	1,900	*6,000	7,520	22,700	11,800	8,320	5,640
25	2,610	b2,050	1,900	2,080	*1,880	1,960	6,130	7,030	21,900	11,700	8,170	5,430
26	2,590	b2,040	1,780	2,080	1,920	2,050	6,530	6,610	19,000	11,700	7,990	5,400
27	2,590	2,030	1,940	*2,070	1,940	2,120	7,290	7,090	16,600	11,600	7,870	5,300
28	2,570	2,040	2,140	2,010	1,970	2,280	7,320	*8,500	15,600	11,400	7,870	5,430
29	*2,570	2,010	2,160	2,100	-	2,420	6,920	11,100	15,300	11,400	7,840	4,940
30	2,570	1,960	2,160	2,120	-	2,590	6,130	10,900	15,300	11,400	7,780	4,290
31	2,570	-	2,180	2,100	-	2,680	-	9,660	-	11,400	7,720	-
Total	84,470	69,970	66,120	67,600	56,030	62,550	113,280	231,780	539,700	397,200	279,250	202,670
Mean	2,725	2,332	2,133	2,181	2,001	2,018	3,776	7,477	17,990	12,810	9,008	6,756
Ac-ft	167,500	138,800	131,100	134,100	111,100	124,100	224,700	459,700	‡1,070	787,800	553,900	402,000

Calendar year 1952: Max 25,500 Min 1,780 Mean 7,585 Ac-ft 5,507,000
Water year 1952-53: Max 25,500 Min 1,780 Mean 5,947 Ac-ft 4,305,000

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

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Snake River near Heise, Idaho

Location (revised).--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 1953. 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.--43 years, 6,840 cfs.

Extremes.--Maximum discharge during year, 26,000 cfs June 20 (gage height, 8.18 ft); minimum, 1,800 cfs Dec. 26 (gage height, 1.37 ft).

1910-53: Maximum discharge, about 60,000 cfs May 19, 1927, result of washing out of landslide on Gros Ventre River (gage height, about 16.0 ft, present datum); minimum, 1,210 cfs Jan. 22, 1935 (gage height, 1.15 ft).

Flood during early June 1894 probably as great as flood of May 19, 1927.

Remarks.--Records excellent except those for periods of ice effect, which are good. Flow partly regulated by Jackson Lake (see p. 13). Station is above all irrigation diversions from main river except Riley ditch (5,370 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 1953 are given in WSP 1293.

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 1 to Apr. 20, July 1-21)

1.5	2,060	5.0	11,000
1.8	2,490	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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,130	3,050	b2,400	2,520	2,400	2,300	3,130	6,360	11,000	16,000	11,700	7,980
2	3,570	3,050	*b2,450	2,460	2,400	2,310	3,110	5,780	12,400	17,100	11,800	7,980
3	3,420	3,010	b2,450	2,440	2,480	2,280	3,010	5,320	14,800	16,900	12,200	8,040
4	3,360	2,950	b2,400	2,480	2,510	2,230	2,990	5,240	14,000	15,900	11,300	7,950
5	3,310	2,930	b2,400	2,440	2,550	2,210	3,170	5,590	13,300	15,200	10,600	7,860
6	3,290	2,950	b2,400	2,460	2,510	2,200	3,340	6,440	14,200	14,900	10,200	7,630
7	3,270	2,970	b2,450	2,480	2,480	2,190	3,190	7,720	13,100	14,500	6,470	7,540
8	3,270	2,990	b2,600	2,490	2,440	2,200	3,090	8,010	14,200	14,100	6,080	7,480
9	3,250	2,890	2,570	2,480	2,440	2,200	2,910	7,660	13,900	13,700	10,400	7,400
10	3,230	2,830	2,550	2,510	2,330	2,230	2,810	6,990	14,100	*13,300	10,700	7,310
11	3,210	2,790	2,630	2,620	2,210	2,270	2,740	6,300	16,300	13,400	10,700	7,570
12	3,210	2,830	2,630	2,590	2,310	2,300	2,700	5,800	19,000	12,900	10,100	7,630
13	3,210	2,890	2,620	2,590	2,310	2,330	2,690	5,500	21,000	12,800	10,200	8,240
14	3,190	2,950	2,620	2,630	2,330	2,310	2,650	5,690	23,400	12,500	*9,920	8,470
15	3,170	2,990	2,600	2,620	2,340	2,270	2,620	6,640	25,500	12,300	9,920	8,180
16	3,130	3,010	2,540	2,490	2,340	2,240	2,600	8,330	25,200	12,200	9,860	7,920
17	3,130	2,930	2,520	2,480	2,330	2,240	2,720	10,700	*24,100	12,000	9,550	7,750
18	3,110	2,930	2,570	2,570	2,340	2,260	2,990	12,100	24,200	11,900	9,200	7,720
19	3,130	2,930	2,590	2,740	2,330	2,260	3,110	12,200	24,900	12,300	8,760	7,600
20	3,130	2,930	2,600	2,760	2,230	2,310	3,420	12,400	25,700	13,100	8,700	7,370
21	3,150	2,910	2,600	2,630	2,170	2,310	4,090	11,000	23,300	12,800	8,410	7,110
22	3,150	2,910	2,590	2,550	2,260	2,270	5,240	10,300	20,700	12,000	8,440	*6,880
23	3,110	2,740	*2,540	2,490	2,270	2,230	6,470	8,760	21,000	11,800	8,640	6,470
24	3,090	2,630	2,430	2,480	2,240	*2,230	*6,730	8,530	22,700	11,900	8,620	6,250
25	3,090	b2,550	2,340	2,430	*2,210	2,240	6,820	8,330	22,400	11,900	8,560	5,910
26	3,070	b2,500	2,230	2,400	2,230	2,310	7,170	7,800	19,800	11,900	8,380	5,940
27	3,070	b2,460	2,270	*2,400	2,260	2,420	8,010	8,120	17,400	11,800	8,210	5,780
28	3,050	b2,430	b2,500	2,360	2,300	2,520	8,090	*9,050	16,200	11,700	8,240	5,880
29	*3,050	b2,400	b2,550	2,380	-	2,700	7,860	11,600	15,800	11,600	8,150	5,670
30	3,050	b2,350	b2,550	2,430	-	2,870	7,020	12,300	15,700	11,600	8,120	5,110
31	3,050	-	2,570	2,420	-	3,050	-	10,900	-	11,700	8,060	-
Total	99,650	84,680	77,760	77,820	65,550	72,290	126,490	257,460	559,330	407,700	290,190	216,620
Mean	3,215	2,823	2,508	2,510	2,341	2,332	4,216	8,305	18,640	13,150	9,361	7,221
Ac-ft	197,700	168,000	154,200	154,400	130,000	143,400	250,900	510,700	‡1,109	808,900	576,400	429,700

Calendar year 1952: Max 26,500 Min 2,230 Mean 8,114 Ac-ft 5,890,000
Water year 1952-53: Max 25,700 Min 2,170 Mean 6,399 Ac-ft 4,633,000

* 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 1953. 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 stations. Records good.

Discharge, in cubic feet per second, May to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								1,870	4,200	9,580	9,190	7,260
2								1,950	4,220	9,650	8,890	7,220
3								2,000	4,010	9,680	8,920	7,430
4								2,360	3,670	9,400	8,860	7,410
5								2,500	3,510	9,490	8,730	7,340
6								3,160	3,370	9,500	8,800	7,020
7								3,840	3,300	8,940	7,280	7,010
8								4,150	3,230	9,160	6,140	7,090
9								4,100	3,300	9,090	7,210	7,200
10								4,080	3,540	9,150	8,150	7,210
11								4,100	3,860	9,180	8,260	7,310
12								4,400	4,930	9,080	8,160	7,280
13								4,480	5,820	9,120	8,170	7,280
14								5,160	6,370	9,250	8,120	7,320
15								5,340	7,120	9,370	7,920	7,270
16								5,460	8,730	9,400	7,610	7,180
17								5,940	9,730	9,400	7,620	6,700
18								6,460	10,200	9,530	7,560	6,520
19								6,770	10,600	9,540	7,420	6,400
20								6,530	10,400	9,390	7,460	6,280
21								6,060	10,100	9,450	7,420	6,230
22								5,400	9,990	9,510	7,350	6,020
23								5,100	10,200	9,570	7,380	5,840
24								4,140	10,200	9,560	7,440	5,860
25								3,710	9,800	9,470	7,480	5,760
26								3,920	9,570	9,340	7,350	5,800
27								4,120	9,360	9,490	7,220	5,700
28								4,240	9,180	9,520	7,130	5,640
29								4,520	9,230	9,500	7,280	5,550
30								4,400	9,320	9,480	6,980	5,360
31								4,280	-	9,500	7,220	-
Total								134,540	211,060	291,290	240,720	199,490
Mean								4,340	7,035	9,396	7,765	6,650
Ac-ft								266,900	418,600	577,800	477,500	395,700

Calendar year : Max Min Mean Ac-ft

The season : Max - Min - Mean - Ac-ft 2,136,000

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 1953.

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.--33 years, 49.2 cfs.

Extremes.--Maximum discharge during year, 239 cfs June 30 (gage height, 2.18 ft); minimum daily, 12 cfs Sept. 28-30.
1920-53: 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. 40). Since 1923, floodwaters of Dry Creek have been diverted at times into Henrys Lake (some diverted during 1953).

Revisions.--WSP 1217: Drainage area.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	19				23	26	26	19	223	155	84
2	19	19				23	26	26	19	214	155	84
3	19	19				23	*26	26	19	209	155	84
4	20	19				23	26	26	19	201	152	84
5	20	19				23	26	26	20	198	148	84
6	20	19				24	26	26	20	190	147	84
7	20	19				24	27	*26	22	185	141	84
8	20	19				24	27	26	24	182	136	84
9	20	19				24	26	26	24	180	136	83
10	20	19				*24	26	25	25	178	133	83
11	20	19				24	26	24	27	176	127	83
12	20	19				24	26	24	29	176	*110	83
13	20	19				24	26	24	31	174	86	83
14	20	19				24	27	24	45	173	86	83
15	20	19	17.5	18	20	24	27	23	52	173	86	83
16	20	19				24	27	22	65	170	86	83
17	20	19				24	27	22	65	168	86	83
18	*20	18				24	26	21	71	170	86	83
19	20	18				24	26	22	80	170	86	43
20	20	*18		(*)		25	26	22	89	*172	86	14
21	20	18				25	27	21	95	170	86	13
22	20	18				25	27	21	99	170	86	13
23	20	18				25	26	21	104	*168	86	13
24	20	18				25	26	21	*152	168	86	13
25	20	18				25	26	20	184	168	85	*13
26	20	18				25	26	20	180	166	85	13
27	20	18				25	26	20	*174	162	*84	13
28	20	18				25	26	20	167	162	84	12
29	20	18			-	25	26	*20	162	161	84	12
30	20	18			-	25	26	20	184	158	84	12
31	20	-			-	26	-	19	-	*155	84	-
Total	617	557	542	558	560	752	788	710	2,266	5,490	3,317	1,686
Mean	19.9	18.6	17.5	18	20	24.3	26.3	22.9	75.5	177	107	56.2
Ac-ft	1,220	1,100	1,080	1,110	1,110	1,490	1,560	1,410	4,490	10,890	6,580	3,340

Calendar year 1952: Max 212 Min 10 Mean 80.6 Ac-ft 58,550
Water year 1952-53: Max 223 Min 12 Mean 48.9 Ac-ft 35,380

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 21 to Mar. 9; discharge estimated on basis of 3 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 1953.
Gage.--Electric tape gage read once daily. Datum of gage is at mean sea level (levels by Bureau of Reclamation).
Extremes.--Maximum contents during year, 136,990 acre-ft May 22 (elevation, 6,303.22 ft); minimum, 33,940 acre-ft Sept. 30 (elevation, 6,283.65 ft).
1938-53: 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.

Usable contents at 8 a.m., in acre-feet, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62,430	62,760	79,790	103,420	105,360	104,455	102,525	128,750	135,365	135,205	104,385	63,710
2	62,335	62,760	80,900	103,420	105,360	104,595	103,075	130,010	135,530	135,045	102,120	62,900
3	62,290	62,760	81,785	103,420	105,360	104,595	103,765	130,800	135,690	135,045	100,895	61,965
4	62,195	62,715	82,615	103,420	105,360	104,595	104,595	131,670	135,690	135,045	99,280	60,990
5	62,055	62,715	83,450	103,420	105,495	104,595	105,360	132,470	135,530	134,960	97,875	60,125
6	62,245	62,715	84,595	103,560	105,495	104,595	106,195	133,510	136,015	134,960	96,485	59,185
7	62,105	62,715	85,055	103,765	105,495	104,315	106,965	134,880	136,175	134,960	94,195	58,300
8	62,150	62,715	87,100	104,180	105,495	104,180	107,740	135,610	136,340	134,880	92,195	57,380
9	62,480	62,715	87,970	104,385	105,495	103,970	108,590	135,610	136,340	134,800	90,605	56,395
10	62,480	62,715	89,280	104,385	105,495	103,905	109,370	135,450	136,260	134,720	89,155	55,465
11	62,480	62,715	90,290	104,455	105,495	103,765	109,940	135,125	136,175	134,640	87,535	54,180
12	62,480	62,760	91,240	104,455	105,495	103,695	110,585	134,800	136,175	134,555	85,930	52,805
13	62,480	62,855	92,130	104,455	105,360	103,625	111,230	134,640	136,260	134,475	84,355	51,465
14	62,290	62,995	93,160	104,525	105,290	103,625	111,810	134,800	136,175	134,395	82,495	50,155
15	62,525	63,425	94,130	104,525	105,290	103,560	112,310	134,800	136,260	134,395	80,955	48,915
16	62,525	64,430	95,105	104,595	105,290	103,490	112,820	134,880	136,015	133,830	79,790	47,705
17	62,525	65,355	96,090	104,800	105,290	103,420	113,405	134,880	135,855	132,790	78,460	46,320
18	62,570	66,490	97,080	105,150	105,290	103,350	113,985	134,880	135,530	131,515	76,975	44,870
19	62,665	67,495	98,075	105,150	105,290	103,145	114,570	134,880	135,285	130,405	76,245	43,535
20	62,715	68,510	99,410	105,290	105,290	103,145	115,155	135,125	135,690	128,830	75,630	42,140
21	62,715	69,650	100,760	105,290	105,150	104,110	115,745	136,825	135,690	126,485	75,075	41,050
22	62,715	70,690	101,780	105,290	105,010	103,145	116,335	136,990	135,690	123,555	74,410	39,765
23	62,760	71,700	102,870	105,360	104,940	103,145	117,075	136,340	135,530	121,120	73,150	38,530
24	62,760	72,720	103,350	105,360	104,940	103,075	118,560	135,855	135,450	118,710	71,985	37,560
25	62,760	73,750	103,280	105,360	104,735	102,940	119,835	136,260	135,285	116,630	70,585	36,670
26	62,760	74,740	103,005	105,360	104,595	102,870	121,045	135,770	135,285	114,350	69,335	36,040
27	62,760	75,685	102,940	105,360	104,455	102,730	122,490	135,365	135,285	112,600	68,310	35,345
28	62,715	76,470	102,940	105,360	104,455	102,665	123,780	135,205	135,285	110,300	67,340	34,735
29	62,715	77,600	103,075	105,360	-	102,595	125,865	135,365	135,205	108,445	66,440	34,070
30	62,715	78,690	103,075	105,360	-	102,525	127,110	135,610	135,205	106,815	65,550	33,940
31	62,760	-	103,350	105,360	-	102,525	-	135,610	-	105,080	64,675	-

Monthly elevation and usable contents, water year October 1952 to September 1953

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	6,291.75	62,525	-
Oct. 31	6,291.80	62,760	+235
Nov. 30	6,294.84	78,690	+15,930
Dec. 31	6,298.74	103,350	+24,660
Calendar year 1952	-	-	+21,390
Jan 31	6,299.03	105,360	+2,010
Feb. 28	6,298.90	104,455	-905
Mar. 31	6,298.62	102,525	-1,930
Apr. 30	6,301.98	127,110	+24,585
May 31	6,303.05	135,610	+8,500
June 30	6,303.00	135,205	-405
July 31	6,298.99	105,080	-30,125
Aug. 31	6,292.20	64,675	-40,405
Sept.30	6,283.65	33,940	-30,735
Water year 1952-53	-	-	-28,585

† 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 (revised) west of Island Park.

Drainage area.--481 sq mi.

Records available.--January 1933 to September 1953.

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

Average discharge.--20 years, 540 cfs.

Extremes.--Maximum discharge during year, 1,950 cfs July 20 (gage height, 5.30 ft); minimum daily, 7 cfs Nov. 16-30.
1933-53: 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. 40) and Island Park Reservoir (see preceding page).

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

Revisions.--WSP 1217: Drainage area.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	640	538	8	440	486	500	327	119	1,060	787	1,360	1,050
2	630	543	8	440	486	500	201	227	1,090	787	1,360	1,050
3	625	543	8	440	486	504	*178	303	1,130	782	1,360	1,050
4	601	543	8	440	486	504	178	391	1,120	777	1,360	1,050
5	576	538	8	440	486	504	178	463	1,130	767	1,430	1,050
6	581	538	8	440	486	504	178	538	1,180	772	1,610	1,050
7	591	543	8	440	486	504	178	*890	1,200	762	1,610	1,050
8	414	543	8	454	486	504	178	1,080	1,260	758	1,420	1,050
9	576	543	8	454	490	504	178	1,080	1,240	753	1,320	1,050
10	562	543	8	454	490	*504	178	915	1,200	738	1,420	1,120
11	548	548	8	458	490	504	178	836	1,190	733	1,420	1,260
12	548	548	8	458	490	504	178	806	1,180	723	1,410	1,210
13	543	548	8	458	490	504	178	811	1,190	718	1,410	1,230
14	*519	548	8	458	490	504	178	831	1,190	708	1,410	1,230
15	504	199	8	*463	490	504	178	851	1,160	762	1,320	1,220
16	504	7	8	463	490	504	185	865	1,130	1,110	1,220	1,250
17	509	7	9	463	490	504	185	870	1,110	1,180	1,220	1,270
18	509	7	9	463	490	504	189	987	1,050	1,160	1,140	1,280
19	528	7	9	463	495	504	189	875	890	1,280	920	1,220
20	538	*7	9	468	495	504	193	1,010	895	1,560	915	1,150
21	543	7	9	468	495	504	198	1,260	885	1,920	910	1,150
22	543	7	9	468	495	504	198	1,320	885	1,910	1,050	1,150
23	543	7	9	468	495	504	80	1,240	880	*1,850	1,190	1,080
24	543	7	349	472	495	504	10	1,220	841	1,700	1,200	981
25	543	7	519	472	495	504	10	1,190	826	1,680	1,190	*935
26	548	7	519	476	495	504	10	1,130	821	1,680	1,120	885
27	548	7	468	476	495	504	10	1,080	*821	1,670	*1,050	880
28	548	7	440	476	495	504	10	1,020	821	1,660	1,050	880
29	538	7	440	481	-	504	10	*1,090	806	1,620	1,050	748
30	533	7	440	481	-	504	10	1,090	797	1,490	1,050	586
31	533	-	440	481	-	468	-	1,090	-	1,420	1,050	-
Total	17,009	7,911	3,806	14,276	13,738	15,580	4,329	27,478	30,978	36,217	38,545	32,165
Mean	549	264	123	461	491	503	144	886	1,033	1,168	1,243	1,072
Ac-ft	33,740	15,690	7,550	28,320	27,250	30,900	8,590	54,500	61,440	71,840	76,450	63,800

Calendar year 1952: Max 2,110 Min 7 Mean 731 Ac-ft 531,000
Water year 1952-53: Max 1,920 Min 7 Mean 663 Ac-ft 480,100

* Discharge measurement made on this day.
Note.--Stage-discharge relation indefinite Nov. 15 to Dec. 23; discharge estimated on basis of 1 discharge measurement. Discharge computed from staff-gage readings Dec. 24 to May 7.

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 1953. 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 (1903-8, 1924-53), 1,364 cfs.

Extremes.--Maximum discharge during year, 3,190 cfs June 5 (gage height, 7.36 ft); minimum, 168 cfs July 13 (gage height, 5.49 ft); minimum daily, 676 cfs Nov. 23, 26.
1890-91, 1902-9, 1920-53: 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. 40) and Island Park Reservoir (see p. 29). About 18,000 acres irrigated by diversions above station.

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

Revisions.--WSP 1217: Drainage area.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,480	1,300	749	1,280	1,300	1,320	1,330	1,210	2,360	1,550	2,100	1,830
2	1,530	1,240	825	1,270	1,270	1,190	1,090	1,270	2,510	1,650	2,080	1,810
3	1,500	1,270	858	1,270	1,340	1,270	964	1,270	2,860	1,530	2,120	1,810
4	1,480	1,340	847	1,280	1,360	1,270	1,030	1,390	2,630	1,630	2,100	1,770
5	1,470	1,320	803	1,300	1,280	1,270	1,040	1,610	2,740	1,580	2,060	1,770
6	1,440	*1,300	803	1,300	1,280	1,230	1,050	1,880	2,950	*1,580	2,340	1,750
7	1,450	1,280	847	1,330	1,280	1,260	1,050	2,180	2,890	1,530	2,400	1,720
8	1,470	1,270	814	1,300	1,280	1,260	988	2,400	*2,930	1,530	2,420	1,650
9	*1,260	1,260	825	1,340	1,240	1,240	952	2,340	2,760	1,530	1,980	*1,720
10	1,520	1,260	869	1,320	1,230	1,270	964	2,100	2,610	1,520	*2,120	1,680
11	1,520	1,260	803	1,300	1,300	1,330	964	1,900	2,490	1,550	2,200	1,940
12	1,440	1,270	847	1,300	1,280	1,300	964	1,880	2,470	1,500	2,180	2,000
13	1,440	1,300	836	1,300	1,270	1,330	964	1,840	2,470	1,470	2,240	1,980
14	1,470	1,300	814	1,300	1,240	1,270	964	1,900	2,380	1,500	2,220	2,020
15	1,390	1,320	825	1,300	1,360	1,270	964	1,980	2,360	1,520	2,280	2,000
16	1,390	940	792	1,300	1,240	1,270	964	1,960	2,300	1,550	2,100	2,000
17	1,400	825	*803	1,340	1,280	1,300	964	2,120	2,220	2,120	1,980	2,100
18	1,400	836	847	1,380	*1,280	1,280	976	2,100	2,240	2,000	2,060	2,080
19	1,330	825	847	1,380	1,230	1,280	1,050	2,240	2,060	1,980	1,790	2,080
20	1,420	814	847	*1,300	1,190	1,320	1,050	2,550	1,940	2,200	1,550	1,980
21	1,420	869	847	1,340	1,140	1,330	1,170	2,660	1,880	2,740	1,600	1,920
22	1,400	760	847	1,270	1,390	1,270	*1,270	2,720	1,790	2,720	1,650	1,880
23	1,390	676	803	1,320	1,240	1,260	1,390	2,530	1,810	2,740	1,980	1,900
24	1,390	892	718	1,300	1,260	*1,270	1,280	2,570	1,840	2,530	2,080	1,720
25	1,390	728	1,080	1,270	1,240	1,330	1,300	2,630	1,700	2,400	2,020	1,610
26	1,380	676	1,340	1,320	1,240	1,300	1,480	*2,470	1,700	2,380	2,040	1,560
27	1,340	814	1,440	1,320	1,260	1,320	1,610	2,420	1,730	2,420	1,920	1,500
28	1,340	738	1,330	1,240	1,270	1,380	1,660	2,380	1,750	2,400	1,830	1,530
29	1,340	760	1,300	1,340	-	1,380	1,660	2,610	1,630	2,400	1,830	1,520
30	1,320	749	1,270	1,260	-	1,330	1,380	2,550	1,660	2,240	1,810	1,190
31	1,300	-	1,330	1,320	-	1,340	-	2,420	-	2,180	1,840	-
Total	43,810	31,192	28,806	40,490	35,570	40,040	34,482	66,080	67,660	60,170	62,900	53,980
Mean	1,413	1,040	929	1,306	1,270	1,292	1,149	2,132	2,255	1,941	2,029	1,799
Ac-ft	86,900	61,870	57,140	80,310	70,550	79,420	68,390	131,100	134,200	119,300	124,800	107,100

Calendar year 1952: Max 4,710 Min 676 Mean 1,773 Ac-ft 1,287,000
Water year 1952-53: Max 2,950 Min 676 Mean 1,548 Ac-ft 1,121,000

* 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 1953. 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 1953

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	794	844	1,030	1,250	915	16	1,120	1,300	1,030	1,030	987
2	835	835	1,030	1,240	924	17	1,140	1,270	1,160	987	916
3	833	844	1,040	1,230	884	18	1,140	1,240	1,140	1,000	914
4	744	755	1,030	1,220	879	19	1,120	1,230	1,160	1,040	895
5	817	692	1,020	1,200	882	20	1,110	1,220	1,190	968	905
6	958	674	1,010	1,270	858	21	1,080	1,140	1,260	964	815
7	1,030	649	1,030	1,260	882	22	978	1,080	1,290	961	789
8	1,080	615	1,010	1,230	903	23	889	1,130	1,310	937	741
9	1,060	640	1,030	1,140	1,000	24	884	1,180	1,360	959	738
10	1,030	722	1,030	1,120	961	25	770	1,150	1,330	972	702
11	1,010	859	939	1,220	925	26	783	1,110	1,310	965	708
12	1,060	892	947	1,190	925	27	811	1,080	1,320	950	480
13	1,010	1,040	1,000	1,150	884	28	842	1,100	1,320	919	480
14	1,110	1,170	980	1,140	1,000	29	811	1,100	1,310	921	480
15	1,150	1,300	1,180	1,100	1,010	30	813	1,090	1,300	914	480
						31	813	-	1,280	908	-
Total							29,625	29,951	35,376	33,355	24,832
Mean							956	998	1,141	1,076	828
Runoff in acre-feet							58,760	59,410	70,170	66,160	49,250

The season — Max - — Min - — Mean - — Ac-ft 303,800

Diversions from Fall River above gaging station near Squirrel, Idaho

Above Squirrel gaging station, two canals divert water from Fall River for irrigation. Records available for part of each irrigation season from 1919 to 1953. 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 1953

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	0	41	267	257	142	16	0	208	256	200	100
2	0	41	258	258	137	17	0	180	256	189	103
3	0	41	258	240	137	18	40	218	255	182	101
4	0	41	256	251	138	19	40	237	248	185	100
5	0	45	257	249	126	20	40	236	248	172	100
6	0	105	257	244	135	21	40	234	235	171	100
7	0	178	257	216	130	22	40	232	235	172	7
8	0	178	260	233	118	23	40	251	235	170	7
9	0	188	260	235	117	24	40	248	18	164	7
10	0	188	260	222	117	25	40	269	17	163	6
11	0	188	260	210	116	26	40	263	18	161	6
12	0	198	260	205	104	27	40	268	244	150	6
13	0	208	260	205	104	28	41	263	248	152	6
14	0	208	259	204	100	29	41	270	250	148	6
15	0	208	256	204	100	30	41	266	250	144	6
						31	41	-	250	140	-
Total							564	5,699	7,148	6,096	2,482
Mean							18.2	190	231	197	82.7
Runoff in acre-feet							1,120	11,300	14,180	12,090	4,920

The season — Max - — Min - — Mean - — Ac-ft 43,610

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 1905), May 1918 to September 1953. Published as "at Wilson's Mill, near Marysville" in 1902, as "near Marysville" in 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, 1917-53), 754 cfs.

Extremes.--Maximum discharge during year, 3,450 cfs June 19 (gage height, 4.81 ft); minimum, 280 cfs Feb. 20 (gage height, 1.32 ft).
1904-9, 1918-53: 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.40). About 16,000 acres irrigated from two diversions above station.

Revisions.--WSP 1217: Drainage area.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	519	469	b500	480	458	430	474	959	1,910	1,540	526	500
2	512	447	b500	474	464	415	464	878	2,040	1,420	545	566
3	512	442	b500	480	486	410	458	834	2,520	1,300	566	545
4	512	447	b500	474	469	410	474	968	2,130	1,220	526	480
5	512	452	b500	480	464	405	512	1,380	2,300	1,190	506	474
6	519	*464	b500	480	464	405	500	*1,610	2,240	*1,110	552	469
7	519	464	b500	486	442	405	474	1,780	2,280	1,030	500	464
8	*512	458	b495	458	447	410	447	1,510	*2,400	923	493	469
9	506	447	b490	493	452	415	442	1,230	2,090	809	493	469
10	493	480	b490	512	b440	420	436	1,040	2,230	766	*493	469
11	486	493	b485	500	b430	436	425	950	2,620	682	506	474
12	486	500	b480	500	b425	425	436	896	2,990	660	493	469
13	486	526	b480	512	420	436	420	977	2,880	615	480	469
14	474	519	b480	500	425	420	420	1,100	3,110	594	480	469
15	474	545	b475	474	442	410	415	1,290	*3,220	580	506	469
16	486	538	480	474	436	405	425	1,390	2,950	552	526	469
17	474	526	*486	500	425	405	442	1,540	2,830	532	506	474
18	464	519	500	493	*425	405	469	1,500	3,090	526	500	474
19	464	519	506	474	415	415	506	1,780	3,260	519	500	469
20	464	519	506	*469	390	420	580	1,980	2,810	506	500	464
21	486	512	506	480	b410	415	716	1,630	2,400	493	500	519
22	480	480	493	469	b410	405	*818	1,400	2,250	*486	500	552
23	474	b480	474	480	b410	405	950	1,210	2,380	480	493	538
24	474	b480	464	464	b410	*405	914	1,390	2,540	622	500	538
25	474	b475	458	464	b415	420	1,180	1,300	2,110	675	493	*538
26	464	474	458	464	b420	420	1,350	*1,290	1,800	601	*493	532
27	452	486	474	469	425	430	1,480	1,430	*1,640	486	500	532
28	452	500	b480	464	420	464	1,590	2,000	1,490	469	519	526
29	452	500	b485	469	-	493	1,370	2,510	1,500	474	532	526
30	458	500	486	452	-	480	1,100	2,070	1,520	474	512	519
31	452	-	493	447	-	500	-	1,750	-	486	500	-
Total	14,992	14,661	15,124	14,835	12,139	13,139	20,687	43,572	71,530	22,820	15,739	14,925
Mean	484	489	488	479	434	424	690	1,406	2,384	736	508	498
Ac-ft	29,740	29,080	30,000	29,420	24,080	26,060	41,030	86,420	141,900	45,260	31,220	29,600

Calendar year 1952: Max 3,450 Min 405 Mean 882 Ac-ft 640,100
Water year 1952-53: Max 3,260 Min 390 Mean 751 Ac-ft 543,800

* 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 1953. 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 1953

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	116	554	689	557	416	16	528	625	556	475	376
2	124	550	734	518	422	17	533	723	572	460	376
3	163	552	800	530	411	18	539	810	559	451	376
4	177	550	790	499	391	19	467	893	528	450	368
5	249	538	764	499	396	20	493	859	527	436	369
6	331	540	754	510	387	21	525	822	524	431	388
7	354	506	768	509	376	22	521	772	522	425	392
8	383	480	745	504	374	23	491	795	516	428	390
9	371	462	690	504	372	24	489	816	575	421	377
10	368	476	677	501	377	25	491	834	566	422	375
11	363	493	647	508	373	26	524	831	572	424	377
12	388	499	712	486	374	27	572	819	516	422	370
13	411	513	674	480	378	28	601	809	511	423	370
14	419	555	642	467	375	29	595	803	514	430	370
15	425	604	567	462	370	30	573	792	519	403	370
						31	564	-	505	407	-
Total							13,148	19,875	19,235	14,442	11,436
Mean							424	662	620	466	381
Runoff in acre-feet							26,080	39,420	38,150	28,650	22,680

The season Ac-ft 155,000

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 1953 (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 May to September, 3,120 cfs June 15 (gage height, 4.73 ft); minimum daily, 20 cfs July 30, 31.

1920-53: 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 July 29-31, which are fair. Flow since October 1939 partly regulated by Grassy Lake (see p. 40). 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, 1953 (gage height, in feet, and discharge, in cubic feet per second)

1.0	25	2.5	515
1.3	63	3.0	900
1.6	127	4.0	1,990
2.0	265	5.0	3,560

Discharge, in cubic feet per second, April to September 1953

Day	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	1,040	1,500	990	65	185	16	-	1,050	2,780	94	188	155
2	909	1,700	900	85	253	17	-	1,240	2,540	74	175	162
3	837	2,410	*738	141	225	18	-	1,160	2,620	76	168	162
4	864	1,900	629	112	175	19	-	1,390	2,770	85	152	155
5	1,090	1,980	608	89	162	20	-	1,860	2,420	83	144	155
6	1,420	2,200	548	104	162	21	-	1,430	1,920	79	*147	175
7	1,690	2,050	466	94	162	22	-	1,220	1,690	72	158	225
8	1,430	*2,330	390	72	168	23	-	981	1,760	*62	162	221
9	1,100	2,000	306	70	168	24	-	1,100	1,900	218	168	*221
10	864	2,070	249	72	162	25	-	1,110	1,550	233	178	225
11	714	2,400	165	87	165	26	-	*1,010	1,200	188	172	206
12	615	2,780	112	96	155	27	-	1,110	1,080	63	175	158
13	643	2,770	102	110	158	28	-	1,490	909	40	192	152
14	722	2,910	102	112	158	29	*1,520	2,130	891	30	203	147
15	927	2,980	102	133	155	30	1,210	1,850	918	20	199	149
						31	-	1,470	-	20	185	-
Total						-		3 ,466	60,928	7,844	4,208	5,281
Mean						-		1,176	2,031	253	136	176
Runoff in acre-feet						-		72,330	120,800	15,560	8,350	10,470

The season May to September: Ac-ft 227,500

* Discharge measurement made on this day.

Henrys Fork at St. Anthony, Idaho

Location (revised).--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 1953 (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 during season May to September, 5,040 cfs June 8 (gage height, 5.43 ft); minimum, 426 cfs July 13 (gage height, 2.71 ft).
1919-53: 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. 40), Island Park Reservoir (see p. 29), and Grassy Lake (see p. 40).
Revisions.--WSP 1217: Drainage area.

Rating table, Apr. 23 to Sept. 30, 1953 (gage height, in feet, and discharge, in cubic feet per second)

3.1	660	5.0	3,870
3.5	1,040	6.0	6,790
4.0	1,760		

Discharge, in cubic feet per second, April to September 1953

Day	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	1,440	3,180	1,620	1,100	1,170	16	-	1,710	4,000	684	1,350	1,240
2	1,290	3,340	1,620	1,060	1,170	17	-	1,980	3,730	1,090	1,210	1,350
3	1,240	4,600	*1,420	1,160	1,240	18	-	2,090	3,750	1,040	1,280	1,360
4	1,460	4,000	1,380	1,170	1,190	19	-	2,460	3,730	996	1,120	1,350
5	1,760	3,940	1,320	*1,140	1,170	20	-	3,340	3,340	1,150	910	1,280
6	2,150	4,730	1,240	1,260	1,170	21	-	3,160	2,900	1,550	*910	1,290
7	2,840	4,330	1,110	1,350	1,150	22	-	3,230	2,600	1,650	963	1,380
8	2,860	4,870	1,030	1,350	1,090	23	*1,650	2,730	2,600	1,570	1,170	1,380
9	2,440	4,410	952	1,150	1,090	24	1,540	2,790	2,710	1,540	1,280	*1,300
10	2,020	4,150	910	1,170	1,080	25	1,710	3,120	2,390	1,470	1,210	1,260
11	1,630	*4,150	910	1,240	1,220	26	2,150	2,790	1,910	1,470	1,220	1,290
12	1,500	4,300	776	1,240	1,340	27	2,540	*2,790	1,790	1,350	1,160	1,340
13	1,440	4,220	732	1,260	1,320	28	2,750	3,090	1,680	1,250	1,110	1,420
14	1,460	4,220	700	1,280	1,290	29	2,500	4,020	1,540	1,250	1,140	1,440
15	1,650	4,250	708	1,300	1,220	30	1,810	3,770	1,550	1,150	1,150	1,140
						31	-	3,320	-	1,120	1,160	-
Total							-	73,570	102,910	36,758	36,573	37,730
Mean							-	2,373	3,430	1,186	1,180	1,258
Runoff in acre-feet							-	145,900	204,100	72,910	72,540	74,840

The season May to September: Ac-ft 570,300

* 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 1953. 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 1953

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	763	565	892	747	650	16	931	1,030	591	666	563
2	761	594	914	746	660	17	985	1,070	913	657	503
3	756	615	892	765	657	18	1,050	1,120	890	644	484
4	772	722	852	794	640	19	1,020	1,150	898	639	436
5	800	662	832	766	615	20	952	1,050	923	602	395
6	829	677	851	725	613	21	835	999	923	627	388
7	926	674	847	743	606	22	825	948	902	638	382
8	921	684	831	757	588	23	748	941	879	649	364
9	911	684	831	739	602	24	677	940	870	637	364
10	889	743	814	737	621	25	602	910	878	646	356
11	854	789	765	745	602	26	721	921	829	654	359
12	874	791	766	720	629	27	739	891	825	659	359
13	886	834	755	686	632	28	810	870	846	644	359
14	887	951	706	666	635	29	742	842	809	626	359
15	913	1,010	737	661	588	30	669	849	754	621	359
						31	668	-	745	633	-
Total							25,716	25,526	25,760	21,239	15,368
Mean							830	851	831	685	512
Runoff in acre-feet							51,010	50,630	51,090	42,130	30,480

The season Ac-ft 225,300

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 1953 in reports of Geological Survey. October and November 1932, July to September 1936, and July to September 1937 in reports of Water District No. 36, State of Idaho.

Gage.--Water-stage recorder. Datum of gage is 5,910.7 ft above mean sea level, unadjusted. Since November 1941, supplementary staff gage at site 1¾ miles upstream.

Average discharge.--14 years (1930-32, 1941-53), 399 cfs.

Extremes.--Maximum discharge during year, 1,420 cfs June 20 (gage height, 2.44 ft); minimum, 170 cfs Feb. 13; minimum gage height, 0.59 ft Feb. 9.
1929-32, 1934-35, 1940-53: 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 1952-53, 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	301	274	215	205	230	240	425	258	324	622	460	324
2	301	266	220	210	234	230	344	254	344	635	478	334
3	301	258	220	215	254	220	314	242	478	609	521	339
4	301	266	225	220	319	215	349	230	397	589	484	329
5	301	258	230	225	296	210	359	227	408	583	454	324
6	301	262	230	230	270	210	344	234	490	577	443	319
7	301	266	230	230	254	215	344	242	454	*577	*443	314
8	301	262	235	210	254	225	292	258	521	570	425	310
9	301	255	235	180	250	250	292	266	448	552	414	*301
10	301	255	240	230	240	262	270	270	397	539	402	296
11	296	255	240	290	230	*292	258	270	425	545	414	292
12	292	260	240	320	210	279	234	262	570	521	414	288
13	292	262	240	320	*180	279	*230	254	858	515	397	288
14	288	266	240	320	180	250	238	250	1,090	502	392	283
15	288	283	240	260	180	242	242	246	*1,210	527	397	279
16	288	270	240	260	180	242	266	246	1,200	521	402	279
17	288	265	240	260	217	279	296	246	1,170	515	402	279
18	283	262	240	280	234	254	292	*250	1,240	515	408	279
19	288	*258	240	320	225	250	270	258	1,360	515	397	279
20	288	255	240	354	215	266	274	301	1,360	490	380	274
21	28	250	240	320	205	246	283	301	1,130	472	354	274
22	283	245	*239	*296	200	230	283	329	962	478	354	274
23	*283	230	230	288	200	227	279	288	932	472	349	274
24	279	215	220	279	200	238	266	329	954	472	349	274
25	279	210	205	274	210	305	250	344	887	460	344	274
26	279	210	190	270	230	419	258	292	724	454	334	270
27	279	210	190	246	254	484	266	279	635	448	329	270
28	274	210	190	240	260	622	274	296	577	448	329	270
29	274	210	195	240	-	655	283	349	545	454	329	270
30	274	215	200	262	-	558	270	359	602	454	324	270
31	274	-	200	223	-	527	-	339	-	460	324	-
Total	8,962	7,463	6,979	8,077	6,411	9,421	8,645	8,569	22,692	16,091	12,246	8,730
Mean	289	249	225	261	229	304	288	276	756	519	395	291
Ac-ft	17,780	14,800	13,840	16,020	12,720	18,690	17,150	17,000	45,010	31,920	24,290	17,320

Calendar year 1952: Max 1,270 Min 190 Mean 431 Ac-ft 313,100
Water year 1952-53: Max 1,360 Min 180 Mean 341 Ac-ft 246,500

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 20 to Jan. 21, Feb. 28 to Mar. 9 (stage-discharge relation affected by ice Nov. 9-12, 17, Nov. 26 to Jan. 16, Jan. 28, 29, Feb. 10-16, 19-26); 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 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 1953 (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.--20 years (1933-53), 758 cfs.

Extremes.--Maximum discharge during year, 3,270 cfs June 19 (gage height, 5.83 ft); minimum, 268 cfs Jan. 9 (gage height, 1.74 ft).
1890-93, 1903-9, 1920-53: Maximum discharge, 7,820 cfs June 5, 1909 (gage height, 6.90 ft, site and datum then in use); minimum, 88 cfs Mar. 12, 1906 (gage height, 1.00 ft, site and datum then in use).

Remarks.--Records excellent except those for periods of ice effect, which are fair. About 40,000 acres of land irrigated from diversions above station. Water is diverted at times during irrigation season from Henrys Fork through Cross Cut Canal to Teton River three-quarters of a mile above station (10,180 acre-ft diverted into river during 1953 irrigation season).

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 5-19)

1.8	300	4.0	1,750
2.0	380	5.0	2,610
2.5	635	6.0	3,520
3.0	965		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	545	498	b400	b385	407	376	659	641	1,290	1,450	832	595
2	540	492	b410	b385	416	367	562	572	1,480	1,420	832	606
3	540	477	b420	b385	430	350	508	534	1,800	*1,360	888	624
4	534	472	b420	b385	498	358	513	513	1,560	1,310	860	612
5	528	477	b410	389	482	346	550	534	1,440	1,280	*832	606
6	528	477	b410	394	477	354	545	584	1,780	1,260	812	601
7	534	477	b420	402	448	358	534	773	1,640	1,230	806	595
8	528	472	b420	376	448	371	482	874	1,850	1,190	780	595
9	*534	448	b420	333	430	389	463	806	1,660	1,140	747	*584
10	534	448	b420	482	420	407	439	714	1,670	1,130	766	572
11	528	458	b420	550	412	*492	416	635	2,010	1,100	754	578
12	523	482	b420	550	b390	453	412	567	2,340	1,060	728	518
13	518	482	b420	540	*b380	463	*412	534	2,660	1,040	721	498
14	513	487	b415	562	b360	425	412	513	2,960	1,010	714	518
15	513	518	416	498	b350	398	416	550	*3,000	986	708	550
16	518	508	b416	448	341	398	420	671	2,770	979	677	534
17	518	487	416	458	398	420	463	806	2,660	930	689	540
18	513	492	420	448	341	398	477	*958	2,850	902	683	534
19	508	*492	420	508	371	416	463	1,080	3,040	881	677	534
20	513	492	420	567	b360	425	463	1,350	2,870	860	659	528
21	513	487	420	523	b350	416	498	1,230	2,360	825	635	523
22	513	434	*416	*498	b350	394	528	1,060	2,070	860	618	523
23	513	b430	416	472	b350	384	578	881	2,050	916	618	523
24	513	b415	b400	463	b350	389	595	853	2,110	916	612	518
25	513	b400	b375	453	354	448	618	895	1,880	909	606	513
26	508	b390	b370	453	354	567	677	832	1,560	895	595	503
27	508	b390	b370	425	371	635	773	937	1,360	888	589	448
28	503	b390	b370	b420	389	786	846	1,240	1,290	888	595	444
29	503	b395	b375	b420	-	867	846	1,800	1,290	860	601	453
30	492	b400	b380	444	-	799	728	1,480	1,350	860	595	444
31	487	-	b380	412	-	766	-	1,170	-	839	595	-
Total	16,076	13,767	12,605	14,028	11,027	14,415	16,296	26,587	60,650	32,174	21,824	16,214
Mean	519	459	407	453	394	465	543	858	2,022	1,038	704	540
Ac-ft	31,890	27,310	25,000	27,820	21,870	28,590	31,320	52,730	120,300	63,820	43,290	32,160

Calendar year 1952: Max 3,110 Min 369 Mean 862 Ac-ft 626,100
Water year 1952-53: Max 3,040 Min 333 Mean 700 Ac-ft 506,100

* 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 1953. 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 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								367	935	1,160	892	583
2								363	960	1,210	920	600
3								377	977	1,160	953	586
4								376	910	1,130	907	584
5								401	783	1,140	866	572
6								425	806	1,120	853	585
7								491	809	1,120	837	593
8								557	816	1,110	828	571
9								563	782	1,090	822	588
10								574	755	1,020	777	565
11								492	803	1,080	763	605
12								484	879	1,060	739	538
13								465	885	1,080	737	523
14								506	1,000	1,050	743	524
15								559	1,130	1,030	705	592
16								687	1,360	1,020	692	534
17								752	1,460	996	676	555
18								820	1,540	989	693	554
19								844	1,530	947	688	560
20								951	1,470	914	672	551
21								1,020	1,390	859	655	546
22								965	1,430	835	638	530
23								916	1,370	926	602	554
24								883	1,370	965	616	547
25								839	1,310	827	637	554
26								821	1,220	918	614	541
27								832	1,230	921	586	496
28								953	1,220	935	620	483
29								1,090	1,160	873	622	482
30								1,090	1,200	903	613	482
31								1,020	-	906	602	-
Total								21,483	33,490	31,294	22,568	16,578
Mean								693	1,116	1,009	728	553
Ac-ft								42,610	66,430	62,070	44,760	32,880

Calendar year : Max Min Mean Ac-ft
The season : Max - Min - Mean - Ac-ft 248,800

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 1953. Prior to 1911, published as North Fork of Snake River near Rexburg.

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

Average discharge.--44 years (1909-53), 1,914 cfs.

Extremes.--Maximum discharge during year, 5,880 cfs June 9 (gage height, 8.80 ft); minimum, 742 cfs July 17 (gage height, 3.20 ft).
1909-53: Maximum discharge, 9,490 cfs June 29, 1927 (gage height, 9.90 ft); minimum, 183 cfs Mar. 24-28, 1934 (gage height, 1.45 ft).

Remarks.--Records good except those for 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. 29), 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 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 10-31, June 5 to July 25)

3.0	720	7.0	3,850
4.0	1,340	8.0	5,000
5.0	2,080	9.0	6,520
6.0	2,920		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,580	1,840	b1,350	b2,140	2,110	1,980	1,910	1,520	3,710	1,720	1,090	1,160
2	1,540	1,860	b1,450	b2,100	2,060	1,940	1,800	1,310	3,660	1,750	1,040	1,160
3	1,540	1,880	b1,500	b2,100	2,090	1,860	1,500	1,120	4,260	1,700	1,090	1,260
4	1,540	1,890	b1,480	b2,110	2,150	1,890	1,370	1,120	5,310	1,570	1,190	1,260
5	1,540	1,940	b1,430	b2,120	2,180	1,890	1,330	1,240	5,140	1,580	*1,160	1,220
6	1,540	1,950	b1,450	b2,150	2,090	1,860	1,440	1,490	5,150	1,520	1,120	1,220
7	1,560	1,950	b1,500	b2,170	2,060	1,840	1,430	1,830	5,720	1,380	1,290	1,230
8	1,570	1,940	b1,480	b2,200	2,040	1,840	1,380	2,210	5,670	1,190	1,300	1,150
9	1,560	1,860	b1,520	b2,150	2,030	1,890	1,250	2,210	5,850	1,050	1,310	1,090
10	1,500	1,850	b1,480	2,340	1,980	1,890	1,190	1,870	5,560	944	1,120	1,040
11	1,580	1,930	b1,500	2,340	1,960	1,910	1,150	1,500	*5,180	992	1,250	1,050
12	1,560	2,050	b1,490	2,370	2,050	1,970	1,110	1,240	5,080	1,020	1,260	1,260
13	1,530	2,100	b1,470	2,420	2,050	1,900	1,230	1,080	5,200	*914	1,260	1,250
14	1,480	2,020	b1,460	2,430	1,960	1,910	1,090	998	5,180	860	1,300	1,240
15	1,520	2,030	b1,480	2,370	1,980	1,810	1,020	1,030	5,140	814	1,280	1,200
16	1,520	1,990	b1,470	2,280	1,990	1,780	974	1,120	5,140	775	1,390	1,240
17	1,540	1,560	b1,510	2,260	1,930	1,720	956	1,250	4,830	775	1,310	1,280
18	1,660	1,420	b1,550	2,320	1,980	1,780	932	1,460	4,360	842	1,260	1,420
19	1,700	1,400	b1,580	2,360	1,920	1,750	932	1,630	4,280	764	1,280	1,470
20	1,670	1,390	b1,600	*2,380	1,870	1,760	950	2,320	4,330	792	1,100	1,480
21	1,740	*1,390	b1,600	2,340	1,880	1,790	926	3,090	4,170	944	*962	1,430
22	1,750	1,380	b1,600	2,340	2,010	1,750	992	3,230	3,750	1,310	944	1,490
23	*1,660	1,270	b1,600	2,240	2,140	1,680	*1,160	3,070	3,190	1,260	998	1,520
24	1,620	1,300	1,480	2,260	*2,010	*1,650	1,400	2,820	3,060	1,260	1,190	1,520
25	1,630	b1,380	1,200	2,190	1,980	1,630	1,300	3,260	3,160	1,280	1,200	1,420
26	1,770	b1,300	1,600	2,170	2,000	1,690	1,520	3,270	2,670	1,320	1,170	1,400
27	1,780	b1,370	b1,850	2,150	1,920	1,740	1,860	*2,950	2,270	1,280	1,190	1,470
28	1,780	b1,330	b2,250	2,050	1,950	1,810	2,210	2,950	2,060	1,160	1,150	1,500
29	1,780	b1,350	b2,180	2,140	-	1,940	2,440	3,480	*1,940	1,150	1,160	1,560
30	1,800	b1,350	*b2,140	2,190	-	2,020	2,020	4,340	1,760	1,200	1,160	*1,570
31	1,810	-	b2,100	2,100	-	1,980	-	4,340	-	1,100	1,150	-
Total	50,350	50,270	49,350	69,280	56,370	56,850	40,772	66,348	126,780	36,216	36,674	39,560
Mean	1,624	1,676	1,592	2,235	2,013	1,834	1,359	2,140	4,226	1,168	1,183	1,318
Ac-ft	99,870	99,710	97,880	137,400	111,800	112,800	80,870	131,600	251,500	71,830	72,740	78,470

Calendar year 1952: Max 7,760 Min 764 Mean 2,487 Ac-ft 1,805,000
Water year 1952-53: Max 5,850 Min 764 Mean 1,860 Ac-ft 1,346,000

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

Smaller Reservoirs in Henrys Fork basin

Henrys Lake.--Lat 44°36', long. 111°21', at dam on Henrys Fork in NW¼ sec. 26, T. 15 N., R. 43 E., 4 miles south of Lake, Idaho. Datum of gage is 6,457.16 ft above mean sea level (levels by Bureau of Reclamation). Drainage area, 98 sq mi, approximately, including 6 sq mi of Dry Creek basin. Records available, June 1923 to September 1953 (fragmentary). Staff gage. Maximum contents observed during year, 84,500 acre-ft June 24 (gage height, 15.80 ft); minimum observed, 63,500 acre-ft Oct. 18 (gage height, 12.44 ft). Maximum contents observed during period 1923-53, that of 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 (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 1952-53). 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', in gatehouse at dam on Grassy Creek, approximately in sec. 7, T. 48 N., R. 116 W. (unsurveyed), half a mile upstream from mouth and 24 miles northwest of Moran, Wyo. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Drainage area, 12 sq mi, approximately, including basin of Cascade Creek, from which water is diverted into Grassy Lake. Records available, October 1939 to September 1953. Mercury pressure gage. Maximum contents observed during year, 15,300 acre-ft, June 18 (elevation, 7,210.25 ft); minimum observed, 12,100 acre-ft Oct. 28, Nov. 3, 13, 26; minimum elevation observed, 7,199.60 ft Nov. 13. Maximum contents during period 1939-53, 15,446 acre-ft July 2, 1943 (elevation, 7,210.85 ft); no contents Oct. 2-5, 1940.

Reservoir is formed by earth-fill, rock-faced dam; storage began Oct. 18, 1939. Capacity, 15,182 acre-ft between elevations 7,135.0 ft (sill of trash rack) and 7,210.0 ft (crest of spillway). Water is used for irrigation of lands in Fremont-Madison irrigation district, Idaho. Gage read about twice monthly. Records given herein represent usable contents. Gage-height record and capacity table furnished by Bureau of Reclamation.

Monthly elevation or gage height and usable contents, water year October 1952 to September 1953

Date	Henrys Lake			Grassy Lake		
	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	12.32	62,700	-	7,200.05	12,200	
Oct. 31	-	a64,100	+1,400	-	a12,100	-100
Nov. 30	-	a66,100	+2,000	-	a12,100	0
Dec. 31	-	a68,400	+2,300	7,200.35	12,300	+200
Calendar year 1952	-	-	-1,900	-	-	-400
Jan. 31	-	a70,400	+2,000	-	a12,600	+300
Feb. 28	-	a71,600	+1,200	-	a12,800	+200
Mar. 31	-	a73,000	+1,400	-	a12,900	+100
Apr. 30	-	a75,600	+2,600	-	a13,000	+100
May 31	-	a80,000	+4,400	-	a14,200	+1,200
June 30	-	a83,100	+3,100	-	a15,200	+1,000
July 31	14.20	74,300	-8,800	-	a15,100	-100
Aug. 31	-	a67,700	-6,600	-	a11,600	-3,500
Sept.30	-	a65,000	-2,700	-	a11,300	-300
Water year 1952-53	-	-	+2,300	-	-	-900

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 1953 (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.--20 years (1931-35, 1937-53), 5,253 cfs.

Extremes.--Maximum discharge during year, 22,300 cfs June 16 (gage height, 11.20 ft); minimum daily, 1,760 cfs Dec. 27.
1915-53: 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), Henrys Lake (see preceding page), Island Park Reservoir (see p. 29), and Grassy Lake (see preceding page). Many diversions above station for irrigation.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

4.8	1,600	8.0	9,790
5.0	1,810	9.0	13,500
5.5	2,540	10.0	17,500
6.0	3,500	11.0	21,600
7.0	6,370	12.0	26,000

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,440	2,920	b2,700	b4,080	3,970	a3,750	4,460	7,060	12,300	9,040	4,580	2,960
2	3,070	2,940	b2,900	b4,100	3,920	a3,700	4,440	6,150	12,200	9,290	4,900	2,960
3	2,230	3,010	b2,950	b4,100	3,870	a3,670	4,270	5,380	14,100	10,100	5,280	3,050
4	2,490	3,090	b3,100	b4,050	3,970	a3,600	3,970	4,780	16,800	9,970	5,410	3,000
5	2,440	*3,170	b3,500	b4,000	4,040	a3,550	3,850	4,270	16,800	9,400	4,610	3,000
6	2,370	3,270	b3,700	b4,000	4,140	a3,500	4,100	4,360	17,000	8,700	4,070	3,070
7	2,350	3,270	b3,520	b4,000	4,000	3,460	4,220	4,940	17,500	8,040	3,710	3,010
8	2,340	3,370	b3,450	b4,150	a3,900	3,480	4,120	6,180	17,300	7,670	2,460	2,920
9	2,350	3,310	b3,600	4,300	a3,700	3,480	3,870	6,770	18,100	7,000	2,460	2,700
10	2,340	3,290	b3,700	4,580	3,730	3,550	3,640	6,500	17,800	6,440	4,780	2,510
11	2,270	3,310	3,590	4,690	3,680	3,520	3,460	5,510	17,700	6,080	4,640	2,120
12	2,290	3,460	3,660	4,810	*3,500	3,620	3,310	4,250	18,700	6,110	4,640	2,160
13	2,340	3,640	3,750	*4,720	3,660	3,710	3,230	3,480	19,900	5,790	4,250	2,650
14	2,270	3,870	a3,880	4,690	3,750	3,640	3,350	2,680	20,900	5,440	4,250	3,170
15	a2,300	3,920	a4,000	4,520	3,830	3,590	*3,150	2,010	21,900	4,970	4,360	3,330
16	a2,300	4,040	*4,100	4,360	b3,830	*3,440	3,030	2,650	21,900	*4,640	4,750	3,290
17	a2,320	3,870	4,020	4,170	3,830	3,400	2,940	4,040	20,500	4,270	4,870	3,270
18	2,340	3,590	4,000	4,250	3,850	3,420	2,830	6,470	18,200	3,950	4,550	3,460
19	2,490	3,440	4,000	4,440	b3,750	3,460	3,010	7,670	*17,800	3,950	4,120	3,750
20	2,630	3,440	4,380	4,610	b3,400	3,460	3,150	8,070	18,600	4,300	*3,800	3,970
21	2,580	3,500	4,360	4,640	b3,300	3,550	3,250	*9,360	19,900	5,060	3,620	3,780
22	2,630	3,420	b4,120	4,440	b3,250	3,550	3,750	9,570	17,900	4,750	3,330	3,460
23	2,630	b3,400	b4,050	4,330	b3,350	3,480	4,750	9,080	14,900	4,460	3,330	3,310
24	2,520	b3,250	b3,800	4,200	b3,500	3,420	6,180	8,350	15,400	4,300	3,640	3,110
25	2,390	b3,000	b3,100	4,120	b3,900	3,290	6,500	8,840	16,800	4,520	3,780	3,110
26	2,420	b2,750	b2,200	4,020	3,870	3,310	6,600	8,760	16,600	4,610	3,780	2,720
27	2,630	b2,500	b1,760	4,000	3,800	3,420	7,230	8,140	13,700	4,720	3,520	2,650
28	2,720	b2,250	b2,240	a3,800	3,800	3,570	8,140	8,210	11,700	4,440	3,310	2,650
29	2,790	b2,200	b3,030	a4,050	-	3,730	8,450	9,290	10,500	4,300	3,190	2,810
30	2,790	b2,300	b3,800	a3,950	-	3,970	8,070	12,500	9,540	4,170	3,190	2,880
31	2,850	-	b4,100	4,020	-	4,220	-	13,600	-	4,410	3,190	-
Total	77,920	96,790	109,060	132,190	105,090	110,510	135,320	208,920	502,940	184,890	124,370	90,830
Mean	2,514	3,226	3,517	4,264	3,753	3,565	4,511	6,739	16,760	5,964	4,012	3,028
Ac-ft	154,600	192,000	216,300	262,200	208,400	219,200	268,400	414,400	997,600	366,700	246,700	180,200

Calendar year 1952: Max 29,200 Min 1,680 Mean 7,329 Ac-ft 5,321,000
Water year 1952-53: Max 21,900 Min 1,760 Mean 5,147 Ac-ft 3,727,000

* 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.

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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 1953. 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 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								1,340	1,360	3,580	3,910	2,460
2								1,420	1,280	3,650	3,870	2,470
3								1,590	1,220	3,720	3,610	2,450
4								1,960	1,210	3,680	3,730	2,360
5								1,630	1,170	3,680	3,740	2,290
6								1,980	1,130	3,630	3,640	2,260
7								2,350	1,100	3,720	3,750	2,260
8								2,540	1,080	3,910	2,280	2,280
9								2,690	1,060	3,850	1,980	2,330
10								2,720	1,110	3,830	3,230	2,230
11								2,790	1,250	3,920	3,140	2,160
12								2,740	1,460	3,940	3,130	2,060
13								2,910	1,700	3,930	3,170	2,120
14								2,680	2,050	3,880	3,220	2,270
15								1,600	2,560	3,830	3,110	2,240
16								1,500	3,060	3,760	3,070	2,130
17								2,540	3,530	3,630	2,990	2,080
18								3,230	3,910	3,540	2,890	1,820
19								3,360	4,030	3,590	2,800	1,660
20								3,010	4,060	3,750	2,950	1,630
21								2,600	4,070	3,810	2,990	1,850
22								2,180	4,080	3,800	2,950	1,810
23								2,120	4,000	3,850	2,970	2,000
24								1,930	3,980	3,860	3,090	2,110
25								1,700	3,970	3,960	3,070	2,080
26								1,730	3,910	3,910	3,130	2,130
27								1,710	3,810	3,940	3,040	2,050
28								1,700	3,710	3,900	2,860	2,050
29								1,600	3,600	3,880	2,780	2,000
30								1,430	3,640	3,810	2,650	1,950
31								1,380	-	3,860	2,650	-
Total								66,660	78,100	117,600	96,390	63,590
Mean								2,150	2,603	3,794	3,109	2,120
Ac-ft								132,200	154,900	233,300	191,200	126,100

Calendar year : Max Min Mean Ac-ft

The season: : Max - Min - Mean - Ac-ft 837,700

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 1953 (summer months only for many years).

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

Average discharge.--19 years (1931-37, 1940-53), 159 cfs.

Extremes.--Maximum discharge during year, 724 cfs June 7 (gage height, 6.32 ft); minimum, 4 cfs Sept. 12 (gage height, 1.15 ft).
1913-53: Maximum discharge, 868 cfs May 21, 1921; no flow for many days.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by Blackfoot-Marsh Reservoir (capacity, 413,000 acre-ft). Many diversions above station for irrigation. Most of flow during nonirrigation season and part of that during irrigation season is supplied by waste from Snake River canals.

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

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 27 to Nov. 23, Aug. 29 to Sept. 4)

1.0	2	2.5	151
1.1	6	3.0	220
1.2	10	4.0	359
1.4	23	5.0	502
1.7	52	6.0	662
2.0	86	6.4	729

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	79	b185	159	224	230	141	454	373	89	20	12
2	75	111	b190	*164	*226	192	151	436	383	62	28	10
3	78	*137	*b194	160	231	179	168	409	338	35	*29	13
4	62	191	b198	147	245	*185	151	366	*538	59	27	13
5	59	267	b200	143	231	193	146	231	601	66	19	13
6	*75	316	b200	143	231	196	160	317	714	62	15	12
7	80	395	b195	143	238	200	192	416	717	41	25	20
8	90	450	b190	143	237	175	199	360	686	41	29	19
9	78	444	b180	150	198	125	170	365	676	28	41	10
10	78	440	b180	191	172	112	150	436	670	21	29	6
11	75	427	b180	210	196	102	137	443	606	29	56	6
12	75	335	b180	210	224	104	122	373	390	39	52	*5
13	75	434	b180	207	189	100	122	184	217	48	43	8
14	79	436	b180	206	216	109	117	63	168	*36	35	16
15	78	437	177	199	210	98	111	18	*192	37	28	11
16	78	397	178	192	175	95	102	13	141	32	84	7
17	91	436	175	184	189	87	78	15	59	18	103	8
18	177	362	170	182	216	89	66	26	29	14	195	17
19	392	325	168	200	156	86	82	78	15	16	*170	29
20	318	304	b166	217	158	98	95	122	18	24	89	33
21	306	289	b165	219	154	100	100	245	20	27	51	30
22	275	261	b160	252	160	99	111	223	29	*21	48	41
23	268	228	b150	242	167	106	122	230	16	18	32	41
24	346	b250	b140	234	167	100	168	226	14	16	39	29
25	228	b210	b140	230	159	90	306	270	37	29	25	41
26	195	b190	b140	240	186	*98	486	295	70	49	25	37
27	179	b185	b145	203	203	100	365	293	156	82	18	22
28	172	b180	b155	188	227	112	409	297	362	62	16	20
29	179	b180	164	175	-	138	386	286	*109	48	*11	18
30	155	b185	163	220	-	137	*401	299	94	42	10	39
31	117	-	160	231	-	135	-	355	-	28	12	-
Total	4,613	8,881	5,348	5,984	5,585	3,970	5,514	8,144	8,438	1,219	1,404	586
Mean	149	296	173	193	199	128	184	263	281	39.3	45.3	19.5
Ac-ft	9,150	17,620	10,610	11,870	11,080	7,870	10,940	16,150	16,740	2,420	2,780	1,160

Calendar year 1952: Max 746 **Min** 13 **Mean** 238 **Ac-ft** 172,500
Water year 1952-53: Max 717 **Min** 5 **Mean** 164 **Ac-ft** 118,400

* Discharge measurement made on this day.
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 1953. 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.--27 years (1926-53), 3,999 cfs.

Extremes.--Maximum discharge during year, 18,800 cfs June 15 (gage height, 9.14 ft); minimum, 255 cfs Sept. 13 (gage height, 0.45 ft).

1910-53: 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. 40), Island Park Reservoir (see p. 29), Grassy Lake (see p. 40), 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 table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 1 to Jan. 9, Sept. 11-30)

0.5	230	5.0	5,900
1.0	500	6.0	8,450
1.5	840	7.0	11,300
2.0	1,250	8.0	14,600
2.5	1,780	9.0	18,400
3.0	2,410	10.0	22,600
4.0	4,040		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,980	2,410	2,760	4,060	4,040	3,690	*4,000	6,190	11,700	*6,120	770	749
2	2,030	2,560	2,990	*4,090	*3,930	3,600	4,110	5,340	*11,200	5,760	1,060	609
3	1,540	*2,680	*2,990	4,150	3,900	3,600	4,090	4,530	12,100	6,460	*1,660	672
4	1,250	2,860	3,160	4,060	3,930	*3,490	3,810	3,710	14,500	6,830	1,880	805
5	1,200	3,070	3,500	4,040	3,990	3,450	3,590	2,840	15,700	6,390	1,540	840
6	*1,100	3,210	3,720	4,040	4,110	3,470	3,740	2,830	15,500	5,800	880	896
7	1,060	3,370	3,660	4,060	4,040	3,420	3,950	2,330	16,300	5,040	735	992
8	1,090	3,440	3,500	4,060	3,950	3,400	3,900	3,000	16,000	4,360	488	896
9	1,090	3,450	3,670	4,310	3,810	3,370	3,740	3,910	16,600	3,840	452	665
10	1,100	3,450	3,780	4,530	3,670	3,370	3,490	4,310	16,700	3,210	665	434
11	1,050	3,500	3,720	4,650	3,710	3,370	3,300	3,860	16,100	2,620	1,540	365
12	1,040	3,540	3,720	4,760	3,600	3,380	3,160	2,520	16,200	2,480	1,830	*275
13	1,100	3,740	3,830	4,810	3,570	3,450	3,050	1,460	17,000	2,420	1,460	270
14	1,100	3,990	3,910	4,760	3,720	3,490	3,040	728	17,800	*1,960	1,240	616
15	1,040	4,170	3,950	4,670	3,740	3,450	3,040	*280	*18,500	1,630	1,340	1,100
16	1,160	4,170	3,990	4,560	3,740	3,370	2,800	398	18,200	1,410	1,860	1,280
17	1,420	4,220	4,040	4,380	3,780	3,250	2,640	707	17,000	1,120	2,200	1,320
18	1,580	3,950	3,990	4,380	3,760	3,280	2,530	1,790	14,700	864	2,280	1,480
19	1,740	3,670	4,020	4,560	3,660	3,300	2,660	3,330	13,200	658	*2,030	2,090
20	1,920	3,620	4,240	4,650	3,230	3,320	2,600	4,470	13,400	644	1,430	2,460
21	1,940	3,600	4,400	4,720	3,180	3,330	2,420	5,860	14,800	1,030	1,070	2,370
22	1,880	3,570	4,150	4,530	3,130	3,400	2,640	7,190	14,300	*1,260	812	2,030
23	1,890	3,500	4,080	4,420	3,210	3,380	3,250	7,350	11,500	928	616	1,740
24	1,920	3,500	3,840	4,270	3,380	3,250	4,290	6,700	10,800	721	651	1,450
25	1,710	3,180	3,150	4,240	3,670	3,160	5,050	7,190	12,200	700	812	1,220
26	1,630	2,860	2,170	4,170	3,620	2,970	5,420	7,560	12,800	944	872	1,030
27	1,660	2,620	1,750	4,020	3,720	3,080	5,700	6,960	11,400	1,120	840	880
28	1,800	2,280	2,240	3,830	3,740	3,250	6,360	6,700	9,880	992	658	976
29	1,860	2,200	3,050	4,110	-	3,380	6,960	6,700	*8,260	805	*630	1,000
30	1,950	2,400	3,790	3,970	-	3,600	*7,110	9,900	6,910	672	644	1,200
31	2,330	-	4,130	4,060	-	3,830	-	12,000	-	630	770	-
Total	47,160	98,780	109,890	133,920	103,530	105,150	116,420	143,293	421,250	79,418	35,715	32,710
Mean	1,521	3,293	3,545	4,320	3,698	3,392	3,881	4,622	14,040	2,562	1,152	1,090
Ac-ft	93,540	195,900	218,000	265,600	205,300	208,600	230,900	284,200	835,500	157,500	70,840	64,880

Calendar year 1952: Max 28,300 Min 270 Mean 6,103 Ac-ft 4,431,000
Water year 1952-53: Max 18,500 Min 270 Mean 3,910 Ac-ft 2,831,000

* Discharge measurement made on this day.

Portneuf River at Topaz, Idaho

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

Drainage area.--420 sq mi, approximately.

Records available.--January 1913 to September 1915, July 1919 to September 1953.

Gage.--Staff gage read once daily. Datum of gage is 4,916.0 ft (revised) above mean sea level, preliminary, unadjusted. Prior to July 20, 1919, staff gage at site 200 ft downstream at datum 1.0 ft lower.

Average discharge.--34 years (1913-14, 1919-22, 1923-53), 197 cfs.

Extremes.--Maximum discharge observed during year, 469 cfs June 6 (gage height, 3.46 ft); minimum observed, 136 cfs Oct. 5; minimum gage height observed, 1.16 ft Oct. 30, Nov. 2, 6-8.

1913-15, 1919-53: Maximum discharge observed, 902 cfs Apr. 3, 1913 (gage height, 6.1 ft, site and datum then in use); minimum observed, 65 cfs Oct. 9, 1934 (gage height, 0.81 ft).

Remarks.--Records good except those for periods of indefinite stage-discharge relation or doubtful gage-height record, which are fair. Flow regulated by Portneuf-Marsh Valley Reservoir (capacity, 16,410 acre-ft) and Chesterfield Reservoir on Twenty-fourmile Creek (capacity, 685 acre-ft). Diversions above station for irrigation of about 22,000 acres.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	145	145	170	174	198	186	194	208	*279	261	216	194
2	142	143	170	174	194	198	190	196	438	263	220	198
3	138	145	168	176	206	194	194	182	450	263	223	202
4	138	147	166	178	210	194	194	174	450	267	214	206
5	136	147	170	180	214	190	194	164	459	269	218	194
6	138	143	170	182	218	190	194	172	469	267	216	194
7	138	143	170	182	218	*192	194	174	436	269	225	194
8	142	143	170	190	218	194	194	178	443	267	233	194
9	140	151	168	206	214	198	194	160	445	259	192	186
10	140	155	166	214	206	202	194	159	452	257	194	190
11	142	160	174	206	198	202	190	151	447	253	194	186
12	143	162	174	210	190	206	194	147	431	255	194	186
13	147	164	176	235	190	210	*188	145	423	259	200	194
14	149	164	*178	231	186	210	180	145	404	253	200	190
15	142	166	178	206	198	206	170	145	362	257	212	190
16	147	168	176	198	194	202	166	145	326	259	202	186
17	147	166	182	210	190	202	172	200	*290	259	198	186
18	149	168	184	313	186	198	174	216	273	*269	202	186
19	153	170	186	368	186	194	174	231	263	257	200	186
20	157	172	186	305	182	196	180	315	309	212	202	186
21	153	176	186	271	182	188	186	300	300	204	204	182
22	151	176	184	251	182	188	186	294	301	202	198	178
23	151	176	182	235	178	192	196	313	307	206	194	178
24	151	172	178	227	178	196	218	341	317	210	190	174
25	*147	170	178	210	174	200	218	322	326	204	*194	166
26	147	168	178	206	182	200	220	328	317	204	190	166
27	145	168	174	202	186	192	223	320	311	249	186	162
28	147	172	174	*200	186	196	284	247	282	235	190	159
29	147	170	174	202	-	196	*263	245	277	227	194	*147
30	143	172	176	202	-	200	223	251	269	223	198	145
31	145	-	178	198	-	196	-	279	-	220	198	-
Total	4,500	4,842	5,444	6,742	5,444	6,108	5,941	6,847	10,856	7,559	6,291	5,485
Mean	145	161	176	217	194	197	198	221	362	244	203	183
Ac-ft	8,930	9,600	10,800	13,370	10,800	12,120	11,780	13,580	21,530	14,990	12,480	10,880

Calendar year 1952: Max 668 Min 136 Mean 239 Ac-ft 173,500
Water year 1952-53: Max 469 Min 136 Mean 208 Ac-ft 150,900

* Discharge measurement made on this day.

Note.--Stage-discharge relation indefinite May 1-12, 17, May 19 to July 31 and gage-height record doubtful May 13-16, 18; discharge estimated on basis of weather records, gage-height record, 2 discharge measurements, and records for station at Pocatello.

Portneuf River at Pocatello, Idaho

Location.--Lat 42°51'40", long. 112°27'25", in NE¼NE¼ sec. 34, T. 6 S., R. 34 E., on right bank 30 ft upstream from 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 1953.

Gage.--Water-stage recorder. Altitude of gage is 4,430 ft (from topographic map). May 18, 1897, to Oct. 14, 1899, staff gage at site 0.6 mile upstream at different datum. Aug. 31, 1911, to May 14, 1927, and Oct. 13, 1927, to June 14, 1928, staff gages at sites near Carson Street Bridge 0.8 mile downstream at different datums. May 14 to Oct. 13, 1927, and June 14, 1928, to Oct. 17, 1950, water-stage recorder at sites near Carson Street Bridge 0.8 mile downstream at different datums.

Average discharge.--40 years (1912-16, 1917-53), 259 cfs.

Extremes.--Maximum discharge during year, 622 cfs Jan. 20 (gage height, 6.15 ft); minimum, 38 cfs July 8, 16 (gage height, 3.88 ft).
1897-99, 1911-53: 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 tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 30 to Feb. 4)

Oct. 1 to Jan. 29		Jan. 30 to Sept. 30			
4.5	116	3.9	40	5.0	256
5.0	246	4.1	64	5.5	426
5.5	412	4.4	112	6.0	616
6.0	592	4.7	178		
6.1	630				

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	122	189	b305	311	368	347	426	430	*376	108	74	80
2	129	198	b315	308	365	347	415	394	404	101	71	77
3	133	192	b330	308	376	340	404	358	463	88	75	68
4	129	189	b335	308	397	336	404	333	500	64	74	75
5	126	256	b335	308	404	344	415	296	508	70	78	83
6	129	285	b335	304	404	347	426	262	519	64	80	81
7	129	294	337	311	390	*350	419	259	530	65	78	68
8	135	298	334	318	394	358	408	262	565	50	75	68
9	135	298	331	318	383	365	397	268	565	46	75	74
10	137	308	324	375	358	379	390	259	580	51	75	75
11	135	301	331	436	340	394	379	242	580	60	75	77
12	137	308	334	392	344	394	372	228	549	64	81	77
13	137	344	334	392	344	390	368	207	519	65	84	78
14	137	328	*334	447	344	386	*365	162	478	48	88	78
15	137	347	331	433	344	376	354	155	444	61	84	78
16	144	347	328	381	344	368	350	155	372	51	83	86
17	146	341	328	371	344	368	350	151	299	67	83	89
18	155	331	328	405	344	358	372	202	*220	*56	88	91
19	163	331	331	548	340	354	383	215	185	60	86	88
20	170	331	341	596	319	365	376	256	164	51	89	81
21	173	328	364	518	309	365	390	271	148	50	103	81
22	168	324	364	482	309	368	422	283	153	64	86	84
23	168	308	341	450	312	358	467	268	142	61	84	88
24	168	308	321	405	312	372	493	299	122	58	78	94
25	*181	308	304	395	312	383	496	361	108	58	*78	98
26	158	288	b280	388	316	397	493	368	114	50	81	91
27	163	265	b290	378	322	401	489	344	108	44	78	86
28	170	b270	b300	361	333	419	470	333	110	44	80	88
29	178	b280	b305	*361	-	430	*508	340	218	75	75	*96
30	178	b290	b310	379	-	437	467	383	185	75	70	98
31	186	-	311	376	-	441	-	397	-	78	77	-
Total	4,656	8,755	10,091	12,043	9,771	11,637	12,468	8,741	10,228	1,947	2,486	2,476
Mean	150	292	326	388	349	375	416	282	341	62.8	80.2	82.5
Ac-ft	9,240	17,370	20,020	23,890	19,380	23,080	24,750	17,340	20,290	3,860	4,930	4,910

Calendar year 1952: Max 1,040 Min 61 Mean 312 Ac-ft 226,200
Water year 1952-53: Max 596 Min 44 Mean 261 Ac-ft 189,000

* 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 1953.
Gage.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation).
Extremes.--Maximum contents during year, 1,720,000 acre-ft June 8 (elevation, 4,354.86 ft); miniumm, 487,000 acre-ft Sept. 30 (elevation, 4,325.63 ft).
1926-53: Maximum contents, 1,729,000 acre-ft June 26, 1951 (elevation, 4,355.02 ft); minimum since full capacity was first 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	580	705	982	1,268	1,558	1,650	1,663	1,706	1,579	1,701	1,232	750
2	579	710	989	1,277	1,570	1,660	1,670	1,706	1,588	1,695	1,216	734
3	577	716	999	1,284	1,574	1,662	1,674	1,703	1,607	1,686	1,199	721
4	577	721	1,011	1,294	1,575	1,659	1,677	1,698	1,627	1,678	1,184	706
5	577	727	1,020	1,304	1,582	1,661	1,684	1,692	1,647	1,670	1,172	692
6	576	735	1,028	1,312	1,584	1,661	1,692	1,685	1,674	1,664	1,157	679
7	576	745	1,037	1,320	1,589	1,663	1,696	1,674	1,697	1,655	1,140	666
8	577	758	1,049	1,329	1,598	1,664	1,708	1,667	1,717	1,644	1,122	654
9	578	767	1,063	1,337	1,609	1,667	1,706	1,660	1,715	1,632	1,105	642
10	580	778	1,073	1,345	1,602	1,666	1,706	1,652	1,712	1,621	1,088	629
11	581	784	1,084	1,355	1,605	1,664	1,701	1,646	1,709	1,606	1,073	618
12	583	794	1,094	1,368	1,606	1,665	1,697	1,637	1,704	1,590	1,059	605
13	586	800	1,104	1,378	1,606	1,661	1,699	1,622	1,701	1,574	1,044	592
14	591	811	1,116	1,387	1,609	1,664	1,696	1,608	1,706	1,559	1,030	580
15	593	822	1,128	1,398	1,604	1,665	1,700	1,595	1,713	1,538	1,017	569
16	596	836	1,138	1,407	1,615	1,668	1,702	1,579	1,711	1,523	1,003	558
17	599	849	1,148	1,415	1,616	1,660	1,701	1,564	1,705	1,507	989	546
18	602	862	1,158	1,426	1,618	1,666	1,703	1,553	1,702	1,488	976	536
19	607	874	1,168	1,439	1,629	1,665	1,707	1,541	1,698	1,469	962	527
20	616	884	1,179	1,451	1,626	1,659	1,711	1,531	1,704	1,447	946	522
21	626	894	1,189	1,459	1,626	1,657	1,710	1,525	1,713	1,432	928	520
22	636	903	1,202	1,471	1,627	1,658	1,706	1,527	1,715	1,415	910	517
23	645	911	1,211	1,480	1,638	1,665	1,696	1,527	1,711	1,396	895	513
24	654	924	1,219	1,490	1,634	1,667	1,696	1,524	1,709	1,377	877	510
25	664	934	1,226	1,498	1,633	1,663	1,695	1,533	1,714	1,358	862	506
26	673	942	1,231	1,508	1,637	1,665	1,696	1,533	1,716	1,341	847	502
27	682	952	1,235	1,514	1,639	1,664	1,697	1,538	1,718	1,323	831	498
28	688	958	1,239	1,525	1,644	1,663	1,692	1,543	1,714	1,305	816	492
29	693	966	1,247	1,531	-	1,661	1,699	1,545	1,708	1,288	800	488
30	695	973	1,254	1,538	-	1,665	1,701	1,551	1,705	1,268	783	488
31	700	-	1,260	1,550	-	1,658	-	1,564	-	1,250	767	-

Monthly elevation and contents, water year October 1952 to September 1953

Date	Elevation (feet)	Contents (thousands of acre-feet)	Change in contents during month (thousands of acre-feet)
Sept.30	4,328.95	583	-
Oct. 31	4,332.55	700	+117
Nov. 30	4,339.75	973	+273
Dec. 31	4,346.07	1,260	+287
Calendar year 1952	-	-	-238
Jan. 31	4,351.76	1,550	+290
Feb. 28	4,353.49	1,644	+94
Mar. 31	4,353.75	1,658	+14
Apr. 30	4,354.51	1,701	+43
May 31	4,352.03	1,564	-137
June 30	4,354.59	1,705	+141
July 31	4,345.87	1,250	-455
Aug. 31	4,334.45	767	-483
Sept.30	4,325.68	488	-279
Water year 1952-53	-	-	-95

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 1953.

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.--27 years (1926-53), 6,739 cfs.

Extremes.--Maximum discharge during year, 23,100 cfs June 15 (gage height, 8.69 ft); minimum, 99 cfs Nov. 16 (gage height, 1.16 ft).
1906-53: 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 tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 21 to Aug. 12)

Oct. 1 to Dec. 4				Dec. 5 to Sept. 30			
1.4	121	3.5	1,350	1.5	134	4.0	2,070
1.7	165	4.0	2,050	1.7	165	5.0	4,920
2.0	240	5.0	4,630	2.0	240	6.0	9,070
2.5	470	6.0	8,770	2.3	360	7.0	14,100
3.0	830			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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,110	3,100	1,330	2,960	623	616	*5,440	8,690	7,120	11,300	12,300	11,900
2	5,390	2,620	1,330	*2,950	*3,770	4,710	4,310	9,210	*7,040	*12,100	12,100	11,700
3	5,020	*3,710	1,330	2,950	4,810	5,190	4,320	9,650	6,040	13,000	*11,500	11,200
4	4,700	2,870	*1,270	398	4,840	*6,340	4,330	9,650	6,040	12,400	11,400	10,700
5	4,660	2,840	1,210	2,980	4,830	6,340	556	9,360	6,160	12,300	11,600	10,400
6	*4,470	1,200	1,220	3,010	4,960	6,310	4,380	9,170	6,160	12,600	11,600	10,400
7	4,220	1,180	137	3,030	5,220	6,310	4,350	9,170	7,040	12,600	11,700	10,300
8	3,880	1,180	1,160	3,030	3,100	3,900	5,380	9,310	15,900	12,800	11,700	9,930
9	3,390	151	1,160	3,070	5,260	6,320	5,920	9,980	21,000	13,000	11,700	9,690
10	3,230	2,470	1,670	3,060	5,220	6,320	6,970	10,400	20,900	12,900	11,700	9,650
11	3,260	2,970	1,670	482	5,220	6,290	6,370	11,500	20,900	12,800	11,700	9,550
12	3,260	1,740	1,630	2,960	5,220	6,320	3,900	11,200	20,900	12,800	11,500	*9,450
13	2,990	1,800	1,660	2,960	5,220	6,310	6,190	11,200	18,000	12,800	11,500	9,410
14	2,820	1,580	141	2,960	5,240	6,290	5,730	10,800	16,300	*12,700	11,500	9,410
15	2,780	1,330	1,610	2,970	3,100	3,900	5,560	10,300	19,600	12,600	11,500	9,360
16	3,370	141	1,620	2,890	5,260	6,290	5,200	10,100	*23,000	12,300	11,500	9,260
17	3,100	1,390	1,620	2,870	5,270	6,350	5,210	10,100	21,700	12,300	11,600	9,260
18	3,090	1,340	1,620	562	5,260	6,320	5,200	10,100	18,600	12,300	*12,100	8,880
19	205	1,350	1,640	2,850	5,260	6,320	1,390	10,200	14,300	12,200	12,500	8,650
20	529	1,350	1,660	2,770	5,220	6,340	5,340	10,500	12,000	12,300	12,800	7,380
21	198	1,830	264	2,770	5,150	6,350	5,870	10,500	14,700	12,300	12,700	6,440
22	198	2,100	2,720	2,800	2,990	3,870	8,050	10,100	17,200	*12,400	12,300	6,240
23	171	135	2,820	2,810	5,120	5,920	8,050	9,650	14,600	12,600	12,200	6,200
24	179	1,320	2,860	2,810	5,450	6,200	8,000	9,210	12,400	12,700	11,800	6,160
25	163	1,320	2,850	616	5,480	6,240	7,690	8,510	12,600	12,700	11,500	6,160
26	163	1,320	2,860	2,800	4,680	6,840	7,470	8,000	13,600	12,700	11,400	6,160
27	590	1,320	2,870	2,890	4,770	6,300	7,510	7,780	14,500	12,700	11,600	6,120
28	2,750	1,300	324	2,810	4,770	6,300	7,820	8,050	15,300	12,700	11,600	6,120
29	2,740	1,300	2,910	2,830	-	3,900	8,000	7,820	*12,900	12,700	*11,900	5,160
30	3,040	130	2,910	2,810	-	6,350	*8,230	7,160	10,500	12,700	12,100	4,690
31	2,900	-	2,940	2,840	-	6,370	-	6,910	-	12,600	12,000	-
Total	83,566	48,387	53,016	80,498	131,313	177,726	172,736	294,280	427,000	388,900	366,600	255,930
Mean	2,696	1,613	1,710	2,597	4,690	5,733	5,758	9,493	14,230	12,550	11,830	8,531
Ac-ft	165,800	95,970	105,200	159,700	260,500	352,500	342,600	583,700	846,900	771,400	727,100	507,600

Calendar year 1952: Max 24,000 Min 130 Mean 9,423 Ac-ft 6,841,000
Water year 1952-53: Max 23,000 Min 130 Mean 6,794 Ac-ft 4,919,000

* Discharge measurement made on this day.

Raft River at Peterson Ranch, near Bridge, Idaho

Location.--Lat 42°04', long. 113°27', in sec. 5, T. 16 S., R. 26 E., on left bank 100 ft upstream from One Mile Creek, 400 ft downstream from road bridge, 7½ miles southwest of Bridge, and 16 miles south of Malta.
Drainage area.--412 sq mi.
Records available.--September 1946 to December 1953 (discontinued).
Gage.--Water-stage recorder. Altitude of gage is 4,980 ft (by barometer).
Average discharge.--7 years, 23.4 cfs.
Extremes.--1952-53: Maximum discharge during water year, 183 cfs Aug. 3 (gage height, 2.75 ft); minimum, 5.8 cfs Nov. 25 (gage height, 1.18 ft), but may have been less during period of ice effect.
1953: Maximum discharge during period October to December, 11 cfs Oct. 12-15, Dec. 2; maximum gage height, 1.31 ft Dec. 2; minimum discharge, 7.0 cfs Nov. 2, 3, 4, 5 (gage height, 1.20 ft).
1946-53: Maximum discharge, 1,090 cfs Feb. 5, 1951 (gage height, 4.52 ft), from rating curve extended above 200 cfs on basis of slope-area determination of peak flow; minimum, 1.2 cfs Jan. 13, 1950 (gage height, 0.90 ft), caused by ice jam upstream.
Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation.

Rating table, Oct. 1, 1952, to Dec. 31, 1953, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.2	5.8	1.8	44
1.3	8.9	2.0	65
1.4	14	2.5	134
1.6	28	3.0	230

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	14	10	18	23	23	32	43	29	14	35	9.9
2	11	14	10	17	23	20	31	41	36	9.4	60	10
3	11	12	11	18	22	20	30	39	57	8.6	105	9.4
4	11	12	12	18	18	22	29	38	44	8.6	21	9.4
5	11	16	13	17	18	22	29	37	41	8.6	16	9.4
6	11	16	13	18	22	23	28	36	38	8.0	13	8.9
7	12	16	14	18	22	23	29	35	55	8.0	12	8.9
8	11	16	15	18	21	23	29	36	72	7.7	11	9.4
9	11	14	15	20	20	23	29	37	56	7.7	11	8.9
10	11	14	15	22	14	*23	29	35	43	8.6	10	8.9
11	11	14	16	21	b14	22	28	33	40	8.6	9.9	8.9
12	11	17	*18	21	b16	23	*29	33	41	8.3	9.9	8.9
13	11	18	20	23	b15	26	30	32	51	8.3	9.9	8.9
14	11	20	18	23	19	24	29	26	64	8.6	9.9	8.6
15	10	20	17	20	20	23	26	26	*67	8.9	11	8.9
16	10	17	18	18	18	23	24	29	57	8.6	12	8.9
17	10	18	18	20	20	23	28	29	52	8.3	9.9	8.9
18	10	16	19	23	20	23	31	28	49	*8.3	9.9	8.9
19	10	16	19	38	16	23	35	28	40	8.0	9.9	8.9
20	11	16	19	33	b13	24	33	29	29	8.0	9.4	8.9
21	11	16	20	31	b14	24	31	30	27	8.3	9.4	8.9
22	11	b13	19	26	20	25	32	28	23	8.3	*9.4	8.9
23	*12	b10	17	26	23	25	36	28	26	8.0	9.4	8.9
24	12	12	b13	26	19	24	37	32	27	8.3	9.4	8.9
25	12	12	b11	25	19	26	37	32	22	8.0	9.4	8.9
26	12	b9.5	11	*25	21	28	37	29	20	8.0	8.9	*8.9
27	13	b9.5	13	22	23	29	38	26	20	8.0	8.9	8.9
28	13	b9.5	16	19	24	31	41	27	20	8.0	9.4	9.4
29	13	b9.5	18	25	-	31	43	28	17	8.3	9.4	9.9
30	14	10	18	24	-	32	*44	29	15	8.6	8.9	9.4
31	14	-	18	23	-	32	-	*34	-	15	8.9	-
Total	353	427.0	484	696	537	763	964	993	1,178	269.9	497.1	273.3
Mean	11.4	14.2	15.6	22.5	19.2	24.6	32.1	32.0	39.3	8.71	16.0	9.11
Ac-ft	700	847	960	1,380	1,070	1,510	1,910	1,970	2,340	535	986	542

Calendar year 1952: Max 199 Min 6.4 Mean 34.1 Ac-ft 24,750
Water year 1952-53: Max 105 Min 7.7 Mean 20.4 Ac-ft 14,750

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

Discharge, in cubic feet per second, 1953

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	9.4	8.0	9.9	9	9.4	8.3	(e)	17	10	8.9	(e)	25	10	9.9	(e)
2	9.4	7.4	11	10	9.4	8.6	(e)	18	10	9.4	(e)	26	10	9.4	(e)
3	9.4	7.4	9.9	11	9.9	8.6	(e)	19	9.9	9.4	(e)	27	10	9.4	(e)
4	9.4	7.0	9.9	12	11	8.6	(e)	20	9.9	9.4	(e)	28	10	9.4	(e)
5	9.9	7.4	9.9	13	11	8.6	(e)	21	9.9	9.4	(e)	29	*9.9	9.4	(e)
6	9.4	8.0	9.9	14	11	8.6	(e)	22	10	9.4	(e)	30	9.4	9.4	(e)
7	9.9	8.9	*10	15	10	8.9	(e)	23	10	9.9	(e)	31	9.4	-	(e)
8	9.4	8.6	(e)	16	10	8.9	(e)	24	10	9.9	(e)				
Total													306.8	264.4	310.5
Mean													9.90	8.81	10.0
Runoff in acre-feet													609	524	616

Calendar year 1953: Max 105 Min. 7.0 Mean 19.3 Ac-ft 13,990

* Discharge measurement made on this day.
e Average discharge for period Dec. 8-31, 10 cfs.
Note.--No gage-height record Dec. 8-31; discharge estimated on basis of weather records and records for Salmon Falls Creek and other nearby streams.

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 1953.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,840 ft (revised) (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.--9 years (1944-53), 10.4 cfs.

Extremes.--Maximum discharge during year, 107 cfs June 13 (gage height, 1.97 ft); minimum, 0.1 cfs July 30, Aug. 7, 8.
1910-11, 1944-53: Maximum discharge observed, 180 cfs May 13, 1910; minimum, 0.1 cfs July 29, 1952, July 30, Aug. 7, 8, 1953.

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 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	0.8	1.6	36
1.2	2.6	1.8	71
1.3	7.2	2.0	114
1.4	14		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	1.1		b0.9	1.6	1.4	2.3	7.8	23	35	7.9	3.7
2	1.0	1.0		b.9	1.4	2.3	2.1	7.2	31	33	14	2.6
3	1.0	.8			1.6	2.3	2.3	7.2	30	*31	8.5	2.3
4	1.0	1.0			1.8	2.1	2.3	6.6	30	31	6.6	2.1
5	1.1	1.1	b0.9		1.8	2.1	2.6	6.6	*32	28	6.1	1.8
				a1.2								
6	1.1	1.1			*1.8	2.1	2.6	7.8	32	27	5.1	1.6
7	1.3	1.1			1.8	2.1	2.3	*10	33	24	2.6	1.6
8	1.3	1.1	(*)		1.8	2.1	2.1	11	36	22	3.1	1.6
9	1.3	1.0		*2.1	1.4	2.3	2.3	9.8	42	22	4.6	1.6
10	1.1	1.0		2.1		2.6	2.3	9.1	60	19	4.6	1.4
11	1.3	1.0	a.9	1.8		2.3	2.3	8.5	84	17	4.1	1.3
12	1.3	1.1		2.1		2.1	2.1	7.8	*94	16	4.1	1.1
13	1.1	1.3		2.3		*2.1	2.3	7.2	99	16	3.7	1.1
14	1.3	1.3	1.0	1.8		1.6	2.3	6.6	99	15	3.7	1.0
15	1.3	1.3	1.0	1.3		1.8	2.3	6.6	96	15	2.5	1.0
16	1.4	1.3	1.0	b1.3	b1.3	2.1	2.6	7.8	82	13	2.4	1.1
17	1.1	1.3	1.1	b1.8		1.8	*3.7	9.1	73	12	3.3	1.3
18	1.1	1.1	1.1	2.3		1.6	2.9	9.8	75	11	2.9	1.1
19	1.3	1.1	1.1	2.3		2.1	2.9	11	*75	10	2.6	1.0
20	1.4	1.1	1.3	2.1		2.1	3.3	14	65	9.8	2.6	.9
21	1.4	1.1	1.3	1.8		1.8	4.6	14	58	*9.8	2.6	.9
22	1.4	.9	1.1	1.4		2.1	6.1	13	56	9.1	2.6	.9
23	1.4		1.0	b1.4	1.3	2.1	8.5	13	56	8.5	2.3	.9
24	1.3			b1.6	1.3	2.3	8.5	14	52	7.8	2.3	*1.0
25	1.3			1.6	1.3	2.6	7.8	12	42	7.2	2.1	1.0
26	1.3	b.9		1.6	1.6	2.3	8.5	10	39	7.2	1.8	.9
27	1.3		b.9	1.1	1.8	2.3	10	12	35	6.6	*1.8	.9
28	*1.1			1.3	2.3	2.6	11	15	33	6.6	2.1	.9
29	1.1			1.6	-	2.6	9.1	17	33	6.6	1.8	1.0
30	1.1			1.4	-	2.6	8.5	17	35	3.4	1.8	.9
31	1.1	-		1.4	-	2.6	-	19	-	3.0	1.8	-
Total	37.4	31.4	29.9	48.5	41.5	66.9	132.5	327.5	1,630	482.6	118.0	40.5
Mean	1.21	1.05	0.96	1.56	1.48	2.16	4.42	10.6	54.3	15.6	3.81	1.35
Ac-ft	74	62	59	96	82	133	263	650	3,230	957	234	80

Calendar year 1952: Max 83 Min - Mean 10.2 Ac-ft 7,380
Water year 1952-53: Max 99 Min - Mean 8.18 Ac-ft 5,920

Peak discharge (base, 70 cfs).--June 13 (5:15 a.m.) 107 cfs (1.97 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records.
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 1953.

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

Extremes.--Maximum contents during year, 99,760 acre-ft June 9 (gage height, 45.38 ft); minimum, 31,660 acre-ft Oct. 28 (gage height, 39.20 ft).
1909-53: 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 height 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92,970	50,630	75,870	79,030	79,590	86,680	94,720	89,600	96,150	92,860	95,910	94,600
2	93,320	56,440	76,550	80,040	75,980	79,930	95,430	89,830	94,720	93,320	95,910	94,250
3	93,320	60,740	77,000	80,610	77,000	81,060	94,840	92,270	95,070	93,550	95,910	96,630
4	93,090	65,670	77,560	80,830	77,900	84,700	94,250	94,140	94,720	94,020	94,370	97,230
5	93,550	69,190	77,900	77,680	79,480	88,660	92,270	95,070	94,490	93,550	94,720	97,350
6	94,020	71,390	78,130	78,800	79,370	91,460	85,980	94,600	97,110	94,020	95,180	97,590
7	93,550	71,390	78,800	79,480	82,300	92,620	86,100	91,690	97,110	94,720	95,430	97,590
8	92,860	71,170	76,770	80,610	82,750	92,160	86,100	90,990	97,350	94,020	94,490	97,470
9	91,230	70,290	77,230	81,510	81,280	90,290	85,640	87,500	98,800	94,840	94,840	96,390
10	89,130	67,430	77,680	82,300	82,750	91,810	90,760	88,430	97,840	95,180	94,490	95,180
11	86,680	70,730	78,130	82,190	83,540	92,740	93,440	89,130	97,110	96,390	95,310	94,950
12	84,590	72,490	78,580	78,920	83,770	93,790	93,790	92,040	96,870	96,990	95,670	94,250
13	81,740	72,260	79,030	79,480	84,700	93,320	91,230	93,550	95,670	97,590	95,910	93,550
14	80,160	72,940	78,800	78,800	85,400	94,600	89,360	95,790	94,490	97,470	95,430	93,550
15	77,450	73,170	76,320	81,060	82,860	93,550	90,760	97,230	95,670	96,750	95,070	93,200
16	74,290	72,940	76,770	82,190	81,960	91,570	90,180	96,630	95,430	96,870	94,600	93,320
17	72,720	70,730	77,230	82,410	82,640	93,090	88,430	95,670	95,790	96,630	94,140	92,740
18	71,390	71,280	77,450	82,300	83,770	95,550	89,600	95,550	95,910	96,630	93,320	94,840
19	68,310	71,720	77,900	79,590	86,100	94,250	87,730	94,600	94,720	96,370	94,020	95,910
20	62,050	72,380	78,580	80,160	86,100	93,790	82,620	93,090	93,900	94,720	94,490	97,840
21	57,620	72,050	78,580	78,920	86,100	92,160	82,160	93,320	93,790	95,180	95,180	97,590
22	53,540	74,970	76,770	80,610	85,640	91,690	86,100	94,840	94,020	95,180	95,430	96,390
23	49,050	76,320	77,450	80,610	84,590	91,690	88,310	94,720	94,950	94,950	96,390	95,430
24	44,500	74,520	78,350	81,170	85,400	93,440	91,690	94,250	96,270	94,600	95,910	94,840
25	41,020	75,420	79,030	80,610	86,680	92,620	94,250	96,990	96,390	94,490	96,270	93,900
26	36,950	75,870	79,710	77,000	86,800	93,900	93,790	96,030	94,490	94,950	95,670	94,020
27	33,320	76,320	80,160	77,680	87,030	93,900	94,250	95,430	94,720	95,310	94,490	93,320
28	32,290	76,550	79,590	78,350	88,660	94,840	90,290	94,250	93,900	95,670	93,790	91,920
29	36,640	77,110	76,320	78,350	-	94,720	92,390	94,140	95,310	96,150	92,860	92,390
30	40,800	77,230	77,680	77,900	-	93,320	88,900	95,670	94,250	95,180	93,320	91,230
31	45,880	-	78,350	79,820	-	93,790	-	96,390	-	95,790	94,020	-

Monthly gage height and contents, water year October 1952 to September 1953

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	44.72	91,920	-
Oct. 31	40.56	45,880	-46,040
Nov. 30	43.44	77,230	+31,350
Dec. 31	43.54	78,350	+1,120
Calendar year 1952...	-	-	+8,720
Jan. 31	43.67	79,820	+1,470
Feb. 28	44.44	88,660	+8,840
Mar. 31	44.88	93,790	+5,130
Apr. 30	44.41	88,900	-4,890
May 31	45.10	96,390	+7,490
June 30	44.92	94,250	-2,140
July 31	45.05	95,790	+1,540
Aug. 31	44.90	94,020	-1,770
Sept.30	44.66	91,230	-2,790
Water year 1952-53...	-	-	-690

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 1953.

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.--12 years (1941-53), 611 cfs.

Extremes.--Maximum discharge during year, 1,810 cfs July 9 (gage height, 10.19 ft); no flow at times.
1909-53: Maximum discharge, that of July 9, 1953; no flow at times.

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 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 13-20 and May 11-20)

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	10.2	1,810

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	946	22	22				0	1,030	*682	1,640	1,540	1,440
2	946	22	22				0	1,030	505	1,690	1,420	1,290
3	946	22	22				0	1,040	0	*1,700	1,340	1,220
4	946	22	22				0	*1,120	0	1,700	1,340	*1,130
5	946	22	22				0	1,210	0	1,710	*1,370	1,090
6	946	22	22				87	1,350	0	1,730	1,380	1,060
7	946	22	22				160	1,420	0	1,730	1,380	1,000
8	855	22	22				160	1,440	0	1,730	1,380	1,030
9	740	22	22				160	1,450	148	1,740	1,380	1,040
10	702	22	22				161	1,450	461	1,770	1,380	1,040
11	690	22	22				161	1,450	592	1,780	1,390	1,040
12	682	22	22				161	1,470	764	1,780	*1,420	1,040
13	674	22	22				160	1,450	907	1,790	1,440	1,030
14	668	22	22				164	1,440	1,020	*1,780	1,470	1,030
15	658	22	22				166	1,500	1,240	1,780	1,520	970
16	*648	22	22				166	*1,530	1,560	1,780	1,540	903
17	644	22	22				196	1,560	*1,690	1,780	1,530	882
18	642	22	22				*215	1,570	1,700	1,780	1,530	837
19	642	22	0				214	1,570	1,710	1,780	1,540	818
20	213	22	0				210	1,530	1,700	1,770	1,570	822
21	0	22	0				302	1,390	1,700	1,770	1,600	820
22	0	22	0				435	1,190	1,630	1,760	1,570	816
23	0	22	0				513	1,170	1,490	1,760	1,560	809
24	0	22	0				604	1,040	1,360	1,760	*1,560	809
25	0	22	0				644	903	1,320	1,760	1,560	740
26	0	22	0				644	864	*1,310	1,760	1,580	*702
27	0	22	0				826	859	1,360	*1,710	1,630	700
28	0	22	0				992	857	1,390	1,690	1,600	696
29	0	22	0				1,040	770	1,450	1,690	1,560	728
30	0	22	0				1,020	680	1,540	1,690	1,500	748
31	22	-	0				-	682	-	1,650	1,470	-
Total	15,102	660	396	0	0	0	9,561	38,015	29,229	53,940	46,050	28,280
Mean	487	22.0	12.8	0	0	0	319	1,226	974	1,740	1,485	943
Ac-ft	29,950	1,310	785	0	0	0	18,960	75,400	57,970	107,000	91,340	56,090

Calendar year 1952: Max 1,700 Min 0 Mean 646 Ac-ft 468,900
Water year 1952-53: Max 1,790 Min 0 Mean 606 Ac-ft 438,800

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 31 to Dec. 18; discharge estimated. Diversion Oct. 31 to Dec. 18 was 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 1953.

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.--12 years (1941-53), 475 cfs.

Extremes.--Maximum discharge during year, 1,410 cfs July 12; maximum gage height, 6.02 ft July 30; no flow during winter.
1909-53: Maximum discharge, that of July 12, 1953; no flow during winters.

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.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	809						0	651	*434	1,280	1,250	1,140
2	826						0	643	371	1,280	1,240	1,090
3	826						0	651	268	*1,280	1,190	1,020
4	760						0	*662	241	1,290	*1,140	948
5	662						0	687	239	1,320	1,140	*898
6	616						134	806	*239	1,330	1,190	844
7	610						270	929	239	1,370	1,300	832
8	582						290	998	234	1,380	1,300	932
9	562						292	1,060	213	1,380	1,260	942
10	549						298	1,100	193	1,390	1,220	929
11	539						302	1,110	208	1,390	1,210	911
12	532						306	1,100	401	1,390	*1,230	923
13	529						302	1,020	629	1,390	1,240	880
14	524						304	1,010	865	*1,380	1,270	847
15	516						298	1,040	1,130	1,370	1,290	817
16	*519						298	*1,050	1,320	1,370	1,290	774
17	552						298	1,110	*1,330	1,340	1,290	749
18	595						*294	1,200	1,320	1,330	1,280	760
19	608						290	1,210	1,340	1,310	1,290	673
20	600						282	1,140	1,360	1,310	1,290	584
21	613						282	1,060	1,360	*1,320	1,300	549
22	556						288	923	1,350	1,330	1,310	584
23	478						300	847	1,350	1,340	1,290	587
24	451						294	729	1,350	1,330	*1,270	589
25	415						399	613	1,290	1,330	1,250	574
26	385						552	569	*1,250	1,330	1,230	*587
27	243						654	552	1,190	*1,330	1,230	613
28	0						667	552	1,200	1,320	1,250	618
29	0						651	516	1,240	1,320	1,230	648
30	0						659	442	1,260	1,310	1,180	698
31	0						-	425	-	1,300	1,160	-
Total	15,457	0	0	0	0	0	9,004	26,405	25,414	41,440	38,610	23,540
Mean	499	0	0	0	0	0	300	852	847	1,337	1,245	785
Ac-ft	30,660	0	0	0	0	0	17,860	52,370	50,410	82,200	76,580	46,690

Calendar year 1952: Max 1,360 Min 0 Mean 532 Ac-ft 385,900
Water year 1952-53: Max 1,390 Min 0 Mean 493 Ac-ft 356,800

* 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 1953. 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.--27 years (1926-53), 5,712 cfs.

Extremes.--Maximum discharge during year, 21,500 cfs June 9 (gage height, 11.18 ft); minimum, 78 cfs Oct. 31 (gage height, 1.59 ft).
1895-99, 1901-53: 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. 47), Lake Walcott (see p. 51), and other reservoirs, having a combined usable capacity of about 3,300,000 acre-ft; many diversions above station for irrigation.

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

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 28 to Jan. 5, Apr. 21-29, and July 15 to Sept. 30)

2.5	338	6.0	4,740
3.0	580	7.0	7,240
3.5	930	8.0	10,300
4.0	1,360	9.0	13,500
4.5	1,930	10.0	16,900
5.0	2,680	11.0	20,600

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,340	604	1,240	2,820	2,460	5,420	5,520	7,330	*6,740	8,660	9,550	9,110
2	3,600	366	1,270	2,790	3,360	5,010	4,920	7,210	7,180	9,140	9,520	9,270
3	3,390	580	1,250	2,810	4,450	5,010	4,670	6,900	6,760	9,670	9,390	8,690
4	2,970	606	1,240	2,770	4,480	4,270	*4,540	7,240	6,460	9,450	9,110	*8,420
5	2,970	1,290	1,240	2,850	4,450	4,740	4,190	7,380	5,900	9,300	*8,840	8,390
6	2,970	1,200	1,240	2,850	4,670	5,520	4,670	7,680	*5,660	*9,390	8,660	8,360
7	2,960	*1,360	1,240	2,880	4,560	6,330	4,650	7,760	6,820	9,480	8,930	8,360
8	2,970	1,460	1,210	2,870	4,610	5,850	4,920	7,910	13,000	9,550	9,020	8,300
9	2,940	1,760	1,210	2,920	4,630	5,490	4,870	8,540	20,300	9,800	9,020	8,270
10	2,960	1,730	1,570	2,940	5,010	5,920	4,370	8,150	20,600	9,520	9,110	8,120
11	2,970	1,420	1,590	2,930	5,080	5,980	4,500	8,180	20,300	9,360	9,080	7,910
12	3,010	1,380	1,620	2,850	5,080	6,180	5,050	8,210	20,200	9,520	*8,900	7,700
13	3,070	1,460	1,630	2,820	5,010	6,310	6,050	7,940	17,400	9,760	8,900	7,730
14	2,900	*1,560	1,730	3,000	5,300	6,740	6,050	7,850	14,700	*9,860	8,900	7,680
15	2,920	1,620	*1,650	2,840	5,420	5,830	5,540	8,090	16,600	9,890	8,840	7,560
16	*2,900	1,670	1,580	2,890	5,080	5,210	5,240	*8,060	20,000	9,730	8,900	7,300
17	2,840	1,550	1,630	2,870	5,120	5,440	5,330	8,240	*19,400	9,700	8,900	7,210
18	2,900	1,360	1,580	2,900	4,840	*6,650	5,280	8,390	16,600	9,640	8,930	6,710
19	2,840	1,230	1,610	2,860	4,720	6,900	5,240	8,510	12,400	9,670	8,840	6,490
20	2,790	1,190	1,620	2,760	5,440	6,630	5,050	8,720	9,640	9,950	9,240	6,100
21	2,190	1,150	1,670	2,850	5,490	6,570	5,030	8,570	11,200	*9,670	9,360	5,490
22	1,960	1,150	2,440	2,800	5,370	6,180	*5,030	8,180	14,000	9,300	9,360	5,240
23	2,220	1,150	2,780	2,760	*4,820	5,710	6,100	8,180	11,600	9,450	9,050	5,240
24	2,090	1,160	2,760	2,810	4,600	6,250	6,380	8,270	9,980	9,640	9,140	5,190
25	1,930	1,190	2,750	2,660	5,000	6,080	6,650	7,620	10,500	9,480	8,840	5,170
26	1,890	1,170	2,800	*2,850	5,050	6,540	6,410	7,330	*11,500	9,300	*8,780	*5,100
27	1,880	1,170	2,810	2,780	4,330	6,100	6,410	7,410	12,100	*9,300	9,050	5,120
28	1,220	1,320	2,830	2,830	4,210	5,710	7,470	7,440	12,600	9,360	9,240	5,210
29	763	1,300	2,850	2,820	-	5,470	*7,240	7,180	10,500	9,330	9,360	4,100
30	612	1,270	*2,780	2,960	-	5,610	7,910	6,230	8,660	9,390	9,180	3,580
31	624	-	2,760	2,690	-	5,950	-	6,180	-	9,420	9,270	-
Total	78,589	37,426	58,180	88,030	132,640	181,600	165,280	240,880	379,300	294,680	281,210	207,120
Mean	2,535	1,248	1,877	2,840	4,737	5,858	5,509	7,770	12,640	9,506	9,071	6,904
Ac-ft	155,900	74,230	115,400	174,600	263,100	360,200	327,800	477,800	752,300	584,500	557,800	410,800

Calendar year 1952: Max 21,000 Min 366 Mean 8,286 Ac-ft 6,016,000
Water year 1952-53: Max 20,600 Min 366 Mean 5,877 Ac-ft 4,254,000

* 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 1953.

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.--30 years (1911-14, 1926-53), 42.8 cfs.

Extremes.--Maximum discharge during year, 245 cfs Aug. 2 (gage height, 3.52 ft); minimum, 8.1 cfs Nov. 9, Sept. 13, 14 (gage height, 1.49 ft).
1911-16, 1919-53: 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 excellent except those for periods of ice effect or no gage-height record, which are fair. 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 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	5.7	2.4	66
1.6	12	2.7	105
1.8	20	3.0	149
2.1	38	3.3	200

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	21	19	30	35	38	64	174	152	30	31	11
2	15	20	20	30	36	36	60	151	151	27	63	13
3	15	19	18	30	36	30	58	131	162	28	91	14
4	15	20	18	30	37	36	60	120	170	27	52	14
5	15	24	20	28	38	38	62	113	177	26	32	13
6	15	24	20	30	42	38	66	104	175	24	26	11
7	16	23	20	33	46	42	68	106	177	24	24	11
8	17	21	20	36	46	41	66	126	168	24	20	10
9	17	21	20	38	42	42	66	146	160	23	19	9.8
10	17	21	22	40	30	42	63	142	149	21	17	9.4
11	17	22	*22	43	28	44	*60	130	142	21	16	8.7
12	18	23	24	43	31	45	57	116	124	20	15	8.4
13	18	25	23	42	31	46	54	111	115	20	15	8.1
14	18	27	23	42	33	43	53	102	111	20	14	8.4
15	18	28	23	40	33	39	52	98	111	20	15	8.4
16	19	28	24	39	30	*42	52	101	108	20	16	8.4
17	19	27	24	38	30	42	52	112	98	20	16	11
18	19	25	24	43	30	39	56	112	*97	20	15	12
19	19	24	25	48	24	39	62	118	83	20	15	11
20	19	23	25	46	18	40	64	128	71	19	14	11
21	19	20	24	44	22	41	68	144	67	18	*14	11
22	*19	14	23	42	30	42	81	151	65	18	13	11
23	19	16	20	40	30	43	94	140	62	19	13	11
24	19	20	15	40	30	44	113	152	56	20	13	11
25	20	18	16	41	30	43	130	160	51	21	12	11
26	20	15	24	*39	33	45	142	143	45	19	11	*11
27	20	14	26	37	32	47	151	125	42	19	10	12
28	20	14	28	31	41	52	168	118	43	19	9.8	12
29	20	16	28	36	-	57	177	124	41	19	10	13
30	21	18	28	38	-	62	*186	*146	35	23	9.8	13
31	21	-	28	36	-	62	-	160	-	25	10	-
Total	559	631	694	1,173	924	1,340	2,505	4,004	3,208	674	651.6	327.6
Mean	18.0	21.0	22.4	37.8	33.0	43.2	83.5	129	107	21.7	21.0	10.9
Ac-ft	1,110	1,250	1,380	2,330	1,830	2,660	4,970	7,940	6,360	1,340	1,290	650

Calendar year 1952: Max 407 Min 11 Mean 64.8 Ac-ft 47,020
Water year 1952-53: Max 186 Min 8.1 Mean 45.7 Ac-ft 33,110

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 10-13, Nov. 20 to about Jan. 25, Feb. 10-27 (no gage-height record Nov. 26 to Dec. 10, Dec. 20 to Jan. 25; discharge estimated on basis of weather records, records for stations on nearby streams, and storage records for Oakley Reservoir.)

Trapper Creek near Oakley, Idaho

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

Drainage area.--32 sq mi, approximately.

Records available.--May 1911 to September 1916, March 1919 to September 1953.

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.--29 years (1911-12, 1913-14, 1926-53), 14.3 cfs.

Extremes.--Maximum discharge during year, 44 cfs June 5 (gage height, 5.25 ft); minimum, 4.3 cfs Feb. 20 (gage height, 4.62 ft), caused by temporary storage behind ice jam upstream.

1911-16, 1919-53: 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. A few small diversions above station. Flow of artesion 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 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

4.7	6.6	5.0	20
4.8	9.8	5.1	28
4.9	14	5.3	50

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	12	13	12	13	14	16	*27	34	20	14	12
2	12	12	14	12	13	14	16	25	38	20	16	12
3	11	12	13	12	14	14	15	25	41	20	14	12
4	11	12	12	12	14	14	15	24	41	20	13	11
5	12	12	12	12	15	14	16	25	41	19	13	11
6	12	12	12	12	16	13	17	27	38	19	13	11
7	12	12	12	12	14	14	17	30	41	19	12	11
8	11	12	12	12	14	14	17	32	38	19	12	11
9	11	12	12	12	14	14	17	32	38	19	13	11
10	12	12	12	12	13	*14	17	30	36	19	12	11
11	12	12	*13	13	13	15	*17	28	36	18	12	11
12	12	12	12	13	13	15	16	28	34	18	11	11
13	12	12	12	13	13	15	16	27	38	17	11	11
14	12	13	12	13	13	14	16	26	36	17	12	11
15	12	13	12	12	13	15	15	27	34	17	12	11
16	12	13	12	13	13	15	15	28	34	16	12	12
17	12	13	12	13	13	15	16	30	34	*16	12	12
18	12	12	12	19	13	14	16	32	32	16	11	11
19	12	12	12	19	12	14	16	36	*32	15	11	11
20	12	13	12	15	13	15	17	36	30	15	11	11
21	12	12	12	14	12	15	19	36	28	15	*11	11
22	*12	11	12	13	13	15	22	34	27	14	11	11
23	12	11	11	13	13	14	26	34	27	14	11	11
24	12	13	8.5	13	13	15	28	36	25	14	11	12
25	12	12	9.2	13	13	16	28	32	25	14	11	12
26	12	8.5	12	*13	13	16	28	30	24	13	11	*11
27	12	12	14	13	13	16	30	30	24	13	11	11
28	12	10	13	13	14	16	34	32	23	14	11	11
29	12	11	12	13	-	16	32	38	22	14	11	11
30	12	12	12	13	-	16	30	*36	21	13	11	11
31	12	-	12	13	-	16	-	34	-	13	11	-
Total	368	357.5	372.7	407	373	457	600	947	972	510	368	337
Mean	11.9	11.9	12.0	13.1	13.3	14.7	20.0	30.5	32.4	16.5	11.9	11.2
Ac-ft	730	709	739	807	740	906	1,190	1,880	1,930	1,010	730	668

Calendar year 1952: Max 78 Min 7.6 Mean 19.7 Ac-ft 14,320
Water year 1952-53: Max 41 Min 8.5 Mean 16.6 Ac-ft 12,040

* Discharge measurement made on this day.

Oakley Reservoir near Oakley, Idaho

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

Drainage area.--670 sq mi, approximately.

Records available.--October 1912 to September 1953.

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

Extremes.--Maximum contents observed during year, 43,900 acre-ft June 15 (gage height, 105.0 ft); minimum observed, 17,900 acre-ft Sept. 23 (gage height, 67.4 ft).
1912-53: 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.

Usable contents, in acre-feet, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23,100	-	25,600	27,300	30,100	32,100	34,800	38,300	-	-	-	-
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	38,500	40,400	-	27,000	-
4	-	24,500	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	38,000	-	-
6	-	-	-	27,700	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	35,400	-	-	-	-	-
8	-	-	-	-	-	32,800	-	-	41,900	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	20,200
10	-	-	-	-	-	33,200	-	38,300	-	-	26,200	-
11	-	24,800	26,100	-	30,800	-	36,100	-	-	-	-	-
12	-	-	-	-	-	-	36,100	-	-	35,800	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	23,500	-	-	-	-	-	-	-	-	-	-	-
15	-	25,000	26,400	28,400	31,200	33,300	36,300	37,700	43,900	35,000	24,900	18,800
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	33,900	-	-
18	-	-	-	-	-	-	-	-	42,600	-	24,500	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	37,000	-	-	31,900	-	-
21	-	-	-	-	-	-	-	-	-	-	-	-
22	24,100	-	-	-	-	33,800	-	-	40,900	-	23,400	-
23	-	-	-	-	-	-	-	-	-	-	-	17,900
24	-	-	-	-	31,700	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	38,500	-	-	-	18,000
26	-	-	-	29,700	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	37,700	-	-	27,000	-	-
28	-	-	27,000	-	a32,000	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	39,400	-	21,800	-
30	-	a25,600	-	-	-	-	38,100	39,200	a39,200	-	-	a17,200
31	a24,400	-	a27,200	a30,000	-	a34,700	-	a39,500	-	a27,000	a21,500	-

a No gage-height record; contents interpolated.

Monthly gage height and usable contents, water year October 1952 to September 1953

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	a23,200	-
Oct. 31	-	a24,400	+1,200
Nov. 30	-	a25,600	+1,200
Dec. 31	-	a27,200	+1,600
Calendar year 1952	-	-	+7,800
Jan. 31	-	a30,000	+2,800
Feb. 28	-	a32,000	+2,000
Mar. 31	-	a34,700	+2,700
Apr. 30	98.0	38,100	+3,400
May 31	-	a39,500	+1,400
June 30	-	a39,200	-300
July 31	-	a27,000	-12,200
Aug. 31	-	a21,500	-5,500
Sept.30	-	a17,200	-4,300
Water year 1952-53	-	-	-6,000

a No gage-height record; contents interpolated.

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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 1953. 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 above mean sea level (river-profile survey).

Extremes.--Maximum discharge during year, 75 cfs Aug. 24-31; maximum gage height, 1.52 ft Aug. 28, 30, 31; no flow for many days.
1919-53: Maximum discharge, that of 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 1952-53 (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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	30	61	61	73	61
2							0	47	58	65	73	60
3							0	47	58	65	73	60
4							0	47	*58	65	73	60
5							0	*61	58	72	74	60
6							0	61	58	72	74	60
7							0	61	32	74	74	60
8							0	64	47	74	74	60
9							0	63	60	74	74	60
10							0	63	59	74	74	60
11							0	63	59	74	74	60
12							0	63	*60	74	74	60
13							0	63	59	72	74	59
14							0	63	59	72	*74	59
15							0	63	60	*71	74	59
16							0	*63	60	71	74	59
17							0	63	60	74	74	59
18							0	62	61	74	74	59
19							0	62	60	73	74	59
20							0	62	61	73	74	51
21							0	62	61	73	74	51
22							0	62	61	73	74	48
23							0	62	61	73	74	48
24							0	62	61	73	75	48
25							0	63	61	73	75	*48
26							0	63	*61	73	75	48
27							17	63	61	73	75	0
28							17	62	61	73	*75	0
29							*17	62	61	73	75	0
30							17	62	61	*73	75	0
31							-	61	-	73	75	-
Total	0	0	0	0	0	0	68	1,855	1,758	2,227	2,298	1,476
Mean	0	0	0	0	0	0	2.27	59.9	58.6	71.8	74.1	49.2
Ac-ft	0	0	0	0	0	0	135	3,680	3,490	4,420	4,560	2,930

Calendar year 1952: Max 74 Min 0 Mean 26.0 Ac-ft 18,890
Water year 1952-53: Max 75 Min 0 Mean 26.5 Ac-ft 19,220

* 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 1953. 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.--9 years (1944-53), 72.8 cfs.

Extremes.--Maximum discharge during year, 216 cfs Aug. 6, 7; no flow for many days.
1921-53: Maximum discharge, 218 cfs July 23-31, 1952; 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 10,300 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	65	158	198	215	214
2							0	65	123	198	215	214
3							0	65	120	198	215	214
4							0	86	106	198	215	212
5							0	127	106	198	215	198
6							0	135	106	198	*216	198
7							0	175	106	198	216	198
8							0	175	106	198	215	190
9							0	175	106	214	215	175
10							0	175	106	214	214	*175
11							0	176	*106	214	214	175
12							0	182	132	214	213	175
13							0	182	158	214	*212	175
14							0	182	158	214	212	174
15							0	182	182	*214	212	168
16							0	182	193	214	212	168
17							0	200	193	214	212	160
18							0	200	*193	214	212	156
19							0	200	193	214	212	156
20							0	200	193	*214	212	132
21							0	200	194	214	212	132
22							0	200	195	214	213	132
23							0	200	196	214	213	132
24							0	200	197	214	213	132
25							0	200	198	214	213	132
26							0	200	*198	214	214	132
27							11	200	198	214	*214	132
28							33	200	198	214	214	132
29							50	158	198	215	214	132
30							50	158	198	215	214	132
31							-	158	-	215	214	-
Total	0	0	0	0	0	0	144	5,203	4,814	6,509	6,622	4,947
Mean	0	0	0	0	0	0	4.8	168	160	210	214	165
Ac-ft	0	0	0	0	0	0	286	10,320	9,550	12,910	13,130	9,810

Calendar year 1952: Max 218 Min 0 Mean 75.2 Ac-ft 54,560
Water year 1952-53: Max 216 Min 0 Mean 77.4 Ac-ft 56,010

* 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 1953.

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.--18 years (1935-53), total 969 cfs; Milner-Gooding project, 554 cfs; North Side Canal Co. project, 415 cfs.

Extremes.--Maximum daily discharge during year, 2,740 cfs Aug. 2; no flow for many days. 1930-53: Maximum daily discharge, that of 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	1,920	2,030	2,440	2,700	2,390
2							0	1,950	2,030	*2,430	2,740	2,370
3							0	1,940	2,000	2,470	2,720	2,380
4							0	*1,930	*1,950	2,520	2,680	2,320
5							0	1,940	1,910	2,530	2,660	*2,300
6							0	2,030	1,900	2,520	2,640	2,270
7							0	2,100	1,900	2,530	*2,600	2,260
8							0	2,160	1,920	2,520	2,600	2,200
9							0	2,200	1,900	2,530	2,610	2,160
10							370	2,270	*1,900	2,560	2,550	2,160
11							550	2,260	1,970	2,540	2,520	2,090
12							560	2,270	2,030	2,520	2,470	2,060
13							570	2,240	2,010	*2,520	2,440	2,100
14							580	2,220	2,040	2,530	*2,460	2,130
15							660	2,250	2,030	2,510	2,460	2,140
16							710	*2,190	2,160	2,550	2,460	*2,140
17							700	2,150	2,170	2,690	2,510	2,150
18							710	2,150	2,250	2,680	2,510	2,150
19							720	2,150	2,300	2,680	2,460	2,120
20							*720	2,170	*2,320	2,670	2,390	2,110
21							780	2,170	2,320	2,710	2,410	2,080
22							860	2,200	2,330	2,700	*2,410	2,050
23							850	2,180	2,320	2,660	2,420	2,040
24							950	2,190	2,410	*2,670	2,400	2,030
25							1,330	2,220	2,480	2,690	2,410	2,030
26							1,790	2,180	2,470	2,690	2,380	1,980
27							1,930	2,170	*2,480	2,680	2,350	1,980
28							1,860	2,160	2,470	2,690	*2,380	2,000
29							1,940	2,180	2,460	2,700	2,380	1,400
30							1,910	2,200	2,450	*2,710	2,390	0
31							-	2,100	-	2,690	2,380	-
Total	0	0	0	0	0	0	21,050	66,440	64,910	80,530	77,490	61,590
Mean	0	0	0	0	0	0	702	2,143	2,164	2,598	2,500	2,053
Ac-ft	0	0	0	0	0	0	41,750	131,800	128,700	159,730	153,700	122,200

Distribution to projects in acre-feet

(†)	0	0	0	0	0	0	33,020	80,110	79,320	98,220	93,920	74,240
(‡)	0	0	0	0	0	0	8,730	51,670	49,430	61,510	59,780	47,920

Calendar year 1952: Max 2,630 Min 0 Mean 1,003 Ac-ft 728,000
Water year 1952-53: Max 2,740 Min 0 Mean 1,019 Ac-ft 737,900

* Discharge measurement made on this day.
† To Milner-Gooding project, total for water year, 458,800 acre-ft.
‡ To North Side Canal Co. project, total for water year, 279,000 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 1953.

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.--18 years (1935-53), 1,246 cfs.

Extremes.--Maximum discharge during year, 2,960 cfs Aug. 3 (gage height, 8.81 ft); no flow for several days.
1909-53: 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.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,550	689	539	434	425	392	0	2,240	1,790	*2,690	2,860	2,800
2	1,470	700	526	437	422	401	119	2,280	1,890	2,700	2,910	2,760
3	1,450	685	*514	434	*443	407	326	2,170	*2,010	2,750	2,920	*2,730
4	1,330	678	510	437	446	395	531	2,060	2,000	2,780	2,820	2,660
5	1,350	685	489	437	437	390	574	*2,060	1,860	2,800	2,720	2,620
6	1,350	674	486	437	419	398	561	2,070	1,780	2,790	2,660	2,590
7	1,340	642	492	431	431	416	744	2,040	1,710	2,800	*2,660	2,580
8	1,340	598	492	425	428	404	837	2,040	1,660	2,770	2,620	2,580
9	1,360	574	492	*422	431	390	840	2,100	1,590	2,800	2,630	2,570
10	1,120	625	492	431	434	398	807	2,410	1,620	2,840	2,620	2,500
11	301	588	501	431	434	404	788	2,390	1,850	*2,780	2,660	*2,420
12	0	568	501	434	434	*407	788	2,360	*1,960	2,760	2,670	2,390
13	0	*584	504	434	434	398	946	2,340	2,070	2,780	*2,660	2,390
14	0	584	504	413	434	413	1,080	2,310	2,220	2,840	2,630	2,400
15	0	588	504	437	428	416	*1,190	2,300	2,350	2,800	2,610	2,390
16	0	588	507	437	434	401	1,150	2,380	2,510	2,870	2,610	2,310
17	0	584	504	434	425	384	1,130	2,400	2,570	2,880	2,640	2,130
18	0	588	489	434	404	401	1,210	2,410	2,600	2,850	2,640	2,020
19	0	552	486	437	413	416	1,230	2,520	2,680	2,850	2,680	1,980
20	726	548	473	440	413	410	1,410	2,580	*2,720	*2,820	2,700	1,970
21	1,110	545	452	428	425	407	1,540	2,550	2,720	2,890	*2,780	1,780
22	1,080	548	458	440	425	404	1,710	2,640	2,750	2,880	2,840	1,510
23	1,020	548	464	437	419	398	1,730	2,510	2,750	2,850	2,860	1,410
24	*1,020	545	470	443	410	395	1,810	2,440	2,800	2,870	2,840	1,350
25	969	539	464	437	398	410	1,710	2,490	2,790	*2,880	2,840	*1,320
26	946	536	481	434	404	256	1,660	2,320	2,760	2,880	2,760	1,330
27	848	532	464	434	407	174	1,640	2,250	2,760	2,850	*2,740	1,280
28	792	532	476	434	395	58	1,750	2,280	2,740	2,840	2,790	1,230
29	919	532	470	428	-	0	1,940	2,010	2,740	2,850	2,820	1,460
30	814	532	*467	419	-	0	2,120	1,820	2,720	2,850	2,840	1,880
31	700	-	449	431	-	0	-	1,800	-	*2,850	2,830	-
Total	24,905	17,711	15,100	13,421	11,852	10,543	33,871	70,550	68,910	87,440	84,860	63,340
Mean	803	590	487	433	423	340	1,129	2,276	2,297	2,821	2,737	2,111
Ac-ft	49,400	35,130	29,950	26,620	23,510	20,910	67,180	139,900	136,700	173,400	168,300	125,600

Calendar year 1952: Max 2,870 Min 0 Mean 1,371 Ac-ft 995,500
Water year 1952-53: Max 2,920 Min 0 Mean 1,377 Ac-ft 996,600

* 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 1953.

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.--27 years (1926-53), 1,756 cfs.

Extremes.--Maximum discharge during year, 3,810 cfs July 24; maximum gage height, 10.66 ft July 16; minimum discharge, 39 cfs Mar. 19-24 (gage height, 1.30 ft).
1909-53: 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. 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.

Cooperation.--Gage-height record and one discharge measurement furnished by Twin Falls Canal Co.

Rating table, water year 1952-53, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 26 to Dec. 17, Mar. 26 to Apr. 2, July 10-22, Aug. 5 to Sept. 30)

1.3	37	3.0	338	7.0	1,730
1.5	49	3.5	467	8.0	2,240
1.7	72	4.0	604	9.0	2,800
2.0	117	5.0	907	10.0	3,430
2.5	216	6.0	1,290	10.6	3,830

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,020	60	516	521	478	449	885	3,420	2,760	*3,560	3,750	3,530
2	1,910	60	513	521	489	454	964	3,420	2,840	3,590	3,750	3,460
3	1,850	60	*491	521	508	451	1,210	3,390	*2,790	3,610	3,700	*3,450
4	1,880	60	486	521	502	451	1,310	3,400	2,750	3,610	3,650	3,440
5	1,970	172	489	521	*483	441	1,300	3,430	2,650	3,620	3,590	3,460
6	1,930	1,020	491	521	489	446	1,140	3,440	2,470	3,610	3,560	3,430
7	1,880	1,110	521	524	475	451	692	3,410	2,400	3,640	*3,560	3,410
8	1,780	1,050	505	526	478	451	624	3,400	2,360	3,640	3,590	3,380
9	1,620	950	499	*529	475	446	624	3,370	2,320	3,650	3,600	3,330
10	1,540	865	499	532	470	446	686	3,450	2,320	*3,660	3,590	3,290
11	1,510	782	499	529	475	454	756	*3,440	*2,430	3,690	3,600	*3,260
12	1,510	*695	502	532	467	*459	859	3,450	2,620	3,710	3,600	3,200
13	1,500	596	502	534	446	475	1,100	3,340	2,890	3,720	*3,610	3,200
14	1,540	554	502	540	446	472	1,190	3,340	3,020	3,730	3,630	3,200
15	1,530	573	505	540	459	470	*1,280	3,360	3,170	3,730	3,650	3,120
16	1,430	593	505	534	454	451	1,280	3,450	3,290	3,750	3,650	3,010
17	*1,390	559	508	532	454	438	1,350	3,480	3,530	3,730	3,660	2,800
18	1,320	551	510	534	459	187	1,460	3,520	*3,590	3,710	3,650	2,770
19	1,280	554	510	521	449	*40	1,550	3,520	3,590	3,730	3,670	2,640
20	1,190	559	502	478	457	39	1,780	3,480	3,650	3,720	3,670	2,580
21	1,110	559	499	475	b450	39	2,160	3,430	3,730	*3,730	*3,670	2,330
22	1,070	556	499	457	441	39	2,580	3,400	3,570	3,700	3,690	2,120
23	1,010	556	497	441	441	40	3,010	3,340	*3,380	3,710	3,690	2,090
24	971	556	499	441	433	222	3,250	3,320	*3,490	3,750	3,690	1,970
25	856	551	499	441	433	537	3,170	3,250	3,500	*3,750	3,700	*1,970
26	803	537	499	441	436	562	3,130	3,230	3,540	3,760	3,690	1,970
27	803	534	502	446	451	*891	*3,150	*3,230	3,560	3,760	*3,670	1,970
28	604	529	521	457	444	947	3,120	3,090	3,540	3,780	3,670	1,960
29	486	529	524	472	-	878	3,390	2,930	3,550	3,760	3,640	1,970
30	464	529	521	480	-	834	3,390	2,680	3,580	3,750	3,620	1,940
31	467	-	*521	467	-	869	-	2,620	-	*3,750	3,600	-
Total	41,224	16,839	15,636	15,529	12,942	13,829	52,390	103,030	92,880	114,610	113,060	84,250
Mean	1,330	561	504	501	462	446	1,746	3,324	3,096	3,697	3,647	2,808
Ac-ft	81,770	33,400	31,010	30,800	25,670	27,430	103,900	204,400	184,200	227,300	224,300	167,100

Calendar year 1952: Max 3,790 Min 59 Mean 1,851 Ac-ft 1,344,000
Water year 1952-53: Max 3,780 Min 39 Mean 1,853 Ac-ft 1,341,000

* 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 1953.

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 datum.

Average discharge.--27 years (1926-53), 2,096 cfs.

Extremes.--Maximum discharge during year, 16,100 cfs June 9 (gage height, 17.40 ft); minimum, 3 cfs Sept. 27-30 (gage height, 1.49 ft).
1909-53: Maximum discharge, 44,400 cfs June 12, 1909 (gage height, 20.10 ft, site and datum then in use); minimum, 2 cfs Mar. 17-28, 1936 (gage height, 1.18 ft).

Remarks.--Records good. Flow regulated by American Falls Reservoir (see p. 47), Lake Walcott (see p. 51) 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 at times for use downstream by Idaho Power Co.

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

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 9-14)

1.4	2	3.5	234	9.0	4,530
1.6	7	4.0	373	10.0	5,550
1.8	13	5.0	748	12.0	7,910
2.0	22	6.0	1,400	14.0	10,600
2.5	68	7.0	2,390	16.0	13,800
3.0	134	8.0	3,580	18.0	17,600

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,670	227	354	*1,950	2,010	4,000	4,290	157	148	*282	310	339
2	2,450	222	392	1,960	2,000	4,130	4,100	163	*148	319	330	325
3	2,160	220	395	1,950	2,890	4,250	*4,000	163	192	319	348	587
4	1,620	249	402	1,970	3,540	4,030	3,430	159	190	325	322	379
5	753	249	402	1,970	3,910	3,970	2,970	154	145	325	316	302
6	638	239	402	2,010	3,780	4,090	2,260	154	142	313	*302	305
7	630	244	399	2,160	3,930	4,990	2,550	147	140	316	307	302
8	634	242	399	2,200	3,870	5,510	3,570	145	3,930	307	310	302
9	638	242	395	2,290	3,900	5,280	4,290	145	13,900	299	302	302
10	748	246	399	2,320	4,100	5,110	4,020	170	15,900	328	302	*305
11	1,620	267	704	2,260	4,190	5,180	3,330	159	*14,900	293	307	305
12	2,040	*269	*824	2,200	4,250	5,280	2,890	422	14,300	285	319	305
13	1,950	269	824	2,030	*4,220	5,080	2,720	188	12,300	282	310	305
14	1,970	290	829	1,830	4,310	5,650	2,870	212	7,440	285	293	229
15	2,130	275	829	1,970	4,180	5,820	3,560	144	8,200	*280	296	45
16	2,100	272	824	1,990	4,430	5,430	3,160	145	11,800	293	307	8
17	*2,140	267	824	1,990	4,370	4,790	2,310	152	11,800	296	313	6
18	2,150	264	824	2,010	4,080	*5,160	1,980	157	*8,960	293	310	8
19	2,150	269	819	2,010	4,180	6,130	1,910	150	4,980	293	310	7
20	1,190	269	824	2,080	4,230	6,280	1,420	154	900	288	305	7
21	912	277	814	2,010	4,440	6,240	509	155	730	299	*310	6
22	894	277	1,090	2,100	4,540	6,160	119	154	4,740	296	325	5
23	766	269	1,770	2,120	4,500	5,980	69	147	4,200	302	354	4
24	392	*269	1,890	2,140	4,300	5,590	44	152	891	302	333	4
25	483	269	1,920	2,080	4,150	5,190	46	234	1,740	*305	330	4
26	634	269	1,870	2,060	4,260	5,250	55	145	2,860	305	313	4
27	776	269	1,890	2,060	4,250	5,540	*49	137	*3,130	299	310	3
28	568	269	1,940	2,050	4,070	4,860	44	148	4,050	299	313	3
29	418	269	1,960	2,000	-	4,630	54	159	2,780	302	313	3
30	269	269	1,950	1,970	-	4,720	128	163	275	307	325	3
31	234	-	1,950	2,060	-	4,750	-	154	-	302	321	-
Total	38,727	7,787	31,108	63,800	110,580	159,070	62,747	5,188	155,811	9,339	9,766	4,712
Mean	1,249	260	1,003	2,058	3,949	5,131	2,092	167	5,194	301	315	157
Ac-ft	76,810	15,450	61,700	126,500	219,300	315,500	124,500	10,290	309,000	18,520	19,370	9,350

Calendar year 1952: Max 14,300 Min 97 Mean 4,269 Ac-ft 3,099,000
Water year 1952-53: Max 15,900 Min 3 Mean 1,804 Ac-ft 1,306,000

* Discharge measurement made on this day.

Devils Washbowl Spring near Kimberly, Idaho

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

Records available.--April 1950 to September 1953.

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.--1950-53: Maximum daily discharge, 27.5 cfs Oct. 3, 4, 1951; minimum daily, 18.5 cfs May 15, 1950.

Remarks.--Records good. No diversion or regulation above station. Flow at station is from principal outlet only. On Apr. 6, 1953, a discharge measurement of total spring flow of 23.3 cfs (adjusted for surface inflow) was made.

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 15		May 16 to Sept. 30	
1.7	17	1.0	17
1.8	21	1.1	21
1.9	26	1.2	26
2.0	32		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	26.5	24	23	23	23	20.5	23	21	23	21	24
2	25.5	26.5	a24	23	23	22.5	20.5	22.5	21	23	22	24
3	26	26.5	a24	23	23	a22.5	20.5	*22	20	22.5	21.5	24
4	26.5	26.5	a24	23	23	a22	20.5	22	20	21.5	21.5	24
5	27	26.5	a24	23	23	a21.5	20.5	21.5	20	21.5	21.5	24
6	27	26.5	a24	23	23	*21.5	20.5	21.5	21	21	21.5	24
7	27	26.5	*24	23	23	21.5	20.5	21	21.5	21	22	24
8	27	26.5	24	23	23	21.5	20.5	21	21	21.5	22	24
9	27	26.5	23.5	23	23	21.5	20.5	21	21	21.5	23	24
10	26.5	26.5	23.5	23	22.5	21.5	20.5	21.5	21	21.5	22.5	24
11	26	26.5	23.5	23	22.5	21.5	*20.5	21.5	20.5	21	22.5	24
12	25.5	26.5	23	23	22.5	21.5	20.5	21	20.5	21.5	22.5	24.5
13	25.5	26.5	23	23	22.5	21.5	20.5	21	20.5	21	22	25
14	24.5	26.5	23	22.5	22.5	21.5	20.5	21	20.5	21	22	25
15	25	26	23	22.5	22.5	21.5	20.5	21.5	20	21	22	24.5
16	25	26	22.5	22.5	22.5	21.5	20.5	*22	20	*21	22.5	25
17	25	26	22.5	24	22.5	21	20.5	22	20.5	21	23.5	25
18	25	25.5	22.5	24.5	22.5	21	20.5	22	20	21.5	22.5	25
19	25	25.5	22.5	24	22.5	21	21	22.5	20.5	21.5	22.5	25
20	a25	26	22.5	a24	22.5	21.5	21	22	*22	21.5	23	25
21	*25	26	22.5	*23.5	22.5	21.5	21	22	21.5	21	*23	25
22	25	25.5	22.5	23.5	22.5	21	21	22	21.5	21	22.5	25
23	25	25	22.5	23.5	22.5	20.5	21	21.5	21.5	21	23	25
24	25	25	22.5	23.5	23	20.5	21	21.5	21.5	21	23.5	*25
25	25.5	24.5	22.5	23	23	20.5	20.5	21.5	21.5	21.5	24	25.5
26	25.5	24.5	22	23	23	20.5	21	21.5	23	21	23.5	26
27	25.5	24.5	22	23	23	20.5	21.5	21.5	23	21	23.5	26
28	25.5	24	22	23	23	20.5	22	21.5	23	21	24	26
29	26	24	22.5	23	-	20.5	22	21.5	23.5	21	23.5	26
30	26.5	24	22.5	23	-	20.5	22.5	21	23.5	21.5	23.5	26
31	26.5	-	23	23	-	20.5	-	21	-	21	24	-
Total	797.0	773.0	713.5	718.0	637.0	659.5	624.5	670.0	636.0	662.0	701.5	743.5
Mean	25.7	25.8	23.0	23.2	22.8	21.3	20.8	21.6	21.2	21.4	22.6	24.8
Ac-ft	1,580	1,530	1,420	1,420	1,260	1,310	1,240	1,330	1,260	1,310	1,390	1,470

Calendar year 1952: Max 27 **Min** 20 **Mean** 23.0 **Ac-ft** 16,690
Water year 1952-53: Max 27 **Min** 20 **Mean** 22.8 **Ac-ft** 16,520

* Discharge measurement made on this day.
a No gage-height record; discharge interpolated.

Snake River near Kimberly, Idaho

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

Records available.--July 1923 to September 1953.

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

Extremes.--Maximum discharge during year, 16,200 cfs June 9 (gage height, 17.48 ft); minimum, 22 cfs Apr. 27, 29 (gage height, 1.46 ft); minimum daily, 278 cfs Apr. 26.
1923-53: Maximum discharge, 27,200 cfs July 4, 1927 (gage height, 14.76 ft, site and datum then in use), from rating curve extended above 20,000 cfs; minimum recorded, 10 cfs May 17, 1944 (gage height, 1.15 ft); minimum daily recorded, 139 cfs July 4, 1941.

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

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

3.7	274	9.0	2,520
4.5	445	11.0	4,500
5.5	740	13.0	7,170
6.0	925	15.0	10,700
7.0	1,350	18.0	17,500
8.0	1,840		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,940	687	708	2,330	2,380	4,260	4,740	547	557	772	776	831
2	2,850	682	792	2,330	2,340	4,460	4,390	562	647	680	785	845
3	2,610	720	824	2,330	2,550	4,610	4,040	*533	611	643	789	893
4	2,380	762	857	2,340	3,590	4,390	3,830	551	620	775	842	1,110
5	1,540	706	806	2,340	4,040	4,260	3,390	557	675	742	803	873
6	1,140	767	857	2,380	4,020	*4,330	2,690	565	625	773	796	775
7	1,120	697	828	2,540	4,160	5,030	2,700	544	616	758	772	803
8	1,130	712	889	2,620	4,130	5,780	3,270	567	2,160	756	772	800
9	1,120	740	*800	2,600	4,110	5,720	4,490	577	13,400	746	789	796
10	1,150	733	828	2,730	4,320	5,590	*4,500	564	*15,600	755	764	803
11	1,700	730	905	2,700	4,550	5,480	3,710	604	14,700	761	768	800
12	2,460	736	1,270	2,660	4,600	5,580	3,070	591	14,200	754	775	803
13	2,420	768	1,310	2,520	4,620	5,580	3,030	803	12,700	732	789	806
14	2,310	772	1,280	2,320	4,630	5,780	3,070	697	8,320	734	782	810
15	2,550	764	1,320	2,320	4,550	6,080	3,680	583	7,960	731	772	792
16	2,540	783	1,310	2,430	4,790	5,790	3,480	569	11,600	*721	768	713
17	2,530	744	1,300	2,460	4,760	5,190	2,850	536	12,100	711	782	547
18	*2,550	764	1,340	2,470	4,460	5,390	2,360	555	9,950	733	792	538
19	2,530	733	1,310	2,460	4,540	6,270	2,210	522	6,190	719	796	526
20	2,210	719	1,310	2,520	4,520	6,570	2,150	612	2,410	724	789	520
21	1,440	758	1,290	2,460	4,760	6,570	1,330	568	1,320	705	786	546
22	1,390	758	1,350	*2,490	4,900	6,440	858	517	5,060	713	778	562
23	1,350	744	2,020	2,540	4,880	6,290	433	652	5,370	702	796	545
24	1,100	754	2,230	2,530	4,680	6,010	504	571	2,170	722	*861	529
25	881	736	2,300	2,520	4,490	5,490	554	606	1,740	728	803	*549
26	897	744	2,280	2,470	4,520	5,260	278	683	3,120	736	817	560
27	1,110	730	2,240	2,460	4,560	5,820	460	615	3,160	743	820	573
28	1,250	716	2,310	2,460	4,460	5,330	472	628	4,390	749	806	549
29	929	719	2,370	2,380	-	4,730	395	564	4,050	744	820	536
30	857	708	2,350	2,350	-	4,760	449	*648	1,530	759	814	530
31	800	-	2,340	2,400	-	5,040	-	591	-	754	828	-
Total	53,784	22,086	43,924	76,460	118,910	167,880	73,383	18,282	167,551	22,775	24,630	20,863
Mean	1,735	736	1,417	2,466	4,247	5,415	2,446	590	5,585	735	795	695
Ac-ft	106,700	43,810	87,120	151,700	235,900	333,000	145,600	36,260	332,300	45,170	48,850	41,380

Calendar year 1952: Max 14,300 Min 529 Mean 4,714 Ac-ft 3,422,000
Water year 1952-53: Max 15,600 Min 278 Mean 2,221 Ac-ft 1,608,000

* 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 1953.

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

Extremes.--1950-53: 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 diversion or regulation above station.

Rating table, water year 1952-53 (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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	248	256	244	236	232	236	232	228	224	228	232	248
2	248	256	244	236	232	236	232	*228	224	228	236	248
3	248	256	244	236	232	236	232	228	224	228	236	244
4	248	256	242	232	232	*236	232	228	224	224	236	244
5	248	256	242	232	232	236	232	228	224	224	236	244
6	248	256	*240	232	236	236	232	228	224	224	236	244
7	248	256	240	232	236	236	232	228	220	224	236	248
8	252	256	240	232	236	236	232	228	220	224	236	248
9	252	256	240	232	236	236	232	228	220	224	236	248
10	252	256	240	232	236	236	*232	228	220	224	236	248
11	252	256	240	232	236	236	232	228	220	224	236	248
12	252	256	240	232	236	236	232	228	220	228	236	248
13	252	256	240	232	236	236	232	228	220	228	236	248
14	252	252	240	232	236	236	232	224	220	228	240	248
15	252	252	240	232	236	236	232	224	224	228	240	248
16	252	252	240	232	236	236	232	224	224	*228	240	248
17	252	248	240	232	236	236	232	224	224	228	240	248
18	252	248	240	232	236	236	232	224	224	228	240	252
19	252	248	240	232	236	236	232	224	224	228	*240	248
20	252	248	240	232	236	236	232	224	224	228	240	248
21	*252	248	240	232	236	236	232	224	*224	228	244	252
22	252	248	236	*232	236	236	228	224	224	228	244	252
23	252	248	236	232	236	232	228	224	224	232	244	*252
24	256	248	236	232	236	232	228	224	224	232	244	252
25	256	248	236	232	236	232	228	*224	224	232	244	252
26	256	248	236	232	236	232	228	224	224	232	244	252
27	256	248	236	232	236	232	228	224	224	232	244	252
28	256	244	236	232	236	232	228	224	224	232	244	252
29	256	244	236	232	-	232	228	224	224	232	244	256
30	256	244	236	232	-	232	228	224	228	232	244	256
31	256	-	236	232	-	232	-	224	-	232	244	-
Total	7,816	7,544	7,416	7,204	6,588	7,280	6,924	6,996	6,692	7,072	7,428	7,476
Mean	252	251	239	232	235	235	231	226	223	228	240	249
Ac-ft	15,500	14,960	14,710	14,298	13,070	14,440	13,730	13,880	13,270	14,030	14,730	14,830

Calendar year 1952: Max 256 Min 212 Mean 232 Ac-ft 168,300
Water year 1952-53: Max 256 Min 220 Mean 237 Ac-ft 171,400

* 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 1953.

Gage.--Water-stage recorder. Altitude of gage is 4,340 ft (by barometer). November 1909 to August 1913, staff gage 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.--9 years (1944-53), 37.5 cfs.

Extremes.--Maximum discharge during year, 205 cfs Apr. 28 (gage height, 2.21 ft); minimum, 5.7 cfs Dec. 24 (gage height, 0.42 ft).
1909-13, 1938-39, 1943-53: Maximum discharge observed, 429 cfs May 21, 1912 (gage height, 10.4 ft, site and datum then in use); minimum observed, 3.6 cfs Aug. 7-12, 1910 (gage height, 0.3 ft, site and datum then in use).

Remarks.--Records good. Small ranch diversions above station.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.4	6.0	1.2	58
.6	14	1.6	105
.8	25	2.2	203
1.0	39		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.8	11	12	14	16	18	43	*134	143	39	14	10
2	8.8	11	13	14	15	17	41	115	166	36	18	10
3	8.8	11	12	14	16	18	39	106	163	35	17	9.6
4	8.8	11	12	14	18	18	39	104	170	32	14	9.6
5	8.8	11	12	14	19	18	41	111	166	32	13	9.2
6	8.8	11	12	14	21	19	39	131	161	30	13	8.8
7	8.8	11	*12	14	19	20	38	154	161	28	12	8.8
8	8.8	11	12	14	21	22	36	154	152	28	12	8.8
9	8.8	11	12	15	20	24	34	142	144	27	12	8.8
10	8.8	11	13	16	19	26	32	130	136	26	12	8.4
11	9.2	12	13	15	19	*28	*30	115	131	25	11	8.4
12	9.2	12	13	15	19	28	28	105	125	24	11	8.0
13	8.8	13	13	16	18	27	28	98	122	23	10	8.0
14	8.8	13	13	16	18	25	28	96	116	23	10	8.0
15	9.2	13	13	15	19	25	27	98	105	22	11	8.4
16	9.2	13	13	15	18	24	30	105	100	22	11	9.2
17	9.2	12	13	18	18	23	39	118	91	*21	11	9.2
18	9.2	12	13	36	18	22	43	132	87	19	10	8.4
19	9.2	12	13	35	b15	22	48	154	*81	18	10	8.4
20	9.6	12	14	27	b11	22	60	156	77	18	*9.6	8.4
21	*9.6	12	14	*25	b14	22	78	152	70	17	9.6	8.0
22	9.6	10	13	22	b16	22	111	138	65	17	9.2	8.0
23	9.6	9.6	13	19	16	22	143	132	61	16	9.2	8.0
24	9.6	12	8.4	18	16	24	148	131	58	16	9.2	8.4
25	10	b11	8.8	17	16	28	142	118	54	15	9.2	*8.4
26	10	b9.0	12	17	16	32	151	113	52	14	9.2	8.4
27	10	b9.0	15	16	16	35	171	109	49	14	9.2	8.4
28	10	b9.0	15	16	17	41	194	124	47	14	9.2	8.4
29	10	b9.5	14	16	-	43	173	138	43	14	9.6	8.8
30	10	11	14	16	-	44	152	136	41	14	9.6	8.4
31	10	-	14	16	-	44	-	134	-	14	9.2	-
Total	288.0	336.1	394.2	549	484	803	2,206	3,883	3,137	693	344.0	259.6
Mean	9.29	11.2	12.7	17.7	17.3	25.9	73.5	125	105	22.4	11.1	8.65
Ac-ft	571	667	782	1,090	960	1,590	4,380	7,700	6,220	1,370	682	515

Calendar year 1952: Max 294 Min 8.0 Mean 41.3 Ac-ft 29,970
Water year 1952-53: Max 194 Min 8.0 Mean 36.6 Ac-ft 26,530

Peak discharge (base, 130 cfs).--Apr. 28 (6 a.m.) 205 cfs (2.21 ft); May 7 (11 p.m.) 163 cfs (1.99 ft); May 19 (8 p.m.) 168 cfs (2.03 ft); June 2 (3:30 p.m.) 182 cfs (2.12 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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 1953.

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

Extremes.--Maximum discharge during year, 18,100 cfs June 10 (gage height, 8.74 ft); minimum, 1,950 cfs Apr. 27 (gage height, 0.45 ft).
1946-53: Maximum discharge, 23,100 cfs June 13, 1947 (gage height, 10.34 ft); minimum observed, 1,900 cfs May 5, 1947 (gage height, 0.38 ft).

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

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

0.5	1,990	5.0	8,550
1.0	2,400	6.0	10,900
2.0	3,450	7.0	13,400
3.0	4,750	9.0	19,000
4.0	6,450		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,800	2,840	2,540	4,110	4,080	5,850	6,680	2,370	3,000	2,950	2,620	2,820
2	5,130	2,750	2,590	4,080	4,040	5,950	5,920	2,480	2,940	2,520	2,680	2,850
3	4,890	2,680	2,630	4,070	4,040	6,040	5,920	2,540	3,120	2,420	2,720	2,870
4	4,660	2,680	2,620	4,060	5,010	*6,030	5,950	*2,500	3,070	2,450	2,720	3,020
5	4,140	2,640	*2,660	4,080	5,670	5,790	5,200	2,440	3,110	2,490	2,700	3,150
6	3,550	2,620	2,660	4,110	5,770	5,810	4,620	2,390	3,090	2,470	2,680	2,950
7	3,350	2,620	2,690	4,210	5,770	6,210	4,400	2,380	3,210	2,450	2,660	2,890
8	3,360	2,640	2,710	4,330	5,790	7,230	*4,750	2,420	3,120	2,450	2,650	2,890
9	3,380	2,720	2,660	4,320	5,720	7,290	5,810	2,470	12,800	2,440	2,670	2,900
10	3,400	2,750	2,630	4,410	5,810	6,970	6,410	2,470	17,800	2,440	2,660	2,900
11	3,460	2,720	2,670	4,380	6,080	6,930	5,520	2,470	*17,100	2,420	2,650	2,920
12	4,450	2,700	2,810	4,360	6,080	7,050	4,860	2,390	16,300	2,440	2,650	2,920
13	4,560	2,750	3,070	4,300	6,150	6,990	4,690	2,500	15,600	2,440	2,650	2,920
14	4,430	2,810	3,070	4,120	6,130	7,230	4,490	2,400	11,100	*2,440	2,650	2,950
15	4,600	2,760	3,080	3,970	6,100	7,590	5,040	2,380	9,770	2,440	2,620	2,980
16	4,660	2,660	3,090	4,110	6,300	7,220	5,290	2,250	12,600	2,490	2,620	2,930
17	*4,630	2,690	3,090	4,170	6,280	6,750	4,780	2,240	14,000	2,460	2,630	2,820
18	4,630	2,650	3,100	4,250	6,120	6,750	4,150	2,250	12,400	2,460	2,640	2,740
19	4,640	2,700	3,100	4,200	5,950	7,570	3,880	2,340	8,940	2,490	2,630	2,750
20	4,630	2,640	3,090	*4,210	5,950	8,140	3,670	2,410	5,360	2,470	2,620	2,790
21	3,760	2,680	3,080	4,230	6,170	8,110	3,280	2,430	3,440	2,480	2,620	2,800
22	3,520	2,600	3,030	4,280	6,360	8,000	2,720	2,510	4,890	2,480	2,620	2,770
23	3,520	2,580	3,360	4,200	6,470	7,850	2,380	2,530	7,590	2,490	2,640	*2,740
24	3,460	2,610	3,900	4,200	6,280	7,630	2,310	2,590	5,050	2,510	2,670	2,740
25	3,110	2,600	3,970	4,190	6,010	6,950	2,260	2,640	3,560	2,510	*2,690	2,730
26	3,060	2,550	3,970	4,140	5,990	6,990	2,110	2,620	4,540	2,520	2,690	2,740
27	3,140	2,540	3,950	4,110	6,120	7,030	2,050	2,600	5,090	2,540	2,700	2,750
28	3,340	2,530	4,120	4,120	6,060	7,230	2,830	*2,690	5,900	2,540	2,740	2,730
29	3,220	2,520	4,160	4,110	-	6,600	2,280	2,980	6,120	2,580	2,760	2,720
30	3,000	2,510	4,140	4,040	-	6,700	2,280	3,240	4,190	2,590	2,800	2,720
31	2,940	-	4,120	4,020	-	6,660	-	3,190	-	2,610	2,810	-
Total	121,420	79,740	98,360	129,490	162,260	215,140	126,530	78,110	228,800	77,480	82,860	85,400
Mean	3,917	2,658	3,173	4,177	5,795	6,940	4,218	2,520	7,627	2,499	2,673	2,847
Ac-ft	240,800	158,200	195,100	256,800	321,800	426,700	251,000	154,900	453,800	153,700	164,400	169,400

Calendar year 1952: Max 15,600 **Min** 2,510 **Mean** 6,520 **Ac-ft** 4,733,000
Water year 1952-53: Max 17,800 **Min** 2,050 **Mean** 4,070 **Ac-ft** 2,947,000

* Discharge measurement made on this day.

Box Canyon Springs near Wendell, Idaho

Location.--Lat 42°42'30", long. 114°48'45", in NE¼ sec. 28, T. 8 S., R. 14 E., on left bank 150 ft below a waterfall, 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 1953.

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

Extremes.--1950-53: Maximum daily discharge, 480 cfs Sept. 29, 1950; minimum daily, 372 cfs Apr. 12, 1951.

Remarks.--Records excellent. No surface diversion or regulation above station. Discharge affected by variable surface waste from irrigation canals over rim rocks into springs above station. This waste was reported not flowing Oct. 17, Dec. 6, Mar. 3, and measured or estimated on May 4 (1.5 cfs); May 22 (2 cfs); June 21 (1.5 cfs); July 14 (0.5 cfs); Sept. 22 (2 cfs).

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 29 to Sept. 30)

Oct. 1 to May 23		May 24 to Sept. 30	
1.4	374	1.5	377
1.6	423	1.7	427
1.8	474	1.9	480

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	458	446	433	416	403	406	398	398	422	427	424	443
2	458	448	433	413	403	406	396	398	424	427	424	443
3	458	448	433	413	403	*406	396	396	424	427	424	443
4	458	448	430	413	403	406	396	*396	424	427	424	443
5	458	448	430	413	403	406	396	398	427	424	422	443
6	457	448	*430	413	406	406	398	400	427	422	427	443
7	457	448	430	413	406	406	398	400	430	422	427	443
8	457	446	428	413	406	406	*398	403	430	422	427	443
9	457	446	426	413	403	406	396	403	430	420	427	443
10	457	446	426	410	403	406	396	403	430	420	427	445
11	456	446	426	410	403	406	396	403	427	420	427	445
12	456	446	423	410	403	406	396	400	430	420	427	445
13	456	446	423	410	406	406	396	400	427	420	427	445
14	456	446	423	410	406	403	396	403	430	*420	430	448
15	456	446	423	410	406	403	393	403	430	417	430	450
16	456	446	423	408	403	403	396	406	432	414	432	450
17	*456	443	423	408	403	403	396	406	430	417	432	450
18	453	438	423	408	406	403	393	406	432	417	432	450
19	453	440	423	408	406	403	393	408	432	417	*432	450
20	453	440	423	406	406	403	393	410	430	417	435	450
21	453	438	420	406	406	403	393	413	*430	417	437	453
22	453	438	420	403	406	403	393	*416	430	417	437	*453
23	451	438	420	403	406	400	393	416	430	417	437	453
24	451	438	418	*403	406	400	396	414	427	422	440	453
25	451	438	418	406	403	400	396	414	430	422	440	453
26	451	436	418	403	406	398	396	414	432	420	440	453
27	451	436	418	403	406	398	398	417	430	420	440	456
28	451	433	418	403	406	398	400	420	430	422	440	456
29	448	433	416	403	-	398	398	420	430	420	443	456
30	448	433	416	403	-	398	400	420	427	422	440	456
31	448	-	416	403	-	398	-	422	-	424	443	-
Total	14,082	13,270	13,130	12,657	11,332	12,493	11,879	12,626	12,864	13,040	13,394	13,457
Mean	454	442	424	408	405	403	396	407	429	421	432	449
Ac-ft	27,930	26,320	26,040	25,100	22,480	24,780	23,560	25,040	25,520	25,860	26,570	26,690

Calendar year 1952: Max 461 Min 393 Mean 429 Ac-ft 311,100
Water year 1952-53: Max 458 Min 393 Mean 423 Ac-ft 305,900

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 1-16; discharge estimated on basis of records for other Snake River springs.

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

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

Drainage area.--439 sq mi.

Records available.--May 1914 to July 1915, October 1948 to September 1953.

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

Average discharge.--5 years (1948-53), 110 cfs.

Extremes.--Maximum discharge during year, 437 cfs June 15 (gage height, 3.27 ft); minimum, 18 cfs Sept. 12, 22, 29, 30; minimum gage height, 1.20 ft Sept. 30.
1914-15, 1948-53: Maximum discharge, 1,170 cfs May 4, 1952 (gage height, 4.82 ft); minimum, 16 cfs Sept. 6, 1949 (gage height, 1.21 ft); minimum gage height, that of Sept. 30, 1953.

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

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.2	18	2.4	162
1.4	30	2.8	265
1.7	58	3.3	445
2.0	94		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	28	30	31	37	47	93	173	230	124	28	21
2	23	27	30	32	37	42	89	*154	235	121	29	23
3	22	28	30	31	38	42	81	140	250	113	30	21
4	22	28	28	31	39	41	84	129	253	101	28	20
5	23	29	30	29	41	*42	89	129	292	95	25	20
6	24	30	30	30	42	43	95	133	289	90	24	20
7	24	30	31	30	45	44	91	148	337	88	23	19
8	24	29	31	31	44	46	86	177	286	84	22	19
9	24	28	30	34	30	50	*82	182	283	81	21	19
10	24	30	*31	35	31	56	75	158	271	81	21	19
11	25	30	33	34	33	61	68	148	274	77	21	19
12	24	33	32	35	36	60	63	128	337	73	21	18
13	24	35	32	36	35	58	61	119	413	69	21	19
14	24	37	31	34	36	52	56	116	417	63	22	19
15	24	34	30	31	38	52	52	116	413	*59	24	20
16	25	31	31	34	37	52	52	129	362	52	24	21
17	26	30	31	34	38	52	54	135	344	48	22	20
18	26	30	32	38	38	50	59	156	330	45	21	20
19	27	30	32	42	b33	50	58	169	351	40	21	20
20	*27	31	32	42	b28	52	62	227	*348	41	*20	20
21	28	28	30	40	35	52	79	227	306	39	20	19
22	28	b23	30	35	35	50	107	198	262	36	20	19
23	28	30	b26	*36	35	50	142	175	241	34	20	19
24	28	30	b22	38	35	52	175	182	224	30	19	*19
25	28	b25	b23	38	34	56	184	166	216	30	19	19
26	28	b22	b27	38	35	66	198	148	196	28	19	19
27	29	b21	30	32	38	74	216	131	184	27	19	19
28	28	b21	30	34	34	81	259	*140	162	27	19	19
29	28	b23	31	37	-	91	230	182	140	26	19	19
30	28	b26	32	38	-	86	198	247	133	26	20	18
31	29	-	31	36	-	91	-	224	-	26	20	-
Total	794	857	929	1,076	1,017	1,743	3,238	4,986	8,379	1,875	682	586
Mean	25.6	28.6	30.0	34.7	36.3	56.2	108	161	279	60.5	22.0	19.5
Ac-ft	1,570	1,700	1,840	2,130	2,020	3,460	6,420	9,890	16,620	3,720	1,350	1,160

Calendar year 1952: Max 1,110 Min 21 Mean 149 Ac-ft 108,200
Water year 1952-53: Max 417 Min 18 Mean 71.7 Ac-ft 51,880

* 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 1953.

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

Average discharge.--39 years (1910-16, 1919-20, 1921-53), 133 cfs.

Extremes.--Maximum discharge during year, 480 cfs June 15; maximum gage height, 5.73 ft June 16; minimum discharge, 10 cfs Aug. 26.
1909-16, 1918-53: Maximum discharge, between 2,060 and 2,420 cfs Feb. 24, 1943 (gage height exceeded range of recorder, 10.20 ft, but was not more than 1.2 ft higher), from rating curve extended above 1,400 cfs; minimum, 2.8 cfs Nov. 13, 1947, during channel improvement work upstream.

Remarks.--Records good. 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	45	48	60	60	85	207	*353	316	155	36	16
2	37	45	51	63	60	78	199	*307	328	146	47	19
3	38	44	50	62	62	74	185	282	351	135	45	22
4	39	44	46	63	62	78	173	232	363	128	38	21
5	39	45	49	59	65	*76	173	215	379	119	36	20
6	40	46	54	60	74	80	179	207	418	109	31	20
7	41	46	53	63	87	83	179	223	442	101	27	18
8	41	50	52	64	93	85	170	255	450	96	25	18
9	41	45	51	67	81	91	*188	269	413	93	24	20
10	41	46	*64	69	60	101	156	253	391	88	23	26
11	40	48	65	73	70	114	146	234	358	88	22	28
12	40	50	68	72	74	131	137	217	358	82	21	28
13	41	52	63	70	70	137	129	201	401	78	20	28
14	41	54	64	70	72	128	128	189	462	76	18	27
15	40	57	64	67	68	117	122	187	475	*70	21	27
16	40	56	67	65	68	121	119	193	462	64	19	28
17	41	51	68	64	68	116	128	201	425	60	19	29
18	42	50	68	70	69	116	153	211	399	56	17	28
19	42	50	68	81	46	110	156	230	*387	53	15	27
20	*42	48	69	78	39	110	166	258	394	49	*14	27
21	42	43	68	74	60	112	189	286	384	47	15	27
22	43	30	60	70	68	109	219	280	344	46	14	27
23	44	33	52	67	65	105	266	260	307	43	13	27
24	45	45	31	*67	65	107	328	258	280	41	13	*27
25	43	41	32	68	65	114	370	258	266	39	13	28
26	42	32	45	67	72	135	382	236	251	38	11	28
27	42	32	53	63	69	158	382	215	234	38	12	28
28	43	31	58	60	74	175	396	209	213	37	14	29
29	43	33	58	60	-	199	432	*240	187	37	14	29
30	46	40	60	60	-	209	399	302	168	37	13	29
31	45	-	59	60	-	205	-	309	-	37	14	-
Total	1,281	1,332	1,758	2,056	1,888	3,659	8,536	7,550	10,808	2,288	664	756
Mean	41.3	44.4	56.7	66.3	67.4	118	218	244	354	73.7	21.4	25.2
Ac-ft	2,540	2,640	3,490	4,080	3,740	7,260	12,960	14,980	21,040	4,530	1,320	1,500

Calendar year 1952: Max 1,370 Min 20 Mean 212 Ac-ft 154,200
Water year 1952-53: Max 475 Min 11 Mean 111 Ac-ft 80,080

* Discharge measurement made on this day.

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 1953.

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, 67,320 acre-ft June 16, 17 (gage height, 38.9 ft); minimum observed, 10,480 acre-ft Sept. 4 (gage height, 7.7 ft).
1922-53: 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36,880	36,140	36,700	37,620	38,730	40,020	45,600	57,020	59,160	62,390	35,030	12,640
2	36,880	36,140	36,700	37,820	38,730	40,210	46,000	57,660	59,810	61,740	33,920	12,070
3	36,700	36,140	36,700	37,620	38,730	40,210	46,400	58,090	60,240	61,320	33,000	11,060
4	36,700	36,140	36,700	37,620	38,920	40,400	46,600	58,520	60,670	60,880	31,700	10,480
5	36,700	36,140	36,700	37,820	38,920	40,400	46,800	58,740	61,320	60,240	31,020	10,760
6	36,700	36,140	36,700	37,620	39,100	40,580	47,600	58,950	61,960	59,600	30,170	10,760
7	36,700	36,140	36,700	37,620	39,100	40,760	48,000	59,600	62,820	58,740	29,660	10,760
8	36,700	36,140	36,700	37,620	39,100	41,140	48,400	59,810	63,460	57,880	28,300	10,780
9	36,700	36,140	37,080	37,820	39,100	41,500	48,800	60,240	64,100	57,020	27,960	10,780
10	36,700	36,140	37,080	37,620	39,100	41,690	49,200	60,460	64,740	56,200	26,770	10,760
11	36,700	36,140	37,080	37,620	39,100	41,690	49,600	60,240	65,340	55,400	26,090	10,780
12	36,700	36,140	37,080	37,800	39,100	42,060	50,000	60,240	65,820	54,400	25,240	10,760
13	36,700	36,140	37,080	37,800	39,100	42,240	50,200	60,020	66,250	53,400	24,560	10,760
14	36,700	36,140	37,080	37,800	39,100	42,430	50,400	59,810	66,900	52,600	23,370	10,780
15	36,700	36,320	37,080	37,800	39,100	42,430	50,600	59,380	67,110	51,400	22,690	10,780
16	36,510	36,510	37,080	37,800	39,280	42,620	50,800	58,950	67,320	50,600	21,840	10,760
17	36,510	36,510	37,060	37,800	39,280	42,800	50,800	58,740	67,320	49,600	21,180	10,760
18	36,510	36,510	37,250	37,800	39,280	43,000	51,200	58,520	67,110	48,600	20,220	10,760
19	36,510	36,510	37,250	37,990	39,280	43,200	51,600	58,090	66,900	47,400	19,740	10,760
20	36,510	36,510	37,250	37,990	39,280	43,200	51,800	57,880	66,680	46,200	18,780	10,760
21	36,510	36,510	37,250	37,990	39,280	43,200	52,000	57,660	66,250	45,000	18,000	10,760
22	36,510	36,510	37,250	37,990	39,280	43,400	52,400	57,440	66,040	44,200	16,650	10,760
23	36,510	36,510	37,250	38,180	39,280	43,600	52,600	57,660	65,600	43,000	15,600	10,780
24	36,140	36,510	37,440	38,360	39,470	43,800	52,800	57,660	65,180	41,880	15,000	10,760
25	36,140	36,510	37,440	38,360	39,660	44,000	53,400	57,660	64,530	40,760	13,950	10,760
26	36,140	36,510	37,440	38,540	39,840	44,200	54,000	57,660	64,100	39,660	13,950	10,760
27	36,140	36,700	37,440	38,540	39,840	44,400	54,600	57,880	63,670	38,730	13,950	10,760
28	36,140	36,700	37,440	38,540	39,840	44,400	55,200	57,880	63,460	37,990	13,800	10,760
29	36,140	36,700	37,440	38,730	-	44,600	56,000	57,880	63,250	37,250	13,800	10,760
30	36,140	36,700	37,440	38,730	-	44,800	56,400	58,090	62,820	36,320	13,800	10,760
31	36,140	-	37,440	38,730	-	45,200	-	58,300	-	35,770	13,660	-

Monthly gage height and usable contents, water year October 1952 to September 1953

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	23.8	36,880	-
Oct. 31	23.4	36,140	-740
Nov. 30	23.7	36,700	+560
Dec. 31	24.1	37,440	+740
Calendar year 1952	-	-	+17,700
Jan. 31	24.8	38,730	+1,290
Feb. 28	25.4	39,840	+1,110
Mar. 31	28.2	45,200	+5,360
Apr. 30	33.8	56,400	+11,200
May 31	34.7	58,300	+1,900
June 30	36.8	62,820	+4,520
July 31	23.2	35,770	-27,050
Aug. 31	9.9	13,660	-22,110
Sept.30	7.9	10,760	-2,900
Water year 1952-53	-	-	-26,120

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 1953.

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

Extremes.--1937-53: Maximum daily discharge, 660 cfs July 21-24, 1944; no flow during long periods in each year.

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

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

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0							0	0	328	438	294
2	0							0	0	342	418	297
3	0							0	0	357	403	295
4	0							0	0	376	394	231
5	0							0	0	420	403	0
6	0							0	0	446	406	0
7	0							0	0	465	389	0
8	0							0	0	481	371	0
9	0							0	0	507	379	0
10	0							197	0	524	378	0
11	0							240	0	528	373	0
12	0							258	0	542	371	0
13	0							277	0	527	385	0
14	0							301	215	535	405	0
15	0							329	292	*548	416	0
16	0							324	337	544	417	0
17	0							325	393	527	422	0
18	0							337	432	548	428	0
19	0							g355	471	557	*435	0
20	0							g343	*486	564	448	0
21	0							g319	493	570	461	0
22	157							g309	488	574	487	0
23	171							g272	475	583	490	0
24	86							g245	471	565	482	0
25	0							g203	435	541	378	0
26	0							g235	413	531	0	0
27	0							g213	364	514	0	0
28	0							183	353	516	0	0
29	0							0	334	501	0	0
30	0							0	333	478	0	0
31	0							0	-	445	202	-
Total	414	0	0	0	0	0	0	5,265	6,785	15,484	10,579	1,117
Mean	13.4	0	0	0	0	0	0	170	226	499	341	37.2
Ac-ft	821	0	0	0	0	0	0	10,440	13,460	30,710	20,980	2,220

Calendar year 1952: Max 627 Min 0 Mean 142 Ac-ft 102,800
Water year 1952-53: Max 583 Min 0 Mean 109 Ac-ft 78,630

* Discharge measurement made on this day.
g Computed from graph based on gage readings made just after gate changes.

Camas Creek at Eighteenmile shearing corral, near Kilgore, Idaho

Location.--Lat 44°18', long. 111°52', in sec. 7, T. 11 N., R. 39 E., on right bank at highway bridge at Eighteenmile shearing corral, just downstream from West Camas Creek, 7 miles south of Kilgore and 18½ miles northeast of Dubois.
Drainage area.--210 sq mi, approximately.
Records available.--May 1937 to October 1953 (no winter records prior to 1947), discontinued.
Gage.--Water-stage recorder. Altitude of gage is 5,260 ft (by barometer). Prior to Sept. 23, 1938, at datum 1.21 ft higher.
Average discharge.--7 years (1946-53), 72.8 cfs.
Extremes.--Maximum discharge during period October 1952 to October 1953, 755 cfs June 3 (gage height, 4.40 ft); minimum daily, 12 cfs Nov. 26, 28.
1937-53: Maximum discharge, 2,030 cfs May 2 or 3, 1952 (gage height, 7.51 ft, from floodmark), from rating curve extended above 740 cfs; no flow for short periods in February 1949.
Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above and below station for irrigation and stock water.
Cooperation.--Water-stage recorder inspected occasionally by employees of Water District No. 66.

Rating table, Oct. 1, 1952, to Oct. 31, 1953, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 21, 25, June 3-10, 13-15)

1.5	12	2.5	212
1.6	20	3.0	365
1.8	42	4.0	681
2.0	76		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	22	16	15	20	20	55	230	224	66	26	17
2	17	20	17	15	20	19	54	*162	294	59	37	17
3	16	20	17	15	20	19	56	142	*678	56	41	17
4	18	20	*16	15	20	20	60	147	598	52	38	18
5	18	22	16	15	20	21	65	165	499	50	36	18
6	20	22	16	15	20	21	65	188	611	46	34	18
7	20	21	16	15	20	21	62	*221	537	42	33	18
8	20	21	15	15	20	*22	56	221	614	40	30	18
9	19	20	15	16	19	22	48	173	502	37	28	17
10	20	20	16	16	18	22	45	128	393	37	28	17
11	20	20	16	16	18	22	45	104	*346	*36	28	17
12	22	21	16	16	18	22	49	85	362	34	*28	18
13	22	22	16	17	18	22	45	76	418	33	26	18
14	22	24	16	17	18	22	42	78	421	34	24	18
15	22	26	16	16	18	22	42	81	396	37	24	18
16	20	26	17	16	19	22	42	83	359	32	24	18
17	20	25	17	17	19	22	43	92	318	30	22	18
18	*22	24	17	17	19	22	45	104	284	28	22	18
19	22	24	17	17	18	23	45	125	263	26	22	19
20	22	24	17	18	18	23	70	396	251	26	22	18
21	22	22	16	18	18	23	90	547	230	24	20	*18
22	22	21	16	18	19	23	180	452	191	22	22	18
23	22	20	15	18	19	24	250	312	165	22	20	17
24	22	18	15	18	19	25	300	418	139	22	20	17
25	22	15	14	19	19	27	346	556	125	22	17	18
26	22	12	14	19	20	29	405	325	117	22	17	18
27	22	13	15	*18	21	32	474	245	112	22	17	18
28	22	12	15	18	21	40	537	209	102	20	17	13
29	22	13	15	19	-	45	458	227	90	22	17	18
30	22	14	15	19	-	50	309	266	76	22	17	19
31	24	-	15	21	-	55	-	251	-	22	17	-
Total	644	604	490	524	536	802	4,383	6,809	9,715	1,043	774	534
Mean	20.8	20.1	15.8	16.9	19.1	25.9	146	220	324	33.6	25.0	17.8
Ac-ft	1,280	1,200	972	1,040	1,060	1,590	8,690	13,510	19,270	2,070	1,540	1,060

Calendar year 1952: **Max** 1,580 **Min** - **Mean** 110 **Ac-ft** 79,960
Water year 1952-53: **Max** 678 **Min** 12 **Mean** 73.6 **Ac-ft** 53,280

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 7-10, 12, 16, 17, Nov. 21 to about Apr. 15. No gage-height record Nov. 26 to Dec. 3, Dec. 5 to Mar. 7, Mar. 16 to Apr. 24; discharge estimated on basis of 3 discharge measurements, weather records, and records for station at Camas and other streams in Mud Lake basin.

Discharge, in cubic feet per second, 1953

Day	Discharge	Day	Discharge	Day	Discharge	Day	Discharge
Oct. 1	19	Oct. 9	22	Oct. 17	24	Oct. 25	*24
2	19	10	22	18	24	26	a25
3	19	11	22	19	24	27	a24
4	20	12	22	20	22	28	a24
5	20	13	22	21	22	29	a24
6	20	14	22	22	22	30	a24
7	20	15	22	23	22	31	a25
8	22	16	24	24	24		

Total	691
Mean	22.3
Runoff in acre-feet	1,370

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

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 1953.

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.--27 years (1926-53), 27.5 cfs.

Extremes.--Maximum discharge during year, 461 cfs June 4 (gage height, 4.84 ft); minimum recorded, 2.4 cfs Aug. 13 (gage height, 1.67 ft).
1925-53: 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.--Seven field estimates of discharge 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 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second) (Shifting-control method used Oct. 1 to Nov. 2, Apr. 7-22, 29, May 11-20)

Oct. 1 to June 3				June 4 to Sept. 30			
2.4	18	3.6	188	1.7	2.9	3.0	79
2.7	42	4.0	284	1.8	4.9	3.5	145
3.0	78	5.0	566	1.9	7.5	4.0	243
3.3	125			2.0	11	4.8	450
				2.5	37		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.7	13	**7	7	12	11	32	202	137	32	15	7.8
2	8.0	13	8	7	12	10	32	*160	135	28	17	7.2
3	8.0	12	8	7	12	10	34	111	230	26	19	7.2
4	8.0	12	*8	7	12	11	37	102	*439	24	19	7.2
5	8.0	13	8	7	12	12	39	102	327	22	18	7.8
6	8.3	13	8	7	12	12	39	102	320	20	16	7.8
7	8.0	12	8	8	12	*13	*37	105	377	20	16	7.5
8	7.4	11	7	8	12	13	33	121	338	23	15	7.5
9	7.1	11	7	9	11	13	29	116	364	23	13	7.5
10	8.6	12	8	9	10	14	27	101	257	21	12	*7.2
11	8.6	12	8	9	10	14	26	74	*192	21	12	7.5
12	8.6	12	8	9	10	14	26	*62	173	21	6.3	7.2
13	9.0	13	8	10	10	13	27	51	188	*20	*3.3	7.0
14	8.6	14	8	10	10	13	25	44	213	18	12	6.7
15	9.0	15	**8	**9	10	14	25	42	210	17	11	6.5
16	8.6	15	8	9	11	14	25	42	192	19	11	7.0
17	*8.9	14	8	10	11	13	26	42	167	18	11	6.5
18	9.5	14	8	10	11	13	27	47	142	16	11	6.7
19	10	14	8	10	10	14	27	55	128	15	10	7.0
20	11	13	8	11	9	14	32	75	119	14	10	*6.7
21	11	12	8	11	9	14	47	279	115	13	10	6.7
22	11	12	8	11	10	14	80	304	100	13	9.5	7.0
23	11	11	7	11	10	15	116	259	86	12	9.5	7.0
24	11	10	7	11	10	16	153	202	72	12	9.2	8.2
25	12	7	6	12	10	**17	188	319	59	12	8.8	8.2
26	12	6	6	*12	11	18	230	302	54	12	8.2	7.5
27	11	7	7	11	12	20	274	168	51	12	7.5	7.8
28	12	6	7	11	**12	25	327	135	46	11	7.8	8.5
29	12	7	7	12	-	30	385	118	42	11	7.8	8.2
30	12	7	7	12	-	35	282	135	36	11	7.8	5.9
31	13	-	**7	**12	-	35	-	151	-	13	*7.5	-
Total	298.9	343	234	299	303	494	2,687	4,128	5,309	550	351.2	218.5
Mean	9.64	11.4	7.5	9.6	10.8	15.9	89.6	133	177	17.7	11.3	7.28
Ac-ft	593	680	464	593	601	980	5,330	8,190	10,530	1,090	697	433

Calendar year 1952: **Max** 1,060 **Min** - **Mean** 71.0 **Ac-ft** 51,510
Water year 1952-53: **Max** 439 **Min** 3.3 **Mean** 41.7 **Ac-ft** 30,180

* Discharge measurement made on this day.
** Field estimate made on this day.

Note.--Stage-discharge relation affected by ice about Nov. 15 to about Mar. 25, Apr. 11. No gage-height record Oct. 13-16, 29-31, Nov. 3 to Mar. 6, Mar. 14 to Apr. 6, except staff-gage readings Nov. 17, Dec. 4; discharge estimated on basis of weather records, 7 field estimates, 2 discharge measurements, and records for other stations in Mud Lake basin.

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 1953.

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.--26 years (1921-24, 1928-29, 1931-53), 17.6 cfs.

Extremes.--Maximum discharge during year, 214 cfs June 3 (gage height, 2.19 ft); no flow for many days.
1921-53: Maximum discharge, 858 cfs Apr. 7, 1930 (gage height, 4.77 ft); no flow for long periods.

Remarks.--Records good except those below 2.0 cfs, which are fair, and those for periods of ice effect or no gage-height record, which are poor.

Cooperation.--Five field estimates of discharge and two discharge measurements furnished and water-stage recorder inspected by employees of Water District No. 66.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.1	0	1.1	23
.2	.1	1.3	41
.3	.3	1.5	68
.5	1.5	1.8	128
.7	4.7	2.2	221
.9	11		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.1	7.3	4.5	5	8.5	8	20	*74	90	27	12	0.1
2	2.7	7.2	4.5	5	9	7	20	66	120	25	8.0	0
3	2.7	4.5	*5.0	5	9.5	7	21	55	*194	24	8.7	0
4	2.7	4.6	5.0	5	10	8	22	52	158	23	7.6	0
5	2.7	8.5	5.0	5	10	9	23	55	142	21	6.7	1.2
6	3.9	9.6	5.0	5	10	9	23	56	162	20	5.9	1.1
7	4.3	8.9	5.0	5	10	*10	22	61	156	19	5.6	.6
8	4.5	5.9	4.5	5	9	10	*22	61	165	17	4.7	.3
9	4.5	4.0	4.5	6	7	10	21	55	144	16	4.1	.1
10	5.0	5.6	4.5	6	7	11	20	52	130	15	2.9	.1
11	4.7	7	4.5	6	7	11	19	46	119	*15	*2.9	0
12	5.3	6.5	5	6	7	11	18	41	117	15	3.1	0
13	6.2	6.5	5	6	7	10	17	40	135	13	*2.7	0
14	5.3	8	5	6	7	10	16	38	135	14	2.2	0
15	5.9	10	**5	**6	8	11	16	36	121	12	2.1	0
16	6.2	9.5	5	6	8	11	19	35	110	9.9	2.6	0
17	6.4	9	5	6	8	11	21	34	98	8.7	2.5	0
18	*7.0	8	5	6	8	12	22	41	88	7.3	1.9	0
19	7.0	7	5	6	7	12	26	52	86	6.7	2.1	0
20	7.0	8	5	6	7	12	35	126	86	6.2	1.9	0
21	7.0	7	5	6	7	12	52	108	76	5.3	1.4	*0
22	7.0	6	5	6	7	13	74	100	68	4.7	1.3	0
23	6.4	5	4.5	6	7	13	108	110	56	4.7	1.1	0
24	6.7	4.5	4.5	6	8	14	115	120	46	5.0	1.0	0
25	7.0	4.0	4	7	8	15	126	150	46	4.1	.7	0
26	7.3	3.5	4	7	9	16	149	130	46	3.3	.5	0
27	7.3	4.0	4.5	*7	9	17	153	100	47	2.7	.3	0
28	7.0	3.5	4.5	7	**9	19	156	80	41	2.0	.1	0
29	7.0	4.0	4.5	7	-	20	151	90	36	1.5	0	0
30	7.0	**4.0	5	8	-	22	88	110	30	1.5	0	0
31	7.0	-	**5	**8	-	22	-	100	-	12	0	-
Total	173.8	191.1	147.5	187	228.0	383	1,595	2,274	3,053	361.6	96.6	3.5
Mean	5.61	6.37	4.76	6.0	8.14	12.4	53.2	73.4	102	11.7	3.12	0.12
Ac-ft	345	379	293	371	452	760	3,160	4,510	6,060	717	192	6.9

Calendar year 1952: Max 472 Min 0 Mean 40.7 Ac-ft 29,580
Water year 1952-53: Max 199 Min 0 Mean 23.8 Ac-ft 17,250

* Discharge measurement or observation of no flow made on this day.
** Field estimate made on this day.
Note.--Stage-discharge relation affected by ice Nov. 11 to about Apr. 5. No gage-height record Oct. 19-21, Nov. 28 to Dec. 2, Dec. 4 to Mar. 17, Mar. 19-29, Apr. 1-7, 9-14, May 22 to June 2, July 28-30; discharge estimated on basis of weather records, 6 discharge measurements, 5 field estimates, and records for 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 1953.

Gage.--Water-stage recorder. Altitude of gage is 4,790 ft (by barometer). Prior to Dec. 22, 1949, staff gages at nearby sites at present datum.

Extremes.--Maximum discharge during year, 106 cfs June 3 (gage height, 2.80 ft); no flow for most of year.
1921-53: 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 except those for periods of no gage-height record and those below 5 cfs, which are poor. Flow affected by irrigation diversions above Dubois, 14 miles above station, and by heavy channel losses below Dubois.

Cooperation.--Two discharge measurements furnished by Water District No. 66.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

0.8	0	1.4	14
.9	.8	1.7	29
1.0	2.1	2.0	48
1.1	4.0	2.3	68
1.2	6.5	2.7	98

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	44	21			
2							0	*38	29			
3							0	29	93			
4			(*)				0	24	*96			
5							0	19	85			
6							2.4	15	93			
7						(*)	3.4	15	91			
8							1.4	19	*97			
9							0	19	89			
10							0	18	79			
11							0	15	69			
12							0	*9.5	67			
13							0	a1	72	(*)	(*)	
14							0	0	77			
15							0	0	72			
16							0	0	67			
17	(*)						0	0	60			
18							0	a1	53			
19							0	a10	46			
20							0	a45	47			
21							0	a50	42			
22							0	48	35			(*)
23							2.5	39	24			
24							43	48	17			
25							50	81	1.5			
26				(*)			58	61	0			
27							66	39	0			
28							67	22	0			
29							74	28	0			
30							56	37	0			
31							-	29	-			-
Total	0	0	0	0	0	0	423.7	803.5	1,522.5	0	0	0
Mean	0	0	0	0	0	0	14.1	25.9	50.8	0	0	0
Ac-ft	0	0	0	0	0	0	840	1,590	3,020	0	0	0

Calendar year 1952: **Max** 177 **Min** 0 **Mean** 17.0 **Ac-ft** 12,370
Water year 1952-53: **Max** 97 **Min** 0 **Mean** 7.53 **Ac-ft** 5,450

* Discharge measurement or observation of no flow made on this day.
a No gage-height record; discharge estimated on basis of record for station at Dubois.

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 1953.
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, 38,300 acre-ft May 3-6; maximum gage height, 7.89 ft May 5; minimum contents, 3,370 acre-ft Oct. 20, 21 (gage height, -0.02 ft).
1921-53: 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 1953. Other irrigation diversions are made by various means from adjacent lakes and wells and Camas Creek above lake. Area of Mud Lake is varied from time to time by changes in dikes. Figures given herein represent contents above gage height -4.0 ft. Capacity table prepared from surveys made by Geological Survey and adjusted for changes in dikes. High winds occasionally disturb the recording of lake stages. Beginning Oct. 1, 1952, daily contents computed at midnight; prior to that date, from mean daily gage heights.
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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,010	4,290	11,100	17,900	24,900	30,500	34,700	37,800	32,100	29,400	11,800	6,200
2	4,750	4,330	-	18,200	25,100	30,800	34,800	38,100	32,700	28,500	11,200	6,460
3	4,540	4,430	11,500	18,300	25,400	30,900	34,900	38,200	32,900	27,700	10,700	6,660
4	4,270	4,680	11,700	-	25,700	31,000	34,900	38,300	33,400	26,900	10,200	6,720
5	4,010	4,900	11,900	-	26,000	31,100	35,200	38,300	34,200	26,100	9,600	6,910
6	3,930	5,050	12,100	-	26,200	31,200	35,500	38,000	34,700	25,400	9,020	7,100
7	3,860	5,340	12,300	-	26,400	31,400	35,500	37,400	35,100	24,500	8,530	7,360
8	3,780	5,530	12,600	-	26,800	31,700	35,900	37,200	35,600	23,700	7,920	7,590
9	3,700	5,750	12,800	-	26,900	32,000	35,900	36,800	36,000	23,000	7,420	7,770
10	3,630	6,000	13,000	-	27,000	32,100	35,900	36,400	36,400	22,400	6,990	7,950
11	3,550	6,200	13,300	-	27,200	32,200	35,900	36,200	36,800	21,800	6,640	8,080
12	3,500	6,510	13,400	-	27,500	32,400	35,900	35,700	37,000	21,200	6,200	8,230
13	3,520	6,770	13,600	-	27,700	32,600	35,800	35,300	27,400	20,600	6,000	8,390
14	3,550	6,960	13,800	20,900	27,800	32,700	36,000	34,800	37,700	20,000	5,700	8,300
15	3,520	7,100	14,100	21,200	27,900	32,800	36,100	34,200	37,800	19,400	5,630	8,390
16	3,540	-	14,300	21,400	28,100	32,900	36,200	33,600	38,000	18,800	5,460	8,560
17	3,500	7,920	14,500	21,600	28,200	33,100	36,300	32,900	37,800	18,300	5,280	8,660
18	3,500	-	14,800	21,900	21,300	33,300	36,300	33,500	37,700	17,900	5,140	8,720
19	3,430	-	15,000	22,100	28,500	33,400	36,400	31,700	37,300	17,500	5,160	8,820
20	3,390	-	15,200	22,400	28,700	33,400	36,400	31,200	37,000	17,300	5,140	8,980
21	3,430	-	15,400	22,600	29,000	33,600	36,500	31,000	36,800	16,900	5,100	9,020
22	3,500	-	15,700	22,900	29,100	33,800	36,600	31,000	36,200	16,500	4,990	8,950
23	3,540	-	15,900	23,200	29,300	34,000	36,600	31,100	35,500	16,100	4,990	8,890
24	3,550	-	16,200	23,200	29,500	34,200	36,700	31,200	34,800	15,700	5,100	8,820
25	3,550	-	16,400	23,500	29,800	34,200	37,000	31,300	34,200	15,300	5,230	8,720
26	3,630	-	16,600	23,700	29,900	34,300	37,100	31,300	33,300	14,800	5,320	8,590
27	3,720	-	16,800	23,900	30,100	24,500	37,200	31,400	32,600	14,300	5,390	8,430
28	3,780	-	17,100	24,000	30,500	34,500	37,400	31,600	31,800	13,700	5,530	8,270
29	3,880	-	17,300	24,300	-	34,700	37,400	31,700	31,000	13,300	5,720	8,230
30	4,030	10,800	17,500	24,500	-	34,700	37,700	31,800	30,200	12,800	5,900	8,140
31	4,170	-	17,700	24,700	-	34,700	-	31,900	-	12,300	6,080	-

Monthly gage height and contents, water year October 1952 to September 1953

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	0.84	5,100	-
Oct. 31	.40	4,170	-930
Nov. 30	g2.77	10,800	+6,630
Dec. 31	4.35	17,700	+6,900
Calendar year 1952	-	-	+500
Jan. 31	5.70	24,700	+7,000
Feb. 29	6.65	30,300	+5,600
Mar. 31	7.34	34,700	+4,400
Apr. 30	7.80	37,700	+3,000
May 31	6.91	31,900	-5,800
June 30	6.63	30,200	-1,700
July 31	3.13	12,300	-17,900
Aug. 31	1.25	6,080	-6,220
Sept.30	1.99	8,140	+2,060
Water year 1952-53	-	-	+3,040

† Gage height at 12 p.m.
g Gage height computed from graph based on gage readings.

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 1953.

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.--12 years (1941-53), 44.4 cfs.

Extremes.--Maximum discharge during year, 74 cfs July 15 (gage height, 2.93 ft); minimum, 4 cfs Feb. 15 (gage height, 1.24 ft).
1940-53: Maximum discharge, 229 cfs June 9, 1944 (gage height, 4.23 ft), from rating curve extended above 120 cfs by logarithmic plotting; minimum, that of Feb. 15, 1953.

Remarks.--Records good except those below about 20 cfs, which are fair. Several diversions above and below station for irrigation.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	34	18	46	41	44	34	*20	41	49	60	44
2	40	32	19	46	40	24	32	20	51	50	62	45
3	40	32	20	46	40	26	32	21	41	50	62	45
4	39	32	21	46	40	34	30	22	*36	50	56	45
5	39	32	*23	44	40	46	30	26	38	51	55	44
6	39	33	25	45	40	48	28	32	34	57	56	44
7	39	33	26	45	40	53	24	36	37	56	56	44
8	38	30	26	45	38	50	*24	39	38	56	54	44
9	38	29	26	45	10	*48	24	39	38	56	54	44
10	38	28	26	44	6	46	24	40	36	56	52	44
11	38	32	28	44	6	46	26	44	34	*58	52	43
12	38	32	32	44	6	45	25	56	38	61	51	43
13	38	34	36	43	6	44	26	56	44	59	*50	42
14	38	34	39	43	6	40	27	56	44	60	50	42
15	37	36	40	41	8	43	26	56	45	64	51	42
16	38	36	42	44	10	42	22	61	45	64	51	42
17	38	36	44	44	14	42	22	60	47	61	50	42
18	*37	36	44	43	20	40	22	60	48	61	49	42
19	37	35	42	42	20	42	22	61	50	61	48	42
20	37	36	43	43	16	43	22	61	48	63	47	41
21	37	31	42	43	14	42	19	59	46	62	46	*40
22	37	20	42	40	17	41	12	51	46	61	46	40
23	36	26	31	42	22	41	12	49	50	60	46	40
24	36	26	22	42	25	42	12	60	46	60	46	40
25	36	15	22	42	28	43	13	46	48	57	46	40
26	36	14	23	42	36	43	15	38	50	59	46	40
27	36	15	26	31	46	42	17	39	51	58	45	40
28	36	16	31	*29	51	40	20	43	51	59	44	39
29	36	16	36	36	-	36	20	45	49	62	45	39
30	36	16	41	43	-	34	20	39	49	61	45	39
31	36	-	46	42	-	34	-	40	-	62	44	-
Total	1,164	857	982	1,315	686	1,284	682	1,375	1,319	1,804	1,565	1,261
Mean	37.5	28.6	31.7	42.4	24.5	41.4	22.7	44.4	44.0	58.2	50.5	42.0
Ac-ft	2,310	1,700	1,950	2,610	1,360	2,550	1,350	2,730	2,620	3,580	3,100	2,500

Calendar year 1952: Max 93 Min 14 Mean 42.1 Ac-ft 30,580
Water year 1952-53: Max 64 Min 6 Mean 39.2 Ac-ft 28,360

* 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 1953.

Gage.--Water-stage recorder. Altitude of gage is 6,240 ft (by barometer). Prior to Oct. 1, 1950, staff gage at site half a mile downstream at different datum.

Extremes.--Maximum discharge during year, 92 cfs June 2 (gage height, 1.72 ft); maximum gage height, 2.29 ft Feb. 10 (backwater from ice); minimum discharge, 69 cfs Aug. 8-13 (gage height, 1.55 ft).
1910-12, 1921-23, 1950-53: 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 or no gage-height record, which are fair. Small ranch diversions above station.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	66
1.6	75
1.7	85
1.8	95

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	75	74	74	76	79	78	78	79	81	75	70	71
2	75	74	74	76	80	*b78	78	79	*88	75	71	71
3	75	74	*75	76	80	b77	78	79	84	75	71	71
4	75	74	75	76	80	b77	79	79	83	76	70	71
5	75	74	75	76	80	76	79	79	86	75	70	71
6	75	74	74	76	81	76	80	80	83	74	70	71
7	75	74	75	76	81	75	80	80	85	74	70	71
8	75	74	74	76	b81	75	79	80	83	74	70	72
9	76	74	b74	78	b81	75	*79	79	82	74	70	72
10	76	74	74	79	b81	75	79	79	81	74	70	72
11	76	74	76	80	82	75	79	79	81	74	70	72
12	76	74	77	80	b81	74	79	79	80	73	70	71
13	76	74	77	81	81	74	78	79	80	*74	*70	71
14	76	75	77	80	b81	73	78	79	80	73	71	71
15	76	75	77	80	b81	75	78	80	80	73	72	72
16	*76	75	77	81	81	74	78	80	80	73	72	72
17	76	75	77	81	81	74	78	80	79	73	71	72
18	76	75	78	81	79	74	79	80	79	73	71	72
19	76	75	78	81	b79	74	79	81	78	73	71	72
20	76	75	79	81	b79	74	80	80	78	72	70	72
21	75	74	79	81	b79	73	79	80	78	72	70	72
22	75	74	78	81	b79	73	79	80	77	72	70	*73
23	75	74	b77	81	b79	73	80	81	77	71	70	73
24	74	74	b76	81	b79	75	79	85	77	71	70	73
25	74	73	b76	81	80	75	79	82	77	72	70	73
26	74	73	b76	81	79	75	79	82	77	72	71	73
27	74	73	79	80	80	76	80	81	77	72	71	73
28	74	73	77	*80	80	77	81	82	77	70	71	73
29	74	73	77	80	-	78	82	83	77	71	71	73
30	74	73	77	79	-	79	*81	82	76	71	71	73
31	74	-	77	79	-	78	-	81	-	71	71	-
Total	2,329	2,221	2,366	2,455	2,244	2,335	2,374	2,489	2,401	2,262	2,186	2,159
Mean	75.1	74.0	76.3	79.2	80.1	75.3	79.1	80.3	80.0	73.0	70.5	72.0
Ac-ft	4,620	4,410	4,690	4,870	4,450	4,630	4,710	4,940	4,760	4,490	4,340	4,280

Calendar year 1952: Max 91 Min 70 Mean 77.2 Ac-ft 56,020
Water year 1952-53: Max 88 Min 70 Mean 76.2 Ac-ft 55,190

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage height record Oct. 1-15, Oct. 25 to Dec. 2; discharge estimated on basis of weather records and recorded range in stage.

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 1953 (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.--6 years (1947-53), 73.2 cfs.

Extremes.--Maximum discharge during year, 185 cfs June 22 (gage height, 3.84 ft); maximum gage height, 4.32 ft Dec. 10 (ice jam); minimum daily discharge, 20 cfs Nov. 26-30; minimum gage height, 2.48 ft probably Dec. 26.
1921-53: 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 periods of ice effect or no gage-height record, which are poor. Diversions above and below station for irrigation of about 11,900 acres.

Cooperation.--Water-stage recorder inspected by employees of Water District No. 9.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 13 to Nov. 10, Apr. 27 to July 7)

2.3	22	3.2	113
2.5	37	3.7	182
2.8	67		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	80	21	43	50	59	82	109	*135	168	81	77
2	76	b76	24	43	50	*b56	77	101	140	170	84	77
3	76	b74	*b24	43	54	b50	80	97	145	167	99	77
4	77	b74	b25	43	55	57	83	94	145	167	88	77
5	78	b75	b30	43	55	67	85	90	150	163	86	76
6	80	b76	36	43	62	68	88	93	150	157	84	71
7	80	b76	36	43	66	69	85	102	152	131	81	71
8	70	b70	36	43	69	71	81	117	153	130	74	72
9	72	b45	b35	43	b50	68	*70	113	152	132	74	72
10	72	39	b35	42	b45	67	80	107	152	138	76	69
11	77	40	b36	42	b43	64	75	103	153	147	71	69
12	72	45	b36	42	43	63	71	101	156	142	71	68
13	72	50	35	42	44	63	71	95	160	135	*71	68
14	75	60	36	42	49	58	69	94	164	*136	75	69
15	77	70	b35	42	52	64	67	91	*166	129	74	69
16	*77	70	38	42	53	66	67	94	164	125	71	70
17	78	70	39	42	56	67	71	95	164	122	74	67
18	75	70	39	42	60	65	78	103	164	116	74	69
19	71	70	38	*42	b55	67	77	105	166	102	71	75
20	69	70	37	43	b50	74	76	118	167	95	70	76
21	69	60	36	43	b45	68	76	126	168	94	77	72
22	69	35	35	43	b42	66	82	131	168	94	79	72
23	69	35	b33	44	b43	67	89	127	172	91	82	*74
24	75	35	b30	44	b44	68	95	132	173	90	82	76
25	78	25	b25	46	b45	70	97	130	173	90	84	70
26	79	20	30	45	45	70	99	120	174	88	82	70
27	79	20	33	45	51	75	100	116	174	85	78	70
28	79	20	37	45	56	97	107	109	173	80	78	70
29	79	20	40	46	-	87	117	120	170	80	86	70
30	79	20	42	46	-	85	*111	131	170	82	85	71
31	80	-	43	47	-	85	-	129	-	79	81	-
Total	2,333	1,590	1,055	1,344	1,432	2,121	2,506	3,393	4,813	3,725	2,443	2,154
Mean	75.3	53.0	34.0	43.4	51.1	68.4	83.5	109	160	120	78.8	71.8
Ac-ft	4,630	3,150	2,090	2,670	2,840	4,210	4,970	6,730	9,550	7,390	4,850	4,270

Calendar year 1952: Max 172 Min - Mean 77.1 Ac-ft 55,970
Water year 1952-53: Max 174 Min 20 Mean 79.2 Ac-ft 57,350

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 11 to Dec. 2, Dec. 26 to Jan. 18, Apr. 3-5; 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 1953 (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.--1924-53: Maximum daily discharge, 87 cfs May 24, 25, 1928; no flow during long periods each year.

Remarks.--Records good except those for periods of headgate leakage, and those Mar. 27-31, 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	12				0.5	22	22	52	70	8.1	7.3
2	14	14				**.5	a25	22	*54	70	8.1	7.3
3	14	6.1	(*)		0.2		a25	22	59	70	8.5	7.3
4	14						a25	20	64	70	8.8	7.3
5	14						a25	17	67	69	8.4	7.3
6	14						32	16	67	68	8.1	6.5
7	14						35	16	67	46	8.1	a6.3
8	14						35	24	67	28	7.2	a8.3
9	14	.5					*36	30	68	29	6.6	6.4
10	14						42	27	69	29	6.6	7.3
11	14						41	24	69	36	6.6	7.7
12	14						38	23	70	40	6.6	7.7
13	14						38	20	71	40	*5.9	7.7
14	14						36	18	72	*39	6.7	7.7
15	14					.5	35	16	*73	39	7.3	7.7
16	*14						34	13	74	39	7.3	8.4
17	14				.4		32	15	75	38	7.3	8.8
18	14	.3					32	19	75	35	7.3	8.8
19	14			(*)			29	20	75	26	7.2	8.8
20	14						22	24	73	19	7.0	9.0
21	14						20	32	a72	18	7.0	8.9
22	14						21	39	70	14	7.0	*8.8
23	14	.2					22	*42	69	11	7.2	*8.8
24	14						23	45	69	11	7.3	8.8
25	14						24	48	a69	10	7.3	8.8
26	14	.1					24	44	70	8.8	7.3	8.8
27	12						25	41	70	8.8	7.1	8.8
28	9.5	0				a2	26	41	70	8.8	7.0	8.8
29	9.1	0			-	a7	23	41	70	8.1	7.5	8.2
30	9.1	0			-	a11	23	41	70	8.1	7.5	7.7
31	9.1	-			-	a15	*22	47	70	8.2	7.5	-
						a19	-	50	-	8.1	7.3	
Total	406.8	40.7	0	0	10.2	67.0	869	878	2,080	1,014.1	227.2	238.0
Mean	13.1	1.36	0	0	0.36	2.16	29.0	28.3	68.7	32.7	7.33	7.93
Ac-ft	807	81	0	0	20	133	1,720	1,740	4,090	2,010	451	472

Calendar year 1952: Max 73 Min 0 Mean 16.7 Ac-ft 12,090
Water year 1952-53: Max 75 Min 0 Mean 15.9 Ac-ft 11,520

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

Note.--Leakage through headgates about Nov. 4-27, Feb. 1 to Mar. 26; discharge estimated on basis of records for Little Lost River near Howe.

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 1953.

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

Average discharge.--9 years, 104 cfs.

Extremes.--Maximum discharge during year, 859 cfs June 13 (gage height, 4.94 ft); minimum, 11 cfs Feb. 10, 25, Apr. 15; minimum gage height, 1.18 ft Feb. 25.
1944-53: 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.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

1.4	20	3.0	227
1.7	40	3.5	362
2.0	66	4.0	530
2.5	129	5.0	915

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	30	22	25	24	23	30	111	196	470	111	52
2	34	29	23	25	23	22	27	*99	262	436	110	54
3	34	28	24	25	24	22	30	93	273	429	116	51
4	34	28	24	24	24	23	30	94	270	429	105	50
5	34	30	24	26	22	22	32	110	302	429	101	47
6	34	30	*24	26	25	22	32	157	311	429	94	46
7	34	29	24	25	24	22	32	220	319	419	88	46
8	34	27	24	26	24	22	30	185	*308	413	83	45
9	33	25	23	31	22	22	30	157	294	400	82	44
10	34	27	25	32	21	*24	30	134	302	378	79	43
11	33	29	25	30	23	24	30	118	443	371	76	41
12	32	30	25	28	24	24	30	109	633	362	72	41
13	32	30	25	27	24	24	*30	105	*818	353	68	40
14	32	30	24	25	23	21	30	105	752	345	70	40
15	32	30	24	24	24	21	30	118	585	327	74	40
16	32	27	25	25	22	24	30	132	573	289	72	40
17	32	28	25	25	25	24	31	152	621	*242	66	40
18	*32	28	25	25	24	21	32	177	*760	220	66	40
19	32	27	25	*25	22	24	34	234	776	201	64	40
20	32	27	25	25	20	24	40	257	613	185	62	38
21	31	25	25	25	22	24	51	242	523	172	*59	38
22	32	22	25	22	23	24	68	205	520	157	58	38
23	31	27	21	26	23	24	90	183	551	152	55	*39
24	31	28	22	25	22	24	110	164	544	147	54	38
25	31	24	25	26	22	25	131	142	481	139	54	38
26	31	22	27	24	25	25	166	132	410	129	53	37
27	31	23	28	22	24	25	203	123	381	126	51	36
28	30	21	29	25	24	27	192	137	374	120	50	35
29	30	21	27	25	-	27	157	157	393	117	51	36
30	31	21	27	24	-	28	134	148	433	116	51	35
31	31	-	27	24	-	29	-	164	-	113	50	-
Total	1,000	803	768	792	649	737	1,922	4,664	14,021	8,615	2,245	1,248
Mean	32.3	26.8	24.8	25.5	23.2	23.8	64.1	150	467	278	72.4	41.6
Cfsm	0.283	0.235	0.218	0.224	0.204	0.209	0.562	1.32	4.10	2.44	0.635	0.365
In.	0.33	0.26	0.25	0.26	0.21	0.24	0.63	1.52	4.57	2.81	0.73	0.41
Ac-ft	1,980	1,590	1,520	1,570	1,290	1,460	3,810	9,250	27,810	17,090	4,450	2,480

Calendar year 1952: Max 995 Min 20 Mean 138 Cfsm 1.21 In. 16.50 Ac-ft 100,200
Water year 1952-53: Max 818 Min 20 Mean 103 Cfsm 0.904 In. 12.22 Ac-ft 74,300

Peak discharge (base, 300 cfs).--June 13 (10 a.m.) 859 cfs (4.94 ft); June 19 (7 a.m.) 843 cfs (4.90 ft); July 1 (4 to 6 a.m.) 495 cfs (3.98 ft).
* Discharge measurement made on this day.

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 (revised).

Records available.--April 1904 to November 1914, May 1920 to September 1953 (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.--6 years (1904-5, 1948-53), 303 cfs.

Extremes.--Maximum discharge during year, 2,400 cfs June 19 (gage height, 4.38 ft); minimum daily, 70 cfs Nov. 28-30, Feb. 20; minimum gage height recorded, 0.77 ft Apr. 2. 1904-14, 1920-53: Maximum discharge, 3,500 cfs June 12, 1921 (gage height, 5.94 ft); minimum observed, 19 cfs (discharge measurement) Dec. 12, 1939.

Remarks.--Records excellent except those for period Nov. 3 to Mar. 26, which are poor. No regulation. Several small diversions above station. Hammerly ditch (capacity, about 20 cfs) diverts a quarter of a mile below station.

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

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 26		Jan. 27 to Sept. 30			
0.7	63	0.7	58	2.5	752
.8	81	1.0	116	3.0	1,140
1.0	121	1.3	193	3.5	1,580
		1.6	289	4.3	2,370
		2.0	454		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	115	100	75	90	85	80	86	333	538	1,460	333	142
2	115	98	80	90	80	80	80	*296	690	1,360	311	152
3	113	90	85	90	85	80	86	282	718	1,330	337	142
4	113	90	85	85	85	80	91	279	690	1,330	303	137
5	110	100	85	90	80	80	95	307	767	1,370	275	132
6	110	100	*85	90	90	*80	95	398	818	1,350	258	125
7	108	95	85	90	85	80	97	549	840	1,320	242	128
8	108	90	85	95	85	80	86	495	*810	1,300	233	128
9	108	85	85	105	80	80	86	440	774	1,260	223	125
10	106	90	90	115	75	80	86	390	788	1,190	214	121
11	106	95	90	105	80	80	86	348	1,170	1,230	202	118
12	106	100	90	100	85	80	84	325	1,690	1,210	193	116
13	106	100	90	95	85	80	*86	318	2,130	1,140	187	112
14	106	100	85	90	80	80	86	314	2,040	1,110	193	112
15	106	100	85	85	85	75	87	348	1,720	1,010	205	114
16	106	90	90	90	80	75	93	386	1,700	862	202	114
17	106	95	90	90	85	80	99	430	1,820	*704	193	116
18	*106	95	90	90	85	80	99	485	*2,170	645	187	116
19	106	90	90	90	80	75	108	607	2,290	601	182	112
20	106	90	90	90	70	80	121	697	1,920	566	*176	108
21	106	85	90	90	75	80	149	651	1,640	510	173	106
22	106	75	90	80	80	80	190	572	1,640	474	168	106
23	106	90	75	95	80	80	252	527	1,750	459	165	*106
24	106	90	75	90	80	80	275	510	1,800	445	162	106
25	106	80	85	*95	80	80	307	459	1,540	403	155	106
26	103	75	95	90	90	80	377	430	1,280	377	149	103
27	103	75	95	80	85	84	474	403	1,170	360	142	101
28	100	70	100	90	85	84	490	435	1,160	352	139	101
29	100	70	95	90	-	82	416	510	1,230	341	142	101
30	102	70	95	85	-	84	377	464	1,360	341	144	101
31	102	-	95	85	-	89	-	485	-	337	137	-
Total	3,306	2,673	2,720	2,835	2,300	2,488	5,144	13,473	40,653	26,747	6,325	3,507
Mean	107	89.1	87.7	91.5	82.1	80.3	171	435	1,355	863	204	117
Ac-ft	6,560	5,300	5,400	5,620	4,560	4,930	10,200	26,720	80,630	53,050	12,550	6,960

Calendar year 1952: Max 2,700 **Min** 70 **Mean** 401 **Ac-ft** 298,800
Water year 1952-53: Max 2,290 **Min** 70 **Mean** 307 **Ac-ft** 222,500

Peak discharge (base, 900 cfs).--June 13 (11 a.m.) 2,250 cfs (4.23 ft); June 19 (8 a.m.) 2,400 cfs (4.38 ft); July 1 (6 a.m.) 1,570 cfs (3.54 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice about Nov. 10 to about Mar. 20. No gage-height record Oct. 13-17, Oct. 26 to Nov. 1, Nov. 3 to Dec. 5, Dec. 8 to Jan. 24, Jan. 27 to Mar. 4, Mar. 13-26; discharge estimated on basis of weather records and records for station at Wild Horse and nearby streams.

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 1953.

Gage.--Water-stage recorder and concrete control. Datum of gage is 6,061.80 ft above mean sea level, unadjusted. Prior to Sept. 22, 1934, at site 550 ft upstream at different datum. Staff gage on Mackay Reservoir is used as an auxiliary gage during periods of backwater from reservoir.

Average discharge.--34 years, 70.4 cfs.

Extremes.--Maximum discharge during year, 1,060 cfs June 19 (gage height, 4.98 ft); minimum, 3 cfs May 15-17; minimum gage height, 1.26 ft May 16.
1919-53: 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 90 for combination of surface flow into Mackay Reservoir.

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

Revisions.--Revised figures of discharge, in cubic feet per second, for water years 1919-21, superseding figures published in WSP 513 and 533, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1919		1920-Con.		1921-Con.		1921-Con.		1921-Con.	
May 24	221	June 15	391	May 18	372	June 9	969	July 1	625
25	259	16	379	19	342	10	943	2	563
26	273	17	348	20	295	11	1,030	3	497
27	322	18	368	21	273	12		4	411
28	354	19	233	22	254	13	1,080	5	351
29	518	20	266	23	229	14		6	328
30	563	21	278	24	235	15	1,000	7	317
31	395	22	317	25	301	16	885	8	285
June 1	273	23	357	26	398	17	677	9	314
		24	285	27	492	18	573	10	314
1920		25	223	28	598	19	540	11	317
May 28	217	26	202	29	664	20	536	12	290
29	268	29	200	30	636	21	544	13	278
30	293	30	266	31	588	22	619	14	255
31	278	July 1	266	June 1	558	23	664	15	233
June 8	298	2	239	2	526	24	715	16	223
9	354	3	239	3	531	25	757	17	215
10	325	4	223	4	600	26	728	18	196
11	306			5	664	27	677	19	179
12	246	1921		6	715	28	658	20	160
13	235	May 16	259	7	800	29	664		
14	314	17	357	8	885	30	664		

Month	Maximum	Minimum	Mean	Runoff in acre-feet
May 1919	563	-	124	7,600
June	273	36	72.9	4,340
May 1920	293	0	62.1	3,820
June	391	110	252	15,000
July	266	33	106	6,500
Water year 1919-20	391	0	39.9	29,000
Calendar year 1920	391	0	41.6	30,200
May 1921	664	2.3	221	13,600
June	-	526	745	44,400
July	625	69	242	14,900
Water year 1920-21	-	-	110	80,000
Calendar year 1921	-	-	110	80,000

Big Lost River (east channel) above Mackay Reservoir, near Mackay, Idaho--Continued

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 13, 14)

Oct. 1 to Apr. 14, June 15 to Sept. 30

1.8	2	3.5	312
2.0	12	4.0	496
2.5	67	4.5	743
3.0	169	5.0	1,150

Apr. 15 to June 14

1.3	3	3.0	220
1.5	11	3.5	350
1.7	25	4.0	532
2.0	54	4.6	860
2.5	125		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	16	11		7	5	4	*5	86	715	126	30
2	14	15	11		7	5	5	5	104	698	133	29
3	14	15	11		7	5	5	5	141	677	139	28
4	14	15	11		7	*5	5	5	164	671	142	27
5	14	15	11	9	7	5	5	5	185	677	130	25
6	15	15	11		7	5	5	6	216	661	100	22
7	15	12	11		7	5	6	6	*262	645	80	21
8	15	12	11		7	5	*5	6	277	622	70	20
9	15	12	11		7	5	5	6	269	620	66	20
10	15	12	11		7	5	5	6	264	577	64	19
11	15	12	11		7	5	5	6	300	596	60	17
12	15	12	11		7	5	6	5	464	606	56	17
13	15	12	11	8	7	5	6	5	686	577	54	16
14	15	12	11		6	5	6	4	842	558	51	15
15	15	12	11		6	5	5	3	755	*514	51	15
16	15	12	*11		6	5	5	3	*671	467	49	15
17	*15	12			6	4	5	5	715	419	48	14
18	15	12		8	6	5	5	10	826	359	44	14
19	15	12		8	6	5	5	28	1,000	328	*43	13
20	15	12	11	8	6	5	5	59	982	306	42	12
21	15	11		8	5	5	5	85	826	274	39	12
22	15	11		8	5	5	4	96	755	236	38	*12
23	16	11		8	5	5	4	106	805	202	37	13
24	16	11		8	5	5	4	111	861	189	35	12
25	16	11		8	5	5	4	108	840	192	34	12
26	16	11		*8	5	5	4	97	732	186	31	12
27	16	10	10	8	5	4	4	82	640	174	30	12
28	15	11		8	5	5	5	75	596	169	32	12
29	15	11		7	-	5	5	84	601	162	32	12
30	15	11		7	-	5	5	86	640	155	32	11
31	15	-		7	-	4	-	85	-	142	30	-
Total	465	368	333	253	173	152	147	1,198	16,505	13,374	1,918	509
Mean	15.0	12.3	10.7	8.2	6.2	4.9	4.9	38.6	550	431	61.9	17.0
Ac-ft	922	730	660	502	343	301	292	2,380	32,740	26,530	3,800	1,010

Calendar year 1952: Max 1,340 Min 1 Mean 167 Ac-ft 121,100
Water year 1952-53: Max 1,000 Min 3 Mean 97.0 Ac-ft 70,210

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 1-4, 7-11, 14-16, 18, 21-25, Dec. 1-15, Dec. 17 to Jan. 17, Aug. 5-8; discharge estimated on basis of weather records, recorded range in stage, and records for nearby streams.

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 1953.

Gage.--Water-stage recorder. Datum of gage is 6,062.38 ft above mean sea level, unadjusted. Prior to May 26, 1919, staff gage, and May 26, 1919, to May 13, 1938, water-stage recorder, at site 200 ft upstream at different datums. Staff gage on Mackay Reservoir is used as an auxiliary gage during periods of backwater from reservoir.

Average discharge.--34 years, 59.5 cfs.

Extremes.--Maximum discharge during year, 438 cfs June 19, 20 (gage height, 4.16 ft); minimum, 21 cfs Apr. 24, 25 (gage height, 2.08 ft).
1919-53: Maximum discharge, 1,200 cfs (estimated) sometime during period June 5-16, 1921 (gage height, 4.45 ft, site and datum then in use); minimum, 9 cfs May 22, 26, 1935.

Remarks.--Records excellent except those below 50 cfs, which are good. Diversions above station for irrigation. See page 90 for combination of surface flow into Mackay Reservoir.

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

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 14 to Sept. 30)

2.0	20	3.0	189
2.2	44	3.5	307
2.5	92	4.0	435

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	35	29	29	27	26	26	*23	48	222	41	30
2	38	35	29	29	27	26	26	23	61	227	44	30
3	38	34	29	29	27	26	26	22	73	218	50	30
4	35	35	29	29	27	*26	26	22	78	213	48	29
5	34	35	29	29	27	26	26	22	90	216	46	30
6	35	35	29	29	27	26	26	22	103	216	50	29
7	35	36	29	29	27	24	27	22	*114	216	52	29
8	35	35	29	29	27	24	*26	22	114	216	48	29
9	36	35	a29	29	27	24	26	23	108	211	46	29
10	36	35	a29	29	27	24	26	23	101	191	44	28
11	35	35	a30	29	27	24	26	23	114	193	41	28
12	35	35	a30	a29	27	24	26	23	202	196	40	28
13	35	35	a30	a29	27	26	26	23	310	189	38	28
14	35	35	30	a29	27	26	26	23	378	183	36	27
15	35	35	30	a28	27	24	26	23	360	*164	36	28
16	36	34	*30	a28	27	24	24	24	327	146	35	28
17	*36	34	30	a28	27	24	24	24	*332	125	35	27
18	36	34	29	28	27	26	23	26	378	106	35	27
19	36	34	29	28	27	26	23	29	425	96	*34	27
20	35	32	29	28	27	26	23	39	414	87	32	26
21	35	32	29	28	27	26	23	52	352	80	31	26
22	36	31	29	27	27	26	23	58	310	70	30	*26
23	38	31	29	27	27	26	23	62	297	62	30	26
24	36	31	29	27	27	26	22	64	320	58	29	24
25	35	31	29	27	27	26	21	64	304	59	29	24
26	35	31	29	*27	26	26	22	58	251	58	29	24
27	35	30	29	27	26	26	22	50	211	54	29	24
28	34	30	29	27	26	26	23	48	193	52	29	24
29	34	30	29	27	-	26	23	50	187	48	29	24
30	35	29	29	27	-	26	23	50	200	46	29	24
31	35	-	29	27	-	26	-	50	-	44	29	-
Total	1,100	999	906	872	753	788	733	1,087	6,755	4,262	1,154	813
Mean	35.5	33.3	29.2	28.1	26.9	25.4	24.4	35.1	225	137	37.2	27.1
Ac-ft	2,180	1,980	1,800	1,730	1,490	1,560	1,450	2,160	13,400	8,450	2,290	1,610

Calendar year 1952: Max 438 **Min** 21 **Mean** 68.8 **Ac-ft** 49,980
Water year 1952-53: Max 425 **Min** 21 **Mean** 55.4 **Ac-ft** 40,100

* Discharge measurement made on this day.
a No gage-height record; discharge interpolated.

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 1953.

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.--34 years, 30.1 cfs.

Extremes.--Maximum discharge during year, 177 cfs June 19 (gage height, 3.59 ft); minimum, 17 cfs May 6 (gage height, 1.66 ft).
1919-53: Maximum discharge observed, 225 cfs June 15, 1922 (gage height, 3.24 ft, site and datum then in use); minimum, 9 cfs May 8, 9. 13, 14, 1919, May 18-21, 1920.

Remarks.--Records excellent. Major portion of flow is return from irrigation, seepage from river channel upstream, and discharge of large spring. See page 90 for combination of surface flow into Mackay Reservoir.

Cooperation.--Water-stage recorder graph furnished by Water District No. 27.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

1.6	15	2.5	75
1.8	24	3.0	122
2.0	36	3.5	172

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	34	32	28	28	27	24	*20	31	98	39	35
2	30	35	32	28	28	27	24	19	39	98	42	35
3	30	35	32	29	28	27	24	18	43	95	44	34
4	30	35	32	30	28	*27	24	18	44	95	42	34
5	30	35	32	30	28	27	25	18	50	97	42	35
6	30	34	31	30	27	27	25	18	53	96	43	35
7	30	33	32	30	27	27	25	18	*56	97	43	35
8	30	35	32	30	28	27	*25	18	56	96	42	35
9	30	35	31	30	27	27	24	18	55	98	40	35
10	30	35	31	30	27	27	24	19	52	91	40	35
11	31	36	31	30	26	27	24	22	56	96	40	35
12	31	37	30	29	26	27	25	20	86	96	39	35
13	31	37	29	30	26	27	24	19	121	93	37	36
14	32	37	29	29	26	27	24	19	148	90	37	36
15	32	36	28	29	27	27	24	19	141	*83	37	37
16	33	35	*28	29	27	27	24	20	128	76	36	37
17	*34	35	28	28	26	27	24	20	*130	67	36	35
18	35	35	28	28	26	27	23	20	150	60	37	33
19	35	35	28	28	27	27	22	22	171	59	37	33
20	35	35	28	28	27	28	21	26	164	55	*35	32
21	35	35	28	28	27	27	20	30	136	52	35	32
22	35	35	28	29	27	27	20	33	123	49	35	*32
23	36	35	28	28	27	27	20	35	121	46	35	32
24	35	35	28	29	27	27	19	36	128	45	35	32
25	36	35	28	29	27	27	19	35	122	45	34	32
26	35	33	28	*29	27	26	19	32	105	44	33	32
27	35	33	28	28	27	25	19	30	91	43	33	32
28	34	33	29	28	27	25	20	30	87	42	34	32
29	34	33	29	28	-	25	20	32	86	41	34	33
30	34	33	28	28	-	24	20	32	89	41	33	33
31	34	-	28	28	-	24	-	32	-	40	33	-
Total	1,012	1,044	914	895	756	825	675	748	2,862	2,224	1,162	1,019
Mean	32.6	34.8	29.5	28.9	27.0	26.6	22.5	24.1	95.4	71.7	37.5	34.0
Ac-ft	2,010	2,070	1,810	1,780	1,500	1,640	1,340	1,480	5,680	4,410	2,300	2,020

Calendar year 1952: **Max** 178 **Min** 24 **Mean** 42.8 **Ac-ft** 31,040
Water year 1952-53: **Max** 171 **Min** 18 **Mean** 38.7 **Ac-ft** 28,040

* Discharge measurement made on this day.

Warm Spring Creek (west channel) near Mackay, Idaho

Location.--Lat 43°58', long. 113°45', in NE¼ sec. 5, T. 7 N., R. 23 E., on right bank 500 ft upstream from confluence with east channel and 7½ miles northwest of Mackay.

Records available.--May 1919 to September 1953.

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.--34 years, 93.5 cfs.

Extremes.--Maximum discharge during year, 267 cfs June 19 (gage height, 2.98 ft); minimum, 59 cfs May 6 (gage height, 1.34 ft).
1919-53: 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	96	96	102	99	99	86	62	95	190	101	84
2	89	99	96	101	100	98	86	61	110	192	106	82
3	89	98	95	101	100	98	84	60	112	189	110	86
4	88	99	96	101	101	98	86	60	112	189	105	86
5	88	99	98	101	101	*98	86	60	124	190	104	87
6	87	99	96	101	100	98	84	60	128	189	106	89
7	86	99	100	100	102	98	87	61	*135	192	105	89
8	86	98	100	99	101	99	*86	61	135	190	104	89
9	86	96	100	100	98	99	84	63	131	190	100	89
10	87	96	100	101	99	98	84	67	126	182	99	89
11	87	98	100	99	98	98	82	77	132	186	96	89
12	87	99	99	99	98	95	82	69	172	187	94	89
13	88	99	98	100	98	95	82	66	217	189	92	89
14	89	99	98	100	98	95	81	64	242	183	92	90
15	89	99	98	100	98	95	82	66	235	169	90	93
16	90	98	*98	99	98	94	81	68	225	*161	90	90
17	*93	96	98	99	98	94	80	69	*228	152	89	92
18	95	96	100	99	98	93	78	69	247	141	90	90
19	96	98	98	99	96	95	76	73	261	136	89	90
20	96	99	99	99	98	96	73	80	256	130	*88	89
21	96	98	98	99	98	95	70	86	230	128	87	89
22	96	96	98	99	98	93	67	90	218	123	87	*86
23	98	95	96	99	98	93	66	93	216	120	88	88
24	96	96	99	99	96	93	62	98	224	114	88	87
25	98	96	100	99	96	93	61	98	220	116	87	87
26	96	96	100	*98	96	92	62	94	203	113	86	88
27	96	95	101	98	98	90	62	90	185	111	86	88
28	96	96	102	98	99	89	61	93	176	108	86	89
29	96	96	101	98	-	89	61	96	173	108	86	90
30	96	96	102	98	-	86	62	96	180	106	84	92
31	96	-	104	98	-	86	-	96	-	104	83	-
Total	2,846	2,920	3,064	3,083	2,758	2,932	2,284	2,346	5,448	4,778	2,898	2,661
Mean	91.8	97.3	98.8	99.5	98.5	94.6	76.1	75.7	182	154	93.5	88.7
Ac-ft	5,640	5,790	6,080	6,120	5,470	5,820	4,530	4,650	10,810	9,480	5,750	5,280

Calendar year 1952: Max 265 Min 86 Mean 110 Ac-ft 79,780
Water year 1952-53: Max 261 Min 60 Mean 104 Ac-ft 75,420

* 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 1953. Prior to October 1952, published with records of "Big Lost River (west channel) above Mackay Reservoir near Mackay, Idaho."

Average discharge.--34 years, 255 cfs.

Extremes.--Maximum daily discharge during year, 1,860 cfs June 19; minimum daily, 105 cfs Apr. 25, May 3-5.
1919-53: 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.--Revised figures of discharge, in cubic feet per second, for the water years 1919-21, superseding those published in WSP 513 and 533, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1919		1920-Con.		1921-Con.		1921-Con.		1921-Con.	
May 24	540	June 15	835	May 18	792	June 9	2,240	July 1	1,230
25	581	16	831	19	741	10	2,570	2	1,090
26	605	17	787	20	673	11	2,680	3	971
27	671	18	763	21	646	12	2,760	4	829
28	736	19	596	22	606	13	2,750	5	733
29	986	20	630	23	563	14	2,730	6	695
30	1,040	21	650	24	569	15	2,630	7	680
31	750	22	709	25	674	16	2,490	8	640
June 1	544	23	771	26	845	17	1,620	9	686
		24	662	27	1,020	18	1,260	10	687
1920		25	551	28	1,200	19	1,110	11	687
May 28	436	26	507	29	1,350	20	1,070	12	645
29	536	29	506	30	1,330	21	1,090	13	622
30	594	30	599	31	1,290	22	1,260	14	580
31	575	July 1	605	June 1	1,250	23	1,400	15	544
June 8	634	2	573	2	1,200	24	1,500	16	522
9	746	3	569	3	1,210	25	1,550	17	504
10	721	4	543	4	1,390	26	1,420	18	477
11	691			5	1,860	27	1,370	19	446
12	588	1921		6	1,930	28	1,350	20	415
13	575	May 16	570	7	2,040	29	1,360		
14	708	17	763	8	2,150	30	1,370		

Month	Maximum	Minimum	Mean	Runoff in acre-feet
June 1919	544	156	219	13,000
May 1920	594	101	195	12,000
June	835	297	583	34,700
July	605	179	309	19,000
Water year 1919-20	835	101	192	139,000
Calendar year 1920	835	101	198	144,000
May 1921	1,350	125	526	32,400
June	2,760	1,070	1,750	104,000
July	1,230	273	558	34,300
Water year 1920-21	2,760	125	360	260,000
Calendar year 1921	2,760	125	362	262,000

Surface inflow to Mackay Reservoir, near Mackay, Idaho--Continued

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	170	181	168	168	161	157	140	110	260	1,220	307	179
2	171	184	168	167	162	156	141	108	314	1,220	325	182
3	171	182	167	168	162	156	139	105	369	1,180	343	178
4	167	184	168	169	163	156	141	105	398	1,170	337	176
5	166	184	170	169	163	156	142	105	449	1,180	322	177
6	167	183	167	169	161	156	140	106	500	1,160	299	175
7	166	180	172	168	163	154	145	107	567	1,150	280	174
8	166	180	172	167	163	155	142	107	582	1,120	264	173
9	167	178	171	167	159	155	139	110	563	1,120	252	173
10	168	178	171	168	160	154	139	115	543	1,040	247	171
11	168	181	172	166	158	154	137	128	602	1,070	237	169
12	168	183	170	165	158	151	139	117	924	1,080	229	169
13	169	183	168	167	158	153	138	113	1,330	1,050	221	169
14	171	183	168	166	157	153	137	110	1,610	1,010	216	168
15	171	182	167	165	158	151	137	111	1,490	930	214	173
16	174	179	167	164	158	150	134	115	1,350	850	210	170
17	178	177	167	163	157	149	133	118	1,400	763	208	168
18	181	177	168	163	157	151	129	125	1,600	666	206	164
19	182	179	166	163	156	153	126	152	1,860	619	203	163
20	181	178	167	163	158	155	122	204	1,820	578	197	159
21	181	176	166	163	157	153	118	253	1,540	534	192	159
22	182	173	166	163	157	151	114	277	1,410	478	190	156
23	188	172	164	162	157	151	113	296	1,440	430	190	159
24	183	173	166	163	155	151	107	309	1,530	406	187	155
25	185	173	167	163	155	151	105	305	1,490	412	184	155
26	182	171	167	162	154	149	107	281	1,290	401	179	156
27	182	168	168	161	156	145	107	252	1,130	382	178	156
28	179	170	170	161	157	145	109	246	1,050	371	181	157
29	179	170	169	160	-	145	109	262	1,050	359	181	159
30	180	169	169	160	-	141	110	264	1,110	348	178	160
31	180	-	171	160	-	140	-	263	-	330	175	-
Total	5,423	5,331	5,217	5,103	4,440	4,697	3,839	5,379	31,571	24,627	7,132	5,002
Mean	175	178	168	165	159	152	128	174	1,052	794	230	167
Ac-ft	10,760	10,570	10,350	10,120	8,810	9,320	7,610	10,670	62,620	48,850	14,150	9,920

Calendar year 1952: Max 2,200 Min 133 Mean 388 Ac-ft 281,900
Water year 1952-53: Max 1,860 Min 105 Mean 295 Ac-ft 213,800

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 1953.
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 above mean sea level (unadjusted).
Extremes.--Maximum contents observed during year, 38,400 acre-ft Mar. 30, Apr. 7, 8 (gage height, 62.00 ft); minimum observed, 8,730 acre-ft Sept. 21 (gage height, 30.00 ft).
1919-53: 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 greater part of this water returns to Big Lost River between reservoir and station below reservoir, near Mackay. Figures given herein represent usable contents.
Cooperation.--Gage readings and capacity table furnished by Water District No. 27.

Usable contents, in acre-feet, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22,520	28,260	33,660	37,770	37,140	37,440	38,300	38,050	27,600	38,150	28,520	11,180
2	22,810	28,500	33,840	37,830	37,140	37,490	38,280	38,000	27,390	38,150	27,620	10,910
3	23,100	28,690	33,980	37,900	37,140	37,570	38,280	38,000	27,550	38,130	27,120	10,510
4	23,290	28,930	34,190	37,900	37,140	37,590	38,290	37,960	27,620	38,180	26,540	10,380
5	23,490	29,020	34,320	37,900	37,150	37,630	38,380	37,900	28,250	38,210	26,120	10,110
6	23,790	29,240	34,440	37,900	37,150	37,660	38,380	37,900	29,130	38,150	25,550	9,860
7	23,880	29,400	34,680	37,900	37,150	37,670	38,400	37,960	30,130	38,180	25,170	9,730
8	23,490	29,590	34,920	37,900	37,150	37,700	38,400	37,960	31,040	38,150	24,680	9,660
9	23,590	29,800	35,110	37,900	37,170	37,750	38,300	37,960	32,020	38,180	24,080	9,500
10	23,880	30,000	35,190	37,630	37,170	37,780	38,280	37,960	32,840	38,130	23,290	9,470
11	24,280	30,130	35,390	37,900	37,170	37,830	38,250	37,830	33,480	37,900	22,520	9,340
12	24,480	30,300	35,470	37,870	37,170	37,900	38,230	37,640	34,440	37,870	21,580	9,340
13	24,680	30,490	35,680	38,060	37,170	37,910	38,200	37,390	36,520	37,870	20,840	9,340
14	24,890	30,690	35,780	38,050	37,170	37,950	38,200	37,240	37,900	37,900	20,120	9,340
15	25,140	30,870	35,900	37,770	37,170	38,000	38,190	36,580	38,280	37,900	19,500	9,220
16	25,350	31,130	36,120	38,020	37,170	38,010	38,180	35,630	37,900	37,640	19,060	9,220
17	25,500	31,360	36,200	38,020	37,170	38,050	38,180	35,170	37,420	37,520	18,540	9,120
18	25,710	31,440	36,370	37,610	37,170	38,090	38,200	34,440	37,080	37,140	17,780	9,030
19	25,760	31,610	36,460	37,590	37,170	38,130	38,180	33,720	37,390	36,770	17,320	8,970
20	25,930	31,790	36,620	37,580	37,150	38,160	38,180	33,010	37,770	36,150	16,710	8,760
21	26,130	31,910	36,710	37,560	37,140	38,180	38,150	32,080	37,880	35,660	16,230	8,730
22	26,310	32,020	36,890	37,420	37,140	38,200	38,150	31,610	37,390	35,170	15,830	8,850
23	26,520	32,140	36,990	37,410	37,150	38,230	38,150	30,930	37,140	34,430	15,440	8,880
24	26,590	32,300	37,140	37,390	37,200	38,250	38,150	29,910	37,640	33,960	14,820	8,910
25	26,960	32,540	37,270	37,370	37,270	38,280	38,090	29,570	38,210	33,250	14,220	8,920
26	27,180	32,780	37,390	37,240	37,290	38,300	38,020	29,150	38,280	32,800	13,770	8,940
27	27,300	32,840	37,460	37,200	37,370	38,250	38,070	28,690	38,340	31,840	13,320	8,980
28	27,390	33,010	37,560	37,150	37,410	38,280	38,070	28,360	38,370	31,430	12,880	9,100
29	27,550	33,220	37,640	37,150	-	38,280	38,090	28,030	38,020	30,720	12,310	9,150
30	27,670	33,480	37,670	37,140	-	38,400	38,090	27,610	38,090	29,910	11,940	9,220
31	28,030	-	37,710	37,140	-	38,300	-	27,660	-	29,350	11,460	-

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 1952 to September 1953

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	48.00	22,710	-
Oct. 31	53.33	28,170	+5,460
Nov. 30	58.09	33,590	+5,420
Dec. 31	61.48	37,750	+4,160
Calendar year 1952	-	-	-1,180
Jan. 31	61.00	37,140	-610
Feb. 28	61.22	37,420	+280
Mar. 31	61.92	38,300	+880
Apr. 30	61.73	38,060	-240
May 31	52.82	27,620	-10,440
June 30	61.78	38,130	+10,510
July 31	53.92	28,820	-9,310
Aug. 31	33.96	11,300	-17,520
Sept.30	30.93	9,301	-1,999
Water year 1952-53	-	-	-13,409

† 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 1953.

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 at different datum.

Extremes.--1912-14, 1919-53: 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 115 acre-ft during year (11 in June, 44 in July, and 60 in August).

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

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.9	12					a0	0.6	11	39	31	18
2	5.4	12	a0.1				a1.5	.5	13	40	29	21
3	4.4	10		a0.2		(*)	a3.0	.5	12	40	26	22
4	4.2	7.1					a3.0	.4	11	39	24	20
5	4.0	4.2					3.0	.3	12	38	22	20
6	4.0	4.4	a.2				3.0	.4	*15	38	20	19
7	3.8	4.4					*3.0	.4	16	38	22	16
8	3.8	4.4					2.8	2.5	14	37	22	14
9	3.6	4.4					2.8	4.9	11	34	20	15
10	3.6	4.7		a.1			2.8	7.9	8.7	34	21	15
11	3.6	3.6					2.6	7.9	8.7	34	22	15
12	3.6	2.8	a.3				2.8	8.2	9.6	34	22	14
13	3.8	2.6					2.6	8.5	12	33	22	13
14	3.8	2.6					2.6	8.5	12	*34	22	15
15	5.6	2.6					7.6	8.2	16	34	21	16
16	*9.0	2.6	**.3				12	8.2	*20	32	20	16
17	10	a2.7					1.4	8.5	20	32	20	16
18	11	2.8					2.8	13	20	31	23	16
19	11	2.8					2.6	19	20	31	*24	15
20	11	2.8		0			2.8	19	20	33	23	14
21	11	2.8	a.3				4.0	20	23	33	22	9.6
22	12	3.0					3.0	20	25	34	21	*9.0
23	12	3.0					9.0	21	23	32	23	13
24	11	1.8					10	21	23	32	22	15
25	12	.1		*0			10	18	34	29	19	11
26	12	.1		0			10	11	38	28	17	8.9
27	12	.1		0			9.8	7.1	37	28	16	13
28	12	a.1		0			8.2	7.1	36	29	16	13
29	12	a.1	a.2	0			8.2	9.3	38	26	19	13
30	12	a.1		0			*6.1	13	39	25	19	7.6
31	12	-		0			-	10	-	28	18	-
Total	246.1	106.7	7.6	2.0	0	0	143.0	284.9	598.0	1,029	668	443.1
Mean	7.94	3.56	0.25	0.06	0	0	4.77	9.19	19.9	33.2	21.5	14.8
Ac-ft	488	212	15	4.0	0	0	284	565	1,190	2,040	1,320	879

Calendar year 1952: Max 44 Min 0 Mean 10.2 Ac-ft 7,430
Water year 1952-53: Max 40 Min 0 Mean 9.67 Ac-ft 7,000

* Discharge measurement or observation of no flow made on this day.
** Field estimate made on this day.
a No gage-height record; discharge interpolated or estimated on basis of probable gate changes 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 1953.

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.--37 years (1904-5, 1912-14, 1919-53), 278 cfs.

Extremes.--Maximum discharge during year, 1,730 cfs June 21, 22; maximum gage height, 4.69 ft June 14; minimum discharge, 90 cfs Oct. 17-20 (gage height, 1.79 ft).
1903-6, 1912-15, 1919-53: Maximum discharge, 2,990 cfs June 10, 1921 (gage height, 5.79 ft); minimum, 18 cfs Nov. 1, 1934; minimum gage height, 1.23 ft Nov. 5-8, 1926.

Remarks.--Records good. Sharp ditch (see preceding page) is only diversion between station and reservoir; about 9,000 acres of land are irrigated by diversions from river and tributaries above reservoir. Flow regulated by Mackay Reservoir (see p. 92).

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

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 21 to Aug. 3)

Oct. 1 to Dec. 19		Dec. 20 to Sept. 30			
1.7	73	1.8	77	3.0	570
1.8	98	2.0	133	3.5	850
2.0	162	2.3	245	4.0	1,180
		2.6	376	5.0	1,910

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a132	101	119	153	178	147	150	136	349	1,090	748	394
2	a133	101	119	157	176	147	147	133	a335	1,140	730	381
3	a134	104	119	171	178	*147	140	133	a266	1,210	653	340
4	135	104	119	186	178	150	143	a130	197	1,170	590	318
5	135	113	119	182	178	150	150	a130	136	1,140	560	318
6	138	113	119	182	178	150	153	a130	100	1,110	545	318
7	113	113	119	182	178	150	*164	a140	*100	1,130	530	283
8	93	113	119	182	178	150	171	a160	103	1,160	565	253
9	93	113	119	182	175	150	171	a160	109	1,140	590	237
10	96	113	119	190	175	150	164	178	112	1,110	595	221
11	96	113	119	205	175	150	164	209	127	1,080	605	209
12	96	116	119	205	171	150	164	258	213	1,000	600	201
13	96	119	119	205	175	150	157	305	574	991	620	197
14	96	119	119	205	171	150	150	372	1,070	*970	595	213
15	96	119	122	201	171	150	147	404	1,630	940	560	237
16	96	119	*122	201	171	150	143	408	*1,590	940	530	237
17	*93	119	125	201	171	153	150	451	1,560	904	525	237
18	90	119	125	201	175	153	150	470	1,570	844	515	237
19	90	119	125	201	171	153	150	490	1,620	844	*490	237
20	90	119	124	201	171	157	150	540	1,690	838	465	229
21	93	119	124	201	164	153	150	595	1,710	808	441	186
22	101	116	127	201	150	157	150	615	1,600	766	441	*175
23	116	116	127	201	143	157	147	620	1,290	772	451	190
24	98	119	127	201	143	157	143	595	1,230	748	480	197
25	98	119	127	*201	143	153	133	545	1,240	742	490	175
26	98	119	127	201	147	153	127	485	1,250	730	456	150
27	101	119	130	201	147	150	127	422	1,170	724	432	147
28	101	119	153	194	147	153	127	422	1,120	708	422	147
29	101	119	153	186	-	153	127	404	1,060	730	427	147
30	101	119	153	182	-	150	*130	364	1,030	724	427	153
31	101	-	153	178	-	153	-	336	-	724	413	-
Total	3,250	3,453	3,910	5,940	4,680	4,696	4,439	10,740	26,151	28,927	16,491	6,964
Mean	105	115	126	192	167	151	148	346	872	933	532	232
Ac-ft	6,450	6,850	7,760	11,780	9,280	9,310	8,800	21,300	51,870	57,380	32,710	13,810

Calendar year 1952: Max 2,020 Min 78 Mean 411 Ac-ft 298,400
Water year 1952-53: Max 1,710 Min 90 Mean 328 Ac-ft 237,300

* Discharge measurement made on this day.
a No gage-height record; discharge interpolated between gate changes.

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. Prior to Oct. 14, 1952, at site 800 ft upstream.

Drainage area.--1,410 sq mi, approximately.

Records available.--August 1946 to September 1953.

Gage.--Water-stage recorder. Prior to Oct. 14, 1952, at site 800 ft upstream at different datum.

Average discharge.--7 years, 67.0 cfs.

Extremes.--Maximum discharge during year, 251 cfs June 17 (gage height, 4.47 ft); maximum gage height, 4.94 ft during period Nov. 3 to Dec. 16 (ice jam); minimum discharge, 16 cfs May 14-16, 18; minimum gage height, 2.74 ft May 15.
1946-53: Maximum discharge, 698 cfs June 11, 1952 (gage height, 3.93 ft, site and datum then in use); maximum gage height, 5.04 ft Jan. 13, 1952, site and datum then in use (ice jam); minimum discharge, 3.0 cfs May 20, 21, 1948 (gage height, 1.01 ft, site and datum then in use).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Station is below all large diversions for irrigation in Big Lost River Valley. Flow regulated by Mackay Reservoir (see p. 92). About 42,000 acres of land irrigated by diversions from river and tributaries above station.

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-13)

Oct. 1-13		Oct. 14 to Sept. 30			
1.7	35	2.7	14	3.5	75
1.8	47	2.9	23	4.0	153
1.9	61	3.2	43	4.5	258
2.0	77				

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	56	90	105	150	137	99	104	21	37	30	25
2	35	58	95	105	160	126	101	91	22	30	32	26
3	39	58	100	105	170	*130	95	80	23	25	34	28
4	35	60	100	105	190	130	91	70	30	30	34	28
5	34	70	100	105	190	132	91	62	35	34	34	28
6	39	75	100	105	190	130	104	46	32	40	26	27
7	46	80	100	105	190	130	*112	34	28	40	25	28
8	50	80	100	105	190	132	113	27	*27	43	24	30
9	64	80	100	105	180	133	113	23	30	48	24	33
10	57	85	100	110	180	137	116	22	28	52	24	32
11	53	85	100	115	170	137	113	21	25	69	25	32
12	53	90	100	113	170	135	112	19	24	92	27	32
13	48	90	100	113	170	135	105	18	24	*91	35	33
14	38	90	105	115	160	132	99	17	35	87	33	32
15	35	90	105	108	160	130	95	16	125	78	35	29
16	*34	90	*105	116	160	128	88	17	*190	69	28	26
17	32	90	105	130	160	128	85	17	240	70	29	27
18	32	90	105	135	150	128	85	17	228	91	*28	30
19	36	90	105	140	150	130	83	18	209	63	29	30
20	32	90	105	140	150	133	78	19	190	54	28	30
21	46	85	105	146	150	132	79	20	196	50	29	*32
22	52	85	105	144	140	130	83	22	209	48	28	32
23	59	85	105	145	140	130	92	24	186	42	27	32
24	71	85	105	145	140	130	101	29	*125	40	27	34
25	71	85	105	145	140	126	107	37	68	36	27	34
26	73	85	105	145	139	125	104	34	60	32	27	35
27	73	85	105	*148	135	121	102	37	54	34	28	36
28	74	85	105	145	135	115	104	37	50	37	28	35
29	63	85	105	145	-	110	105	31	48	35	28	32
30	60	85	105	145	-	104	*105	28	43	34	28	32
31	58	-	105	145	-	99	-	22	-	32	27	-
Total	1,528	2,447	3,175	3,878	4,509	3,955	2,960	1,059	2,605	1,563	888	920
Mean	49.3	81.6	102	125	161	128	98.7	34.2	86.8	50.4	28.6	30.7
Ac-ft	3,030	4,850	6,300	7,690	8,940	7,840	5,870	2,100	5,170	3,100	1,760	1,820

Calendar year 1952: Max 681 Min 32 Mean 165 Ac-ft 120,000
Water year 1952-53: Max 240 Min 16 Mean 80.8 Ac-ft 58,470

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 16 to Jan. 10, Jan. 28, Mar. 3, 4, and during part of period of no gage-height record. No gage-height record Nov. 4 to Dec. 15, Jan. 23-26, Jan. 29 to Feb. 25; discharge estimated on basis of weather records, recorded range in stage, and records for station below Mackay Reservoir.

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 1953.

Gage.--Water-stage recorder. Altitude of gage is 3,000 ft (from topographic map).

Extremes.--1951-53: 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 10 cfs, which are fair, and those below 1 cfs, which are poor. Brailsford ditch diverts from Lewis Spring for irrigation.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.9	2.8	a2.0	1.8	3.1	a2.8	0.7	14	13	12	12	12
2	9.0	2.4	a2.0	1.8	3.1	*2.8	3.8	14	13	12	12	12
3	9.3	2.1	a2.0	1.8	3.1	2.6	10	13	13	12	12	12
4	9.6	2.0	a2.0	1.9	2.9	2.4	10	13	13	12	12	12
5	9.9	2.0	*1.7	2.0	2.9	2.4	10	*13	13	12	13	12
6	9.9	1.8	1.8	2.0	2.9	2.4	10	14	13	12	12	12
7	10	1.8	1.9	2.0	2.7	2.4	10	14	13	12	13	12
8	10	1.7	2.0	2.1	2.8	2.5	*11	14	13	12	13	12
9	10	1.6	1.8	2.0	2.8	2.4	11	14	13	12	13	12
10	10	1.5	1.8	2.1	2.8	2.5	11	14	13	11	13	12
11	10	1.4	1.8	1.9	2.8	2.5	10	14	10	12	13	12
12	11	1.2	1.8	1.9	2.8	2.4	10	14	12	11	13	12
13	11	1.1	1.8	1.8	3.0	2.4	10	14	12	*12	13	12
14	7.1	1.2	1.8	1.8	2.9	2.4	10	14	12	13	13	12
15	2.7	1.3	1.6	1.7	3.0	2.3	10	14	12	13	13	13
16	*3.4	1.3	1.7	a1.7	3.0	2.2	10	14	12	13	13	13
17	3.2	1.4	1.7	a1.7	2.9	2.4	10	14	12	13	13	13
18	2.8	1.3	1.8	a1.7	2.9	2.4	11	14	12	13	*12	13
19	2.4	2.1	1.8	*2.2	2.8	2.4	11	14	12	13	12	13
20	2.1	3.1	1.8	2.9	2.8	2.4	11	14	12	13	12	13
21	1.8	2.8	1.8	2.9	2.7	2.4	11	14	*12	13	12	*13
22	1.9	2.6	1.8	2.8	2.8	2.3	11	14	12	13	12	13
23	2.4	2.4	1.9	2.8	2.7	2.4	11	14	12	12	12	13
24	2.3	2.2	1.8	2.7	2.7	2.4	11	14	12	12	12	12
25	2.5	2.2	1.8	2.7	2.9	2.4	12	14	12	12	12	12
26	2.5	2.2	1.8	2.7	2.9	1.5	13	13	12	12	12	12
27	2.5	2.2	1.9	2.7	a2.9	.7	14	*13	12	12	12	12
28	2.7	2.2	1.9	2.8	a2.9	.7	14	14	12	12	12	12
29	2.9	a2.0	1.7	2.8	-	.7	14	13	12	12	12	12
30	2.8	a2.0	1.7	2.9	-	.7	14	13	12	12	12	12
31	2.7	-	1.6	3.0	-	.6	-	13	-	12	12	-
Total	180.3	57.9	56.3	69.6	80.5	65.8	315.5	426	368	379	384	369
Mean	5.82	1.93	1.82	2.25	2.88	2.12	10.5	13.7	12.3	12.2	12.4	12.3
Ac-ft	358	115	112	138	160	131	626	845	730	752	762	732

Calendar year 1952: **Max** 13 **Min** - **Mean** 6.20 **Ac-ft** 4,500
Water year 1952-53: **Max** 14 **Min** 0.6 **Mean** 7.54 **Ac-ft** 5,460

* 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 1953.

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

Extremes.--1951-53: Maximum daily discharge, 77 cfs Mar. 21-23, 1952; 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	70	71	70	68	68	70	60	59	60	60	66
2	62	70	71	70	68	*68	70	60	60	60	60	*68
3	62	70	71	70	68	68	60	60	60	61	59	68
4	62	70	71	70	68	67	60	*60	60	60	60	68
5	62	70	*71	70	68	67	60	60	59	60	60	68
6	62	69	71	70	68	67	61	60	60	60	59	67
7	62	70	71	70	68	67	61	60	60	60	59	67
8	62	70	71	70	68	67	*61	60	59	60	59	67
9	62	70	71	70	68	67	62	60	59	60	59	68
10	62	70	71	70	68	67	61	60	59	60	60	68
11	62	69	71	70	68	68	61	60	60	60	60	68
12	62	69	70	71	68	68	62	60	60	60	61	67
13	62	69	70	71	68	68	62	60	59	60	60	67
14	66	70	70	71	68	66	61	60	60	*59	60	68
15	70	70	70	70	68	66	61	60	60	59	60	68
16	*68	70	70	71	68	66	62	60	60	59	60	68
17	69	71	70	71	68	66	62	60	61	58	60	68
18	69	71	70	71	68	67	62	60	62	58	*59	68
19	70	69	70	*70	68	68	62	60	62	58	59	69
20	70	70	71	69	68	68	62	60	61	58	60	70
21	71	70	71	68	68	68	62	60	*61	58	60	*70
22	70	70	70	68	68	68	63	60	61	58	61	70
23	70	70	70	68	68	68	62	60	61	59	61	69
24	70	71	70	68	68	67	62	60	61	59	62	69
25	70	71	70	68	68	67	62	60	61	59	62	69
26	70	71	70	68	68	68	62	60	60	60	63	69
27	71	70	70	68	69	69	61	60	60	60	63	69
28	71	70	70	68	69	69	60	60	60	59	63	69
29	71	70	69	68	-	69	60	*59	60	60	64	69
30	70	71	70	68	-	69	61	59	60	60	63	69
31	71	-	70	68	-	69	-	59	-	60	66	-
Total	2,063	2,101	2,182	2,153	1,906	2,095	1,858	1,857	1,805	1,842	1,882	2,048
Mean	66.5	70.0	70.4	69.5	68.1	67.6	61.9	59.9	60.2	59.4	60.7	68.3
Ac-ft	4,090	4,170	4,330	4,270	3,780	4,160	3,690	3,680	3,580	3,650	3,730	4,060

Calendar year 1952: **Max** 77 **Min** 60 **Mean** 66.2 **Ac-ft** 48,070
Water year 1952-53: **Max** 71 **Min** 58 **Mean** 65.2 **Ac-ft** 47,190

* 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 Big Wood (Malad) River, and 2¼ miles north of Hagerman.

Records available.--November 1937 to September 1953.

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, 27,300 cfs June 10 (gage height, 14.80 ft); minimum, 981 cfs Dec. 6 (gage height, 3.02 ft); minimum daily, 5,910 cfs Apr. 23.
1937-53: 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.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

6.5	5,760	10.0	13,600
7.0	6,720	12.0	18,900
8.0	8,810	14.0	24,800

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,570	7,510	7,020	8,690	8,520	10,400	11,000	6,780	8,310	7,380	6,960	7,240
2	9,620	7,520	8,080	8,940	8,520	10,200	9,940	6,930	7,860	6,780	6,950	7,240
3	10,000	7,490	6,940	8,600	8,860	*10,000	10,000	6,880	8,330	6,760	7,080	7,350
4	9,420	7,230	7,480	8,730	9,270	10,500	10,900	6,830	8,400	6,190	7,380	7,440
5	8,890	7,220	*7,560	8,650	10,500	10,300	9,830	*6,630	7,320	6,840	7,060	7,580
6	7,790	7,200	7,280	8,430	10,300	8,720	8,650	6,670	9,270	6,450	6,850	7,410
7	8,060	6,930	7,520	8,830	10,600	11,100	*8,910	6,640	7,590	6,340	6,990	7,310
8	7,720	7,100	7,330	9,220	10,100	10,600	9,100	6,440	8,010	6,620	6,840	7,340
9	8,510	7,390	7,340	9,100	9,690	12,300	8,990	6,640	15,300	6,580	6,890	7,440
10	8,120	7,660	7,290	9,340	9,830	11,000	10,700	6,930	22,800	6,390	6,970	*7,660
11	8,430	7,670	7,410	9,130	10,300	11,100	10,700	6,880	*21,800	6,410	7,000	*7,520
12	8,450	7,450	7,420	9,060	11,000	11,500	9,330	6,900	20,800	6,350	6,880	7,340
13	9,180	7,520	7,950	9,000	10,300	11,400	8,880	6,490	21,000	*6,500	6,850	7,400
14	9,090	7,590	7,610	8,910	11,300	12,700	8,790	6,820	15,800	6,450	6,740	7,680
15	9,070	7,300	7,840	8,650	10,000	10,900	9,030	6,500	15,000	6,420	6,910	7,350
16	*9,300	7,520	7,830	8,640	10,400	11,300	a9,930	6,370	15,200	6,450	6,840	7,560
17	9,560	7,330	7,770	9,010	10,600	11,300	a8,980	6,450	18,200	6,390	6,890	7,600
18	9,560	7,440	7,860	8,970	10,900	10,900	a8,110	6,400	17,000	6,440	6,840	7,470
19	9,170	7,420	7,980	9,000	10,300	11,500	a8,220	6,750	15,000	6,460	6,810	7,490
20	9,350	7,230	7,860	*8,930	10,100	12,500	a7,670	6,980	10,300	6,410	6,860	7,630
21	8,840	7,220	7,610	8,770	9,970	12,600	a7,340	6,600	7,920	6,510	6,800	7,600
22	7,900	7,300	7,790	8,800	9,940	12,300	*6,440	7,200	9,030	6,560	6,790	*7,610
23	8,140	7,020	8,070	8,840	10,600	12,100	5,910	6,880	10,900	6,420	6,850	7,430
24	8,390	7,300	8,510	8,520	10,000	11,400	5,960	7,330	9,820	6,570	6,940	7,220
25	7,780	7,510	8,370	8,670	10,800	12,300	6,500	7,170	7,900	6,620	*6,900	7,330
26	7,640	6,840	8,300	8,780	9,760	9,640	6,010	7,420	9,740	6,610	7,050	7,480
27	7,930	7,030	8,400	8,530	10,300	11,800	6,070	*7,210	9,510	6,500	6,980	7,370
28	7,950	7,150	8,600	8,550	11,200	10,700	6,820	7,460	10,000	6,680	7,020	7,490
29	7,820	7,240	8,950	8,810	-	10,700	6,530	7,210	9,710	6,690	7,100	7,540
30	7,650	7,030	9,170	8,530	-	12,000	6,310	8,380	9,550	7,000	6,980	7,010
31	7,660	-	8,530	8,630	-	10,700	-	8,080	-	6,740	7,210	-
Total	266,560	219,360	243,670	273,260	283,960	346,460	251,550	214,850	367,370	203,510	215,210	223,130
Mean	8,599	7,312	7,860	8,815	10,140	11,180	8,385	6,931	12,250	6,565	6,942	7,438
Ac-ft	528,700	435,100	483,300	542,000	563,200	687,200	498,900	426,100	728,700	403,700	426,900	442,600

Calendar year 1952: Max 20,500 Min 6,450 Mean 10,990 Ac-ft 7,976,000
Water year 1952-53: Max 22,800 Min 5,910 Mean 8,518 Ac-ft 6,166,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated from records of power output 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 1953.

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.--5 years, 174 cfs.

Extremes.--Maximum discharge during year, 833 cfs June 19 (gage height, 4.61 ft); minimum recorded, 19 cfs Feb. 20, Mar. 14, but may have been less during period of ice effect; minimum gage height, 1.99 ft Mar. 14.
1948-53: Maximum discharge recorded, 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 tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 28				Apr. 29 to Sept. 30			
2.1	25	3.0	186	2.3	64	3.6	386
2.3	47	3.5	341	2.5	94	4.0	548
2.6	95	4.0	548	2.8	153	4.6	828
				3.2	254		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	66	58	54	53	50	77	272	333	521	145	96
2	74	60	64	55	48	40	74	246	390	487	181	92
3	74	61	61	55	53	43	75	240	401	478	208	89
4	74	63	55	51	51	47	81	251	397	478	158	88
5	74	61	64	54	47	42	93	294	416	474	147	84
6	74	64	61	54	51	42	91	368	439	474	136	83
7	72	61	75	54	48	46	84	393	454	470	128	83
8	72	57	72	54	47	47	75	330	435	450	126	81
9	72	53	75	51	27	47	72	297	408	427	122	81
10	72	58	71	60	*b28	54	66	263	412	408	118	80
11	71	64	66	61	b45	51	64	234	503	408	116	78
12	71	64	69	61	b45	50	64	226	638	375	112	77
13	69	64	66	61	b48	48	61	229	753	*361	110	77
14	71	67	54	57	b45	39	60	237	738	347	112	77
15	*71	66	58	41	45	45	57	257	652	323	112	78
16	71	50	67	48	37	48	61	275	629	297	110	77
17	69	48	57	54	48	47	66	297	692	287	108	78
18	69	57	60	60	42	41	71	306	773	269	*107	75
19	71	53	60	55	b34	*54	90	372	808	251	105	75
20	69	57	60	55	b30	53	126	379	710	234	103	75
21	69	53	48	53	b35	46	194	361	642	218	101	*75
22	69	47	48	42	b38	45	280	306	*654	205	99	77
23	69	54	31	54	b37	46	*348	281	656	195	98	77
24	69	b58	30	53	b35	48	348	254	652	190	98	77
25	69	*b40	41	57	b40	55	348	*232	584	178	96	75
26	67	b32	51	53	b45	53	402	216	512	171	94	75
27	66	b33	60	45	46	54	422	213	482	167	92	74
28	66	b33	61	46	48	60	462	248	470	160	92	74
29	66	b38	*60	53	-	61	375	284	482	158	94	75
30	66	b45	60	54	-	67	323	275	512	151	92	74
31	66	-	57	53	-	74	-	297	-	147	91	-
Total	2,176	1,627	1,820	1,658	1,196	1,543	5,010	8,733	16,607	9,759	3,611	2,377
Mean	70.2	54.2	58.7	53.5	42.7	49.8	167	282	554	315	116	79.2
Cfsm	0.512	0.396	0.428	0.391	0.312	0.364	1.22	2.06	4.04	2.30	0.847	0.578
In.	0.59	0.44	0.49	0.45	0.32	0.42	1.36	2.37	4.51	2.65	0.98	0.65
Ac-ft	4,320	3,230	3,610	3,290	2,370	3,060	9,940	17,320	32,940	19,360	7,160	4,710

Calendar year 1952: Max 1,220 Min 30 Mean 213 Cfsm 1.55 In. 21.19 Ac-ft 154,800
Water year 1952-53: Max 808 Min 27 Mean 154 Cfsm 1.12 In. 15.23 Ac-ft 111,300

Peak discharge (base, 400 cfs).--Apr. 28 (2 a.m.) 544 cfs (3.99 ft); May 6 (10 p.m.) 446 cfs (3.76 ft); May 19 (9 to 11 p.m.) 408 cfs (3.66 ft); June 19 (2 to 7 a.m.) 833 cfs (4.61 ft); Aug. 2 (9 p.m.) 416 cfs (3.68 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 1953.

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.--12 years (1941-53), 87.0 cfs.

Extremes.--Maximum discharge during year, 387 cfs June 13 (gage height, 2.51 ft); minimum, 16 cfs Dec. 7 (gage height, 0.65 ft), result of ice jam upstream.
1940-53: 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 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 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

0.7	18	1.8	167
.9	32	2.0	218
1.2	64	2.5	383
1.5	107		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	40	37	38	a35	a35	76	165	207	179	58	44
2	42	37	40	37	35	a29	70	149	224	174	59	44
3	42	38	38	37	35	a31	69	145	230	167	60	43
4	42	39	38	35	37	a32	76	152	230	163	57	42
5	42	40	40	38	36	a31	85	177	247	158	56	42
6	42	41	41	38	36	a31	85	218	256	156	54	41
7	42	39	39	38	35	a34	78	238	275	149	53	41
8	42	37	37	39	36	a34	70	199	259	149	51	41
9	42	34	39	39	30	36	65	174	241	135	51	41
10	42	36	43	43	*27	41	60	154	241	131	51	40
11	42	42	40	41	33	41	57	137	278	125	50	39
12	42	40	39	40	32	41	56	127	342	116	50	40
13	42	42	39	40	34	40	53	125	376	112	49	39
14	42	42	37	38	34	36	51	127	364	*104	49	40
15	42	42	38	30	34	37	50	139	325	101	51	40
16	42	34	39	38	31	38	53	154	318	96	50	40
17	42	37	38	39	35	37	60	163	322	91	49	43
18	42	41	39	38	33	34	62	160	342	87	48	41
19	42	40	39	38	30	*38	77	196	346	83	*47	39
20	*42	40	40	37	21	38	107	221	311	80	46	39
21	42	39	37	a35	a24	36	158	204	278	77	45	39
22	42	30	38	36	a26	35	210	177	*262	76	45	*38
23	42	35	29	37	a25	35	*253	163	259	73	44	37
24	42	38	27	35	a24	38	232	147	253	72	44	37
25	41	*33	32	36	a28	45	224	135	232	69	44	37
26	41	30	36	a34	a33	48	250	*131	213	68	44	37
27	40	34	44	35	a32	50	256	131	196	65	44	37
28	40	32	43	34	a33	56	311	156	186	64	44	37
29	40	33	*40	36	-	59	235	186	184	63	44	37
30	41	33	39	a35	-	69	194	177	179	60	45	37
31	41	-	39	35	-	76	-	189	-	60	44	-
Total	1,292	1,118	1,184	1,149	884	1,261	3,683	5,116	7,976	3,303	1,526	1,192
Mean	41.7	37.3	38.2	37.1	31.6	40.7	123	165	266	107	49.2	39.7
Ac-ft	2,560	2,220	2,350	2,280	1,750	2,500	7,310	10,150	15,820	6,550	3,030	2,360

Calendar year 1952: Max 607 Min 21 Mean 117 Ac-ft 85,220
Water year 1952-53: Max 376 Min 21 Mean 81.3 Ac-ft 58,880

Peak discharge (base, 300 cfs).--Apr. 28 (4:30 p.m.) 364 cfs (2.45 ft); June 13 (11 p.m.) 387 cfs (2.51 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Big Wood River near Ketchum and other nearby streams.

Big Wood Slough at Hailey, Idaho

Location.--Lat 43°31'00", long. 114°19'30", in sec. 9, T. 2 N., R. 18 E., on left bank 25 ft upstream from bridge on State Highway 22, an eighth of a mile northeast of Big Wood River, and an eighth of a mile southwest of Hailey.

Drainage area.--See Big Wood River at Hailey on following page.

Records available.--June 1915 to September 1953.

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, 89 cfs Apr. 22 (gage height, 4.06 ft); minimum, 3.4 cfs Dec. 25 (gage height, 1.51 ft).
1915-53: 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 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Aug. 19				Aug. 20 to Sept. 30	
1.5	3.2	2.4	25	2.0	7.5
1.7	6.4	3.0	46	2.2	13
2.0	12	4.0	85	2.4	21

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	10	b8.8	*9.8	9.4	8.4	26	50	36	21	36	17
2	4.4	9.8	8.6	9.8	9.2	7.8	25	36	44	18	35	18
3	4.4	9.6	8.4	10	9.4	b7.3	25	34	49	19	55	15
4	4.4	9.6	b8.2	9.8	9.4	8.0	28	37	51	20	41	15
5	4.4	10	8.8	10	8.8	7.8	33	36	52	25	33	13
6	4.4	10	9.4	10	9.0	7.8	36	51	50	29	29	12
7	4.9	10	b9.4	10	8.8	8.0	35	63	52	22	28	12
8	5.0	10	b9.4	11	8.8	8.2	28	55	52	21	27	12
9	5.0	9.4	b9.4	10	*7.9	8.6	27	46	51	20	25	12
10	5.0	9.2	9.8	11	b6.2	9.4	23	40	46	19	25	12
11	5.0	9.6	9.8	11	b6.8	9.6	21	34	52	18	25	11
12	5.0	9.8	10	11	b7.3	9.6	20	29	59	17	26	10
13	4.9	10	10	11	7.8	9.8	19	26	58	28	27	9.5
14	5.0	10	10	11	8.0	9.0	18	24	52	*28	26	9.0
15	5.4	10	9.8	10	8.2	9.0	17	26	44	25	27	9.2
16	*5.5	9.0	10	9.6	b7.3	9.6	19	29	40	20	26	9.2
17	5.4	8.6	10	10	8.4	9.4	21	32	40	14	25	10
18	5.2	a8.7	10	11	8.4	8.6	23	34	42	11	23	10
19	5.0	a8.4	10	11	b7.7	10	29	40	40	9.0	*21	9.2
20	5.0	8.2	10	10	b6.9	10	41	47	*34	7.8	20	8.5
21	4.9	9.0	9.6	10	b7.3	*10	61	46	30	6.9	19	8.0
22	4.7	7.7	8.8	9.4	b7.8	9.6	61	41	29	6.4	18	*8.5
23	4.7	b7.5	b8.0	9.8	b7.3	9.6	30	35	28	36	18	8.2
24	4.7	*8.6	b6.5	9.8	b7.3	10	*25	32	29	69	18	8.2
25	4.7	b7.7	b6.0	10	b7.5	11	22	*28	26	64	18	8.2
26	4.7	b7.5	b7.0	9.8	7.8	12	20	25	21	59	17	8.2
27	4.6	b6.8	b8.0	9.2	8.0	13	10	20	18	55	17	7.5
28	4.9	b7.5	b8.5	b9.2	8.2	15	9.4	23	17	51	16	7.5
29	7.1	b7.7	b9.0	9.6	-	16	31	32	17	49	16	8.0
30	9.4	b8.6	9.4	9.4	-	20	62	32	18	48	16	9.5
31	10	-	10	9.2	-	24	-	33	-	41	15	-
Total	162.1	268.5	280.6	312.4	224.9	326.1	845.4	1,116	1,177	877.1	768	315.4
Mean	5.23	8.95	9.05	10.1	8.03	10.5	28.2	36.0	39.2	28.3	24.8	10.5
Ac-ft	322	533	557	620	446	647	1,680	2,210	2,330	1,740	1,520	626

Calendar year 1952: Max 83 Min 4.4 Mean 22.9 Ac-ft 16,580
Water year 1952-53: Max 69 Min 4.4 Mean 18.3 Ac-ft 13,230

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of recorded range in stage and records for Big Wood River at Hailey.
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 1953. 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, 38 years, 422 cfs.

Extremes.--Maximum discharge during year, 2,480 cfs June 19 (gage height, 5.16 ft); minimum, 107 cfs Feb. 10, 20 (gage height, 1.28 ft).

1915-53 (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.

1915-53 (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 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 20-26)

1.3	111	3.0	880
1.6	204	3.5	1,200
2.0	360	4.0	1,550
2.5	600	5.0	2,340

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	222	204	161	*194	186	170	347	862	808	1,520	343	222
2	222	197	187	194	180	161	339	784	928	1,430	331	226
3	222	194	187	197	187	148	339	730	982	1,410	418	215
4	222	201	184	194	194	164	356	736	1,010	1,410	*356	211
5	229	204	190	197	180	161	391	736	1,070	1,460	331	201
6	229	204	204	201	190	161	413	934	1,160	1,450	314	194
7	229	204	208	208	184	164	404	1,100	1,240	1,440	310	190
8	229	204	187	204	187	167	369	994	1,200	1,400	302	190
9	226	194	190	197	*164	177	356	886	1,170	1,330	294	190
10	226	194	201	215	133	194	331	784	1,120	1,260	290	187
11	226	204	197	218	145	197	318	700	1,290	1,240	294	184
12	226	211	204	226	154	194	310	650	1,680	1,210	290	177
13	222	211	208	229	164	197	298	635	2,070	1,120	286	173
14	218	215	197	218	167	177	314	625	2,110	*1,100	282	170
15	222	215	201	194	173	180	286	650	1,800	1,030	282	170
16	*222	190	208	184	148	197	302	685	1,750	940	282	170
17	218	187	208	208	177	190	331	730	1,880	832	267	177
18	218	190	208	211	173	170	352	748	2,150	772	259	173
19	218	187	211	211	154	197	386	844	2,300	712	*255	167
20	218	184	215	204	136	197	455	928	*2,030	675	248	158
21	218	194	197	201	b140	*187	600	904	1,770	630	244	158
22	215	158	190	180	148	180	826	814	1,740	605	240	*158
23	211	164	164	194	148	180	1,040	730	1,840	530	233	158
24	211	*187	b130	190	142	194	*1,060	675	1,820	465	236	154
25	211	167	b125	197	145	215	1,040	*630	1,610	445	236	154
26	208	136	b145	194	158	233	1,160	600	1,420	422	233	154
27	204	136	190	173	161	244	1,280	560	1,300	409	226	148
28	204	131	201	164	164	274	1,390	600	1,250	386	222	145
29	204	131	197	187	-	290	1,170	718	1,300	378	222	148
30	204	139	201	190	-	318	988	712	1,420	373	222	164
31	208	-	201	187	-	335	-	724	-	356	215	-
Total	6,762	5,537	5,897	6,161	4,582	6,213	17,551	23,408	45,218	28,740	8,563	5,286
Mean	218	185	190	199	164	200	585	755	1,507	927	276	176
Ac-ft	13,410	10,980	11,700	12,220	9,090	12,320	34,810	46,430	89,690	57,000	16,980	10,480

Calendar year 1952: Max 3,600 Min 114 Mean 686 Ac-ft 497,900
Water year 1952-53: Max 2,300 Min 125 Mean 449 Ac-ft 325,100

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

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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	226	214	170	204	195	178	373	912	844	1,540	379	239
2	226	207	196	204	189	169	364	820	972	1,450	366	244
3	226	204	195	207	196	155	364	764	1,030	1,430	473	230
4	226	211	192	204	203	172	384	773	1,060	1,430	397	226
5	233	214	199	207	189	169	424	772	1,120	1,480	364	214
6	233	214	213	211	199	169	449	985	1,210	1,480	343	206
7	234	214	217	218	193	172	439	1,160	1,290	1,460	338	202
8	234	214	196	215	196	175	397	1,050	1,250	1,420	329	202
9	231	203	199	207	172	186	383	932	1,220	1,350	319	206
10	231	203	211	226	139	203	354	824	1,170	1,280	315	199
11	231	214	207	229	152	207	339	734	1,340	1,260	319	195
12	231	221	214	237	161	204	330	679	1,740	1,230	316	187
13	227	221	218	240	172	207	317	661	2,130	1,150	313	182
14	223	225	207	229	175	186	332	649	2,160	1,130	308	179
15	227	225	211	204	181	189	303	676	1,840	1,060	309	179
16	228	199	218	194	155	207	321	714	1,790	960	308	179
17	223	196	218	218	185	199	352	762	1,920	846	292	187
18	223	199	218	222	181	179	375	782	2,190	783	282	183
19	223	195	221	222	162	207	415	884	2,340	721	276	178
20	223	192	225	214	143	207	496	975	2,060	683	268	168
21	223	203	207	211	147	197	661	950	1,800	637	263	166
22	220	166	199	189	156	190	887	855	1,770	611	258	166
23	216	172	172	204	155	190	1,070	765	1,870	566	251	166
24	216	196	136	200	149	204	1,080	707	1,850	534	254	162
25	216	175	131	207	152	226	1,060	658	1,640	509	254	162
26	213	144	152	204	166	245	1,180	625	1,440	481	250	162
27	209	143	198	182	169	257	1,290	580	1,320	464	243	156
28	209	138	210	173	172	289	1,400	623	1,270	437	238	152
29	211	139	206	197	-	306	1,200	750	1,320	427	238	156
30	213	148	210	199	-	338	1,050	744	1,440	421	238	174
31	218	-	211	196	-	359	-	757	-	397	230	-
Total	6,923	5,809	6,177	6,474	4,804	6,541	18,389	24,522	46,396	29,627	9,331	5,599
Mean	223	194	199	209	172	211	613	791	1,547	956	301	187
Ac-ft	13,730	11,520	12,250	12,840	9,530	12,970	36,470	48,640	92,030	58,780	18,510	11,110

Calendar year 1952: Max 3,620 Min 137 Mean 709 Ac-ft 514,600
Water year 1952-53: Max 2,340 Min 131 Mean 467 Ac-ft 338,400

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 1953 (no winter records prior to 1943 except 1916, 1922, 1940-41).

Gage.--Water-stage recorder. Altitude of gage is 4,800 ft (by barometer). Prior to July 8, 1921, water-stage recorder at site three-eighths of a mile downstream at different datum.

Average discharge.--15 years (1915-16, 1921-22, 1939-41, 1942-53), 296 cfs.

Extremes.--Maximum discharge during year, 1,700 cfs June 14 (gage height, 5.37 ft); minimum, 44 cfs Feb. 24 (gage height, 3.16 ft).
1911-53: 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 below 1,000 cfs and fair above. Diversions for irrigation of about 36,400 acres above station. Storage above station is negligible.

Cooperation.--Water-stage recorder inspected and four discharge measurements furnished by employees of Water District No. 7 AB.

Rating table, water year 1952-53, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 13-15, 18-20)

3.2	42	4.5	660
3.4	88	5.0	1,030
3.6	156	5.7	1,640
4.0	350		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	119	134	100	63	156	104	276	800	222	815	138	80
2	*119	149	110	63	149	100	276	716	276	793	138	88
3	113	156	107	78	152	94	270	674	407	758	141	86
4	110	164	104	86	160	91	270	647	425	758	*141	83
5	107	141	110	86	160	94	291	621	492	772	134	80
6	104	94	116	97	160	94	318	660	634	744	130	76
7	97	86	126	119	160	94	334	723	793	737	123	73
8	97	110	134	138	152	97	318	688	852	772	119	80
9	97	130	126	141	149	107	307	582	808	800	110	83
10	97	134	138	164	126	113	296	467	716	737	104	88
11	97	130	138	164	*104	123	281	396	681	716	91	91
12	94	141	100	160	107	130	276	276	905	674	100	91
13	91	149	104	164	110	134	265	203	1,380	634	110	83
14	88	156	126	169	116	130	260	164	1,610	576	110	84
15	*88	164	130	160	116	126	250	*149	1,350	556	116	97
16	97	164	134	152	119	126	255	152	1,110	*517	116	94
17	107	149	130	156	116	134	270	156	1,090	419	113	*94
18	113	145	138	164	119	130	286	169	1,320	356	113	91
19	113	145	141	177	116	134	296	198	*1,520	301	113	88
20	113	145	145	169	97	*152	328	291	1,340	*255	*110	83
21	116	141	141	164	91	149	419	301	1,120	222	107	80
22	119	138	134	160	88	145	628	328	1,050	207	97	*76
23	116	130	123	152	91	152	845	281	1,050	181	97	73
24	116	134	94	152	80	181	898	250	1,100	160	94	73
25	126	*130	76	152	86	217	*860	226	974	141	91	73
26	126	110	b65	152	88	231	912	*185	808	119	86	70
27	126	110	63	141	94	240	998	123	688	119	88	70
28	119	94	61	134	94	250	1,140	97	614	130	91	73
29	113	94	59	138	-	255	1,050	130	634	138	91	70
30	113	94	59	141	-	265	928	160	730	145	86	70
31	126	-	*66	145	-	276	-	194	-	138	83	-
Total	3,377	3,961	3,398	4,301	3,356	4,668	14,401	11,007	26,699	14,390	3,381	2,441
Mean	109	132	110	139	120	151	480	355	890	464	109	81.4
Ac-ft	6,700	7,860	6,740	8,530	6,660	9,260	28,560	21,830	52,960	28,540	6,710	4,840

Calendar year 1952: Max 2,920 Min 54 Mean 519 Ac-ft 376,800
Water year 1952-53: Max 1,610 Min 59 Mean 261 Ac-ft 189,200

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

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, 2½ miles upstream from backwater of Magic Reservoir, and 4 miles southeast of Blaine.

Drainage area.--648 sq mi.

Records available.--May 1912 to September 1953 (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.--9 years (1944-53), 195 cfs.

Extremes.--Maximum discharge during year, 2,530 cfs Apr. 5 (gage height, 8.25 ft); minimum, 3.6 cfs Aug. 28 (gage height, 0.86 ft).
1912-53: 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 20 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.--Two discharge measurements and occasional inspections of recorder furnished by employees of Water District No. 7 AB.

Revisions.--WSP 1217: Drainage area.

Rating tables, water year 1952-53, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 15-31)

Oct. 1 to Mar. 14		Mar. 15 to Sept. 30			
1.0	6.0	0.9	3.6	3.0	200
1.1	8.0	1.0	5.2	4.0	435
1.3	13	1.2	9.3	5.0	760
1.5	20	1.5	18	6.0	1,180
1.8	39	1.8	34	7.0	1,700
2.1	69	2.1	58	8.0	2,320
2.4	108	2.5	106		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.2	21	24	25	71	60	2,130	598	292	47	10	4.4
2	8.4	20	26	24	74	57	1,890	538	278	42	9.6	4.4
3	8.2	20	27	23	80	*44	1,830	448	276	46	*9.6	5.0
4	7.8	20	27	23	90	50	1,950	405	278	42	9.3	4.6
5	7.6	22	26	26	93	54	2,140	378	276	38	8.6	4.4
6	7.8	24	26	25	89	53	2,210	366	278	36	8.2	4.4
7	7.8	24	26	25	93	60	1,840	366	318	35	7.3	4.2
8	8.0	24	26	27	98	65	1,260	366	325	33	7.1	4.1
9	9.2	24	25	32	91	71	856	349	325	33	7.1	4.2
10	8.8	22	25	37	60	81	*732	323	288	32	8.2	4.2
11	8.4	23	26	35	50	89	685	297	258	30	8.6	4.2
12	8.6	26	26	38	60	97	643	274	246	30	9.1	4.4
13	9.2	28	25	44	65	104	568	256	262	30	11	4.6
14	10	30	25	44	70	95	499	244	274	29	9.8	4.4
15	*15	32	25	39	65	122	438	235	267	26	7.8	4.4
16	16	34	25	39	64	133	*415	218	244	31	6.5	4.6
17	16	34	26	39	60	122	388	237	226	*38	5.8	*4.7
18	16	31	26	46	60	126	392	249	207	34	5.4	4.7
19	16	29	26	53	58	140	425	262	*215	27	4.9	4.9
20	16	30	26	52	57	146	442	274	185	22	4.7	4.9
21	16	30	25	50	60	150	550	285	161	17	4.6	4.7
22	16	b21	25	51	60	150	678	269	151	14	*4.4	4.7
23	16	b22	23	50	60	167	710	253	112	11	4.4	5.6
24	16	*b23	18	49	60	233	*664	240	111	12	4.2	5.0
25	16	22	20	56	64	351	618	222	95	11	4.2	4.6
26	17	21	22	57	70	544	568	204	87	9.3	4.2	4.4
27	17	21	25	55	75	1,010	544	190	75	8.6	4.2	4.6
28	17	21	27	55	75	1,530	650	*200	68	10	4.2	4.6
29	18	22	26	60	-	1,520	764	292	60	11	4.2	4.9
30	18	23	26	65	-	1,980	688	368	57	15	4.7	5.2
31	20	-	25	69	-	2,310	-	361	-	12	5.2	-
Total	400.0	744	776	1,313	1,971	11,714	28,167	9,567	6,295	811.9	207.1	138.0
Mean	12.9	24.8	25.0	42.4	70.4	378	939	309	210	26.2	6.68	4.60
Ac-ft	793	1,480	1,540	2,600	3,910	23,230	55,870	18,980	12,490	1,610	411	274

Calendar year 1952: **Max** 8,700 **Min** 7.6 **Mean** 437 **Ac-ft** 317,100
Water year 1952-53: **Max** 2,310 **Min** 4.1 **Mean** 170 **Ac-ft** 123,200

Peak discharge (base, 500 cfs).--Apr. 5 (10:30 p.m.) 2,530 cfs (8.25 ft); Apr. 29 (5 p.m.) 808 cfs (5.12 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 25 to Jan. 8, Jan. 27-29, Feb. 10 to Mar. 1; discharge estimated on basis of weather records, inflow-outflow studies for Magic Reservoir, and records for nearby streams.

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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, 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 1953.
Gage.--Staff gage on face of dam read once 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, 192,700 acre-ft June 19-21 (gage height, 135.3 ft); minimum observed, 102,300 acre-ft Sept. 30.
1909-53: 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 6 to 10 a.m.; contents computed from gage heights as observed.
Cooperation.--Gage readings and yield table furnished by Water District No. 7 AB.
Revisions.--WSP 1217: Drainage area.

Usable contents, in acre-feet, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	105,500	112,900	118,200	128,000	141,300	152,300	180,400	188,800	178,500	189,500	165,800	128,300
2	105,800	112,900	118,400	128,300	141,900	152,600	180,400	188,400	178,500	189,500	164,400	127,200
3	106,000	113,700	118,700	128,500	142,200	153,300	180,000	188,000	178,500	189,500	163,000	126,000
4	106,300	114,200	119,200	128,800	142,800	153,600	180,000	188,000	178,900	189,500	161,700	125,200
5	106,500	114,500	119,500	129,100	143,100	154,000	180,000	187,600	179,200	189,500	160,000	124,100
6	106,800	114,700	119,800	129,400	143,500	154,300	180,400	187,600	180,000	189,200	158,600	123,300
7	107,000	115,000	120,000	129,700	144,100	154,600	180,700	187,600	180,700	189,200	157,300	122,200
8	107,300	115,300	120,600	130,500	144,700	154,900	180,700	188,000	181,900	189,200	155,900	121,400
9	107,500	115,300	120,900	130,500	145,000	155,300	179,200	189,200	183,400	189,200	154,300	120,300
10	107,800	115,500	121,400	130,800	145,900	155,600	178,100	188,000	184,500	189,200	153,000	119,500
11	108,000	115,800	121,900	131,400	146,200	155,900	180,000	187,600	185,700	189,200	151,700	118,700
12	108,300	115,300	122,200	131,600	146,600	156,600	181,500	187,200	186,400	189,200	150,400	117,900
13	108,500	116,800	122,500	132,200	146,900	157,300	183,000	186,800	187,600	188,800	148,800	117,100
14	108,500	117,400	122,700	132,800	147,500	157,900	183,400	186,400	190,300	188,800	147,500	116,000
15	108,800	117,600	123,300	133,300	147,800	158,300	184,100	185,700	191,900	188,400	146,200	115,000
16	108,800	117,900	123,600	133,900	148,100	158,900	184,900	184,500	192,300	187,200	145,000	114,200
17	109,000	118,200	124,100	134,200	148,500	159,600	185,300	183,800	191,900	186,100	143,800	113,200
18	109,300	118,400	124,400	135,400	148,800	160,000	186,100	183,400	191,900	185,300	142,500	112,100
19	109,600	118,700	124,700	135,700	149,100	160,600	186,100	182,600	192,700	184,100	141,600	111,400
20	109,800	119,200	124,900	136,000	149,400	161,300	186,400	182,200	192,700	183,000	140,100	110,300
21	110,100	119,500	125,200	136,500	149,700	162,000	186,400	182,200	192,700	181,900	139,200	109,300
22	110,300	119,800	125,800	136,800	150,100	162,700	186,800	182,200	192,300	180,700	138,000	108,300
23	110,600	120,000	126,000	137,100	150,400	163,000	187,200	182,200	191,500	179,200	137,100	107,800
24	110,800	120,600	126,300	137,400	150,700	164,100	188,000	182,200	191,500	177,700	136,200	107,000
25	111,100	120,900	126,600	138,000	151,000	165,100	188,400	181,500	191,500	176,300	135,100	106,500
26	111,400	121,100	126,600	138,300	151,300	166,500	188,400	180,400	191,500	174,800	133,900	105,500
27	111,600	121,400	126,900	138,600	151,700	169,000	188,400	180,000	191,100	173,000	133,100	104,800
28	111,600	121,700	127,200	139,200	152,000	172,200	188,400	179,200	190,700	171,500	131,900	104,000
29	112,100	120,600	127,400	139,800	-	175,900	188,400	178,900	189,900	170,400	130,800	103,000
30	112,400	119,000	127,700	140,100	-	178,100	188,800	178,500	189,500	168,700	129,900	102,300
31	112,600	-	128,000	140,700	-	179,600	-	178,500	-	167,200	129,400	-

Monthly gage height and usable contents, water year October 1952 to September 1953

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	107.5	105,500	-
Oct. 31	110.3	112,600	+7,100
Nov. 30	112.7	119,000	+6,400
Dec. 31	116.0	128,000	+9,000
Calendar year 1952	-	-	-10,000
Jan. 31	120.4	140,700	+12,700
Feb. 28	124.0	152,000	+11,300
Mar. 31	131.9	179,600	+27,600
Apr. 30	134.3	188,800	+9,200
May 31	131.6	178,500	-10,300
June 30	134.5	189,500	+11,000
July 31	128.5	167,200	-22,300
Aug. 31	116.5	129,400	-37,800
Sept.30	106.2	102,300	-27,100
Water year 1952-53	-	-	-3,200

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 1953.

Gage.--Water-stage recorder. Altitude of gage is 4,665 ft (by barometer).

Average discharge.--41 years (1912-53), 424 cfs.

Extremes.--Maximum discharge during year, 2,400 cfs Apr. 7 (gage height, 6.79 ft); minimum, 8 cfs Oct. 3, 24, Dec. 3, 4; minimum gage height, 1.92 ft Dec. 3, 4.
1911-53: Maximum discharge, 10,000 cfs Apr. 26, 1952; no flow Feb. 3, 1915.

Remarks.--Records good. Water diverted for irrigation of about 47,100 acres above station. Flow regulated by Magic Reservoir (see preceding page), Twin Lakes Reservoir on tributary of Camas Creek (capacity, 31,240 acre-ft), and minor reservoirs having combined capacity of about 680 acre ft.

Cooperation.--Water-stage recorder inspected and one discharge measurement furnished by employees of Water District No. 7 AB.

Rating table, water year 1952-53 (gage height, in feet, and discharge in cubic feet per second)

1.9	5	3.5	312
2.0	12	4.0	540
2.2	31	4.5	810
2.5	67	5.0	1,140
2.8	113	7.0	2,710
3.0	156		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	11	.10	11	12	14	2,250	1,630	615	852	912	590
2	10	11	9	11	12	13	2,170	1,460	590	840	912	580
3	9	11	9	11	12	12	2,070	1,300	580	840	906	580
4	11	11	8	11	11	12	2,050	1,180	580	840	888	585
5	11	12	9	11	11	12	2,170	876	585	846	864	590
6	11	12	9	11	11	12	*2,330	1,000	595	840	852	590
7	11	12	10	11	11	12	2,330	1,040	585	828	840	590
8	11	12	10	11	12	12	2,010	1,060	575	828	828	590
9	11	11	10	11	11	13	1,570	965	555	846	828	580
10	12	11	10	11	11	13	627	864	565	864	828	570
11	12	11	10	11	11	12	131	864	565	870	828	555
12	11	11	10	11	*11	12	168	798	575	864	828	555
13	11	11	9	11	12	12	332	792	595	*864	804	565
14	*11	11	10	11	12	12	452	792	717	864	786	565
15	11	11	10	11	11	12	366	792	1,370	864	768	565
16	10	11	10	11	12	12	405	1,100	1,670	*858	756	575
17	10	11	10	11	12	12	456	762	*1,490	876	756	570
18	10	11	11	11	12	12	555	762	1,250	894	722	545
19	10	11	11	11	12	13	640	780	1,570	900	700	535
20	10	11	12	11	12	*12	722	774	1,740	912	700	545
21	10	11	12	11	11	11	816	774	1,610	906	678	535
22	10	10	11	11	11	11	1,010	762	1,520	906	668	*525
23	9	11	11	12	11	13	1,300	756	1,370	912	668	505
24	9	11	11	12	12	14	1,470	739	1,290	918	*630	*490
25	10	*11	11	12	12	13	*1,540	728	1,190	918	625	490
26	10	10	11	12	12	13	1,550	678	1,130	912	625	495
27	10	285	11	12	13	14	1,610	656	993	712	625	485
28	9	750	11	12	13	49	1,780	*662	937	930	625	485
29	10	750	11	12	-	674	1,820	668	894	924	625	476
30	10	450	11	11	-	1,450	1,860	620	870	918	640	201
31	10	-	*11	12	-	2,020	-	600	-	918	625	-
Total	321	2,523	319	349	326	4,528	38,560	27,234	29,171	27,064	23,340	16,107
Mean	10.4	84.1	10.3	11.3	11.6	146	1,285	879	972	873	753	537
Ac-ft	637	5,000	633	692	647	8,980	76,480	54,020	57,860	53,680	46,290	31,950

Calendar year 1952: **Max** 9,800 **Min** 5 **Mean** 1,042 **Ac-ft** 756,000
Water year 1952-53: **Max** 2,330 **Min** 8 **Mean** 465 **Ac-ft** 336,900

* Discharge measurement made on this day.

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 1953 (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.

Extremes.--Maximum discharge during year, 672 cfs Apr. 28 (gage height, 2.98 ft); minimum recorded, 32 cfs Nov. 22 (gage height, 0.90 ft).
1920-26, 1941-42, 1944-53: 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 periods 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 1952-53, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	29	2.0	240
1.0	37	2.5	428
1.2	59	3.0	690
1.5	109		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	62	50			70	252	376	268	328	70	51
2	49	60	*b61			65	231	332	355	298	70	51
3	49	59	-			60	223	298	376	291	75	49
4	48	60	-			62	249	285	347	281	69	48
5	49	62	-			60	288	295	372	288	62	48
6	49	63	-			64	288	347	384	281	60	45
7	48	62	-			68	252	415	402	278	59	43
8	48	60	-			73	211	376	368	271	57	43
9	48	57	-			82	194	328	347	262	55	43
10	49	58	-			92	178	291	339	265	55	42
11	49	62	-			100	167	271	402	281	55	42
12	49	63	-			96	159	252	485	256	55	42
13	49	65	-			92	159	240	560	240	53	39
14	49	69	-			85	170	243	560	237	52	38
15	52	69	-			80	183	249	495	*217	53	39
16	*51	60	-			84	246	274	475	200	53	39
17	55	58	-			82	332	281	490	175	49	43
18	57	63	-			*75	359	281	*555	164	49	43
19	57	63	-			78	364	343	565	151	48	42
20	57	63	-			80	376	380	480	136	*48	40
21	58	62	-			76	*442	351	410	127	47	42
22	58	43	-			73	510	309	406	113	46	41
23	58	42	-			76	575	285	428	107	46	*40
24	58	46	-			87	555	271	437	105	45	40
25	58	48	-			116	525	243	364	98	45	40
26	58	42	-			141	545	231	320	92	45	40
27	58	40	-			156	575	*220	295	88	45	39
28	58	36	-			186	608	240	285	88	45	38
29	59	38	-			194	515	291	302	83	46	39
30	60	42	-			226	442	271	320	80	48	40
31	62	-	-			246	-	259	-	75	46	-
Total	1,655	1,677	-	-	-	3,125	10,173	9,128	12,192	5,956	1,651	1,269
Mean	53.4	55.9	-	-	-	101	339	294	406	192	53.3	42.3
Ac-ft	3,280	3,330	-	-	-	6,200	20,180	18,110	24,180	11,810	3,270	2,520

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

* Discharge measurements made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 23 to Dec. 1, Mar. 1-17; 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 1953. February 1920 to September 1926 at site 6 miles upstream; records not equivalent because of diversion and inflow.

Gage.--Water-stage recorder. Altitude of gage is 5,010 ft (by barometer). Apr. 28, 1904, to May 31, 1905, staff gage, Sept. 20, 1926, to Apr. 22, 1938, water-stage recorder, and Apr. 23 to Aug. 17, 1938, staff gage, all at datum 0.74 ft higher.

Average discharge.--24 years (1926-27, 1929-42, 1943-53), 137 cfs.

Extremes.--Maximum discharge during year, 686 cfs Apr. 28 (gage height, 4.79 ft); minimum daily, 7 cfs Mar. 3-5.
1904-5, 1926-53: 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 is also affected by Campbell, Cameron, and Howard Reservoirs (combined capacity, 690 acre-ft) on South Fork Muldoon and Little Fish Creeks.

Cooperation.--Water-stage recorder inspected by employees of Little Wood Reservoir Co. and Water District No. 11 C.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	4.8	2.8	88
1.9	7.4	3.0	126
2.0	11	3.5	244
2.2	24	4.0	396
2.5	50	4.8	690

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	69	b50	b74	17	8	43	427	277	337	226	85
2	95	68	*b64	b74	16	8	41	370	341	316	183	79
3	76	67	b66	b72	18	b7	42	334	416	303	181	74
4	63	67	b68	72	18	b7	45	316	376	291	171	74
5	59	68	b55	72	17	7	45	312	386	291	165	73
6	59	70	b70	72	17	8	43	357	399	286	158	73
7	59	70	b68	74	18	9	143	423	427	283	151	69
8	59	69	b66	76	19	9	228	413	403	277	147	66
9	59	63	b64	78	17	9	213	366	370	268	145	66
10	60	63	b65	78	17	9	193	325	357	258	160	64
11	60	68	b67	78	*17	9	183	294	396	288	193	64
12	60	70	b70	80	b16	9	174	271	483	266	193	64
13	62	73	b70	80	b15	9	169	260	556	247	181	63
14	58	74	b70	78	11	9	179	258	574	244	176	63
15	*62	78	b72	76	11	9	188	260	523	*223	165	63
16	64	69	b74	76	b11	11	234	283	490	206	149	62
17	66	68	b76	76	11	25	331	300	494	179	147	60
18	68	72	b76	78	11	*27	366	303	*548	165	145	60
19	69	72	76	78	b11	28	376	337	574	198	143	60
20	69	72	b78	78	b10	29	396	406	505	216	141	59
21	69	70	b74	76	b10	29	444	380	434	252	*141	59
22	69	b54	b66	74	b10	29	*563	344	413	266	136	58
23	69	b46	b62	50	b10	30	616	306	420	252	132	*58
24	70	b50	b60	17	b10	33	604	291	437	239	124	56
25	70	b54	56	18	b10	37	552	260	386	266	120	56
26	68	b48	60	17	b9	40	544	*241	331	280	116	55
27	67	b45	68	15	9	43	585	231	306	286	114	55
28	66	b45	72	16	8	45	654	244	291	283	106	55
29	67	b45	74	16	-	48	589	303	300	294	97	54
30	68	b46	*b74	17	-	50	501	294	322	286	92	54
31	69	-	b74	17	-	48	-	277	-	260	86	-
Total	2,089	1,893	2,105	1,853	374	678	9,284	9,786	12,535	8,106	4,584	1,901
Mean	67.4	63.1	67.9	59.8	13.4	21.9	309	316	418	261	148	63.4
Ac-ft	4,140	3,750	4,180	3,680	742	1,340	18,410	19,410	24,860	16,080	9,090	3,770

Calendar year 1952: Max 2,380 Min 43 Mean 284 Ac-ft 206,000
Water year 1952-53: Max 654 Min 7 Mean 151 Ac-ft 109,500

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 25-29, Jan. 4 to Feb. 10, Feb. 28 to Mar. 2, Mar. 5-12; discharge estimated on basis of weather records, reported gate changes for Little Wood Reservoir and recorded range in stage.

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 1953 (1922-35, irrigation seasons only).

Gage.--Water-stage recorder. Altitude of gage is 4,790 ft (by barometer).

Average discharge.--20 years (1920-22, 1935-53), 154 cfs.

Extremes.--Maximum discharge during year, 268 cfs Mar. 26 (gage height, 3.05 ft); maximum gage height, 3.81 ft Dec. 28 (ice jam); minimum discharge, 92 cfs May 16 (gage height, 1.32 ft), but may have been less during period of ice effect.
1920-53: Maximum discharge, 317 cfs Apr. 15, 1952 (gage height, 3.70 ft); maximum gage height, 4.57 ft Jan. 22, 1950 (ice jam); minimum discharge, 26 cfs June 2, 1920 (gage height, 0.48 ft).

Remarks.--Records excellent except those for Nov. 26 to Jan. 31, which are good. Diversions for irrigation of about 9,000 acres above station. Two small canals bypass station. Records of discharge do not include water bypassed around station at times by slough on right bank from which there is some diversion for irrigation. Silver Creek receives considerable return flow resulting from Big Wood River irrigation.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	207	206	b160	175	186	168	214	141	166	130	173	176
2	208	206	b170	172	187	167	195	139	179	130	174	177
3	207	206	b170	173	191	163	186	136	184	134	171	182
4	207	205	b170	173	197	164	181	134	181	136	171	185
5	207	205	172	173	200	162	179	125	180	138	168	188
6	207	207	173	173	199	165	178	118	184	141	161	186
7	207	212	180	175	196	165	173	109	197	143	158	188
8	207	211	180	178	193	167	175	111	209	144	161	187
9	207	209	b175	181	189	170	174	112	203	157	165	186
10	210	208	b175	184	184	176	176	114	203	163	163	185
11	211	206	176	188	*181	184	175	116	205	173	160	182
12	212	207	174	181	178	191	174	118	200	182	158	179
13	212	211	173	184	176	197	169	120	*192	184	155	184
14	212	216	170	185	174	195	164	107	176	186	156	184
15	212	221	*170	182	172	190	161	100	174	*175	155	182
16	*213	221	170	182	171	189	160	93	139	168	166	179
17	212	215	170	185	174	190	163	94	129	165	177	174
18	211	210	172	188	168	187	181	95	124	165	182	171
19	211	208	175	197	170	188	177	98	121	162	178	168
20	211	206	177	195	168	199	168	106	*123	159	*172	167
21	211	205	177	197	167	*209	162	104	125	155	169	165
22	212	204	175	194	166	201	*157	101	128	150	170	166
23	211	200	176	193	165	201	152	105	127	149	167	*168
24	209	196	b170	191	163	215	147	107	125	151	169	168
25	207	193	b150	191	162	237	146	103	127	154	173	171
26	205	b150	b140	193	162	261	144	*104	131	157	175	173
27	207	b95	b150	186	162	259	143	111	130	164	172	177
28	207	b110	b160	186	163	256	154	116	131	169	174	176
29	206	b120	b170	185	-	252	148	135	136	171	178	180
30	206	b150	*176	185	-	244	145	151	134	177	180	169
31	208	-	185	185	-	235	-	163	-	178	176	-
Total	6,480	5,817	5,273	5,710	4,964	6,147	5,021	3,586	4,763	4,910	5,227	5,343
Mean	209	194	170	184	177	198	167	116	159	158	169	178
Ac-ft	12,850	11,540	10,460	11,330	9,850	12,190	9,960	7,110	9,450	9,740	10,370	10,600

Calendar year 1952: Max 311 **Min** 95 **Mean** 190 **Ac-ft** 137,600
Water year 1952-53: Max 261 **Min** 93 **Mean** 173 **Ac-ft** 125,400

* 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 23.1 cfs Oct. 16; 9.79 cfs Dec. 15; 12.0 cfs Dec. 30; 7.21 cfs Feb. 11; 22.2 cfs Mar. 21; 14.3 cfs Apr. 22; 6.01 cfs May 26; 17.9 cfs June 13; 4.66 cfs June 20; 7.61 cfs July 15; 4.07 cfs Sept. 23.

Little Wood River near Richfield, Idaho

Location.--Lat 43°03', long. 114°08', in sec. 30, T. 4 S., R. 20 E., on right bank half a mile upstream from Byrns Slough and heading of Dietrich Canal, 1 mile east of railroad station at Richfield, and 14 miles downstream from Silver Creek.

Drainage area.--570 sq mi, approximately.

Records available.--January 1911 to September 1953 (irrigation seasons only).

Gage.--Water-stage recorder. Altitude of gage is 4,270 ft (by barometer). Prior to Sept. 5, 1918, staff gage at present site at datum 1.00 ft lower. Sept. 5, 1918, to Apr. 13, 1920, staff gage at present site and datum.

Extremes.--Maximum discharge during year, 360 cfs June 8 (gage height, 2.40 ft); minimum recorded, 58 cfs May 17 (gage height, 1.21 ft).
1911-53: Maximum discharge recorded, 868 cfs May 3, 1938 (gage height, 3.97 ft); minimum recorded, 7.6 cfs June 24, 25, 1920 (gage height, 0.52 ft).

Remarks.--Records good. Diversions for irrigation of about 38,300 acres above station. Flow partly regulated by Little Wood Reservoir (capacity, 11,700 acre-ft), Fish Creek Reservoir (capacity, 13,700 acre-ft), and three small reservoirs on tributaries (combined capacity, 690 acre-ft). River above Silver Creek is dry a large part of the time because of channel losses and irrigation diversions above Carey.

Cooperation.--Water-stage recorder graph and four discharge measurements furnished by Water District No. 11 AB.

Rating table, water year 1952-53 (gage height, in feet, and discharge in cubic feet per second)

1.3	62
1.5	94
1.7	136
2.0	214
2.5	377

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	176	192				163	211	266	194	96	136	143
2	176	192				165	192	238	200	96	132	138
3	173	192				163	173	217	229	100	141	136
4	176	192				160	173	197	250	102	129	141
5	176	194				160	176	170	257	116	134	146
6	176	197				158	168	148	286	125	132	155
7	176	200				160	168	129	312	129	127	158
8	178	203				160	165	141	343	127	123	163
9	178	197				163	165	146	*346	123	127	168
10	178	194				165	165	125	309	134	127	168
11	183	194				173	168	112	302	150	127	163
12	186	194				181	165	108	299	168	125	160
13	186	197				189	163	*108	296	176	123	153
14	*186	200				192	160	106	302	*168	121	158
15	189	206				189	155	94	289	148	118	155
16	192	208				186	153	82	214	136	118	158
17	192	206				*186	150	62	134	*132	129	155
18	192	203				183	160	64	*106	118	138	153
19	192	197				183	173	68	91	127	148	150
20	192	197				186	170	77	89	125	148	143
21	192	197				200	186	84	104	118	*143	*141
22	197	194				200	197	87	89	116	143	143
23	197	192				194	223	79	89	108	148	146
24	197	189				194	244	89	89	112	148	*148
25	197	160				208	260	92	87	114	146	143
26	194	*135				232	254	79	87	114	148	146
27	194	85				254	*254	*82	94	116	153	143
28	194	105			160	254	273	94	92	123	150	143
29	192	115			-	247	302	114	96	127	143	143
30	192	140			-	238	286	160	96	129	148	150
31	192	-			-	226	-	189	-	132	150	-
Total	5,791	5,469	-	-	-	5,912	5,852	3,807	5,771	3,905	4,223	4,510
Mean	187	182	-	-	-	191	195	123	192	126	136	150
Ac-ft	11,490	10,850	-	-	-	11,730	11,610	7,550	11,450	7,750	8,380	8,950

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

* Discharge measurement made on this day.

Little Wood River at Shoshone, Idaho

Location.--Lat 42°56', long. 114°24', in sec. 2, T. 6 S., R. 17 E., on left bank just upstream from diversion dam for town water supply, 400 ft upstream from highway bridge in Shoshone.

Drainage area.--620 sq mi, approximately.

Records available.--April 1922 to September 1953 (irrigation seasons only).

Gage.--Water-stage recorder. Datum of gage is 3,958.97 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Extremes.--Maximum discharge during year, 518 cfs May 31 (gage height, 3.24 ft); minimum recorded, 24 cfs Nov. 27 (gage height, 0.24 ft).
1922-53: Maximum discharge recorded, 673 cfs Apr. 28, 1952 (gage height, 5.24 ft); practically no flow July 29, 1931, Oct. 3, 1938.

Remarks.--Records good except those for period of ice effect, which are fair. Diversions for irrigation of about 52,200 acres above station. Flow affected by operation of Milner-Gooding canal, which diverts from Snake River and crosses Little Wood River above station, by operation of five reservoirs above Carey (see Remarks for station near Richfield), and by Big Wood River water deliveries through Byrns Slough for Dietrich Canal via Little Wood River at Richfield.

Cooperation.--Water-stage recorder graph and one discharge measurement furnished by Water District No. 11 AB.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	114	95	*160			151	208	490	477	484	473	465
2	70	98				151	198	472	466	485	477	460
3	68	100				146	184	458	493	*483	491	456
4	68	96				149	165	443	463	485	497	460
5	68	98				149	165	406	459	488	491	451
6	71	98				118	160	358	458	490	494	446
7	73	100				131	162	399	480	487	494	450
8	74	104				131	158	426	493	488	489	453
9	76	104				133	151	454	504	484	485	444
10	74	102				135	156	461	493	483	488	443
11	76	104				140	158	475	480	492	492	433
12	79	102				151	156	466	497	496	492	400
13	*82	104				156	153	455	494	502	474	393
14	88	108				160	169	448	483	499	459	405
15	91	110				160	226	440	485	489	458	413
16	93	110				158	237	436	442	473	454	424
17	97	112				*162	277	415	*418	*469	458	431
18	100	112				162	289	398	408	474	468	436
19	100	108				160	293	388	427	464	465	444
20	104	106				156	289	400	444	465	454	426
21	100	104				146	269	416	458	471	*455	416
22	98	102				158	290	448	479	475	456	413
23	98	b100				151	340	456	472	469	457	408
24	98	b95				146	393	457	455	460	456	*408
25	98	b90				151	447	461	479	461	448	406
26	95	*b70				162	452	443	489	465	445	392
27	95	b45				194	*472	*428	488	464	437	382
28	95	b50			149	226	473	415	493	461	436	377
29	84	b50			-	244	490	437	490	462	442	380
30	82	b125			-	239	500	467	487	470	447	284
31	86	-			-	216	-	506	-	473	455	-
Total	2,695	2,904	-	-	-	4,992	8,080	13,622	14,154	14,611	14,487	12,599
Mean	86.9	96.8	-	-	-	161	269	439	472	478	467	420
Ac-ft	5,350	5,760	-	-	-	9,900	16,030	27,020	28,070	29,380	28,730	24,990

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 1953 (fragmentary 1922-37, 1941, 1942). Prior to October 1950, published as Big Wood River near Gooding.

Gage.--Water-stage recorder. Altitude of gage is 3,345 ft (from topographic map). Prior to Apr. 18, 1934, staff gage at same site and datum.

Average discharge.--31 years (1916-22, 1937-41, 1942-53), 235 cfs.

Extremes.--Maximum discharge during year, 2,240 cfs Apr. 8 (gage height, 7.52 ft); no flow for part of Oct. 18.
1916-53: 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. 106) and by several smaller reservoirs on tributaries and affected by deliveries from canals diverting from Snake River at Milner.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	1	3.0	258
.7	4	4.0	450
1.0	15	5.0	752
1.3	33	6.0	1,170
1.6	60	7.0	1,830
2.0	109	8.0	2,800
2.5	180		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	10	253	*221	196	178	1,590	1,130	445	144	44	78
2	54	19	*245	189	204	192	1,810	998	425	100	58	97
3	15	43	252	184	208	b160	1,730	830	458	102	84	112
4	13	43	220	b175	240	b150	1,710	708	465	102	118	133
5	11	32	196	b155	215	b140	1,730	513	404	115	106	144
6	16	36	181	b160	210	b145	*1,840	287	374	116	92	104
7	9	27	192	b150	207	b150	2,120	174	423	90	70	105
8	9	21	201	181	210	164	2,140	223	432	59	79	105
9	10	24	189	200	204	164	1,830	292	441	46	68	124
10	10	25	172	218	184	172	1,460	314	438	33	77	117
11	11	28	170	265	165	170	713	242	362	35	86	124
12	11	30	174	250	159	165	270	220	299	64	87	112
13	*6	30	186	287	*170	176	347	178	270	51	90	73
14	2	40	188	339	162	177	382	129	212	28	58	55
15	1	68	189	285	161	181	452	102	168	27	37	60
16	1	72	195	244	155	172	499	77	*188	21	33	77
17	2	73	195	253	165	171	475	66	460	*18	35	104
18	2	120	204	569	158	178	510	32	345	21	35	110
19	8	129	206	*1,350	136	180	499	33	190	35	43	104
20	6	126	215	472	b150	177	516	106	365	32	33	122
21	8	123	207	540	b150	178	438	120	601	31	30	109
22	4	115	207	312	b160	166	380	148	583	39	*22	105
23	147	96	190	258	b150	*178	410	176	505	39	32	131
24	282	b110	b170	250	b155	176	662	200	404	37	54	124
25	147	b90	b130	224	b160	172	725	206	382	27	56	*93
26	161	b80	b125	215	b170	172	776	201	380	32	41	83
27	102	75	b130	210	180	178	*776	*166	306	33	45	79
28	59	75	137	208	170	202	941	162	278	34	27	83
29	24	80	164	190	-	244	1,020	328	206	26	32	86
30	21	200	201	206	-	272	1,120	516	171	35	39	96
31	16	-	234	198	-	932	-	425	-	38	57	-
Total	1,277	2,040	5,918	8,968	4,934	6,232	29,871	9,302	10,980	1,610	1,769	3,049
Mean	41.2	68.0	191	289	176	201	996	300	366	51.9	57.1	102
Ac-ft	2,530	4,050	11,740	17,790	9,790	12,360	59,250	18,450	21,780	3,190	3,510	6,050

Calendar year 1952: Max 6,400 **Min** 1 **Mean** 685 **Ac-ft** 497,200
Water year 1952-53: Max 2,140 **Min** 1 **Mean** 235 **Ac-ft** 170,500

* 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 1953 (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.--1930-53: Maximum daily discharge, 340 cfs June 2, 1948; no flow or small flow from leakage at headgate during nonirrigation seasons and other periods when gates were closed.

Remarks.--Records excellent. 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. Four discharge measurements furnished by Idaho Power Co.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	288				0	2	102	298	2	312	312	300
2	288				0	2	99	298	246	309	310	303
3	288				0	2	163	298	310	306	308	*303
4	288				0	**2	193	298	310	303	304	300
5	288				0	2	193	312	309	310	296	300
6	290				0	2	193	312	310	315	294	300
7	290				0	2	*194	314	312	315	292	300
8	290				0	2	188	320	310	315	292	300
9	290				0	2	187	328	310	312	296	300
10	290				0	2	187	330	310	312	298	298
11	100				0	2	184	328	310	315	302	*294
12	4				0	2	185	327	310	314	303	284
13	2				0	1	202	326	310	312	300	276
14	0				0	0	229	324	310	315	298	273
15	0				0	0	256	318	309	316	268	273
16	0				0	0	255	318	309	318	303	273
17	0				0	0	248	321	309	318	306	273
18	0				0	17	274	326	309	318	306	274
19	0				0	22	288	326	188	316	309	276
20	0				0	78	*288	*338	306	314	309	279
21	0				0	101	*286	334	316	318	309	*280
22	0				0	100	297	328	*312	321	312	278
23	0				0	100	302	330	310	*321	308	274
24	0				0	100	298	327	316	321	191	276
25	0				0	99	302	326	318	318	303	274
26	0				0	100	302	324	318	318	*310	274
27	0				0	99	303	*327	318	321	308	274
28	0				1	99	306	242	318	237	302	273
29	0				-	99	303	2	315	315	298	270
30	0				-	100	303	2	314	315	297	272
31	0				-	100	-	2	-	312	298	-
Total	2,996	0	0	0	1	1,239	7,110	8,904	8,854	9,682	9,242	8,524
Mean	96.6	0	0	0	0.0	40.0	237	287	295	312	298	284
Ac-ft	5,940	0	0	0	2.0	2,460	14,100	17,660	17,560	19,200	18,330	16,910

Calendar year 1952: Max 335 Min 0 Mean 145 Ac-ft 105,000
Water year 1952-53: Max 338 Min 0 Mean 155 Ac-ft 112,200

* Discharge measurement made on this day.
** Field estimate 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 1953.

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 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, 27,900 cfs June 11 (gage height, 12.08 ft); minimum, 2,630 cfs Dec. 18 (gage height, 3.12 ft); minimum daily, 7,500 cfs May 15.
1909-53: 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 except those for periods based on partly estimated gage heights, which are good. Flow regulated by powerplants at Lower Salmon Falls and near Bliss and many reservoirs above station. Practically entire flow at Milner diverted during irrigation season; flow at King Hill is then derived largely from springs and seepage entering below Milner. About 1,590,000 acres of land irrigated by diversions from river and its tributaries above station. Records of chemical analyses and water temperatures for the water year 1953 are given in WSP 1293.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

5.0	5,730
6.0	7,840
8.0	13,200
10.0	20,100
12.0	27,600

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11,000	9,320	8,870	10,200	10,500	12,200	13,400	9,140	10,800	9,020	8,040	8,640
2	11,400	9,320	8,760	11,200	10,600	*12,400	14,200	9,010	9,860	8,360	8,410	8,860
3	11,500	9,420	9,160	10,200	10,800	11,600	13,000	9,060	10,500	8,160	8,540	8,880
4	11,200	9,560	*9,020	10,200	10,500	12,500	13,800	8,840	10,500	7,600	8,520	9,040
5	10,600	8,980	9,390	10,100	12,300	12,000	13,600	*9,100	9,250	8,190	8,650	9,070
6	9,490	8,860	9,080	10,600	11,700	11,800	12,500	8,160	11,600	7,820	8,620	9,140
7	9,480	8,880	9,190	10,600	12,500	12,400	*12,600	7,960	9,620	7,950	8,270	9,000
8	9,740	8,660	9,220	10,800	12,100	12,600	12,300	7,730	10,500	7,800	8,370	9,160
9	9,840	9,020	9,220	10,800	12,500	14,600	12,800	8,140	15,100	7,650	8,260	9,080
10	10,000	9,440	9,240	11,100	11,400	12,800	13,400	8,220	25,000	8,070	8,400	*9,200
11	10,500	9,340	9,030	11,300	12,000	12,600	13,100	8,200	*24,600	7,790	8,400	*8,920
12	9,920	9,480	9,280	11,100	12,800	13,500	11,800	8,120	23,200	7,650	8,380	8,680
13	11,200	9,860	9,760	11,200	12,500	13,600	10,700	7,990	23,500	7,830	8,420	8,900
14	10,900	9,100	9,340	11,500	12,800	13,800	10,300	8,080	19,100	7,940	8,070	9,160
15	*10,800	9,380	9,900	10,600	12,000	12,800	10,600	7,500	17,000	7,910	8,420	8,940
16	10,800	9,950	9,560	10,300	12,000	13,800	11,800	7,520	16,600	7,730	8,360	9,140
17	11,600	8,960	9,720	10,900	12,500	13,400	11,600	7,580	20,600	7,660	8,400	9,160
18	11,100	9,290	9,650	12,700	13,000	12,500	10,600	7,630	19,600	8,000	8,260	8,800
19	11,100	9,040	9,630	*14,000	11,900	13,400	9,940	7,670	17,500	7,820	8,250	9,080
20	11,200	9,130	9,840	12,700	11,900	14,300	9,560	7,970	12,700	8,020	8,300	9,240
21	11,100	9,220	9,590	11,600	12,000	14,000	9,260	8,130	10,100	7,570	8,160	9,040
22	9,800	9,410	9,910	10,700	12,100	14,200	*8,120	8,400	10,800	*7,840	8,130	*9,260
23	9,900	8,980	9,840	10,900	12,400	14,200	7,670	8,120	12,600	7,860	8,380	8,900
24	10,200	9,200	9,940	10,600	11,900	13,300	7,580	9,060	12,000	7,860	8,410	8,860
25	10,000	9,190	9,980	10,900	12,700	14,100	8,120	8,450	9,940	7,920	8,540	8,740
26	9,800	9,020	10,000	10,800	12,300	12,600	7,980	9,400	11,300	7,900	*8,460	8,900
27	9,310	8,400	9,920	10,800	11,600	13,300	8,080	*8,660	11,400	7,980	8,360	8,780
28	10,100	8,620	10,100	10,600	13,100	12,300	8,720	8,800	11,100	7,820	8,480	9,310
29	9,370	8,310	10,500	10,800	-	12,900	9,040	10,300	11,200	8,130	8,400	8,900
30	9,500	8,760	10,700	10,600	-	14,300	8,800	10,300	11,700	8,150	8,520	8,250
31	9,540	-	10,800	10,300	-	13,400	-	10,500	-	8,080	8,640	-
Total	321,990	274,100	298,140	340,700	336,400	407,200	324,970	263,740	429,270	246,080	259,820	269,030
Mean	10,390	9,137	9,617	10,990	12,010	13,140	10,830	8,508	14,310	7,938	8,381	8,968
Ac-ft	638,700	543,700	591,400	675,800	667,200	807,700	644,600	523,100	851,400	488,100	515,300	533,600

Calendar year 1952: Max 24,900 Min 8,040 Mean 13,250 Ac-ft 9,620,000
Water year 1952-53: Max 25,000 Min 7,500 Mean 10,330 Ac-ft 7,481,000

* Discharge measurement made on this day.
Note.--Discharge for Oct. 15 to Dec. 3, Jan. 18, 19 computed from gage heights partly estimated on basis of recorder graphs for station below Lower Salmon Falls near Hagerman, and for stage station of Idaho Power Co. near Indian Cove.

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 1953.

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, 1931-53: Maximum daily discharge, 182 cfs Jan. 1, 1943; no flow at times during most years.

Remarks.--Records good except 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		2.1	0	3.1	27	23	36	64	35	82	65	44
2		2.4	0	2.8	31	22	34	45	*38	82	65	51
3		2.4	0	2.4	35	21	33	32	40	82	66	52
4		2.7	0	2.2	55	21	32	30	41	79	53	52
5		2.7	0	2.2	50	20	32	46	*44	73	51	52
	1.0											
6		2.7	0	3.5	50	20	31	58	48	64	50	52
7		3.0	0	3.8	45	20	31	60	51	81	49	53
8		3.0	0	3.8	42	20	29	60	50	85	49	52
9		3.0	0	3.8	39	21	29	60	46	95	49	52
10		2.7	0	4.2	36	21	28	61	44	94	49	52
11		3.0	0	4.6	34	22	27	58	42	93	49	50
12		3.3	0	*4.9	33	23	26	54	44	93	50	48
13		4.5	0	7.0	32	23	26	58	49	91	49	45
14		6.0	0	11	31	22	25	60	48	90	50	40
15		5.0	0	13	30	22	24	59	48	89	42	36
16		4.5	0	15	29	22	23	70	76	88	40	41
17	1.5	4.5	.6	22	29	22	24	71	92	78	40	41
18		4.0	2.8	81	28	21	23	71	*93	67	40	40
19		4.0	4.2	129	*28	*21	22	74	91	66	50	46
20		4.0	4.9	125	28	22	22	76	90	64	50	45
21		b3	5.3	122	26	22	22	77	74	65	46	43
22		b3	5.3	90	26	22	*24	75	70	*64	45	40
23		b2	6.5	65	26	23	24	51	70	63	45	37
24	*1.4	b2	5.6	50	24	27	23	48	78	62	52	36
25	1.6	*1.6	5.6	40	24	39	30	47	78	61	52	36
26	1.6	.3	4.9	35	23	40	44	47	78	62	*55	20
27	1.6	0	4.2	30	23	39	68	46	78	61	54	5
28	1.8	0	4.2	27	22	40	70	48	78	65	46	4
29	1.6	0	4.2	25	-	39	72	48	78	66	44	3
30	1.8	0	3.8	25	-	39	71	48	82	65	44	3
31	2.1	-	3.8	26	-	38	-	48	-	65	43	-
Total	43.0	81.4	65.9	979.3	906	797	1,005	1,750	1,874	2,335	1,532	1,169
Mean	1.39	2.71	2.13	31.6	32.4	25.7	33.5	56.5	62.5	75.3	49.4	39.0
Ac-ft	85	161	131	1,940	1,800	1,580	1,990	3,470	3,720	4,630	3,040	2,320

Calendar year 1952: Max 132 Min 0 Mean 36.4 Ac-ft 26,410
Water year 1952-53: Max 129 Min 0 Mean 34.3 Ac-ft 24,870

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 1-23, Jan. 22 to Feb. 18, Sept. 28-30; discharge estimated on basis of weather records, and records for Moore Creek near Arrowrock, Big Wood River near Gooding, and other nearby streams.

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 1953.

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.--8 years (1910-14, 1949-53), 38.5 cfs.

Extremes.--Maximum discharge during year, 172 cfs June 6 (gage height, 5.08 ft); minimum, 0.1 cfs Aug. 18 (gage height, 1.44 ft).

1910-15, 1948-53: 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; minimum discharge, that of Aug. 18, 1953.

Maximum stage known, 16.9 ft, from floodmark, datum then in use, during spring of 1910.

Remarks.--Records excellent except those below about 10 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 East Fork, to Cedar Creek Reservoir in Salmon Falls Creek basin for irrigation.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	0.2	2.2	13
1.6	.7	2.5	26
1.7	1.5	3.0	49
1.8	2.7	3.5	74
1.9	4.2	4.0	102
2.0	6.3	5.0	160

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.5	11	13	15	9.6	12	14	20	56	25	0.5	0.9
2	7.5	11	15	14	9.3	11	14	19	*52	23	.6	1.2
3	6.6	12	15	14	9.6	10	14	17	54	20	.7	1.9
4	7.2	11	14	14	10	10	14	18	66	19	1.3	2.1
5	7.2	11	14	13	10	11	14	18	67	18	1.5	2.0
6	7.8	12	14	12	11	11	14	13	95	14	1.9	1.7
7	8.1	12	15	13	11	11	16	11	92	14	2.0	1.4
8	8.1	12	15	14	12	11	17	8.7	119	12	1.3	1.5
9	8.4	13	14	*14	10	12	16	9.6	120	11	1.3	1.7
10	8.4	11	14	14	10	14	16	18	109	*10	1.4	1.7
11	8.1	11	15	17	9	15	16	25	103	10	1.3	1.5
12	8.1	14	16	14	9	15	13	25	91	10	1.0	1.5
13	7.8	14	16	13	10	14	12	23	86	9.6	.7	1.3
14	8.1	13	15	13	10	13	13	21	89	9.3	.5	1.1
15	*8.4	13	14	14	11	12	14	20	85	8.1	.4	.9
16	9.0	14	14	12	10	12	15	18	88	7.5	.3	1.6
17	10	13	14	13	10	13	15	18	*84	5.9	.2	1.9
18	10	14	15	14	9.3	13	16	18	78	5.2	.2	.8
19	10	13	15	13	*8	*12	27	24	68	4.8	.4	.5
20	10	14	15	13	8	12	29	29	62	4.6	.5	.4
21	9.6	12	15	12	8	13	29	37	60	4.6	.4	.3
22	9.6	11	14	11	10	12	30	37	56	4.8	.5	.3
23	10	10	14	11	10	12	*29	38	*52	4.8	.6	.9
24	*10	10	12	10	9	12	30	38	45	4.4	.6	1.4
25	10	*13	7	10	9	12	29	42	42	4.0	*.8	1.6
26	11	12	7	10	10	12	29	44	37	3.4	1.1	1.6
27	11	11	12	9.0	12	11	25	39	34	*2.3	1.1	1.6
28	11	10	15	7.5	12	11	20	35	34	1.9	1.0	1.5
29	11	10	16	8.4	-	12	18	51	32	1.2	1.3	*1.9
30	11	11	15	12	-	14	20	80	29	.7	1.2	2.3
31	11	-	15	10	-	14	-	71	-	.7	1.3	-
Total	281.5	359	434	383.9	276.8	379	578	885.3	2,085	273.8	27.9	41.0
Mean	9.08	12.0	14.0	12.4	9.89	12.2	19.3	28.6	69.5	8.83	0.90	1.37
Ac-ft	558	712	861	761	549	752	1,150	1,760	4,140	543	55	81

Calendar year 1952: Max 219 Min 3 Mean 38.4 Ac-ft 27,850
Water year 1952-53: Max 120 Min 2 Mean 16.5 Ac-ft 11,920

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 22 to Jan. 11, Jan. 27, Feb. 10-17, Feb. 19 to Mar. 3, Mar. 5-9.

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 1953.
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.--15 years (1909-14, 1943-53), 435 cfs.
Extremes.--Maximum discharge during year, 2,150 cfs May 30 (gage height, 7.63 ft); minimum, 61 cfs Dec. 25, 26 (gage height, 3.63 ft).
1909-15, 1943-53: 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 except those for period of no gage-height record, which are good. 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 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

3.6	61	5.0	500
3.8	91	5.5	760
4.0	130	6.0	1,040
4.3	211	7.0	1,700
4.6	320	7.4	1,980

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	95	117	95	142	154	165	438	744	1,780	848	142	90
2	98	117	135	135	149	162	434	661	*1,750	820	140	92
3	98	117	137	137	149	159	411	590	1,650	782	152	89
4	98	115	126	130	152	165	402	540	1,580	744	142	86
5	99	115	126	124	162	165	424	510	1,540	716	130	85
6	98	117	126	122	178	165	438	530	1,570	688	126	84
7	100	117	135	132	181	162	438	610	1,620	650	120	84
8	100	117	137	137	205	165	397	688	1,740	615	115	82
9	102	117	130	*135	211	173	371	672	1,580	570	111	80
10	102	109	126	142	162	193	341	620	1,440	535	107	78
11	102	107	132	147	140	241	324	570	1,470	500	105	77
12	102	120	140	157	147	273	300	535	1,610	486	104	76
13	102	124	140	168	170	258	280	486	1,920	457	100	76
14	102	126	132	170	178	244	269	462	1,920	429	98	77
15	102	126	128	168	193	214	362	462	1,770	397	98	77
16	102	128	126	154	170	206	255	490	1,630	375	104	78
17	104	130	130	147	159	205	284	525	*1,570	345	104	79
18	105	126	135	149	165	208	354	590	1,580	312	100	80
19	107	126	140	165	*149	*205	411	666	1,670	280	98	78
20	107	122	140	262	102	199	457	925	1,600	266	96	76
21	109	122	137	266	100	205	570	1,260	1,410	248	93	76
22	109	109	137	251	144	205	694	1,050	1,310	237	89	76
23	109	81	128	214	142	196	*876	908	1,280	224	89	76
24	*105	81	100	199	140	196	1,000	820	1,260	211	89	76
25	108	*96	65	187	137	221	991	793	1,180	202	*88	75
26	108	83	68	196	140	362	973	776	1,040	190	88	75
27	113	91	115	170	157	424	1,000	716	955	*178	88	76
28	115	75	162	149	162	434	1,020	672	870	165	88	76
29	115	79	149	152	-	471	1,020	881	854	157	88	76
30	117	80	140	165	-	447	870	1,570	859	152	92	76
31	117	-	144	159	-	438	-	1,820	-	147	90	-
Total	3,255	3,289	3,961	5,131	4,398	7,525	16,404	23,142	44,008	12,926	3,274	2,382
Mean	105	110	128	166	157	243	547	747	1,467	417	106	79.4
Ac-ft	6,460	6,520	7,860	10,180	8,720	14,930	32,540	45,900	87,290	25,640	6,490	4,720

Calendar year 1952: Max 3,640 Min 55 Mean 586 Ac-ft 425,200
Water year 1952-53: Max 1,920 Min 65 Mean 355 Ac-ft 257,200

* Discharge measurement made on this day.
Note.--No gage-height record Aug. 26 to Sept. 30; discharge estimated on basis of records for South Fork Boise River near Featherville and nearby streams.

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 1953. 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 contenrs. Elevations and area-elevation curve furnished by Idaho Power Co.

Monthly elevation and total contents at 12 p.m., March 1952 to September 1953

Date	Elevation (feet)	Contents (acre-feet)
Mar. 31, 1952.....	2,450.7	219,400
Apr. 30.....	2,450.3	216,700
May 31.....	2,454.0	242,800
June 30.....	2,454.9	249,300
July 31.....	2,455.0	250,000
Aug. 31.....	2,454.7	247,800
Sept.30.....	2,453.6	239,700
Oct. 31.....	2,454.0	242,600
Nov. 30.....	2,454.5	246,300
Dec. 31.....	2,454.0	242,600
Jan. 31, 1953.....	2,451.8	226,900
Feb. 28.....	2,454.5	246,300
Mar. 31.....	2,454.7	247,800
Apr. 30.....	2,454.8	248,500
May 31.....	2,455.4	253,000
June 30.....	2,455.25	251,900
July 31.....	2,454.65	247,400
Aug. 31.....	2,454.65	247,400
Sept.30.....	2,453.95	242,200

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 1953.

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, 28,700 cfs June 11 (gage height, 10.27 ft); minimum, 5,980 cfs Dec. 9 (gage height, 3.33 ft); minimum daily, 7,510 cfs July 27.
1912-53: 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 since February 1952, by C. J. Strike Reservoir (total capacity, 250,000 acre-ft) and by gravity and pumping diversion. About 1,630,000 acres irrigated by diversion from river and its tributaries above station.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11,900	9,880	8,300	10,200	11,700	13,900	13,900	9,970	12,600	11,700	8,620	8,560
2	10,100	9,280	9,670	11,600	9,340	13,000	13,500	9,610	12,800	10,500	8,240	8,390
3	9,550	8,440	9,940	12,900	9,910	12,500	13,600	10,400	11,300	8,680	7,700	8,330
4	10,700	10,000	10,500	10,100	9,580	12,300	13,000	9,610	11,500	7,900	8,420	9,610
5	11,400	10,200	10,900	9,820	9,160	11,600	14,300	10,200	11,800	8,130	9,670	9,100
6	10,700	10,000	9,880	11,300	9,340	11,400	14,700	9,310	*10,500	7,870	8,770	8,240
7	10,300	10,300	8,620	11,600	12,800	10,900	13,900	9,190	13,500	8,240	8,470	8,620
8	9,640	9,610	7,790	11,600	11,500	12,700	13,500	8,650	11,200	8,390	8,860	8,830
9	9,910	9,220	11,000	*10,900	13,500	12,600	14,300	7,870	11,200	8,360	8,100	8,980
10	10,400	8,680	10,100	11,200	12,900	14,600	13,600	7,790	19,200	8,360	7,810	9,580
11	10,400	9,490	11,100	10,300	12,700	12,400	12,200	7,900	26,700	8,360	8,130	9,490
12	10,200	9,670	10,700	9,070	10,900	13,600	12,400	9,190	*25,000	8,130	8,010	8,920
13	10,200	10,600	9,940	11,800	13,400	13,700	13,000	8,680	24,600	8,070	8,420	8,800
14	10,200	11,300	9,220	12,800	12,600	13,700	12,200	8,740	24,200	8,100	8,440	8,980
15	a10,400	10,200	8,010	12,500	13,200	14,200	10,800	9,130	19,300	7,980	8,180	8,440
16	a11,400	9,010	10,600	12,200	12,200	13,200	10,100	9,340	16,500	*7,870	7,840	8,530
17	a12,100	9,400	10,300	11,300	12,500	13,600	11,700	7,650	19,200	7,840	7,900	8,980
18	a12,000	10,700	10,500	10,800	12,500	14,200	11,900	7,530	21,200	7,790	9,250	9,340
19	a10,500	10,300	10,700	*12,800	12,500	11,700	8,100	20,300	7,730	8,530	9,310	
20	*a11,500	9,160	10,400	15,700	12,000	13,300	10,200	7,670	17,200	7,700	8,180	9,370
21	11,400	10,000	8,770	13,900	12,100	14,200	8,650	8,620	13,300	7,700	7,730	8,770
22	11,100	10,600	8,560	13,500	12,600	14,600	8,770	9,040	13,100	7,700	7,670	8,860
23	11,100	9,400	11,400	14,200	11,800	14,200	9,550	8,800	12,600	7,730	7,700	9,880
24	10,600	8,920	11,700	10,900	12,900	*14,900	*9,160	9,910	12,100	7,900	*7,670	9,790
25	10,100	*10,600	10,900	8,920	12,000	13,300	8,560	7,900	10,100	7,870	8,180	9,400
26	9,400	9,760	10,200	9,790	13,400	14,300	8,210	10,400	11,400	7,840	8,160	10,700
27	9,970	8,500	10,200	12,600	12,700	14,000	8,590	9,370	13,100	7,510	7,950	9,160
28	10,200	9,010	8,040	12,500	11,800	13,100	9,550	9,100	13,100	7,530	8,830	*9,220
29	10,800	10,400	8,300	12,000	-	12,000	9,730	9,820	10,400	7,650	8,470	9,910
30	10,300	8,210	10,900	12,100	-	13,600	9,790	8,160	9,820	7,650	7,930	9,430
31	10,700	-	11,800	14,200	-	14,700	-	12,300	-	7,950	7,900	-
Total	329,170	290,840	308,940	364,000	333,830	412,800	345,060	279,950	458,820	252,730	255,730	273,520
Mean	10,620	9,695	9,966	11,740	11,920	13,320	11,500	9,031	15,290	8,153	8,249	9,117
Ac-ft	652,900	576,900	612,800	722,000	662,100	818,800	684,400	555,300	910,100	501,300	507,200	542,500

Calendar year 1952: Max 28,700 **Min** 7,790 **Mean** 13,740 **Ac-ft** 9,974,000
Water year 1952-53: Max 26,700 **Min** 7,510 **Mean** 10,700 **Ac-ft** 7,746,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for stations at Weiser and King Hill and Bruneau River near Hot Spring.

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 (corrected) of Mountain City.

Drainage area.--209 sq mi.

Records available.--March 1938 to September 1953.

Gage.--Gage readings obtained about twice monthly from reference point on dam. Datum of gage is 6,109.18 ft above mean sea level (levels by Office of Indian Affairs).

Extremes.--Maximum contents observed during year, 34,550 acre-ft May 31, June 1 (gage height, 81.0 ft); minimum observed, 16,640 acre-ft Nov. 20.
1938-53: 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 gage) and 80.0 ft (spillway crest). No dead storage. Water is used for irrigation on Duck Valley project.

Cooperation.--Part of gage-height record and base data for capacity table furnished by Office of Indian Affairs.

Contents, in acre-feet, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-		-	-	-	-	-	-	-	26,170	-
2	-	-		-	-	-	-	-	34,550	32,690	-	-
3	-	-		-	-	-	-	-	-	-	-	-
4	-	-		-	-	-	-	30,190	-	-	-	-
5	-	-		-	-	-	-	-	-	-	-	19,570
6	-	-		-	-	-	-	-	-	32,150	-	-
7	-	-		-	-	-	-	-	-	-	-	-
8	-	-		-	-	-	-	-	-	-	24,910	-
9	-	-		-	-	-	-	-	33,810	-	-	-
10	-	-		-	-	-	-	-	-	-	-	-
11	-	-		-	-	-	-	-	-	-	-	-
12	-	-		-	-	-	-	-	-	-	-	18,900
13	-	-		-	-	-	-	-	33,620	-	-	-
14	17,880	-		-	-	-	-	-	-	-	-	-
15	-	-		-	-	-	-	-	-	-	23,690	-
16	-	-		-	-	-	25,380	-	-	-	-	-
17	-	-		-	-	-	-	-	-	29,150	-	18,390
18	-	-		-	-	-	-	32,150	-	28,810	-	-
19	-	-		-	-	-	-	-	-	-	-	18,130
20	-	16,640		-	-	-	-	-	33,250	-	-	-
21	-	-		-	-	-	-	-	-	-	22,360	-
22	-	-		17,370	-	-	-	-	-	-	-	-
23	-	-		-	-	20,800	-	-	-	-	-	-
24	17,370	-		-	-	-	-	-	-	-	-	-
25	-	-		-	-	-	-	-	-	27,470	-	-
26	-	-		-	-	-	-	-	-	-	-	17,500
27	-	-		-	19,170	-	-	33,060	32,880	-	-	-
28	-	-		-	19,170	-	-	-	-	-	-	-
29	-	-		-	-	-	-	-	32,880	-	20,660	-
30	17,130	16,760		-	-	-	29,500	33,810	32,690	-	-	17,130
31	-	-	16,890	17,880	-	22,790	-	34,550	-	-	20,380	-

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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 (corrected) of Mountain City.

Drainage area.--209 sq mi.

Records available.--March 1916 to September 1925, October 1936 to September 1953.

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.--24 years (1917-21, 1922-25, 1936-53), 44.4 cfs.

Extremes.--Maximum discharge during year, 464 cfs June 1 (gage height, 4.60 ft); no flow Nov. 30 to Dec. 2, Feb. 1, to May 18.

1916-25, 1936-53: 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 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

0.6	0.2	2.5	55
.8	.5	3.0	123
1.0	1.4	3.5	221
1.3	3.5	4.0	329
1.6	7.5	4.5	450
2.0	20		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	20	0	7.9				0	434	22	72	94
2	58	20	0	7.9				0	*389	48	72	81
3	58	20	4.3	7.9				0	359	76	72	62
4	58	20	12	7.9				*0	322	70	72	50
5	58	20	12	7.9				0	294	70	72	42
6	58	20		7.9				0	270	78	72	42
7	58	20		7.9				0	278	113	72	42
8	58	20	a12	7.9				0	261	141	72	42
9	58	20		7.7				0	*232	141	72	42
10	58	19		7.7				0	204	141	72	42
11	58	19	*12	7.7				0	176	141	72	42
12	58	19	12	7.7				0	152	141	72	42
13	58	19	12	7.7				0	137	139	77	42
14	47	19	12	4.6				0	123	139	86	42
15	29	19	12	1.3				0	113	127	91	42
16	29	19	11	**.4			(*)	0	103	104	94	42
17	29	19	11	.4				0	97	*104	94	*42
18	29	19	9.7	.5				*0	88	100	94	42
19	29	19	7.9	.4				3.7	78	90	94	43
20	29	*19	7.9	.4				38	71	90	94	43
21	29	19	7.9	.4				70	66	88	*94	43
22	29	19	7.9	.4				91	59	88	94	43
23	29	19	7.9			(*)		94	50	90	94	43
24	*29	13	7.9	a.3				96	44	88	94	43
25	29	.3	7.9					103	40	88	94	43
26	29	.2	7.9					96	36	88	94	43
27	23	a.2	7.9	a.2	(*)			*84	37	88	94	43
28	20	a.1	7.9					79	34	88	94	43
29	20	a.1	7.9		-			141	*30	87	94	43
30	20	a0	7.9	a.1	-			*238	26	82	94	43
31	20	-	7.9		-			389	-	72	94	-
Total	1,252	459.9	282.7	112.3	0	0	0	1,522.7	4,603	3,022	2,622	1,391
Mean	40.4	15.3	9.12	3.62	0	0	0	49.1	153	97.5	84.6	46.4
Ac-ft	2,480	912	561	223	0	0	0	3,020	9,130	5,990	5,200	2,760

Calendar year 1952: Max 1,180 Min 0 Mean 89.9 Ac-ft 65,280
Water year 1952-53: Max 434 Min 0 Mean 41.8 Ac-ft 30,280

* Discharge measurement or observation of no flow made on this day.
** Field estimate made on this day.
a No gage-height record, discharge estimated on basis of recorded range in stage, gate release data, 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 1953.

Gage.--Water-stage recorder. Datum of gage is 5,425 ft above mean sea level, unadjusted.

Average discharge.--14 years, 158 cfs.

Extremes.--Maximum discharge during year, 1,570 cfs June 2 (gage height, 9.13 ft); minimum, 15 cfs Nov. 28.
1939-53: Maximum discharge, 2,710 cfs May 3 or 4, 1952; 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. 121).

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 1-20)

1.2	21	5.0	403
1.4	34	6.0	555
1.8	67	7.0	739
2.4	121	8.0	1,000
3.0	180	9.0	1,480
4.0	285	9.2	1,620

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	38	25	b35	35	b39	138	298	1,410	160	98	120
2	62	38	28	b37	35	b38	131	262	*1,520	148	100	115
3	61	36	31	b36	37	b38	133	232	1,430	185	98	91
4	61	37	33	36	48	37	140	*219	1,270	180	96	80
5	62	38		37	47	36	151	220	1,170	169	94	65
6	62	40		43	62	39	156	259	1,080	161	92	56
7	62	39		44	76	41	134	312	1,140	161	86	53
8	63	39		40	72	50	135	315	1,010	193	87	53
9	62	b38		48	b52	56	120	283	*907	198	89	53
10	64	b38		62	b48	62	119	241	815	198	89	52
11	65	b39	b41	57	b48	60	108	222	739	190	89	52
12	67	40	(*)	47	b49	59	102	205	688	186	83	47
13	69	43		48	b50	59	96	195	654	183	83	47
14	70	47		45	b50	48	95	198	616	180	93	47
15	58	48		41	b46	59	96	222	570	175	98	48
16	45	43		*38	b43	56	*108	241	523	152	103	48
17	43	40	b39	35	40	55	134	256	479	*145	109	*48
18	44	40	b38	134	35	53	175	*297	438	140	108	48
19	45	43	b35	242	b34	54	189	437	409	127	105	50
20	45	*46	b31	129	b32	54	205	665	382	116	103	50
21	45	b41	b30	114	b33	52	250	589	348	116	*106	48
22	45	b40	b30	77	b35	58	311	545	320	116	106	48
23	44	b39	b29	75	b37	*76	382	505	296	115	106	49
24	*45	b37	b27	59	b38	128	404	505	273	116	107	50
25	45	b31	b29	53	b38	136	386	534	255	116	107	50
26	46	b27	b31	48	b39	138	387	482	238	113	106	49
27	46	26	b33	41	*b39	141	417	*440	222	108	107	49
28	42	25	b34	45	b39	154	480	423	207	110	110	49
29	38	24	b35	40	-	145	394	789	*185	111	110	50
30	39	23	b35	38	-	139	345	*1,340	171	110	112	48
31	37	-	b33	34	-	141	-	1,330	-	110	116	-
Total	1,645	1,123	1,098	1,858	1,237	2,301	6,421	13,061	19,765	4,588	3,096	1,713
Mean	53.1	37.4	35.4	59.9	44.2	74.2	214	421	659	148	99.9	57.1
Ac-ft	3,260	2,230	2,180	3,690	2,450	4,560	12,740	25,910	39,200	9,100	6,140	3,400

Calendar year 1952: Max 2,500 Min 20 Mean 280 Ac-ft 203,000
Water year 1952-53: Max 1,520 Min 23 Mean 159 Ac-ft 114,900

Peak discharge (base, 380 cfs).--Apr. 28 (11 a.m.) 493 cfs (5.70 ft); May 20 (3:30 p.m.) 684 cfs (6.83 ft); June 2 (2 p.m.) 1,570 cfs (9.13 ft).
* Discharge me surement made on this day.
b Stage-discharge relation affected by ice.

Jordan Creek above Lone Tree Creek, near Jordan Valley, Oreg.

Location.--Lat 42°53', long. 116°59', in NW¼ sec. 19, T. 6 S., R. 5 W., on left bank 2 miles upstream from Lone Tree Creek and 7 miles southeast of Jordan Valley.

Drainage area.--450 sq mi, approximately.

Records available.--October 1945 to January 1953 (discontinued).

Gage.--Staff gage read once daily. Altitude of gage is 4,495 ft (by barometer). Prior to June 14, 1952, water-stage recorder at same site and datum.

Average discharge.--7 years, 204 cfs.

Extremes.--Maximum discharge observed during period October 1952 to January 1953, 474 cfs Jan. 19 (gage height, 0.84 ft); minimum observed, 7.3 cfs Oct. 1 (gage height, -2.34 ft). 1945-53: Maximum discharge, 3,250 cfs Apr. 14, 1952 (gage height, 5.57 ft); no flow part of day Oct. 4, 5, 1948.

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

Rating table, Oct. 1, 1952, to Jan. 31, 1953, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

-2.4	5.5	-0.5	167
-2.1	16	0.0	257
-1.8	30	.5	375
-1.5	51	.9	495
-1.0	98		

Discharge, in cubic feet per second, October 1952 to January 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.3	12	b16	28								
2	7.9	13	18	26								
3	7.9	14	b18	26								
4	8.5	*15	18	20								
5	8.5	16	a20	a14								
6	8.5	16	22	b20								
7	7.9	17	30	b21								
8	8.5	19	33	24								
9	9.2	19	28	26								
10	9.2	20	26	34								
11	9.2	20	30	74								
12	9.2	22	33	80								
13	9.9	24	26	80								
14	10	30	26	69								
15	11	33	26	78								
16	12	28	26	67								
17	12	26	24	67								
18	12	24	24	74								
19	12	20	*24	474								
20	12	20	26	a350								
21	12	20	28	a275								
22	12	20	28	a230								
23	12	20	b24	a200								
24	12	20	b15	a180								
25	12	20	b17	a170								
26	12	b15	b20	a160								
27	12	b14	b23	a150								
28	12	b13	26	a150								
29	12	b12	26	a140								
30	12	b13	28	a140								
31	12	-	28	a140								
Total	324.7	575	757	3,585								
Mean	10.5	19.2	24.4	116								
Ac-ft	644	1,140	1,500	7,110								

Calendar year 1952: Max 3,040 Min 5.5 Mean 377 Ac-ft 273,600
Water year 1952-53: 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 nearby streams.
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 (revised) downstream from Jordan Creek and 2½ miles north of Rome.

Drainage area.--About 8,000 sq mi.

Records available.--October 1949 to September 1953.

Gage.--Water-stage recorder. Datum of gage is 3,343.96 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1947.

Extremes.--Maximum discharge during year, 5,400 cfs June 6 (gage height, 7.00 ft); minimum, 112 cfs Sept. 21, 22 (gage height, 1.01 ft).
1949-53: Maximum discharge, 27,800 cfs Apr. 14, 1952 (gage height, 15.60 ft); minimum, 75 cfs Aug. 18, 1951 (gage height, 0.72 ft).

Remarks.--Records good except those for period of no gage-height record, which are poor. Diversions above station for irrigation. Flow regulated by Antelope Reservoir (capacity, 36,600 acre-ft), Wild Horse Reservoir (capacity, 32,700 acre-ft), and numerous small reservoirs.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

1.0	110	4.0	1,450
1.5	220	5.0	2,450
2.0	360	7.0	5,400
3.0	780		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	180	192	162	225	345	294	820	1,390	3,500	564	195	148
2	240	190	162	225	339	303	785	1,200	4,000	518	190	146
3	195	190	154	228	339	315	720	1,060	4,500	458	188	144
4	188	190	156	228	357	318	700	940	4,800	398	*208	138
5	185	192	156	220	458	*294	*676	810	5,000	364	205	142
6	182	190	156	228	580	276	676	725	*5,030	339	200	164
7	182	182	*158	228	845	300	671	653	4,240	327	195	175
8	182	178	160	222	1,470	339	671	599	4,960	303	200	172
9	182	178	158	228	1,070	357	662	582	4,590	279	190	178
10	180	178	160	232	815	374	599	599	3,920	268	180	166
11	180	180	164	258	626	374	562	690	*3,370	*252	172	154
12	180	178	170	285	502	381	526	685	2,950	245	172	146
13	180	182	170	303	454	398	506	640	2,640	242	172	138
14	182	192	170	357	426	398	490	620	2,430	245	172	136
15	*182	208	175	364	420	388	470	600	2,310	255	166	136
16	185	210	185	342	412	388	446	650	2,240	265	164	140
17	188	215	200	342	402	381	442	700	2,220	248	164	132
18	192	215	309	327	384	364	482	800	2,040	238	168	128
19	198	225	235	720	348	370	522	1,000	1,820	255	158	122
20	200	222	238	1,860	306	367	626	1,200	1,590	276	138	118
21	200	192	235	2,330	268	354	790	1,400	1,390	258	136	114
22	198	182	228	2,080	268	354	855	1,200	1,230	232	132	114
23	192	168	235	1,210	260	354	892	1,100	1,140	218	134	116
24	190	144	195	850	270	548	940	1,050	1,010	215	144	116
25	190	152	178	680	265	826	970	1,000	910	215	142	116
26	198	142	180	558	279	1,690	1,010	1,000	820	212	136	118
27	192	150	192	502	279	1,180	1,050	1,050	740	212	136	120
28	192	160	205	446	276	1,010	1,150	1,200	685	195	*134	122
29	192	150	215	*416	-	904	1,260	1,500	666	195	142	124
30	192	150	220	367	-	880	1,450	2,000	640	195	134	126
31	192	-	222	345	-	865	-	2,500	-	198	138	-
Total	5,891	5,477	5,903	17,206	13,063	15,944	22,419	31,143	77,381	8,684	5,105	4,109
Mean	190	183	190	555	467	514	747	1,005	2,579	280	165	137
Ac-ft	11,680	10,860	11,710	34,130	25,910	31,620	44,470	61,770	153,500	17,220	10,130	8,150

Calendar year 1952: Max 24,200 Min 142 Mean 2,357 Ac-ft 1,711,000
Water year 1952-53: Max 5,030 Min 114 Mean 582 Ac-ft 421,200

Peak discharge (base, 3,000 cfs).--June 6 (about 6 a.m.) 5,400 cfs (7.00 ft).
* Discharge measurement made on this day.
Note.--No gage-height record May 13 to June 5; discharge estimated on basis of records for Malheur River near Drewsey and computed inflow to Owyhee Reservoir.

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.--About 11,160 sq mi.

Records available.--October 1932 to September 1953.

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

Extremes.--Maximum contents observed during year, 1,069,000 acre-ft June 21-23 (elevation, 2,665.75 ft); minimum observed, 795,000 acre-ft Sept. 30 (elevation, 2,640.80 ft).
1932-53: 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, 630,500 acre-ft Sept. 30, 1948 (elevation, 2,622.29 ft).

Remarks.--Reservoir is formed by concrete arch-gravity dam, completed in September 1932; storage began Oct. 16, 1932. Capacity, 1,122,000 acre-ft between elevations 2,367.5 ft (bottom of sluice gates) and 2,670 ft (top 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.--Gage-height record furnished by Bureau of Reclamation.

Monthly elevation and contents, water year October 1952 to September 1953

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	2,648.02	867,600	-
Oct. 31	2,646.25	849,300	-18,300
Nov. 30	2,647.25	859,600	+10,300
Dec. 31	2,649.11	879,000	+19,400
Calendar year 1952	-	-	+45,900
Jan. 31	2,652.80	918,500	+39,500
Feb. 28	2,655.88	952,600	+34,100
Mar. 31	2,658.25	979,500	+26,900
Apr. 30	2,656.75	962,400	-17,100
May 31	2,655.30	946,100	-16,300
June 30	2,664.75	1,056,000	+109,900
July 31	2,656.89	964,000	-92,000
Aug. 31	2,648.59	873,500	-90,500
Sept.30	2,640.80	795,000	-78,500
Water year 1952-53	-	-	-72,600

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 1953.

Gage.--Water-stage recorder. Datum of gage is 2,343.67 ft above mean sea level (levels by Bureau of Reclamation.)

Average discharge.--24 years, 418 cfs.

Extremes.--Maximum discharge during year, 218 cfs May 19 (gage height, 1.33 ft); minimum observed, 1 cfs Oct. 18 to Dec. 2.
1929-53: 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 good except those for periods of backwater from moss or weeds which are fair, and those for Oct. 16 to Apr. 4, which are poor. Diversions above station for irrigation. Flow regulated by Wild Horse and Owyhee Reservoirs (see pp.

Cooperation.--Water-stage recorder inspected and two discharge measurements made by Bureau of Reclamation.

Revisions (water years).--WSP 983: 1941-42

Rating tables, water year 1952-53, except period of backwater from moss or weeds (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 4				Apr. 5 to Sept. 30	
-1.1	1	-0.3	31	0.0	35
-1.0	2	0.0	57	.5	80
-.8	7	.3	90	1.0	150
-.6	14	.6	135	1.4	235

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	1	1	4	4	4	4	132	37	145	144	157
2	83	1	1	4	4	4	4	132	37	164	145	157
3	122	1	2	4	4	4	4	132	36	166	144	157
4	121	1	2	4	4	4	4	144	36	168	147	157
5	121	1	3	4	4	4	*47	159	37	170	140	157
6	121	1	3	4	4	4	*85	159	37	170	132	157
7	121	1	*4	4	4	4	100	159	*37	170	134	157
8	121	1	4	4	4	4	130	161	36	172	110	147
9	113	1	4	4	4	4	130	161	36	172	134	140
10	110	1	4	4	4	4	131	161	*36	172	*134	140
11	110	1	4	4	4	4	131	161	47	*172	134	139
12	112	1	4	4	4	4	132	161	64	172	134	128
13	112	1	4	4	4	4	132	164	102	172	132	120
14	112	1	4	4	4	4	132	170	125	172	124	120
15	66	1	4	4	4	4	132	170	126	172	118	120
16	10	1	4	4	4	4	132	192	126	172	118	120
17	10	1	4	4	4	4	132	210	125	172	119	119
18	1	1	4	4	4	4	132	212	137	172	119	119
19	1	1	4	4	4	4	132	179	148	166	118	119
20	1	1	4	4	4	4	134	163	148	163	119	119
21	1	1	4	4	4	4	134	154	148	163	119	108
22	1	1	4	4	4	4	134	109	147	163	119	100
23	1	1	4	4	4	4	145	58	164	163	119	100
24	1	1	4	4	4	4	163	58	145	163	120	100
25	1	1	4	4	4	4	163	58	120	159	120	100
26	1	1	4	4	4	4	163	58	125	155	122	100
27	1	1	4	4	4	4	164	58	132	155	122	100
28	1	1	4	4	4	4	144	58	140	147	124	101
29	1	1	4	4	-	4	132	48	140	144	142	101
30	1	1	4	4	-	4	132	36	142	144	159	101
31	1	-	4	4	-	4	-	36	-	144	159	-
Total	1,650	30	112	124	112	124	3,434	4,013	2,916	5,074	4,024	3,760
Mean	53.2	1.0	3.6	4.0	4.0	4.0	114	129	97.2	164	130	125
Ac-ft	3,270	60	222	246	222	246	6,810	7,960	5,780	10,060	7,980	7,460

Calendar year 1952: Max 21,800 Min 1 Mean 1,613 Ac-ft 1,171,000
Water year 1952-53: Max 212 Min 1 Mean 69.5 Ac-ft 50,320

* Discharge measurement made on this day.

Note.--Discharge computed from staff-gage readings made at times Oct. 16 to Apr. 4; discharge, which is only leakage at dam, interpolated between readings. Backwater from moss or weeds June 24 to Sept. 30.

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 1953.

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.--42 years, 1,156 cfs.

Extremes.--Maximum discharge during year, 9,090 cfs June 13 (gage height, 7.81 ft); minimum, 192 cfs probably Nov. 22, while clock was stopped (gage height, 1.78 ft), but may have been less during period of ice effect.
1911-53: 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 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 10-23)

1.8	196	3.5	1,380
2.0	254	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

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	348	348	b330	364	518	499	1,400	2,890	4,100	4,070	800	450
2	348	338	b410	359	557	457	1,280	2,400	4,550	3,780	792	460
3	343	330	b400	354	792	428	1,220	2,200	4,600	3,730	880	430
4	343	340	b385	354	1,170	434	1,260	2,300	4,640	3,760	800	420
5	343	340	b385	354	934	412	1,420	2,740	4,980	3,750	752	420
6	343	340	423	359	808	418	1,400	3,490	4,550	3,680	720	400
7	343	330	418	374	712	445	1,250	4,100	4,710	3,680	688	410
8	338	320	401	*374	688	524	1,110	3,630	4,770	3,540	656	390
9	338	310	401	434	619	648	1,020	3,070	4,460	3,250	633	380
10	338	310	406	656	512	816	934	2,620	4,330	3,010	626	370
11	338	350	401	598	531	824	864	2,290	4,940	3,020	612	360
12	338	350	423	640	512	752	824	2,170	6,700	2,880	591	360
13	338	350	418	925	524	704	784	2,340	8,390	*2,710	570	360
14	338	350	401	856	524	626	760	2,440	7,020	2,650	564	350
15	343	350	385	672	531	605	720	2,920	5,890	2,360	550	340
16	348	315	390	591	487	*584	776	3,180	5,510	2,030	544	350
17	*343	315	390	584	487	570	864	3,360	*6,130	1,760	538	360
18	343	340	401	864	*487	531	997	3,520	6,740	1,630	512	*364
19	338	330	396	961	406	550	1,290	4,440	6,510	1,510	*499	364
20	343	330	406	808	b330	577	1,910	4,810	5,400	1,430	481	359
21	343	310	390	784	b340	564	2,820	4,160	4,690	1,300	475	354
22	343	270	380	688	b425	538	3,660	3,580	4,750	1,230	470	348
23	338	300	b330	619	b410	538	4,710	3,230	5,020	1,160	470	343
24	338	360	b240	570	b360	640	*4,370	2,960	4,820	1,110	460	343
25	338	*b280	b250	550	b380	961	3,940	2,620	4,280	1,050	460	343
26	343	b220	b320	531	b400	1,020	4,210	2,440	3,850	1,010	460	343
27	338	b230	b450	499	440	1,020	4,640	*2,310	3,710	952	460	338
28	338	b260	b500	487	487	1,250	5,690	2,720	3,660	925	450	338
29	338	b240	451	493	-	1,250	4,420	3,250	3,800	889	450	348
30	338	b250	418	487	-	1,420	3,600	3,230	3,990	848	460	348
31	348	-	380	475	-	1,510	-	3,700	-	832	450	-
Total	10,578	9,406	12,079	17,664	15,371	22,115	64,143	95,110	151,490	69,536	17,873	11,143
Mean	341	314	390	570	549	713	2,138	3,068	5,050	2,243	577	371
Cfsm	0.411	0.378	0.470	0.687	0.661	0.859	2.58	3.70	6.08	2.70	0.695	0.447
In.	0.47	0.42	0.54	0.79	0.69	0.99	2.87	4.26	6.79	3.12	0.80	0.50
Ac-ft	20,980	18,660	23,960	35,040	30,490	43,860	127,200	188,800	300,500	137,900	35,450	22,100

Calendar year 1952: Max 8,610 Min 220 Mean 1,511 Cfsm 1.82 In. 24.77 Ac-ft 1,097,000
Water year 1952-53: Max 8,390 Min 220 Mean 1,360 Cfsm 1.64 In. 22.24 Ac-ft 984,700

Peak discharge (base, 3,700 cfs).--Apr. 28 (8 a.m.) 6,250 cfs (6.48 ft); May 7 (3 a.m.) 4,280 cfs (5.45 ft); May 20 (3 a.m.) 5,220 cfs (5.96 ft); June 13 (7 a.m.) 9,090 cfs (7.81 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 3-24, Aug. 22 to Sept. 17; 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 1953.

Gage.--Water-stage recorder. Altitude of gage is 4,220 ft (from topographic map of Bureau of Reclamation).

Average discharge.--8 years, 827 cfs.

Extremes.--Maximum discharge during year, 4,640 cfs June 13 (gage height, 6.84 ft); minimum, 105 cfs probably Dec. 25 (gage height, 1.49 ft).
1945-53: 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 fair. Small ranch diversions above station. No regulation.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

1.6	133	3.5	1,080
1.8	185	4.0	1,500
2.0	252	5.0	2,560
2.5	472	7.0	4,920
3.0	755		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	211	228	168	a230	252	267	848	1.750	2,210	2,520	462	263
2	211	217	245	a220	252	245	*797	1,510	2,400	2,330	452	271
3	214	211	260	a220	286	224	785	1,430	2,440	2,270	467	252
4	214	217	228	a220	349	242	848	1,460	2,570	2,250	432	245
5	220	231	224	a220	302	231	973	1,690	2,670	2,230	413	242
6	231	238	248	a230	286	242	980	2,040	2,640	2,190	394	234
7	228	228	242	a240	271	260	893	2,420	2,760	2,080	380	231
8	228	217	220	*234	271	290	785	2,160	2,620	1,960	266	228
9	224	195	224	234	248	335	725	1,880	2,480	1,800	362	224
10	220	195	248	327	198	394	647	1,660	2,440	1,660	353	217
11	220	228	242	327	201	403	602	1,480	2,880	1,650	353	211
12	220	260	263	306	234	389	574	1,390	3,840	1,510	335	207
13	220	260	263	366	238	366	542	1,420	4,470	1,410	319	207
14	220	260	234	349	252	327	530	1,460	4,130	1,320	315	204
15	224	260	214	282	267	319	525	1,670	3,570	1,200	315	204
16	228	204	228	275	*238	335	596	1,780	3,400	1,070	302	207
17	224	195	231	286	248	323	701	1,880	3,810	966	302	217
18	224	214	245	306	248	302	828	2,030	4,080	900	294	214
19	220	228	248	310	207	331	1,000	2,420	*4,020	841	290	214
20	224	228	248	298	182	327	1,300	2,550	3,520	785	279	207
21	228	217	231	290	185	302	*1,740	2,350	3,180	743	275	207
22	224	163	217	260	214	294	2,230	2,010	3,110	695	271	207
23	*224	182	191	263	217	294	2,710	1,770	3,230	*659	271	207
24	224	214	140	260	207	353	2,630	1,590	3,140	641	267	207
25	224	*214	a150	252	207	472	2,480	1,380	2,820	608	267	204
26	224	157	a190	252	228	509	2,620	1,300	2,530	574	267	204
27	220	168	a260	234	245	542	2,860	1,250	2,430	547	*263	204
28	220	177	a260	231	260	695	3,230	1,540	2,380	530	263	204
29	220	165	a260	249	-	707	2,570	*1,970	2,440	514	263	204
30	220	163	a250	248	-	815	2,140	1,860	2,500	493	271	211
31	224	-	a240	242	-	880	-	2,020	-	472	260	-
Total	6,877	6,334	7,112	8,260	6,793	12,015	40,689	55,120	90,710	39,418	10,123	6,558
Mean	222	211	229	266	243	388	1,356	1,778	3,024	1,272	327	219
Cfsm	0.350	0.332	0.361	0.419	0.383	0.611	2.14	2.80	4.76	2.00	0.515	0.345
In.	0.40	0.37	0.42	0.48	0.40	0.70	2.38	3.23	5.31	2.31	0.59	0.38
Ac-ft	13,640	12,560	14,110	16,380	13,470	23,830	80,710	109,300	179,900	78,180	20,080	13,010

Calendar year 1952: Max 5,360 Min 140 Mean 1,031 Cfsm 1.62 In. 22.11 Ac-ft 748,900
Water year 1952-53: Max 4,470 Min 140 Mean 795 Cfsm 1.25 In. 16.97 Ac-ft 575,200

Peak discharge (base, 2,000 cfs).--Apr. 28 (5 a.m.) 3,570 cfs (5.92 ft); May 7 (5 a.m.) 2,470 cfs (4.96 ft); May 20 (4:30 a.m.) 2,670 cfs (5.16 ft); June 13 (6 a.m.) 4,640 cfs (6.84 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 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 1953.

Gage.--Water-stage recorder. Altitude of gage is about 4,250 ft (from topographic map of Bureau of Reclamation).

Average discharge.--8 years, 91.5 cfs.

Extremes.--Maximum discharge during year, 676 cfs Apr. 28 (gage height, 5.02 ft); minimum, 11 cfs Nov. 9, 16 (gage height, 2.30 ft), result of freezeup.
1945-53: 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 diversion or regulation.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 27 to Sept. 2)

2.4	15	3.5	204
2.6	30	4.0	334
2.8	56	5.0	680
3.0	93		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	28	b30	36	40	39	180	292	221	87	27	24
2	26	28	b40	36	41	38	*168	256	223	84	27	28
3	26	24	b39	34	53	33	166	236	221	80	27	24
4	26	28	b38	33	72	39	185	236	218	74	27	24
5	26	30	38	34	56	37	223	248	223	72	27	23
6	27	32	38	38	52	36	246	271	221	69	25	21
7	28	30	38	*36	48	39	204	295	276	65	24	21
8	28	27	38	36	48	41	166	271	233	61	23	21
9	27	21	36	38	41	50	153	233	214	58	23	21
10	27	26	36	60	27	65	137	214	204	53	24	20
11	27	36	37	53	b30	67	122	199	206	52	24	19
12	26	36	39	52	b36	65	122	187	226	50	24	19
13	26	37	37	70	b42	61	110	180	238	46	a24	19
14	26	39	34	54	b42	54	112	180	226	44	a24	19
15	28	36	34	38	40	56	110	187	211	41	a24	20
16	28	21	38	48	40	56	142	194	194	40	a24	21
17	28	28	37	46	*40	54	209	190	185	41	a24	21
18	28	38	37	52	38	53	246	190	182	39	a23	21
19	28	31	36	53	33	54	274	228	180	37	a23	21
20	28	32	38	50	b30	56	306	230	171	37	a23	20
21	28	31	36	47	b32	53	337	223	157	37	a23	20
22	28	24	34	41	b36	50	*399	202	146	34	a23	20
23	*27	30	22	44	b37	52	439	180	137	*33	a23	20
24	27	34	b18	41	b36	78	396	171	129	32	a23	21
25	27	*34	b19	41	b36	131	366	157	*120	31	a23	21
26	27	b20	b30	40	b38	129	369	150	112	30	a23	21
27	27	b21	b35	36	40	122	396	146	106	29	*23	21
28	28	b22	b40	41	40	144	512	192	99	28	24	21
29	28	b20	38	41	-	148	381	*274	95	28	25	21
30	28	b21	39	40	-	173	340	223	93	28	26	22
31	28	-	38	39	-	187	-	226	-	28	24	-
Total	843	865	1,087	1,348	1,144	2,260	7,516	6,661	5,467	1,438	751	635
Mean	27.2	28.8	35.1	43.5	40.9	72.9	251	215	182	47.4	24.2	21.2
Cfsm	0.208	0.220	0.268	0.332	0.312	0.556	1.92	1.64	1.39	0.362	0.185	0.162
In.	0.24	0.25	0.31	0.38	0.32	0.64	2.13	1.89	1.55	0.42	0.21	0.18
Ac-ft	1,670	1,720	2,160	2,670	2,270	4,480	14,910	13,210	10,840	2,910	1,490	1,260

Calendar year 1952: Max 1,020 Min 18 Mean 138 Cfsm 1.05 In. 14.36 Ac-ft 100,300
Water year 1952-53: Max 512 Min 18 Mean 82.3 Cfsm 0.628 In. 8.52 Ac-ft 59,590

Peak discharge (base, 230 cfs).--Apr. 5 (11:30 p.m.) 263 cfs (3.76 ft); Apr. 28 (2:30 a.m.) 676 cfs (5.02 ft); May 29 (2:30 a.m.) 346 cfs (4.12 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records 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 1953.

Gage.--Water-stage recorder. Altitude of gage is 4,350 ft (from topographic map of Bureau of Reclamation).

Average discharge.--8 years, 72.6 cfs.

Extremes.--Maximum discharge during year, 516 cfs Apr. 28 (gage height, 5.15 ft); minimum daily, 13 cfs Dec. 24; minimum gage height, 2.53 ft Nov. 3, 9.
1945-53: 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 poor. No diversion or regulation.

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 30		Dec. 1 to Sept. 30			
2.6	15	2.6	13	4.0	173
2.8	26	2.7	17	4.5	293
		3.0	38	5.0	457
		3.5	93		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	18	b16	18	25	27	103	232	*217	107	28	17
2	17	18	b18	18	26	26	97	204	234	101	27	18
3	17	16	b18	18	36	b24	97	195	222	96	31	17
4	17	18	b17	18	45	25	112	206	215	90	27	17
5	16	18	17	18	37	25	132	234	208	85	26	16
6	16	18	18	19	34	26	133	260	197	81	25	16
7	16	18	18	19	32	28	113	282	220	76	25	15
8	16	18	19	*19	31	32	96	247	202	72	24	15
9	17	16	18	20	29	41	85	222	193	67	24	15
10	17	18	18	29	b22	48	76	195	193	64	22	15
11	17	19	20	25	b22	47	72	185	211	60	22	15
12	18	20	22	28	b23	44	67	179	252	56	21	15
13	18	21	21	40	b25	42	62	177	260	54	21	15
14	17	21	20	33	26	40	61	185	239	53	20	15
15	18	22	19	29	26	38	62	193	222	48	20	15
16	18	19	19	27	*25	38	74	197	208	46	19	15
17	18	20	19	26	25	36	92	206	208	43	19	17
18	18	20	19	32	25	36	108	220	*213	42	19	15
19	18	20	19	34	24	36	141	276	206	40	18	15
20	18	20	19	31	b22	36	202	265	187	38	17	16
21	18	20	19	29	b23	34	*282	239	175	37	17	16
22	*18	b16	18	26	b24	32	355	200	166	36	17	15
23	17	b15	b16	26	b23	33	405	183	159	*36	17	15
24	17	*b18	b13	25	b23	*41	381	168	148	36	17	15
25	18	20	b14	25	b23	45	358	153	143	33	17	15
26	18	b14	b16	24	24	58	372	146	135	32	17	15
27	18	b14	b18	23	24	60	405	146	128	32	*18	15
28	18	b15	b19	24	26	73	454	177	122	31	17	15
29	18	b14	19	24	-	79	349	187	119	30	18	15
30	20	b15	19	24	-	107	279	185	113	29	18	16
31	19	-	18	24	-	112	-	222	-	28	17	-
Total	543	539	563	775	750	1,379	5,625	6,366	5,715	1,679	645	466
Mean	17.5	18.0	18.2	25.0	26.8	44.5	188	205	190	54.2	20.8	15.5
Cfsm	0.316	0.325	0.329	0.452	0.485	0.805	3.40	3.71	3.44	0.980	0.376	0.280
In.	0.37	0.36	0.38	0.52	0.50	0.93	3.78	4.28	3.84	1.13	0.43	0.31
Ac-ft	1,080	1,070	1,120	1,540	1,490	2,740	11,160	12,630	11,340	3,330	1,280	924

Calendar year 1952: Max 824 Min 13 Mean 101 Cfsm 1.83 In. 24.77 Ac-ft 72,990
Water year 1952-53: Max 454 Min 13 Mean 68.6 Cfsm 1.24 In. 16.83 Ac-ft 49,700

Peak discharge (base, 300 cfs).--Apr. 28 (1 a.m.) 516 cfs (5.15 ft); May 6 (9 p.m.) 305 cfs (4.53 ft); May 19 (10 p.m.) 311 cfs (4.56 ft); June 12 (9:30 p.m.) 323 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 1953.

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, 1924-53: 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	59	59	56	51	46
2							0	59	59	56	51	46
3							0	59	59	55	50	46
4							0	59	59	55	50	46
5							0	59	17	55	50	45
6							0	59	0	55	49	45
7							0	59	0	55	49	45
8							0	59	0	55	49	45
9							0	59	0	55	49	45
10							0	59	0	54	49	45
11							0	59	0	54	49	36
12							0	59	0	54	49	30
13							0	59	0	54	48	30
14							0	59	0	53	48	21
15							0	59	25	53	48	15
16							12	59	*46	53	47	5
17							27	59	46	52	47	0
18							34	59	53	52	47	0
19							40	59	59	52	47	0
20							46	59	59	52	47	0
21							52	59	34	52	47	0
22	(*)						52	59	18	*51	47	0
23							57	59	47	51	47	0
24							65	59	31	51	47	0
25							63	59	46	51	47	0
26							59	59	57	50	*47	0
27							59	59	57	51	47	0
28							59	59	56	51	47	0
29							59	59	56	51	47	0
30							59	59	56	51	46	0
31							-	59	-	51	46	-
Total	0	0	0	0	0	0	743	1,829	999	1,641	1,489	591
Mean	0	0	0	0	0	0	24.8	59.0	33.3	52.9	48.0	19.7
Ac-ft	0	0	0	0	0	0	1,470	3,630	1,980	3,250	2,950	1,170

Calendar year 1952: Max 55 Min 0 Mean 11.2 Ac-ft 8,130
Water year 1952-53: Max 65 Min 0 Mean 20.0 Ac-ft 14,450

* 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 1953.

Gage.--Staff gage read once daily. Datum of gage is at mean sea level (surveys by Bureau of Reclamation).

Extremes.--Maximum contents observed during year, 468,200 acre-ft June 20 (elevation, 4,196.84 ft); minimum observed, 209,600 acre-ft Jan. 28, 29 (elevation, 4,127.9 ft).
1945-53: Maximum contents observed, 468,900 acre-ft June 30, 1952 (elevation, 4,197.0 ft); no usable contents prior to Jan. 27, 1946; minimum since full capacity was attained June 21, 1951, that of Jan. 28, 29, 1953.

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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	304,600	249,900	245,800	218,600	211,100	224,800	255,100	352,800	420,100	464,700	439,200	367,400
2	301,800	249,600	245,100	218,900	211,400	225,400	257,000	352,000	424,500	465,300	437,300	365,000
3	299,300	249,600	243,900	219,200	211,900	226,000	259,300	357,800	429,800	465,600	435,300	362,600
4	295,700	249,600	242,600	218,600	212,500	226,600	261,900	359,800	435,300	465,900	433,100	359,900
5	222,200	250,500	241,000	218,000	212,800	227,500	264,900	360,200	441,600	466,500	431,000	357,300
6	288,000	250,500	239,800	217,100	213,400	228,100	267,200	363,400	447,800	466,500	429,000	354,700
7	284,900	250,500	239,100	216,300	214,200	229,000	271,300	365,400	432,200	466,500	427,200	352,200
8	281,100	250,500	239,100	215,700	215,100	229,000	273,000	368,600	463,200	466,300	424,800	349,600
9	278,400	250,500	238,200	215,100	215,700	229,600	275,700	371,800	459,500	466,000	422,600	346,900
10	275,000	250,500	236,700	215,700	216,600	229,900	278,100	373,400	458,000	465,600	420,300	344,200
11	272,600	250,200	235,400	216,300	217,100	230,500	279,400	375,900	458,500	465,200	417,900	341,600
12	270,600	250,900	234,200	215,700	217,400	231,100	280,800	377,100	460,400	465,000	415,900	339,000
13	266,900	251,500	233,900	215,700	217,700	232,100	282,500	377,900	462,800	464,600	413,800	336,500
14	266,600	252,200	233,600	215,400	218,000	233,000	283,900	378,700	463,200	464,300	411,400	333,700
15	264,900	252,200	233,600	215,400	218,600	233,600	285,300	379,600	461,700	463,800	409,100	331,000
16	262,900	252,200	233,300	215,700	218,900	234,500	286,300	380,000	462,000	463,200	407,000	328,500
17	262,300	252,200	232,100	215,700	219,200	235,100	287,700	380,800	462,900	462,600	404,700	326,400
18	261,900	251,800	230,500	215,700	219,500	235,700	289,400	384,100	464,900	461,600	402,400	324,600
19	261,900	251,500	228,400	216,000	220,100	236,400	292,900	385,800	467,300	460,500	400,000	322,900
20	261,900	251,200	227,500	216,300	221,000	237,300	294,300	388,700	468,200	459,300	397,800	321,500
21	261,600	250,900	226,300	216,300	221,500	238,200	299,300	392,400	466,400	457,900	395,300	320,200
22	261,300	250,900	227,500	215,700	222,100	239,100	303,600	394,500	464,500	456,500	392,800	318,400
23	260,300	250,500	227,200	214,500	222,400	239,800	310,400	396,700	462,500	454,900	390,400	317,700
24	258,700	249,300	225,100	213,100	223,000	240,400	315,100	399,300	460,600	453,300	388,100	317,300
25	256,400	248,600	223,300	212,500	223,300	241,600	321,700	401,800	460,500	451,800	385,300	317,200
26	254,100	246,400	222,400	211,400	223,600	242,900	325,700	402,500	460,600	450,100	382,900	317,600
27	253,400	246,100	221,500	210,200	223,900	243,900	331,000	402,900	460,600	448,300	380,400	316,600
28	252,200	246,100	221,200	209,600	224,200	245,100	336,600	403,000	462,100	446,700	377,700	316,900
29	251,500	245,800	221,000	209,600	-	246,100	344,200	405,500	462,300	445,000	375,400	316,600
30	251,200	245,400	219,800	210,200	-	247,300	348,500	410,000	463,900	443,000	372,900	314,400
31	250,500	-	219,200	210,800	-	251,800	-	414,600	-	441,100	370,100	-

Monthly elevation and usable contents, water year October 1952 to September 1953

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,158.0	307,100	-
Oct. 31	4,141.4	250,500	-56,600
Nov. 30	4,139.8	245,400	-5,100
Dec. 31	4,131.2	219,200	-26,200
Calendar year 1952	-	-	+4,200
Jan. 31	4,128.3	210,800	-8,400
Feb. 28	4,132.9	224,200	+13,400
Mar. 31	4,141.8	251,800	+27,600
Apr. 30	4,169.1	348,500	+96,700
May 31	4,185.2	414,800	+66,300
June 30	4,195.95	463,900	+49,100
July 31	4,191.06	441,100	-22,800
Aug. 31	4,174.58	370,100	-71,000
Sept.30	4,160.02	314,400	-55,700
Water year 1952-53	-	-	+7,300

† 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 1953 (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 U. S. Bureau of Reclamation).

Average discharge.--10 years (1943-53), 971 cfs.

Extremes.--Maximum discharge during year, 6,480 cfs June 15 (gage height, 8.48 ft); minimum, 81 cfs Nov. 23 (gage height, 1.96 ft).
1943-53: 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. Some water stored in Little Camas Reservoir and diverted for irrigation of about 5,000 acres of land in vicinity of Mountain Home. Flow regulated by Anderson Ranch Reservoir (see preceding page) beginning Dec. 15, 1945.

Cooperation.--Water-stage recorder inspected by Bureau of Reclamation.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

2.0	88	4.0	1,050
2.3	168	5.0	1,890
2.6	276	6.0	2,930
3.0	450	8.0	5,660
3.5	730		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,480	292	671	141	128	126	126	1,110	*727	2,260	1,580	1,670
2	2,170	187	932	668	110	129	132	1,080	330	2,350	1,610	1,670
3	1,990	292	922	546	110	132	132	773	277	2,340	1,610	1,670
4	2,000	452	912	476	110	134	132	1,050	334	2,050	1,580	1,670
5	2,130	310	830	617	110	132	126	1,360	143	2,320	1,600	1,660
6	2,100	270	615	772	113	129	129	1,440	567	2,350	1,560	1,660
7	2,080	288	137	840	110	129	126	1,550	297	2,270	1,590	1,660
8	2,050	278	933	*718	113	126	126	1,310	2,060	2,320	1,550	1,660
9	1,830	172	971	188	113	126	124	1,480	3,830	2,140	1,600	1,670
10	1,500	249	965	134	113	126	124	1,220	3,100	2,060	1,630	1,650
11	1,380	252	898	610	113	126	124	1,570	2,740	1,990	1,640	1,600
12	1,030	365	951	687	110	126	121	1,560	3,390	1,790	1,560	1,660
13	1,350	418	546	738	126	132	121	1,670	4,040	1,880	1,630	1,620
14	1,320	493	187	648	121	126	118	1,680	4,440	1,760	1,600	1,670
15	1,180	208	964	508	118	126	118	1,690	4,070	1,680	1,580	1,660
16	680	270	954	365	121	129	118	1,700	3,610	1,600	1,540	1,340
17	307	436	940	294	*121	126	115	1,450	3,450	1,590	1,600	1,260
18	265	524	908	590	129	124	118	1,640	*4,020	1,630	1,590	1,180
19	467	554	1,090	713	126	129	113	1,680	3,400	1,630	1,610	946
20	618	288	793	770	121	140	113	1,670	4,450	1,630	1,590	1,030
21	494	559	146	886	124	137	*113	1,580	4,640	1,630	1,630	1,380
22	*892	507	853	1,040	124	143	597	1,560	4,500	*1,610	1,650	540
23	1,150	514	840	670	124	118	857	1,530	4,440	1,610	1,560	376
24	1,310	*690	806	770	121	*103	1,090	466	3,690	1,600	1,650	441
25	1,400	767	622	828	124	99	1,140	1,470	3,100	1,630	1,610	135
26	612	998	736	680	124	110	1,050	1,540	2,660	1,600	*1,630	492
27	1,230	348	419	715	124	134	1,020	1,670	2,440	1,600	1,660	384
28	784	603	603	682	129	137	1,280	1,580	2,020	1,440	1,660	816
29	256	240	754	134	-	137	1,620	594	1,870	1,570	1,670	835
30	271	194	441	132	-	132	1,170	137	2,340	1,570	1,670	1,010
31	337	-	570	129	-	129	-	134	-	1,590	1,670	-
Total	36,663	12,018	22,909	17,687	3,328	3,952	12,393	40,944	80,975	57,090	49,910	37,015
Mean	1,183	401	739	571	119	127	413	1,321	2,699	1,842	1,610	1,234
Ac-ft	72,720	23,840	45,440	35,080	6,600	7,840	24,580	81,210	160,600	113,200	73,420	73,420

Calendar year 1952: Max 7,130 Min 129 Mean 1,444 Ac-ft 1,048,000
Water year 1952-53: Max 4,640 Min 99 Mean 1,027 Ac-ft 743,500

* Discharge measurement made on this day.

Arrowrock Reservoir at Arrowrock, Idaho

Location.--Lat 43°36', long. 115°55', in E½ sec. 13, T. 3 N., R. 4 E., at Arrowrock and 22 miles by road east of Boise.
Drainage area.--2,210 sq mi, approximately.
Records available.--October 1917 to September 1953.
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, 292,200 acre-ft July 7 (elevation, 3,217.8 ft); minimum observed, 21,810 acre-ft Oct. 15 (elevation, 3,068.6 ft).
1917-53: 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 (crest of movable spillway at highest position). 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 rating table, in use beginning 1952-53 water year (elevation, in feet, and contents, in acre-feet)

2,990	500	3,080	30,000
3,000	1,160	3,100	49,000
3,010	2,210	3,130	90,500
3,020	3,800	3,160	146,000
3,040	8,270	3,190	214,000
3,060	16,770	3,218	292,800

Contents at about 8 a.m., in acre-feet, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27,920	62,800	95,430	171,000	261,500	277,200	228,000	227,500	227,500	287,500	233,200	129,000
2	26,220	64,100	97,470	171,800	263,200	276,900	224,700	228,300	227,000	287,500	230,100	126,000
3	26,080	65,530	100,900	174,000	265,600	276,600	222,800	228,600	227,000	288,800	227,000	123,200
4	25,500	66,830	103,600	176,000	268,500	275,700	220,800	228,000	227,300	290,000	223,900	120,700
5	25,220	68,280	106,500	177,800	272,700	275,100	219,200	228,300	228,000	290,300	220,800	117,800
6	25,000	69,960	108,900	180,100	275,700	274,500	217,600	229,600	228,000	290,300	217,900	115,100
7	24,930	71,640	111,100	183,100	278,100	273,900	216,300	233,000	228,300	292,200	215,000	112,400
8	24,930	73,040	112,900	184,900	280,800	273,300	215,300	236,400	229,100	291,900	212,200	109,800
9	25,000	74,160	115,400	187,400	283,200	273,300	214,000	238,400	232,700	291,900	209,000	107,200
10	24,510	75,300	118,200	189,000	284,100	273,600	213,500	239,200	237,400	291,200	206,000	104,300
11	23,270	76,500	121,100	191,400	284,100	273,900	212,500	239,700	240,000	290,900	202,500	101,400
12	23,000	78,000	123,900	193,800	284,100	274,200	211,000	239,500	242,800	290,300	199,100	98,320
13	22,140	78,600	126,800	196,700	284,100	272,700	209,000	239,200	252,600	289,700	195,700	95,260
14	22,070	78,200	129,000	201,000	284,100	270,900	206,500	239,200	266,500	289,400	191,900	92,200
15	21,810	79,650	131,000	204,000	283,800	268,800	202,500	239,500	278,100	288,800	188,400	89,380
16	25,360	79,350	134,000	206,800	283,500	266,800	200,300	240,800	283,500	286,600	184,900	86,340
17	27,390	78,600	136,800	209,500	283,500	265,000	196,000	242,500	286,000	283,800	181,200	82,660
18	29,530	79,200	139,600	212,500	283,200	262,400	192,400	246,200	289,100	281,100	177,300	79,350
19	30,960	79,350	142,400	218,700	282,900	260,700	188,100	250,100	290,300	278,100	173,600	76,050
20	32,560	79,650	145,400	224,700	282,600	258,900	184,900	253,400	290,000	275,100	170,100	72,760
21	34,360	79,350	147,700	229,100	281,400	256,900	183,500	255,400	289,700	271,500	166,400	69,820
22	36,610	79,500	149,800	233,200	280,500	254,900	184,000	256,600	289,100	268,200	163,000	67,220
23	39,500	81,150	152,300	237,100	280,200	252,900	186,700	256,300	286,900	265,000	159,400	63,580
24	42,500	82,820	154,400	240,800	279,900	251,200	191,900	255,200	286,000	261,500	155,400	59,420
25	46,250	85,060	156,500	243,900	279,600	248,100	196,700	251,800	282,900	258,100	151,900	55,520
26	49,600	87,460	158,200	247,600	278,400	245,600	201,000	249,500	281,400	254,300	148,100	50,200
27	51,880	89,380	160,500	250,400	278,100	243,400	205,500	245,300	282,000	250,600	144,600	46,360
28	55,520	91,180	162,600	253,700	277,500	240,600	212,200	241,400	284,100	247,000	141,200	42,700
29	58,640	93,050	164,700	256,600	-	237,100	220,000	239,000	286,000	243,400	138,000	39,200
30	60,070	94,410	166,800	258,100	-	234,300	225,200	235,300	287,500	239,700	135,000	35,890
31	61,500	-	169,000	260,100	-	231,200	-	230,600	-	236,600	132,000	-

Monthly elevation and contents, water year October 1952 to September 1953

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	3,079.8	‡29,840	-
Oct. 31	3,010.0	61,500	+31,660
Nov. 30	3,132.3	94,410	+32,910
Dec. 31	3,170.9	169,000	+74,590
Calendar year 1952	-	-	-90,200
Jan. 31	3,207.1	260,100	+91,100
Feb. 28	3,213.0	277,500	+17,400
Mar. 31	3,196.6	231,200	-46,300
Apr. 30	3,194.3	225,200	-6,000
May 31	3,196.4	230,600	+5,400
June 30	3,216.3	287,500	+56,900
July 31	3,198.7	236,600	-50,900
Aug. 31	3,153.0	132,000	-104,600
Sept.30	3,087.1	35,890	-96,110
Water year 1952-53	-	-	+6,050

† Elevation at about 8 a.m.
‡ Computed on basis of revised contents table.

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 1953.

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.--42 years, 2,304 cfs.

Extremes.--Maximum discharge during year, 10,700 cfs June 22 (gage height, 7.92 ft); minimum, 4 cfs Dec. 24 (gage height, 0.80 ft); minimum daily, 9 cfs Oct. 21-26.
1911-53: 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.133). Small diversion from tributaries above station for irrigation.

Revisions.--WSP 883: Drainage area.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 18 to June 29)

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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*2,780	10	12	12	22	1,010	3,740	3,620	5,500	6,270	4,150	3,620
2	2,730	10	13	12	22	1,010	3,150	3,600	5,430	5,800	4,080	3,560
3	2,710	10	12	12	25	1,000	2,800	3,580	5,170	5,340	4,040	3,490
4	2,710	10	12	12	25	1,010	2,800	3,560	5,030	5,650	4,020	3,470
5	2,680	10	12	12	28	1,010	2,800	3,680	5,220	5,900	3,920	3,450
6	2,600	10	12	12	31	1,010	2,760	3,760	5,380	5,650	3,840	3,430
7	2,530	10	13	13	31	1,020	2,490	3,780	5,410	5,880	3,820	3,410
8	2,500	10	12	14	35	1,010	2,160	3,860	5,410	5,880	3,840	3,390
9	2,470	10	12	*13	267	1,020	2,090	3,940	5,700	5,680	3,840	3,470
10	2,440	10	13	13	823	1,020	1,950	3,620	6,530	5,430	3,900	3,520
11	2,100	10	13	13	1,050	1,030	1,940	4,000	6,950	5,260	3,920	3,540
12	1,870	207	12	13	1,050	1,650	2,140	4,060	5,840	4,980	3,960	3,540
13	1,840	712	12	16	1,050	2,030	2,410	4,060	6,270	*4,870	4,000	3,520
14	1,840	858	13	16	1,060	2,030	2,630	4,060	6,500	4,730	4,020	3,490
15	822	858	17	12	1,060	2,030	2,800	4,080	7,000	4,800	4,040	3,450
16	13	850	12	15	1,060	*2,030	3,040	4,080	7,900	4,800	4,040	*3,450
17	10	762	12	22	1,060	2,030	3,320	4,100	*8,480	4,980	4,040	3,370
18	10	693	12	54	*1,050	2,020	3,450	2,440	9,500	4,710	4,060	3,280
19	10	858	12	46	1,040	2,030	3,510	4,800	*9,980	4,730	*4,020	3,080
20	10	858	12	34	1,030	2,030	3,470	5,190	9,920	4,730	4,000	2,970
21	9	858	12	35	1,030	2,030	3,430	5,220	9,890	4,660	4,020	2,950
22	9	394	12	27	1,020	2,030	3,430	5,220	10,100	4,620	4,000	2,900
23	9	14	12	25	1,020	2,030	3,370	5,220	9,820	4,590	4,000	2,930
24	9	13	10	23	1,030	2,520	*3,350	5,220	9,890	4,550	3,960	2,810
25	9	*12	10	22	1,030	2,780	3,390	5,190	8,660	4,550	4,040	2,780
26	9	12	12	20	1,010	2,990	3,430	5,780	6,560	4,530	3,940	2,800
27	10	12	12	19	1,010	2,970	3,490	*6,140	5,220	4,480	3,840	2,780
28	10	11	12	19	1,010	3,470	3,540	6,030	4,890	*4,420	3,800	2,860
29	10	12	12	22	-	3,880	3,580	6,030	4,890	4,360	3,720	2,900
30	10	12	13	21	-	3,350	3,620	6,060	5,750	4,270	3,660	2,760
31	*10	-	13	21	-	3,780	-	5,980	-	4,170	3,640	-
Total	34,779	8,116	380	620	19,979	60,860	90,080	139,960	209,790	155,270	122,170	96,970
Mean	1,122	271	12.3	20.0	714	1,963	3,003	4,515	6,993	5,009	3,941	3,232
Ac-ft	68,980	16,100	754	1,230	39,630	120,700	178,700	277,600	416,100	308,000	242,300	192,300

Calendar year 1952: Max 9,380 Min 9 Mean 3,478 Ac-ft 2,525,000
Water year 1952-53: Max 10,100 Min 9 Mean 2,573 Ac-ft 1,862,000

* Discharge measurement made on this day.

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 1953.

Gage.--Water-stage recorder and broad-crested wooden control with V-notch for low stages. Altitude of gage is 4,090 ft (from topographic map).

Extremes.--Maximum discharge during year, 16 cfs Apr. 28 (gage height, 1.49 ft); minimum, 0.3 cfs Nov. 9, 21, but may have been less during period of ice effect; minimum gage height, 0.06 ft Nov. 29 (result of siphon action at weir).
1939-41; 1950-53: 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, that of Nov. 29, 1952.

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

Rating table, water year 1952-53, 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.5	b0.6	0.8	1.4	1.3	4.1	9.0	7.2	2.8	0.9	0.7
2	.5	.5	.7	.7	1.6	1.3	3.9	7.9	9.2	2.7	.9	.7
3	.5	.5	.8	.7	3.0	1.2	3.9	7.4	9.2	2.5	.9	.7
4	.5	.6	.8	.7	3.0	1.2	4.1	7.2	9.6	2.5	.9	.7
5	.5	.6	.8	.7	2.4	1.2	4.3	7.2	10	2.3	.8	.7
6	.5	.6	.8	.8	2.1	1.2	4.4	7.4	10	2.2	.8	.7
7	.5	.6	.8	.8	2.0	1.2	4.3	7.9	12	2.1	.8	.7
8	.5	.6	.8	*.8	2.0	1.3	4.2	7.7	12	2.0	.8	.7
9	.5	.5	.7	1.4	1.7	1.3	3.8	7.4	12	1.9	.8	.7
10	.5	.6	.8	1.2	b1.7	1.4	3.6	6.7	11	1.8	.8	.7
11	.5	.7	.8	1.1	b1.6	1.4	3.4	6.3	10	1.7	.8	.6
12	.5	.7	.9	1.6	b1.6	1.5	3.3	5.9	9.9	1.7	.7	.6
13	.5	.8	.8	2.2	1.6	1.5	3.2	5.6	9.2	1.6	.6	.6
14	.5	.8	.7	1.4	1.6	b1.4	3.0	5.5	8.5	*1.6	.6	.6
15	.5	.7	.7	1.2	1.5	1.4	3.0	5.6	7.9	1.4	.6	.6
16	*.5	.6	.7	1.2	1.5	1.4	3.1	5.8	7.4	1.4	.6	.5
17	.5	.6	.8	1.5	1.5	1.4	3.2	5.9	7.0	1.3	.6	.5
18	.5	.7	.8	3.8	1.4	1.4	3.2	6.0	6.3	1.3	.6	*.5
19	.5	.6	.8	3.3	*b1.2	1.7	3.7	7.7	6.0	1.3	.6	.5
20	.5	.6	.8	2.4	b1.3	2.0	4.7	7.7	*5.6	1.3	*.6	.5
21	.5	.5	.8	2.1	b1.4	1.8	6.5	7.7	5.1	1.3	.7	.5
22	.5	b.5	.8	1.8	b1.5	1.8	*8.5	7.4	4.8	1.2	.7	.5
23	.5	b.5	.7	1.7	1.3	1.8	11	7.0	4.5	1.2	.7	.5
24	.5	*.6	.7	1.6	1.4	2.1	10	6.5	4.3	1.2	.8	.5
25	.5	.5	.6	1.5	1.3	2.5	9.6	6.0	3.9	1.1	.8	.5
26	.5	.5	.7	1.5	1.3	2.6	10	*5.6	3.7	1.1	.8	.5
27	.5	b.5	.7	1.4	1.2	2.9	12	5.3	3.5	1.1	.7	.5
28	.5	b.6	.8	1.4	1.3	3.3	15	6.2	3.4	*1.1	.7	.5
29	.5	b.5	.8	1.4	-	3.6	12	6.8	3.2	1.0	.7	.6
30	.5	b.5	.8	1.4	-	*3.7	10	6.8	3.0	1.0	.8	.5
31	.5	-	.8	1.4	-	3.9	-	7.2	-	.9	.7	-
Total	15.5	17.6	23.6	45.5	46.4	57.7	179.0	210.3	219.4	49.6	22.8	17.6
Mean	0.50	0.59	0.76	1.47	1.66	1.86	5.97	6.78	7.31	1.60	0.74	0.59
Cfsm	0.111	0.131	0.169	0.327	0.369	0.413	1.33	1.51	1.62	0.356	0.164	0.131
In.	0.13	0.15	0.20	0.38	0.38	0.48	1.48	1.74	1.81	0.41	0.19	0.15
Ac-ft	31	35	47	90	92	114	355	417	435	98	45	35

Calendar year 1952: Max 35 Min 0.5 Mean 3.05 Cfsm 0.678 In. 9.23 Ac-ft 2,220
Water year 1952-53: Max 15 Min 0.5 Mean 2.48 Cfsm 0.551 In. 7.50 Ac-ft 1,790

Peak discharge (base, 4.5 cfs).--Jan. 19 (1 a.m.) 6.8 cfs (1.12 ft); Apr. 28 (4 a.m.) 16 cfs (1.49 ft); May 19 (6:30 a.m.) 8.7 cfs (1.23 ft); June 7 (2 p.m.) 12 cfs (1.35 ft).

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

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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 1953.

Gage.--Water-stage recorder. Altitude of gage is 3,120 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,930 cfs Apr. 28 (gage height, 6.11 ft); minimum, 29 cfs Dec. 24 (gage height, 2.08 ft), but may have been less during period of ice effect.
1950-53: Maximum discharge, 3,620 cfs Apr. 27, 1952 (gage height, 8.23 ft); minimum, that of Dec. 24, 1952.

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 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	54	46	76	223	183	850	964	874	396	70	46
2	43	54	58	74	258	155	766	832	1,070	372	72	45
3	42	52	76	70	505	173	736	766	1,090	352	84	44
4	42	52	72	70	814	168	754	760	1,050	333	74	42
5	43	56	72	72	570	160	850	802	1,070	315	69	41
6	43	58	78	72	456	168	886	880	1,010	298	66	39
7	44	57	83	74	396	186	772	994	1,090	282	62	38
8	45	56	83	76	424	214	676	922	1,100	266	59	37
9	42	50	82	*98	368	252	622	802	1,030	255	58	37
10	43	49	82	138	315	311	555	706	994	237	56	35
11	45	62	90	141	308	340	510	634	958	223	56	35
12	46	62	110	155	278	352	475	595	1,030	206	54	33
13	46	70	105	272	278	352	444	805	1,080	194	52	33
14	47	85	95	282	258	308	432	616	1,010	*168	49	33
15	48	84	70	194	255	301	408	670	952	158	49	32
16	49	70	70	181	240	288	460	706	892	148	48	*32
17	49	62	65	220	234	*278	525	706	858	143	47	34
18	49	64	70	790	226	260	570	736	844	134	45	34
19	49	64	76	*922	*170	288	676	1,020	814	124	43	35
20	49	66	87	605	160	348	874	1,130	*748	117	*42	35
21	50	60	84	505	183	322	1,080	1,010	676	112	41	36
22	50	41	80	384	189	308	*1,310	904	634	108	41	36
23	*50	40	56	315	168	311	1,630	808	610	100	41	36
24	50	*48	41	275	168	412	1,500	748	580	96	41	37
25	50	46	42	252	170	590	1,320	670	540	90	44	37
26	50	34	55	231	168	616	1,320	*634	495	89	47	37
27	52	37	70	206	173	652	1,450	595	460	84	46	37
28	52	40	80	206	183	796	1,820	676	448	82	43	38
29	53	38	80	206	-	766	1,440	790	432	78	43	39
30	54	32	82	206	-	868	1,160	760	412	74	47	40
31	54	-	80	203	-	886	-	826	-	72	48	-
Total	1,471	1,643	2,320	7,571	8,138	11,612	26,871	24,267	24,849	5,706	1,637	1,113
Mean	47.5	54.8	74.8	244	291	375	896	783	828	184	52.8	37.1
Cfsm	0.119	0.137	0.187	0.612	0.729	0.940	2.25	1.96	2.08	0.461	0.132	0.093
In.	0.14	0.15	0.22	0.71	0.76	1.08	2.50	2.26	2.32	0.53	0.15	0.10
Ac-ft	2,920	3,260	4,600	15,020	16,140	23,030	53,300	48,130	49,290	11,320	3,250	2,210

Calendar year 1952: Max 3,380 Min 32 Mean 421 Cfsm 1.06 In. 14.38 Ac-ft 306,100
Water year 1952-53: Max 1,820 Min 32 Mean 321 Cfsm 0.805 In. 10.92 Ac-ft 232,500

Peak discharge (base, 800 cfs).--Jan. 18 (8:30 p.m.) 1,700 cfs (5.80 ft); Feb. 4 (4 a.m.) 886 cfs (4.58 ft); Apr. 6 (4 a.m.) 958 cfs (4.70 ft); Apr. 28 (11 a.m.) 1,930 cfs (6.11 ft); May 20 (4 a.m.) 1,230 cfs (5.11 ft); June 7 (10 p.m.) 1,180 cfs (5.04 ft)

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 22 to Dec. 19, Dec. 25 to Jan. 8.

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 1953.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 3,080 ft (from topographic map).

Extremes.--Maximum discharge during year, 118 cfs Jan. 18 (gage height, 2.43 ft); minimum, 0.6 cfs Aug. 18-23; minimum gage height, 0.71 ft Aug. 19-21.
1950-53: Maximum discharge, that of Jan. 18, 1953; minimum, 0.3 cfs Aug. 19, 1951; minimum gage height, that of Aug. 19-21, 1953.

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

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	0.6	1.3	9.0
.8	1.1	1.5	17
.9	2.0	1.7	29
1.0	3.1	1.9	48
1.1	4.5	2.1	71
1.2	6.5	2.3	98

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	2.6	b2.5	3.1	13	7.5	20	20	15	5.3	1.0	1.4
2	2.3	2.7	b2.8	3.0	16	7.5	18	18	22	5.1	1.0	1.3
3	2.1	2.7	2.8	3.0	23	7.0	18	16	21	4.7	1.1	1.5
4	1.8	2.8	3.0	3.0	28	7.0	17	15	20	4.5	1.2	1.4
5	1.9	3.0	3.0	3.0	24	7.0	19	15	20	4.5	1.2	1.4
6	2.2	2.9	3.1	3.0	23	6.8	18	16	20	4.2	1.0	1.0
7	2.0	2.9	3.7	3.1	20	7.2	18	18	23	4.1	.9	1.2
8	2.0	2.9	3.2	3.5	23	8.0	17	17	21	3.8	.9	1.9
9	2.0	2.8	3.1	*4.5	21	8.8	15	15	20	3.7	.9	1.6
10	1.9	2.9	3.2	5.3	20	10	15	13	18	3.5	1.0	1.1
11	1.9	2.9	3.8	4.5	19	11	13	12	18	3.1	1.0	.9
12	1.9	3.0	4.4	6.5	16	11	13	11	18	3.0	1.0	.9
13	1.9	3.1	3.7	14	15	10	13	11	16	2.4	.9	.8
14	2.0	4.7	3.4	14	15	9.0	11	11	15	*2.3	.8	1.2
15	2.0	3.5	b3.2	8.2	15	8.8	11	11	14	2.1	.8	1.4
16	*2.0	3.1	3.1	7.5	14	8.2	12	11	13	2.2	.8	1.4
17	2.0	3.1	3.2	15	13	*8.0	13	11	13	2.2	.8	1.6
18	2.2	3.1	3.4	87	13	7.8	13	9.4	11	2.2	.8	*1.8
19	2.4	3.1	3.4	*59	*11	9.0	15	16	10	1.9	.8	1.7
20	2.6	3.1	4.1	28	b8.8	9.4	19	15	*9.8	1.8	*.8	1.6
21	2.6	2.9	3.7	20	b9.4	8.8	23	16	9.0	1.9	.7	1.7
22	2.6	b2.4	3.5	18	b8.4	9.4	*31	15	8.5	1.9	.7	1.6
23	2.6	b2.3	b3.0	16	b8.4	11	35	15	7.5	1.7	.8	1.6
24	2.6	*3.0	b2.5	14	b8.2	14	*32	14	7.0	1.7	.8	1.6
25	2.4	2.6	b2.6	12	b7.8	20	27	13	7.0	1.9	.8	1.6
26	2.6	2.6	b3.0	12	7.5	20	26	*13	6.8	2.3	.8	1.6
27	2.6	2.8	3.2	11	7.8	20	31	12	6.3	2.3	.8	1.6
28	2.6	b2.8	3.0	11	8.0	20	34	14	6.1	2.3	.8	1.7
29	2.6	b2.5	3.0	11	-	21	27	15	5.7	2.1	.9	1.7
30	2.6	b2.3	3.2	11	-	23	23	14	5.1	1.6	1.0	1.7
31	2.6	-	3.1	11	-	22	-	15	-	.8	1.6	-
Total	69.7	87.1	99.9	425.2	416.3	358.2	597	437.4	406.8	87.1	28.4	43.5
Mean	2.25	2.90	3.22	13.7	14.9	11.6	19.9	14.1	13.6	2.81	0.92	1.45
Cfsm	0.142	0.184	0.204	0.867	0.943	0.734	1.26	0.892	0.861	0.178	0.058	0.092
In.	0.16	0.21	0.24	1.00	0.98	0.84	1.41	1.03	0.96	0.21	0.07	0.10
Ac-ft	138	173	198	843	826	710	1,184	868	807	173	56	86

Calendar year 1952: Max 110 Min 10 Mean 15.2 Cfsm 0.962 In. 13.07 Ac-ft 11,000
Water year 1952-53: Max 87 Min 0.7 Mean 8.37 Cfsm 0.530 In. 7.21 Ac-ft 6,060

Peak discharge (base, 35 cfs).--Jan. 18 (6 p.m.) 118 cfs (2.43 ft); Apr. 23 (4 a.m.) 39 cfs (1.85 ft); Apr. 28 (4 a.m.) 41 cfs (1.87 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Moore Creek near Arrowrock, Idaho

Location.--Lat 43°35', long. 115°59', in sec. 21, T. 3 N., R. 4 E., on right bank 150 ft downstream from bridge on Boise-Arrowrock highway, a quarter of a mile upstream from mouth, and 3 miles southwest of Arrowrock.

Drainage area.--426 sq mi.

Records available.--October 1914 to November 1915 (discharge measurements only), December 1915 to September 1953.

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 0.23 ft higher thereafter.

Average discharge.--37 years (1916-53), 302 cfs.

Extremes.--Maximum discharge during year, 2,060 cfs Apr. 28 (gage height, 3.90 ft, from graph based on gage readings); minimum, 32 cfs Dec. 24 (gage height, 0.35 ft, from graph based on gage readings), but may have been less during period of no gage-height record.

1915-53: 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 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 9-23, Sept. 10-30)

0.3	32	1.6	316
.4	38	2.0	470
.6	56	2.5	750
.8	83	3.0	1,120
1.0	125	4.0	2,180
1.3	212		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*45	60	49	89	252	212	862	992	904	395	74	48
2	45	60	70	83	287	175	806	841	1,080	376	71	46
3	46	60	85	77	458	196	750	764	1,120	353	87	44
4	46	58	80	72	862	190	778	764	1,060	338	77	43
5	46	63	77	76	619	178	876	813	1,100	323	76	43
6	46	66	87	77	502	187	925	911	1,060	309	70	42
7	46	66	92	82	434	209	799	1,030	1,130	276	63	41
8	48	66	91	83	462	238	679	976	1,160	262	57	40
9	46	61	92	*102	407	291	649	855	1,060	252	56	40
10	44	61	92	161	357	342	583	718	1,030	242	55	39
11	47	77	102	164	361	357	525	631	1,000	219	55	38
12	48	78	120	169	331	364	506	613	1,050	209	54	38
13	49	87	118	284	327	364	474	625	1,100	193	54	37
14	50	109	107	320	309	316	462	637	1,020	*175	52	37
15	51	109	82	222	309	316	442	673	960	164	51	36
16	52	98	80	203	284	320	488	711	904	155	49	*36
17	53	83	77	256	276	*302	555	718	862	149	48	37
18	54	78	80	876	262	291	601	744	841	144	47	37
19	56	77	83	*1,190	*190	312	718	1,010	813	136	46	38
20	56	76	96	698	175	364	876	1,160	771	125	*44	39
21	56	62	92	565	193	349	1,100	1,060	718	120	44	38
22	56	42	91	430	209	342	1,340	953	*667	114	43	37
23	57	46	62	353	193	338	*1,680	841	619	111	42	37
24	57	57	42	309	184	399	1,570	778	571	104	43	38
25	56	*55	a40	280	187	577	1,400	692	545	98	45	38
26	58	a40	a60	266	200	613	1,350	643	506	94	47	39
27	58	44	74	238	196	631	1,460	*613	470	91	47	40
28	60	48	94	242	219	771	1,870	679	450	87	44	40
29	60	46	96	245	-	764	1,490	834	434	87	45	41
30	60	a40	92	238	-	869	1,200	799	414	82	50	40
31	*60	-	92	232	-	904	-	855	-	78	51	-
Total	1,612	1,973	2,595	8,682	9,045	12,081	27,814	24,933	25,419	5,861	1,687	1,187
Mean	52.0	65.8	83.7	280	323	390	927	804	847	189	54.4	39.6
Cfsm	0.122	0.154	0.196	0.657	0.758	0.915	2.18	1.89	1.99	0.444	0.128	0.093
In.	0.14	0.17	0.23	0.76	0.79	1.05	2.43	2.18	2.22	0.51	0.15	0.10
Ac-ft	3,200	3,910	5,150	17,220	17,940	23,960	55,170	49,450	50,420	11,630	3,350	2,350

Calendar year 1952: Max 3,700 Min 40 Mean 456 Cfsm 1.07 In. 14.57 Ac-ft 331,100
Water year 1952-53 Max 1,870 Min 36 Mean 337 Cfsm 0.791 In. 10.73 Ac-ft 243,800

Peak discharge (base, 850 cfs).--Jan. 18 (11 p.m.) 2,180 cfs (4.00 ft); Feb. 4 (7 a.m.) 939 cfs (2.77 ft); Apr. 6 (1 a.m.) 1,040 cfs (2.90 ft); Apr. 28 (12:30 p.m.) 2,060 cfs (3.90 ft); May 8 (1 a.m.) 1,100 cfs (2.97 ft); May 20 (5 a.m.) 1,260 cfs (3.16 ft); June 8 (2 a.m.) 1,260 cfs (3.15 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for station above Robie Creek and other nearby streams.

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 1947-53, 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 1953 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, 57,070 acre-ft; November, 17,990 acre-ft; February, 39,630 acre-ft; March, 39,690 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 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							1,570	3,280	1,590	3,530	3,180	2,990
2							1,670	3,210	249	3,500	3,200	2,960
3							2,010	3,220	254	3,520	3,190	2,880
4							2,170	3,230	244	3,530	3,150	2,900
5							2,160	3,280	527	3,530	3,170	2,900
6							2,190	3,370	633	3,500	2,970	2,870
7							2,250	3,440	623	3,540	3,000	2,850
8							2,040	3,520	625	3,490	2,960	2,820
9							2,090	3,450	657	3,510	3,100	2,790
10							2,120	3,480	936	3,490	3,060	2,940
11							1,890	3,480	1,160	3,500	3,150	2,920
12							1,950	3,480	1,710	3,480	3,140	2,960
13							2,140	3,490	743	3,510	3,260	2,920
14							2,360	3,480	946	3,520	3,190	2,890
15							2,770	3,490	1,000	3,510	3,230	2,900
16							2,850	3,490	1,780	3,540	3,220	2,890
17							2,920	3,490	2,310	3,530	3,210	2,870
18							2,910	2,380	2,360	3,530	3,270	2,780
19							3,040	2,380	2,730	3,530	3,230	2,700
20							3,050	3,270	2,950	3,520	3,220	2,580
21							3,180	3,270	3,140	3,520	3,240	2,460
22							3,360	3,240	3,320	3,500	3,280	2,480
23							3,420	3,080	3,520	3,520	3,280	2,460
24							3,410	2,980	3,460	3,520	3,200	2,430
25							3,370	2,880	3,480	3,480	3,320	2,320
26							3,400	2,710	3,480	3,500	3,300	2,390
27							3,440	2,740	3,500	3,500	3,260	2,410
28							3,380	2,680	3,520	3,450	3,130	2,400
29							3,320	2,090	3,550	3,370	3,100	2,550
30							3,370	1,610	3,540	3,380	2,980	2,520
31							-	1,610	-	3,210	2,940	-
Total							79,800	94,800	58,537	108,260	98,130	81,730
Mean							2,660	3,058	1,951	3,492	3,165	2,724
Ac-ft							158,300	188,000	116,100	214,700	194,600	162,100

Calendar year	: Max	Min	Mean	Ac-ft
The period	: Max 3,550	Min 244	Mean -	Ac-ft 1,034,000

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 1953.

Gage.--Staff gages read once daily. Datum of gage is 2,500.5 ft above mean sea level (surveys of Bureau of Reclamation).

Extremes.--Maximum contents observed during year, 177,900 acre-ft June 2, 3 (gage height, 30.08 ft); minimum observed, 42,400 acre-ft Sept. 12.
1917-53: 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51,160	71,460	91,170	94,050	97,540	133,900	163,900	168,900	177,500	160,200	98,570	49,040
2	51,950	71,710	91,460	94,190	97,540	135,600	165,800	169,500	177,900	158,000	97,760	48,270
3	52,630	71,710	91,460	94,190	97,690	137,700	167,500	170,000	177,900	155,700	96,520	47,230
4	53,430	71,910	91,600	94,190	97,690	139,600	169,000	170,400	177,200	153,200	95,200	46,470
5	54,520	72,040	91,960	94,330	97,690	141,400	170,600	171,000	176,600	150,800	94,190	45,770
6	55,510	72,230	92,030	94,330	97,690	143,100	171,500	171,000	175,800	148,700	92,680	44,760
7	56,680	72,430	92,030	94,330	98,200	145,000	173,000	171,000	175,400	146,300	91,240	43,810
8	57,980	72,560	92,170	94,480	98,720	146,700	174,200	170,600	175,200	143,900	89,460	43,340
9	59,420	72,620	92,320	94,620	98,790	148,500	174,700	169,600	174,600	141,700	87,630	42,720
10	60,560	72,820	92,750	94,840	99,010	150,200	175,400	168,900	174,200	139,500	85,880	42,640
11	61,900	73,080	93,040	94,910	100,300	151,300	175,600	168,500	174,100	137,800	84,010	42,490
12	63,070	73,340	93,040	95,200	102,400	151,400	175,500	168,200	174,700	135,100	82,020	42,400
13	64,300	73,800	93,180	95,200	104,300	151,300	175,300	167,500	175,700	133,000	80,050	42,750
14	65,360	74,910	93,180	95,790	106,100	151,200	175,200	166,900	175,500	130,800	78,100	43,010
15	66,610	76,230	93,110	95,930	108,100	150,900	175,200	166,300	174,700	128,500	76,100	43,120
16	68,570	78,030	93,180	95,930	109,900	150,700	175,400	165,300	174,200	125,800	74,260	43,600
17	69,210	79,920	93,110	96,220	111,600	150,600	175,400	164,300	174,400	123,400	71,840	43,920
18	69,850	81,950	93,180	96,520	113,500	150,500	175,600	163,400	175,000	121,400	69,780	44,710
19	70,100	83,740	93,110	97,100	115,200	150,300	175,600	162,500	175,200	119,200	67,750	45,450
20	70,170	85,680	93,110	97,100	117,100	150,100	175,500	162,600	175,200	117,000	65,920	46,310
21	70,300	87,490	93,040	97,100	119,000	149,900	175,200	162,800	175,400	115,100	63,680	46,800
22	70,360	89,040	93,180	97,250	121,400	149,800	174,800	163,700	175,400	113,400	61,720	47,670
23	70,490	89,750	93,320	97,250	122,700	149,700	173,700	165,200	174,600	111,700	59,840	48,210
24	70,490	90,600	93,320	97,250	124,800	149,500	173,200	166,600	173,700	109,700	58,220	48,650
25	70,620	91,100	93,470	97,250	126,500	150,600	172,300	168,500	172,500	108,100	56,330	49,320
26	70,750	91,240	93,470	97,400	128,300	152,500	171,000	170,300	170,600	106,700	54,350	49,700
27	70,940	91,240	93,610	97,400	130,200	154,400	170,000	172,000	168,900	104,900	53,370	50,260
28	71,070	91,240	93,610	97,400	132,100	156,200	169,500	173,500	166,800	103,900	52,350	51,050
29	71,200	91,240	93,680	97,400	-	158,200	169,000	175,800	164,800	102,700	51,380	51,610
30	71,260	91,170	93,760	97,540	-	160,200	168,800	177,100	162,600	101,700	50,650	52,010
31	71,390	-	93,900	97,540	-	162,000	-	177,400	-	100,300	50,090	-

Monthly gage height and usable contents, water year October 1952 to September 1953

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept. 30	13.40	50,560	-
Oct. 31	16.83	71,390	+20,740
Nov. 30	19.74	91,170	+19,780
Dec. 31	20.12	93,900	+2,730
Calendar year 1952	-	-	-940
Jan. 31	20.62	97,540	+3,640
Feb. 28	25.01	132,100	+34,560
Mar. 31	28.41	162,000	+29,900
Apr. 30	29.14	168,800	+6,800
May 31	30.02	177,400	+8,600
June 30	28.48	162,600	-14,800
July 31	20.99	100,300	-62,300
Aug. 31	13.30	50,090	-50,210
Sept. 30	13.64	52,010	+1,920
Water year 1952-53	-	-	+1,360

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 1953.

Gage.--Water-stage recorder. Datum of gage is 2,675.46 ft above mean sea level (datum of Corps of Engineers, Boise River Surveys). Prior to Apr. 30, 1943, water-stage recorder at site 1 mile upstream at datum 13.69 ft higher. Apr. 30 to July 10, 1943, water-stage recorder at site 400 ft downstream at present datum.

Extremes.--Maximum discharge during year, 8,270 cfs June 19 (gage height, 7.70 ft); minimum, 24 cfs Nov. 23 (gage height, 2.55 ft); minimum daily, 30 cfs Nov. 19.
1940-53: 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 or no gage-height record, which are fair. Flow regulated by Arrowrock Reservoir (see p. 135) and Anderson Ranch Reservoir (see p. 133). New York, Ridenbaugh, and four smaller canals divert between Moore Creek and this station (see following page).

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.6	29	4.0	708
2.8	54	5.0	2,370
3.0	96	6.0	4,440
3.3	204	7.7	8,270
3.6	374		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	471	86	a80	123	274	242	3,040	1,690	5,550	3,450	1,070	785
2	440	86	89	123	308	b230	2,480	1,580	6,190	3,330	1,050	774
3	455	86	99	120	418	218	1,550	1,480	*6,470	2,560	1,040	763
4	432	84	96	114	785	223	1,370	1,390	6,080	2,520	1,040	730
5	403	84	102	114	763	218	1,420	1,390	5,960	2,760	993	719
6	367	89	105	102	633	214	1,480	1,550	6,010	2,760	978	719
7	263	91	111	113	553	218	1,320	*1,660	6,030	2,620	922	719
8	258	91	120	130	570	238	896	1,750	6,150	2,780	922	708
9	286	86	117	130	351	263	689	1,780	5,800	2,620	883	719
10	274	79	123	158	77	775	623	1,570	6,580	2,370	870	730
11	286	86	126	179	430	1,340	579	1,530	6,420	2,220	870	719
12	215	77	130	*183	487	1,690	652	1,710	6,720	1,910	883	730
13	187	43	137	242	447	2,430	719	1,690	6,810	1,750	896	730
14	196	39	133	389	447	2,410	689	1,670	6,770	1,440	909	719
15	247	34	126	328	432	2,390	605	1,710	6,470	*1,600	922	699
16	204	32	133	247	410	2,370	730	1,820	6,610	1,580	935	689
17	117	32	123	291	396	2,350	1,040	1,820	7,100	1,580	922	*680
18	105	31	108	780	367	2,350	1,320	1,090	7,450	1,460	896	642
19	94	30	114	1,530	274	2,370	1,390	2,180	8,110	1,460	922	614
20	96	31	120	963	*b260	*2,410	1,460	3,540	*7,970	1,440	909	570
21	*96	31	126	741	b240	2,390	1,480	3,500	7,720	1,410	*896	562
22	91	31	123	597	252	2,350	1,570	3,430	7,510	1,300	896	562
23	86	61	114	503	247	2,070	1,730	3,430	7,580	1,250	896	562
24	84	72	61	425	238	1,800	1,690	3,480	7,430	1,230	896	553
25	84	38	a65	381	233	2,160	1,570	*3,480	7,030	1,220	883	519
26	82	*94	a75	341	233	2,260	1,510	3,710	5,010	1,230	857	511
27	82	b65	96	302	233	2,220	1,570	4,330	3,100	1,200	818	511
28	79	a70	123	280	238	2,480	2,050	4,660	2,310	1,200	807	479
29	82	a70	130	280	-	3,180	2,070	5,320	2,240	1,130	807	479
30	82	a65	133	274	-	3,000	1,840	5,500	2,520	*1,080	807	463
31	86	-	130	269	-	3,120	-	5,500	-	1,080	807	-
Total	6,330	1,894	3,468	10,752	10,596	51,979	41,132	80,940	183,700	57,540	28,202	19,359
Mean	204	63.1	112	347	378	1,677	1,371	2,611	6,123	1,856	910	645
Ac-ft	12,560	3,760	6,880	21,330	21,020	103,100	81,580	160,500	364,400	114,100	55,940	38,400

Calendar year 1952: Max 7,790 Min 30 Mean 2,329 Ac-ft 1,691,000
Water year 1952-53: Max 8,110 Min 30 Mean 1,359 Ac-ft 983,600

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for Moore Creek near Arrowrock and other Boise River stations and diversions.
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 1947-53 in reports of Geological Survey. Records of daily diversion for each canal from 1916 to 1953 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 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							27	1,990	983	2,320	2,110	1,870
2							27	1,980	889	2,290	2,080	1,860
3							149	2,000	869	2,420	2,050	1,860
4							185	2,040	878	2,430	2,060	1,840
5							217	2,140	832	2,440	2,040	1,820
6							532	2,230	811	2,430	2,020	1,820
7							500	2,210	807	2,420	2,000	1,800
8							485	2,210	774	2,460	1,990	1,770
9							632	2,180	719	2,450	1,970	1,740
10							728	2,130	714	2,420	1,970	1,760
11							793	2,100	808	2,400	1,950	1,770
12							863	2,150	857	2,370	1,860	1,810
13							953	2,220	848	2,310	1,870	1,730
14							1,090	2,230	835	2,250	1,940	1,730
15							1,160	2,250	921	2,280	1,960	1,700
16							1,280	2,240	1,100	2,350	1,970	1,680
17							1,340	2,240	1,270	2,400	2,000	1,630
18							1,450	2,190	1,550	2,440	1,990	1,570
19							1,510	2,000	1,690	2,340	2,030	1,580
20							1,590	2,000	1,870	2,360	2,020	1,560
21							1,730	1,990	1,900	2,380	2,010	1,470
22							1,870	1,910	1,970	2,340	2,000	1,460
23							2,030	1,840	2,100	2,330	2,000	1,460
24							2,110	1,760	2,160	2,360	2,020	1,450
25							2,130	1,730	2,180	2,340	1,990	1,410
26							2,110	1,600	2,180	2,310	1,950	1,370
27							2,110	1,490	2,260	2,290	1,940	1,350
28							1,640	1,450	2,280	2,240	1,920	1,340
29							1,780	1,370	2,270	2,200	1,900	1,340
30							1,910	1,110	2,260	2,180	1,890	1,310
31							-	1,120	-	2,140	1,880	-
Total							34,931	60,100	41,585	72,690	61,380	48,860
Mean							1,164	1,939	1,386	2,345	1,980	1,629
Ac-ft							69,280	119,200	82,480	144,200	121,700	96,910

Calendar year	: Max	Min	Mean	Ac-ft
The period	: Max -	Min -	Mean -	Ac-ft 633,800

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 steel highway bridge, a quarter of a mile southeast of Notus, and 7 miles northwest of Caldwell.

Drainage area.--3,820 sq mi, approximately.

Records available.--April 1920 to September 1953.

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, 7,690 cfs June 3 (gage height, 7.82 ft); minimum, 42 cfs Aug. 21 (gage height, 1.10 ft); minimum daily, 48 cfs Aug. 21.
1920-53: Maximum discharge, 20,500 cfs Apr. 20, 1943 (gage height, 10.43 ft); minimum observed, 10 cfs Aug. 18, 21, 1920.

Remarks.--Records good. Diversions above station for irrigation of about 309,300 acres. Diversions between station and mouth for irrigation of about 5,300 acres. Flow regulated by Arrowrock Reservoir (see p. 135) and Anderson Ranch Reservoir (see p. 133). Records of chemical analyses and water temperatures for the water year 1953 are given in WSP 1293.

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 25, 26)

Oct. 1 to Jan. 17		Jan. 18 to June 26				June 27 to Sept. 30			
2.1	270	1.7	177	4.0	1,550	1.1	42	2.5	565
2.4	395	2.0	284	5.0	2,630	1.3	75	3.0	965
2.7	575	2.5	520	6.0	4,160	1.6	147	4.0	1,960
3.2	965	3.0	810	8.0	8,170	2.0	288	5.0	3,120

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	362	808	675	638	846	810	3,560	1,390	6,120	1,840	300	255
2	362	800	690	638	852	792	3,340	1,220	6,740	2,340	300	217
3	381	800	698	631	909	786	2,100	1,080	7,490	1,730	353	194
4	395	800	690	624	1,080	774	1,560	916	*6,910	1,350	373	168
5	395	800	690	617	1,420	768	1,580	619	6,530	1,560	368	165
6	400	792	698	*624	1,320	756	1,470	505	6,390	1,750	328	177
7	412	792	712	624	1,200	756	1,460	480	6,580	1,470	255	225
8	372	784	705	624	1,730	756	1,240	660	6,700	1,610	184	217
9	367	776	698	645	1,390	774	870	870	6,580	1,550	190	236
10	376	768	712	631	987	810	720	974	6,430	1,340	228	268
11	376	768	720	652	890	1,670	636	834	6,810	1,090	180	288
12	395	768	712	668	1,100	1,930	548	780	6,640	974	162	320
13	353	768	712	690	1,100	2,750	553	762	7,080	734	96	353
14	300	776	705	816	1,060	2,990	440	660	6,930	586	81	400
15	390	760	690	906	1,060	2,930	288	654	6,680	*400	75	416
16	652	720	698	864	1,030	2,890	200	708	6,320	427	56	444
17	645	705	690	864	1,000	2,860	251	798	6,490	416	61	441
18	736	690	682	1,490	1,000	*2,860	586	822	6,510	427	52	499
19	728	682	675	2,610	*928	2,860	660	826	6,910	358	59	525
20	720	682	675	2,160	858	2,920	738	3,250	*7,230	383	52	493
21	*720	675	668	1,640	852	3,000	654	3,870	7,100	368	48	*456
22	744	668	675	1,410	840	3,000	542	3,890	6,790	416	50	416
23	856	660	668	1,230	828	2,930	510	3,870	6,530	348	70	*410
24	848	682	652	1,120	816	2,440	619	3,990	6,450	328	*106	394
25	864	698	603	1,040	810	2,660	*548	3,900	6,340	363	153	410
26	856	*660	603	974	804	2,800	465	3,920	5,190	363	194	422
27	840	698	603	928	810	2,930	563	4,550	2,880	394	221	400
28	832	690	624	896	810	2,930	1,480	4,780	1,650	358	221	468
29	824	668	638	883	-	3,770	1,820	6,200	1,300	363	228	468
30	816	668	652	864	-	3,960	1,570	6,470	1,160	328	247	506
31	816	-	652	852	-	3,580	-	6,160	-	272	259	-
Total	18,133	22,006	20,965	29,853	28,330	68,442	31,571	70,408	179,460	26,236	5,550	10,651
Mean	585	734	676	963	1,012	2,208	1,052	2,271	5,982	846	179	355
Ac-ft	35,970	43,650	41,580	59,210	56,190	135,800	62,620	139,700	356,000	52,040	11,010	21,130

Calendar year 1952: Max 8,350 Min 94 Mean 2,411 Ac-ft 1,751,000
Water year 1952-53: Max 7,490 Min 48 Mean 1,402 Ac-ft 1,015,000

* Discharge measurement made on this day.

Malheur River near Drewsey, Oreg.

Location.--Lat 43°47', long. 118°20', in SE¼ sec. 31, T. 20 S., R. 36 E., on left bank 300 ft downstream from crossing of Burns-Ontario highway, half a mile downstream from Cottonwood Creek, and 3 miles southeast of Drewsey.

Drainage area.--910 sq mi, approximately (revised).

Records available.--June 1920 to September 1921, April to September 1923, June 1926 to September 1953. 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 (corrected) 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.--27 years (1926-53), 170 cfs.

Extremes.--Maximum discharge during year, 3,190 cfs Jan. 19 (gage height, 10.56 ft); minimum, 4.6 cfs Sept. 20, 21 (gage height, 2.79 ft).
1920-21, 1923, 1926-53: 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 backwater from diversion dam, which are fair, and 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.

Rating table, water year 1952-53, except periods of ice effect or backwater from diversion dam (gage height, in feet, and discharge, in cubic feet per second)

2.7	1.0	3.5	94
2.8	5	4.0	190
2.9	12	5.0	440
3.0	22	7.0	1,150
3.2	45	10.0	2,800

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	41	46	b70	380	152	512	858	648	170	21	26
2	16	30	51	78	365	130	479	697	566	164	17	24
3	17	28	*b62	b75	524	*136	*485	608	497	154	24	17
4	17	28	68	b70	778	146	521	560	*482	148	30	20
5	17	33	70	b70	545	136	584	533	554	142	28	21
6	17	40	b65	b70	587	136	680	536	515	126	*26	19
7	18	41	b70	b80	686	148	672	554	602	108	22	20
8	19	38	b66	b90	669	178	578	572	648	*108	20	20
9	19	33	b65	b340	418	235	509	548	627	90	20	21
10	19	37	71	360	335	290	470	497	605	61	20	19
11	19	57	73	215	318	285	430	428	524	65	20	15
12	22	62	76	b290	305	258	400	382	485	66	19	11
13	22	66	76	798	285	240	375	352	497	62	20	7.8
14	*23	80	73	669	272	208	350	348	524	57	21	7.1
15	24	76	68	350	252	198	352	382	479	48	23	7.1
16	22	62	68	248	220	190	395	395	524	41	23	7.8
17	22	41	65	577	228	178	452	398	527	35	22	7.8
18	23	b45	68	1,600	220	174	530	425	465	34	21	6.4
19	24	b50	73	2,470	180	215	593	503	420	31	19	5.7
20	25	b45	b73	*1,080	168	260	690	795	395	30	20	4.6
21	25	b45	b68	882	152	220	767	806	352	29	19	4.6
22	29	b45	b65	530	166	210	*946	690	320	29	15	5.7
23	25	b42	b60	449	156	270	1,130	620	290	23	13	7.1
24	30	b40	b50	415	158	497	1,230	620	275	21	16	7.8
25	30	b40	b55	358	152	722	1,090	569	248	20	19	8.5
26	33	b40	b60	298	154	593	1,000	515	235	18	*21	7.8
27	32	b40	b60	230	158	518	1,070	470	220	17	22	9.2
28	35	b40	b55	232	172	548	1,470	422	186	21	23	9.9
29	35	b38	b60	232	-	539	1,280	420	184	21	29	11
30	35	b35	b65	252	-	506	1,040	467	182	19	28	14
31	37	-	b60	302	-	524	-	473	-	17	28	-
Total	745	1,338	2,005	13,780	9,003	9,040	21,080	16,443	13,076	1,975	669	372.9
Mean	24.0	44.6	64.7	445	322	292	703	530	436	63.7	21.6	12.4
Ac-ft	1,480	2,650	3,980	27,330	17,860	17,930	41,810	32,610	25,940	3,920	1,330	740

Calendar year 1952: Max 4,290 Min 4.2 Mean 367 Ac-ft 266,500
Water year 1952-53: Max 2,470 Min 4.6 Mean 245 Ac-ft 177,800

Peak discharge (base, 800 cfs).--Jan. 14 (1 a.m.) 1,030 cfs (6.70 ft); Jan. 19 (4:30 a.m.) 3,190 cfs (10.56 ft); Feb. 4 (7 a.m.) 878 cfs (6.32 ft); Apr. 28 (8 to 10 p.m.) 1,540 cfs (7.85 ft); May 21 (1 to 2 a.m.) 882 cfs (6.33 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Backwater from diversion dam Oct. 1 to Dec. 2.

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 1953 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 gage 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.--41 years (1909-16, 1919-53), 176 cfs.

Extremes.--Maximum discharge during year, 1,400 cfs Apr. 30 (gage height, 6.62 ft); minimum, 1 cfs Nov. 30, Dec. 26.
1906-17, 1919-53: 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 above 10 cfs, poor below. Flow completely regulated since November 1919 by Warmsprings Reservoir (see p. 152). Diversions for irrigation of about 16,000 acres above station.

Revisions (water years).--WSP 833: 1936. WSP 1063: 1942-45.

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
2.7	1	3.6	53	3.6	57	5.0	590
2.8	2	3.8	88	3.8	94	6.0	1,090
3.0	7	4.0	135	4.0	143	6.5	1,340
3.2	16	4.5	315	4.5	340		
3.4	30						

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	292	2	2	2	3	4	5	1,300	530	565	615	425
2	297	2	2	2	3	3	5	1,120	580	575	615	405
3	297	3	2	2	3	3	5	1,000	570	575	605	400
4	297	2	2	2	3	3	5	850	555	575	575	400
5	297	2	2	2	3	3	6	600	535	570	*560	400
6	297	2	2	2	3	3	61	515	550	565	555	400
7	297	2	3	3	3	3	112	520	555	*570	540	395
8	292	2	2	4	4	3	112	530	605	570	525	395
9	292	2	2	3	3	3	96	540	650	565	520	390
10	292	2	2	3	3	3	78	530	705	625	515	375
11	292	2	2	3	3	3	112	520	680	675	515	370
12	292	2	2	3	3	3	138	425	630	675	510	370
13	292	3	2	3	3	3	164	440	580	670	500	370
14	292	3	2	3	3	3	277	485	560	670	495	355
15	116	3	2	3	3	3	336	485	555	665	490	350
16	3	3	2	3	3	4	390	485	550	665	490	326
17	2	3	2	3	3	4	455	485	550	665	490	322
18	2	3	2	3	3	4	500	490	550	670	490	318
19	2	3	2	3	3	6	500	490	520	670	490	308
20	2	3	2	3	3	5	500	495	500	670	485	304
21	2	3	2	3	3	5	500	540	495	650	485	308
22	2	3	2	3	3	3	500	600	500	650	490	264
23	2	2	2	3	3	3	505	635	505	645	490	242
24	2	2	2	3	3	3	415	640	505	645	490	206
25	2	2	2	3	3	3	295	640	510	645	490	192
26	2	2	1	3	3	3	259	620	535	645	480	195
27	2	2	2	3	3	3	272	590	545	640	475	192
28	2	2	2	3	3	4	308	565	540	625	470	192
29	2	2	2	3	-	4	565	490	540	615	455	188
30	2	2	2	3	-	5	955	470	540	615	445	170
31	2	-	2	3	-	5	-	495	-	615	430	-
Total	4,267	71	62	88	85	110	8,431	18,590	16,725	19,440	15,780	9,527
Mean	138	2.4	2.0	2.8	3.0	3.5	281	600	558	627	509	318
Ac-ft	8,460	141	123	175	169	218	16,720	36,870	33,170	38,560	31,300	18,900

Calendar year 1952: Max 2,100 Min - Mean 261 Ac-ft 189,800
Water year 1952-53: Max 1,300 Min 1 Mean 255 Ac-ft 184,800

* Discharge measurement made on this day.

North Fork Malheur River above Agency Valley Reservoir, near Beulah, Oreg.

Location.--Lat 43°58', long. 118°11', in sec. 33, T. 18 S., R. 37 E., on left bank at M. W. Scott's ranch, 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 1953. 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.--17 years, 129 cfs.

Extremes.--Maximum discharge during year, 1,130 cfs Jan. 18 (gage height, 3.00 ft); minimum not determined; minimum daily, 34 cfs Nov. 9.
1914, 1936-53: 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.

Remarks.--Records good October to December and March to July, poor at other times. Diversions for irrigation of about 900 acres above station.

Revisions (water years).--WSP 883: 1938(M). WSP 1093: 1944(m).

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 24		Dec. 25 to Sept. 30			
-0.1	31	-0.2	39	1.0	260
0.0	36	0.0	59	1.5	410
.2	49	.2	87	2.0	630
.5	78	.5	142	2.3	780

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	44	45	55	150	89	275	414	482	192	60	68
2	46	40	50	60	170	86	268	366	490	181	65	65
3	46	41	*65	65	200	*96	*280	342	517	174	75	60
4	46	43	70	70	300	96	327	342	*512	165	80	60
5	46	44	70	75	200	92	375	369	499	159	70	58
6	47	43	65	80	220	97	378	414	482	157	*66	55
7	47	41	70	90	250	115	330	450	508	150	65	55
8	46	40	70	113	228	140	294	434	504	*144	60	55
9	47	34	67	96	128	172	275	386	494	136	60	52
10	48	42	59	97	126	181	262	348	446	126	58	50
11	51	45	64	97	134	172	240	321	410	120	55	50
12	51	46	64	151	118	165	228	300	434	117	52	50
13	50	52	62	235	126	150	215	297	470	113	50	50
14	*49	56	54	185	120	124	208	318	426	104	55	50
15	49	53	51	126	115	134	205	330	430	101	60	50
16	50	43	49	128	104	130	228	336	490	94	58	50
17	50	43	48	321	122	118	250	339	410	92	55	50
18	49	45	45	755	111	120	265	351	386	84	52	50
19	48	50	45	386	97	152	306	454	363	78	50	50
20	48	48	50	*348	80	150	336	462	348	75	45	50
21	48	45	48	240	90	157	442	422	321	71	45	50
22	48	45	45	174	96	162	*535	369	294	69	45	50
23	47	43	42	170	96	207	645	363	282	66	45	50
24	47	40	40	155	87	287	605	348	270	63	48	50
25	46	40	45	142	87	306	562	309	260	60	50	50
26	46	40	50	120	97	265	605	300	245	58	*51	50
27	45	40	50	96	104	268	730	275	238	55	55	50
28	44	40	45	104	113	300	770	262	225	58	60	50
29	44	38	50	108	-	280	615	303	220	60	70	52
30	44	35	55	117	-	282	499	318	198	62	70	56
31	44	-	50	124	-	303	-	439	-	55	70	-
Total	1,462	1,299	1,683	5,083	3,869	5,396	11,553	11,081	11,654	3,239	1,800	1,586
Mean	47.2	43.3	54.3	164	138	174	385	357	388	104	58.1	52.9
Ac-ft	2,900	2,580	3,340	10,080	7,670	10,700	22,920	21,980	23,120	6,420	3,570	3,150

Calendar year 1952: Max 1,080 Min 30 Mean 191 Ac-ft 138,800
Water year 1952-53: Max 770 Min 34 Mean 164 Ac-ft 118,400

Peak discharge (base, 500 cfs).--Jan. 18 (6 p.m.) 1,130 cfs (3.00 ft); Apr. 28 (3:30 a.m.) 840 cfs (2.42 ft); May 20 (3 to 4 a.m.) 508 cfs (1.74 ft); May 31 (2 p.m.) 650 cfs (2.04 ft); June 16 (2 a.m.) 610 cfs (1.96 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Nov. 11, 21, 22, Nov. 28 to Dec. 2, Feb. 1-7, July 26-29, July 31 to Aug. 5, Aug. 7-25, Aug. 27 to Sept. 30; discharge estimated on basis of records for Malheur River near Drewsey and computed inflow to Agency Valley Reservoir. Stage-discharge relation affected by ice Nov. 18-20, 24-27, Dec. 3-7, 17-19, Dec. 22 to Jan. 7.

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 1953. 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.--18 years (1935-53), 135 cfs.

Extremes.--Maximum discharge during year, 864 cfs Apr. 28 (gage height, 4.01 ft); minimum, 0.1 cfs at times Oct. 23 to Mar. 3.
1909-12, 1913-14, 1926-53: 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 fair. Flow regulated by Agency Valley Reservoir (see p. 152). Diversions for irrigation of about 2,400 acres above station; practically entire summer flow is diverted below station and above Juntura.

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 29				Apr. 30 to Sept. 30	
0.0	0.1	1.0	75	1.8	230
.1	.5	1.5	155	2.0	280
.2	2.8	2.0	265	3.0	560
.3	7	3.0	540	4.0	860
.5	20	4.0	860		
.7	39				

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	173	0.2	0.3	0.2	0.1	0.1	4.1	518	512	355	290	352
2	173	.2	.3	.2	.1	.1	4.1	413	593	375	272	360
3	161	.2	*.3	.2	.1	*.2	*4.1	434	584	383	252	358
4	155	.2	.3	.2	.1	.2	2.8	410	*659	375	252	355
5	146	.2	.3	.2	.2	.3	2.6	380	701	370	250	352
6	137	.2	.3	.2	.2	.3	2.6	383	620	383	*250	352
7	118	.2	.3	.2	.2	.4	45	383	614	*404	248	338
8	117	.1	.3	.2	.1	.4	65	437	641	407	248	328
9	120	.1	.3	.3	.1	.4	62	464	551	407	248	325
10	102	.2	.3	.2	.1	.4	63	455	533	342	245	325
11	94	.1	.3	.2	.1	.4	63	449	539	312	250	325
12	94	.1	.3	.2	.2	.5	63	425	497	312	255	322
13	94	.1	.3	.3	.2	.7	63	404	491	310	278	320
14	*92	.2	.3	.3	.2	.7	65	401	485	310	292	318
15	34	.1	.3	.3	.2	.7	65	407	482	310	302	318
16	.3	.2	.3	.3	.2	1.0	65	407	545	310	312	318
17	.3	.2	.3	.3	.2	1.0	66	407	554	308	312	315
18	.3	.2	.3	.3	.2	1.0	66	407	530	308	310	312
19	.4	.2	.3	.3	.1	1.0	66	362	452	305	318	310
20	.4	.2	.3	.3	.1	1.0	94	345	386	305	345	308
21	.4	.2	.3	.2	.2	1.2	148	348	350	305	358	308
22	.4	.2	.3	.2	.3	1.2	*191	398	358	302	360	302
23	.2	.3	.3	.2	.2	1.6	275	378	348	302	358	302
24	.1	.3	.3	.2	.2	1.6	399	368	342	302	352	300
25	.1	.3	.3	.1	.2	1.9	516	368	342	300	352	300
26	.1	.3	.2	.1	.2	2.1	552	355	350	300	*350	298
27	.1	.3	.2	.1	.2	2.6	639	338	358	300	350	298
28	.1	.3	.2	.1	.2	2.6	822	285	348	300	350	310
29	.1	.3	.2	.1	-	2.8	846	282	340	298	350	320
30	.1	.3	.2	.1	-	3.6	761	358	345	298	348	318
31	.1	-	.2	.1	-	3.6	-	398	-	298	345	-
Total	1,813.5	6.2	8.7	6.4	4.7	35.6	6,080.3	12,167	14,450	10,196	9,402	9,667
Mean	58.5	0.21	0.28	0.21	0.17	1.15	203	392	482	329	303	322
Ac-ft	3,600	12	17	13	9.3	71	12,060	24,130	28,660	20,220	18,650	19,170

Calendar year 1952: Max 1,230 Min 0 Mean 218 Ac-ft 158,000
Water year 1952-53: Max 846 Min 0.1 Mean 175 Ac-ft 126,600

* Discharge measurement made on this day.

Malheur River at Little Valley near Hope, Oreg.

Location.--Lat 43°54', long. 117°30', in SE¼ sec. 24, T. 19 S., R. 42 E., on right bank 500 ft downstream from bridge at Little Valley, 8 miles southwest of Hope, and 13 miles southwest of Vale.

Drainage area.--3,010 sq mi, approximately.

Records available.--April 1949 to September 1953.

Gage.--Water-stage recorder. Datum of gage is 2,424.12 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Extremes.--Maximum discharge during year, 1,690 cfs May 1 (gage height, 4.88 ft); minimum not determined; minimum daily, 27 cfs Apr. 6.
1949-53: 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.
The two greatest floods known occured in March 1894 and March 1910.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Vale-Oregon Canal diverts at Namorf; no other large diversions above station, but many small ones. Flow regulated by Warmsprings and Agency Valley Reservoirs (see p. 152).

Revisions (water years).--WSP 1217: 1949(M), 1950.

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 1				May 2 to Sept. 30			
1.6	20	3.0	350	2.0	74	3.0	350
1.8	42	3.5	580	2.2	112	4.0	840
2.0	73	4.0	900	2.5	190	4.6	1,220
2.5	192	5.0	1,810				

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	95	a30	b32	43	95	64	66	1,420	828	247	268	238
2	102	a30	b34	43	91	*61	77	1,140	1,100	259	277	226
3	104	a35	*b36	43	93	59	55	906	1,050	284	265	223
4	100	a40	b38	43	111	59	a40	840	990	294	262	220
5	93	45	b40	45	117	58	a30	710	1,020	294	238	217
6	89	45	41	43	137	56	*27	435	1,030	*287	229	217
7	83	49	42	45	142	55	a30	390	1,030	287	226	217
8	85	b45	43	48	214	56	a35	374	*1,040	290	214	202
9	81	b45	45	99	214	56	43	422	1,170	298	205	190
10	75	b45	45	117	198	56	64	445	1,200	298	*193	181
11	79	b45	46	113	157	56	50	426	1,140	308	193	178
12	75	50	46	120	134	56	40	398	1,110	308	193	170
13	73	53	46	132	125	56	43	304	1,030	318	193	170
14	68	59	46	200	120	55	52	301	954	312	193	173
15	68	55	48	170	113	53	70	336	908	308	193	181
16	*71	55	49	149	111	55	144	332	846	315	196	164
17	50	53	49	137	111	53	195	346	864	315	193	148
18	40	52	49	294	108	53	206	354	858	312	184	133
19	37	50	49	*622	97	59	226	426	792	318	184	133
20	36	49	49	520	87	56	235	422	650	332	187	126
21	35	48	49	343	79	70	*214	445	540	322	208	126
22	34	46	49	271	81	64	198	515	450	318	217	121
23	32	42	46	220	79	71	195	615	370	304	229	119
24	a31	41	45	184	70	75	214	655	340	294	241	97
25	a31	b40	45	162	68	75	256	630	304	294	*247	95
26	a31	b38	43	147	66	68	256	645	290	298	244	89
27	a30	b36	42	134	66	53	265	675	287	301	244	91
28	a30	b35	42	120	66	59	301	635	284	287	244	89
29	a30	b32	42	*106	-	58	450	615	277	277	244	84
30	a30	b30	42	97	-	46	924	635	274	271	241	86
31	a30	-	43	97	-	42	-	665	-	262	244	-
Total	1,848	1,318	1,361	4,907	3,150	1,813	5,001	17,457	23,024	9,212	6,889	4,704
Mean	59.6	43.9	43.9	158	112	58.5	167	563	767	297	222	157
Ac-ft	3,670	2,610	2,700	9,730	6,250	3,600	9,920	34,630	45,670	18,270	13,660	9,330

Calendar year 1952: Max 6,820 Min 30 Mean 382 Ac-ft 277,100
Water year 1952-53: Max 1,420 Min 27 Mean 221 Ac-ft 160,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for station near Drewsey and unpublished records for station below Nevada Dam near Vale.
b Stage-discharge relation affected by ice.

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 1953 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.--17 years (1933-34, 1937-53), 42.3 cfs.

Extremes.--Maximum discharge during year, 952 cfs Jan. 19 (gage height, 3.87 ft); minimum, 9 cfs July 22, 23.
1933-53: 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 good except those for period of ice effect, which are poor. Occasional fluctuation caused by releases from Vale-Oregon Canal which diverts water for irrigation of lands west of Vale; considerable return flow enters Bully Creek above station. Diversions above station for irrigation of about 7,000 acres.

Revisions (water years).--WSP 1183: 1946-47.

Rating tables, water year 1952-53, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from moss Oct. 1-17, Aug. 8 to Sept. 30)

Oct. 1 to Jan. 18				Jan. 19 to Sept. 30			
0.9	10	1.5	67	0.6	9	2.0	173
1.0	14	2.0	175	.8	18	2.5	300
1.2	29	3.0	520	1.0	31	3.0	510
				1.2	46	4.0	1,030
				1.5	80		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	14	b11	15	71	70	117	64	333	44	19	22
2	17	14	*b11	15	71	*60	84	42	390	41	14	20
3	17	14	b12	15	74	59	75	73	279	40	15	18
4	17	13	b13	15	102	59	71	62	258	40	18	18
5	18	15	14	14	119	59	77	57	300	39	21	25
6	18	16	14	14	119	59	*80	58	300	*39	20	28
7	20	15	15	13	141	58	88	53	310	36	21	24
8	22	16	18	15	260	59	90	48	*350	32	19	24
9	23	15	15	42	184	63	76	55	402	32	20	24
10	21	15	17	268	159	65	119	59	291	29	*21	24
11	19	16	16	76	147	67	97	41	262	26	21	25
12	19	16	16	55	133	66	72	18	265	25	20	24
13	18	17	16	230	123	64	72	32	273	25	20	24
14	17	22	15	428	115	60	62	33	242	22	19	24
15	18	19	15	212	106	54	54	37	220	20	16	23
16	*19	16	15	140	94	53	68	37	268	20	16	23
17	19	16	15	185	90	46	53	24	230	13	16	21
18	18	16	15	424	90	40	38	36	169	13	20	21
19	16	15	14	*660	77	39	52	50	155	13	19	20
20	16	15	14	346	68	51	47	49	117	12	18	20
21	16	15	14	300	68	46	34	53	92	12	17	20
22	16	15	14	222	71	51	32	72	82	11	18	20
23	16	14	12	186	70	51	37	97	104	11	18	22
24	15	b13	13	171	67	79	63	117	123	11	20	22
25	15	b13	13	153	65	125	61	119	100	11	*24	22
26	15	b13	14	131	64	123	53	121	60	14	22	19
27	15	b12	14	104	65	117	55	125	60	12	30	18
28	15	b12	12	*90	67	121	45	97	58	13	21	19
29	15	b12	14	86	-	127	77	131	56	18	23	19
30	15	b11	15	76	-	113	95	230	52	19	31	20
31	15	-	13	72	-	106	-	191	-	11	25	-
Total	537	445	439	4,773	2,880	2,205	2,044	2,281	6,201	704	622	653
Mean	17.3	14.8	14.2	154	103	71.1	68.1	73.6	207	22.7	20.1	21.8
Ac-ft	1,070	883	871	9,470	5,710	4,370	4,050	4,520	12,300	1,400	1,230	1,300

Calendar year 1952: Max 1,630 Min 7 Mean 82.3 Ac-ft 59,770
Water year 1952-53: Max 660 Min 11 Mean 65.2 Ac-ft 47,170

Peak discharge (base, 130 cfs).--Jan. 9 (1:30 a.m.) 565 cfs (3.11 ft); Jan. 14 (9 a.m.) 605 cfs (3.19 ft); Jan. 19 (5 a.m.) 952 cfs (3.87 ft); Feb. 8 (3 a.m.) 297 cfs (2.49 ft); Mar. 25 (7 to 9 p.m.) 151 cfs (1.89 ft); Apr. 1 (9 a.m. to 3 p.m.) 147 cfs (1.87 ft); June 2 (11 a.m. to 1 p.m.) 570 cfs (3.12 ft); about June 8 (time unknown) 460 cfs (2.90 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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 1953. Tape gage read once daily April to September and 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, 194,900 acre-ft May 1 (elevation, 3,406.85 ft); minimum observed, 89,380 acre-ft Oct. 15 (elevation 3,379.65 ft). Maximum contents observed during period 1920-53, 196,000 acre-ft Apr. 7, 1942 (elevation, 3,407.08 ft); no contents Sept. 18 to Nov. 1, 1929, Aug. 26 to sometime in November 1935, Sept. 18 to Oct. 11, 1950.

Reservoir is formed by concrete-arch dam; capacity, 191,000 acre-ft between elevations 3,327 ft (bottom of outlet tunnel) and 3,406 ft (top of 5-foot flashboards). Dead storage, 1,400 acre-ft below elevation 3,327 ft, 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 of Vale project of Bureau of Reclamation. Water used to irrigate lands on both side 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 1953. Pressure gage with mercury column read once each day except Nov. 5-29 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, 60,320 acre-ft June 2 (elevation, 3,340.21); minimum observed, 4,360 acre-ft Oct. 15 (elevation, 3,291.40 ft). Maximum contents observed during period 1935-53, 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 (botttom 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 1952 to September 1953

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	3,382.50	98,650	-	3,295.75	6,480	-
Oct. 31	-	a91,000	-7,650	3,294.90	6,040	-440
Nov. 30	-	a93,500	+2,500	3,300.05	9,010	+2,970
Dec. 31	3,382.05	97,160	+3,660	3,305.20	12,680	+3,670
Calendar year 1952	-	-	+79,160	-	-	+810
Jan. 31	3,391.05	128,300	+31,140	3,317.21	24,820	+12,140
Feb. 28	3,395.75	146,500	+18,200	3,324.85	34,810	+9,990
Mar. 31	-	a164,000	+17,500	3,332.50	46,570	+11,760
Apr. 30	3,406.70	194,200	+30,200	3,340.05	60,020	+13,450
May 31	3,406.30	192,400	-1,800	3,340.15	60,200	+180
June 30	3,405.12	187,000	-5,400	3,339.30	58,600	-1,600
July 31	3,396.0	147,500	-39,500	3,331.38	44,740	-13,860
Aug. 31	3,387.0	113,800	-33,700	3,320.95	29,480	-15,260
Sept.30	3,381.0	93,700	-20,100	3,305.94	13,290	-16,190
Water year 1952-53	-	-	-4,950	-	-	+6,810

† Time of observed gage reading not given.
‡ 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 1953.

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.--12 years, 886 cfs.

Extremes.--Maximum discharge during year, 5,030 cfs June 13 (gage height, 6.69 ft); minimum, 158 cfs Dec. 24 (gage height, 2.47 ft).
1941-53: Maximum discharge, 5,250 cfs May 28, 1948 (gage height, 6.73 ft); minimum, 148 cfs Dec. 9, 1944 (gage height, 2.40 ft).

Remarks.--Records excellent except those for periods of ice effect, which are fair. No regulation. Several small diversions for irrigation and placer mining, the return flow from which enters river above station.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 21 to June 4)

2.5	173	4.5	1,710
2.7	238	5.0	2,340
2.9	323	5.5	3,050
3.2	488	6.0	3,880
3.5	705	6.6	4,990
4.0	1,160		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	338	305	b260	274	318	292	657	1,320	2,200	3,160	871	470
2	338	296	b320	270	328	270	596	1,160	*2,390	3,040	862	464
3	333	296	b320	270	428	278	575	1,120	2,440	2,990	925	446
4	333	300	b310	270	501	270	589	1,160	2,500	3,020	853	440
5	333	305	b310	266	412	270	673	1,350	2,690	3,000	817	434
6	328	305	b320	274	384	270	649	1,680	2,530	2,960	773	422
7	328	296	b330	282	353	278	589	1,890	2,640	2,930	756	417
8	328	287	b320	282	358	314	540	1,660	2,620	2,870	714	412
9	323	278	314	333	328	368	508	1,450	2,550	2,720	705	406
10	328	282	310	417	278	412	482	1,290	2,600	2,540	689	400
11	328	314	300	343	*323	395	452	1,180	3,080	2,510	665	395
12	328	314	300	412	305	378	440	1,160	4,020	2,400	641	390
13	323	318	292	501	323	363	417	1,240	4,930	2,340	625	384
14	323	318	287	422	310	338	406	1,300	4,440	2,320	611	378
15	323	314	278	*348	310	333	395	1,510	3,830	*2,170	596	378
16	318	287	b280	343	305	333	422	1,660	*3,620	1,910	596	384
17	318	287	282	363	318	338	476	1,750	3,950	1,690	589	390
18	318	305	282	417	305	318	534	1,850	4,500	1,570	567	384
19	314	300	282	417	262	328	657	2,270	4,520	1,500	560	378
20	318	296	287	384	242	333	898	2,320	3,930	1,410	*553	368
21	318	274	282	373	258	318	1,240	2,060	3,560	1,330	534	363
22	314	242	282	353	300	314	1,630	1,810	3,560	1,240	527	363
23	310	262	246	338	274	314	1,990	1,640	3,740	1,200	514	358
24	310	*318	182	323	274	358	1,790	1,530	3,660	1,140	520	358
25	310	250	188	318	287	501	1,710	1,400	3,370	1,100	520	*358
26	310	203	242	305	300	476	1,870	1,320	3,040	1,060	508	358
27	305	246	292	305	292	482	2,050	1,300	2,880	1,010	501	358
28	*305	234	314	300	296	*575	*2,280	1,440	2,840	989	488	358
29	310	224	300	305	-	567	1,840	1,620	2,940	943	482	363
30	310	231	292	305	-	641	1,560	1,680	3,080	916	476	358
31	305	-	287	296	-	673	-	1,950	-	889	470	-
Total	9,928	8,487	8,891	10,409	8,972	11,698	28,915	48,070	98,650	60,867	19,508	11,735
Mean	320	283	287	336	320	377	964	1,551	3,288	1,963	629	391
Cfsm	0.702	0.621	0.629	0.737	0.702	0.827	2.11	3.40	7.21	4.30	1.38	0.857
In.	0.81	0.69	0.73	0.85	0.73	0.95	2.36	3.92	8.05	4.96	1.59	0.96
Ac-ft	19,690	16,830	17,640	20,650	17,800	23,200	57,350	95,350	195,700	120,700	38,690	23,280

Calendar year 1952: Max 4,690 Min 182 Mean 972 Cfsm 2.13 In. 29.02 Ac-ft 705,900
Water year 1952-53: Max 4,930 Min 182 Mean 894 Cfsm 1.96 In. 26.60 Ac-ft 646,900

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

Deadwood Reservoir near Lowman, Idaho

Location.--Lat 44°18', long. 115°39', in SE¼ sec. 8, T. 11 N., R. 7 E., at dam on Deadwood River, 15 miles north of Lowman.

Drainage area.--108 sq mi.

Records available.--October 1935 to September 1953.

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, 5,336.4 ft June 20, 21; minimum observed, 5,285.35 ft Oct. 15.
1935-53: Maximum elevation observed, 5,337.1 ft June 1, 2, 1943; minimum observed, 5,205.0 ft Sept. 18 to Oct. 11, 1951, reservoir 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. Gage read 7 to 9 a.m.

Cooperation.--Gage readings furnished by Bureau of Reclamation.

Elevation, in feet, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	296.5	286.65	288.7	290.95	294.45	296.55	298.9	305.7	321.9	335.95	327.55	320.85
2	295.3	286.75	288.8	291.0	294.55	296.6	299.0	306.2	322.7	335.9	326.6	319.7
3	294.1	286.8	288.85	291.05	294.65	296.65	299.05	306.6	323.4	335.9	325.7	318.5
4	292.85	286.85	288.9	291.15	294.8	296.75	299.15	306.9	324.3	335.85	324.75	317.3
5	291.6	286.95	288.95	291.2	294.9	296.8	299.25	307.3	325.1	335.8	323.9	316.05
6	291.0	287.0	289.05	291.25	295.0	296.85	299.35	307.8	325.9	335.75	323.15	315.0
7	290.3	287.05	289.15	291.35	295.05	296.95	299.5	308.4	326.7	335.75	322.6	314.0
8	289.6	287.1	289.25	291.5	295.1	297.0	299.6	309.0	327.6	335.7	322.2	313.1
9	289.0	287.15	289.3	291.8	295.2	297.05	299.7	309.5	328.3	335.65	322.15	312.3
10	288.25	287.25	289.4	292.0	295.25	297.15	299.8	310.0	329.0	335.6	322.25	311.5
11	287.6	287.35	289.55	292.1	295.3	297.2	299.9	310.4	329.75	335.55	322.3	310.7
12	286.9	287.4	289.7	292.3	295.35	297.3	300.0	310.8	330.6	335.5	322.4	309.95
13	286.15	287.45	289.85	292.5	295.45	297.35	300.15	311.2	331.6	335.4	322.45	309.15
14	285.45	287.6	289.95	292.7	295.5	297.4	300.25	311.6	332.7	335.35	322.55	308.5
15	285.35	287.7	290.0	292.8	295.55	297.5	300.35	312.0	333.7	335.1	322.6	307.75
16	285.45	287.8	290.05	292.9	295.65	297.55	300.5	312.6	334.6	335.1	322.7	307.1
17	285.55	287.9	290.1	293.0	295.7	297.65	300.6	313.1	335.25	335.05	322.8	306.4
18	285.6	287.95	290.15	293.2	295.8	297.7	300.75	313.7	335.8	335.0	322.85	305.8
19	285.65	288.0	290.25	293.4	295.85	297.8	300.85	314.7	336.2	335.0	322.9	305.15
20	285.75	288.1	290.35	293.55	295.9	297.85	300.95	315.6	336.4	334.95	323.0	304.5
21	285.85	288.15	290.4	293.65	296.0	297.9	301.1	316.4	336.4	334.55	323.05	303.85
22	285.9	288.2	290.45	293.7	296.05	297.95	301.4	317.0	336.35	334.2	323.1	303.2
23	286.0	288.25	290.5	293.75	296.1	298.05	301.7	317.5	336.3	333.75	323.15	302.65
24	286.05	288.3	290.55	293.85	296.2	298.15	302.2	318.0	336.3	333.3	323.2	302.1
25	286.15	288.35	290.6	293.9	296.25	298.3	302.7	318.5	336.25	332.7	323.25	301.55
26	286.2	288.4	290.65	294.0	296.35	298.4	303.3	318.9	336.2	332.1	323.35	301.0
27	286.25	288.45	290.7	294.05	296.4	298.5	303.7	319.3	336.1	331.4	323.3	300.5
28	286.35	288.55	290.75	294.1	296.45	298.6	304.1	319.7	336.0	330.7	323.25	300.0
29	286.4	288.6	290.8	294.2	-	298.7	304.7	320.15	336.0	330.0	323.15	299.5
30	286.5	288.65	290.85	294.3	-	298.75	305.2	320.7	335.95	329.25	322.85	299.0
31	286.6	-	290.9	294.35	-	298.85	-	321.3	-	328.45	322.0	-

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 1953.

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.--26 years (1927-53), 211 cfs.

Extremes.--Maximum discharge during year, 2,580 cfs July 14 (gage height, 6.56 ft); minimum observed, 2 cfs for many days during period when gates in dam were closed.
1926-53: Maximum discharge, that of July 14, 1953; no flow or small amount of leakage from reservoir for long periods during 1934-37 when gates in dam were closed.

Remarks.--Records excellent above 200 cfs and fair below. Flow regulated by Deadwood Reservoir (see preceding page).

Revisions (water years).--WSP 1123: 1943.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-14, June 16-20)

0.5	1	2.0	242
.6	3	2.5	365
.7	10	3.0	505
.8	20	4.0	895
1.0	48	6.0	2,150
1.5	139		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,090	2	2	2	2	2	3	3	4	980	1,510	1,640
2	1,200	2	2	2	2	2	3	3	4	955	1,540	1,640
3	1,220	2	2	2	2	2	3	3	4	925	1,540	1,630
4	1,240	2	2	2	2	2	3	3	4	895	1,460	1,620
5	828	2	2	2	2	2	3	4	4	868	1,310	1,500
6	602	2	2	2	2	2	3	4	4	846	1,100	1,370
7	630	*2	2	2	2	2	3	4	4	828	720	1,310
8	633	2	2	2	2	2	3	4	4	796	368	1,190
9	702	2	2	2	2	2	3	4	4	760	3	1,110
10	622	2	2	2	2	2	3	4	4	720	3	1,080
11	619	2	2	2	2	2	3	4	*4	672	3	1,080
12	619	2	2	2	2	2	3	5	3	630	10	1,010
13	616	2	2	2	2	2	3	5	3	588	3	985
14	373	2	2	2	2	2	3	5	3	*803	3	915
15	3	2	2	2	2	2	3	5	9	427	3	877
16	2	2	2	2	2	2	3	5	222	408	3	846
17	2	2	2	2	2	2	3	5	548	392	3	814
18	2	2	2	2	2	2	3	5	895	372	3	800
19	2	2	2	2	2	2	3	4	1,130	350	*3	810
20	2	2	2	2	2	2	3	4	1,230	751	3	810
21	2	2	2	2	2	2	4	4	1,240	890	3	769
22	2	2	2	2	2	2	4	4	1,230	930	2	732
23	2	2	2	2	2	2	4	4	1,230	1,060	2	680
24	2	2	2	2	2	2	4	4	1,210	1,110	2	*664
25	2	2	2	2	2	2	4	4	1,180	1,170	2	636
26	2	2	2	2	2	2	4	4	1,110	1,250	62	626
27	2	2	2	2	2	2	4	4	1,050	1,250	158	626
28	2	2	2	2	2	2	3	4	1,020	1,240	208	626
29	2	2	2	2	-	2	3	4	1,000	1,310	462	608
30	2	2	2	2	-	2	3	4	990	1,400	1,170	591
31	2	2	2	2	-	2	-	4	-	1,470	1,550	-
Total	11,029	60	62	62	56	62	97	127	15,347	27,046	13,212	29,595
Mean	356	2.0	2.0	2.0	2.0	2.0	3.2	4.1	512	872	426	986
Ac-ft	21,880	119	123	123	111	123	192	252	30,440	53,640	26,210	58,700

Calendar year 1952: Max 1,780 Min 1 Mean 231 Ac-ft 168,000
Water year 1952-53: Max 1,640 Min 2 Mean 265 Ac-ft 191,900

* Discharge measurement made on this day.
Note.--No gage-height record (gates closed) Oct. 15 to June 14, Aug. 9-11, 13-25, except once-weekly staff-gage readings; discharge estimated on basis of staff-gage readings, weather records, and records for station near Lowman.

Deadwood River near Lowman, Idaho

Location.--Lat 44°05', long. 115°40', in sec. 29, T. 9 N., R. 7 E., on left bank 700 ft upstream from mouth and 2½ miles west of Lowman.

Drainage area.--230 sq mi, approximately.

Records available.--August 1921 to January 1953 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 3,680 ft (from topographic map).

Average discharge.--31 years, 390 cfs.

Extremes.--Maximum discharge during period October 1952 to January 1953, 1,280 cfs Oct. 3-5 (gage height, 3.20 ft); minimum daily, 40 cfs Dec. 24, 25.
1921-53: Maximum discharge, 4,230 cfs May 9, 1928 (gage height, 5.17 ft), from rating curve extended above 3,200 cfs; minimum recorded, 28 cfs Nov. 4, 1935; minimum gage height, 0.82 ft Dec. 8, 1951; minimum daily discharge, 34 cfs Nov. 4, 1935.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Flow regulated by Deadwood Reservoir (see p. 154).

Revisions.--WSP 633: Drainage area.

Rating table, Oct. 1, 1952, to Jan. 31, 1953, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	36	2.0	319
1.1	58	2.5	606
1.3	91	3.0	995
1.6	164	4.0	2,250

Discharge, in cubic feet per second, October 1952 to January 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,070	58	50	62								
2	1,240	54	60	60								
3	1,260	56	60	60								
4	1,280	58	58	60								
5	990	58	58	60								
6	667	58	60	60								
7	703	57	65	60								
8	703	56	60	62								
9	746	56	60	67								
10	696	54	62	95								
11	688	60	65	87								
12	688	66	70	89								
13	688	67	60	140								
14	609	66	54	120								
15	98	62	52	*82								
16	66	54	50	90								
17	61	54	52	110								
18	61	58	55	140								
19	60	58	60	160								
20	60	56	60	140								
21	60	54	60	120								
22	60	50	55	110								
23	58	48	50	100								
24	57	*58	40	90								
25	58	50	40	85								
26	58	45	45	80								
27	58	41	54	78								
28	*58	47	68	75								
29	58	47	66	75								
30	58	47	65	75								
31	58	-	64	75								
Total	13,075	1,653	1,778	2,767								
Mean	422	55.1	57.4	89.3								
Ac-ft	25,930	3,280	3,530	5,490								

Calendar year 1952: Max 1,940 Min 40 Mean 488 Ac-ft 354,000
Water year 1952-53: Max - Min - Mean - Ac-ft -

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 6-10, 12-28, Dec. 30 to Jan. 7, Jan. 16-31; discharge estimated on basis of weather records and records for South Fork Payette River at Lowman and near Garden Valley. Stage-discharge relation affected by ice Nov. 4-7, 9-12, Nov. 18 to about Jan. 6, Jan. 13-15.

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 1953.

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.--29 years (1924-53), 1,283 cfs.

Extremes.--Maximum discharge during year, 7,060 cfs June 18 (gage height, 6.33 ft); minimum, 195 cfs Nov. 27 (gage height, 1.40 ft).
1921-53: 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 fair. Practically no diversion above station. Flow regulated by Deadwood Reservoir (see p. 154).

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.4	195	3.5	2,190
1.6	310	4.0	2,890
2.0	600	5.0	4,510
2.5	1,050	6.3	7,000
3.0	1,570		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,430	403	b290	368	468	438	1,000	2,140	3,370	4,800	2,540	2,310
2	1,620	389	b320	362	505	403	936	1,870	*3,720	4,600	2,560	2,290
3	1,620	368	b370	362	685	410	898	1,760	3,840	4,470	2,630	2,270
4	1,640	389	b380	362	888	396	898	1,850	3,870	4,470	2,560	2,260
5	1,430	396	368	356	736	389	1,010	2,110	4,110	4,400	2,330	2,180
6	1,020	410	389	362	651	396	1,020	2,640	3,850	4,310	2,100	1,970
7	1,080	389	410	375	584	410	955	3,060	4,090	4,280	1,740	1,880
8	1,070	375	396	*389	600	452	879	2,710	4,090	4,160	1,390	1,750
9	1,130	336	396	438	544	528	815	2,350	3,890	3,970	1,000	1,630
10	1,040	336	410	608	452	626	753	2,070	3,850	3,710	842	1,590
11	1,040	403	403	505	*482	626	719	1,880	4,240	3,610	824	1,570
12	1,040	417	417	536	482	592	702	1,820	5,350	3,470	806	1,540
13	1,040	431	403	753	490	568	668	1,960	6,540	3,320	779	1,460
14	1,020	424	396	694	482	528	660	2,020	6,080	3,580	762	1,440
15	505	410	368	536	482	520	626	2,350	5,280	*2,950	753	1,360
16	438	362	368	498	460	512	668	2,570	*5,180	2,670	744	1,340
17	431	349	375	544	468	512	728	2,680	5,810	2,400	736	1,320
18	431	375	375	753	460	482	833	2,830	6,680	2,240	719	1,290
19	424	382	382	806	375	505	974	3,500	6,940	2,120	702	1,280
20	424	368	389	660	b320	528	1,290	3,720	6,360	2,140	*694	1,280
21	424	336	375	626	b350	512	1,760	3,310	5,830	2,450	694	1,270
22	417	256	368	560	445	498	2,290	2,880	5,730	2,350	676	1,220
23	410	274	330	520	b390	490	3,010	2,600	5,890	2,360	660	1,170
24	410	356	b240	498	b390	544	2,740	2,420	5,770	2,430	660	1,130
25	*410	*316	b240	482	403	753	2,560	2,200	5,390	2,420	685	*1,130
26	410	b220	b300	460	424	779	2,780	2,090	4,920	2,460	651	1,090
27	410	250	362	445	431	762	3,100	2,020	4,670	2,460	788	1,090
28	410	b280	431	438	438	*898	*3,610	2,230	4,560	2,390	806	1,080
29	410	b280	410	445	-	898	2,980	2,500	4,580	2,380	824	1,090
30	410	b260	396	445	-	964	2,530	2,600	4,730	2,460	1,500	1,050
31	403	-	389	431	-	1,030	-	2,960	-	2,520	2,050	-
Total	24,397	10,540	11,446	15,617	13,885	17,949	44,392	75,700	149,210	98,350	37,205	45,330
Mean	787	351	369	504	496	579	1,480	2,442	4,974	3,173	1,200	1,511
Ac-ft	48,390	20,910	22,700	30,980	27,540	35,600	88,050	150,100	296,000	195,100	73,800	89,910

Calendar year 1952: Max 6,250 Min 220 Mean 1,579 Ac-ft 1,146,000
Water year 1952-53: Max 6,940 Min 220 Mean 1,490 Ac-ft 1,079,000

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

South Fork Payette River near Banks, Idaho

Location.--Lat 44°05'30", long. 116°06'00", in sec. 28, T. 9 N., R. 3 E., on right bank 1 mile upstream from North Fork Payette River and 1½ miles northeast of Banks.

Drainage area.--1,200 sq mi, approximately.

Records available.--August 1921 to September 1953.

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.--32 years, 1,711 cfs.

Extremes.--Maximum discharge during year, 9,320 cfs June 13 (gage height, 8.96 ft); minimum, 327 cfs Dec. 25 (gage height, 0.18 ft).
1921-53: Maximum discharge, 13,800 cfs May 17, 1927 (gage height, 10.6 ft, from floodmarks); minimum, about 225 cfs Dec. 15, 1935, Jan. 26, 1936, Dec. 26, 1939.

Remarks.--Records excellent except those for period of ice effect, which are good, and those for periods of no gage-height record, which are fair. Small diversions above station for irrigation. Flow regulated by Deadwood Reservoir (see p. 154).

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.2	335	3.0	2,130
.5	465	4.0	3,030
1.0	720	6.0	5,250
2.0	1,370	9.0	9,380

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,520	555	b440	550	822	740	1,870	3,630	5,040	5,720	2,730	2,430
2	1,740	545	b500	545	950	660	1,730	3,170	*5,700	5,500	2,750	2,420
3	1,750	520	b570	540	1,360	660	1,640	2,950	5,880	5,350	2,840	2,380
4	1,780	525	b580	535	1,850	700	1,640	3,070	5,880	5,320	2,770	2,360
5	1,380	560	565	530	1,540	680	1,860	3,490	6,230	5,200	2,590	2,310
6	1,140	570	580	545	1,250	660	1,930	4,260	5,850	5,080	2,310	2,070
7	1,200	545	616	550	1,120	676	1,760	5,020	6,210	5,000	2,000	2,000
8	1,200	525	605	*575	1,220	725	1,590	4,540	6,340	4,840	1,640	1,860
9	1,220	492	590	626	1,090	815	1,490	3,900	5,960	4,600	1,240	1,740
10	1,200	474	595	886	950	1,000	1,380	3,430	5,900	4,270	1,040	1,690
11	1,170	570	590	780	912	1,100	1,290	3,100	6,210	4,120	1,010	1,670
12	1,170	610	610	786	*905	1,100	1,240	2,990	7,590	3,960	990	1,640
13	1,170	638	610	1,280	886	1,100	1,170	3,210	9,020	3,780	964	1,570
14	1,160	626	590	1,250	853	1,000	1,140	3,290	8,460	3,840	938	1,540
15	709	610	570	918	846	960	1,100	3,740	7,610	*3,480	918	1,460
16	570	560	555	798	804	910	1,160	4,060	*7,170	3,050	898	1,450
17	565	520	555	892	810	920	1,300	4,240	7,820	2,790	886	1,430
18	560	550	560	1,610	798	890	1,460	4,480	8,720	2,650	872	1,400
19	555	570	565	1,710	682	910	1,750	5,670	8,960	2,470	853	1,390
20	555	545	580	1,350	605	1,000	2,300	6,120	8,200	2,450	840	1,380
21	560	520	570	1,260	632	960	3,120	5,370	7,410	2,740	*828	1,370
22	555	424	555	1,060	726	920	3,980	4,660	7,190	2,640	822	1,320
23	555	416	515	944	692	970	5,350	4,220	7,330	2,630	804	1,280
24	555	b500	362	866	670	1,080	4,890	3,930	7,170	2,700	798	1,240
25	*550	*b460	362	822	665	1,450	4,440	3,570	6,650	2,660	840	*1,220
26	550	b390	456	786	687	*1,550	4,720	3,390	6,100	2,700	810	1,180
27	550	b380	621	744	660	1,500	5,370	3,260	5,760	2,700	912	1,180
28	550	b450	638	726	700	1,720	6,520	3,530	5,620	2,620	944	1,180
29	550	b450	600	726	-	1,730	*5,270	3,970	5,600	2,610	976	1,200
30	550	b420	585	738	-	1,870	4,390	4,000	5,680	2,670	1,520	1,170
31	550	-	575	726	-	1,940	-	4,430	-	2,720	2,160	-
Total	28,389	15,520	17,265	26,654	25,685	32,896	78,850	122,690	203,260	112,860	42,493	48,530
Mean	916	517	557	860	917	1,061	2,628	3,958	6,775	3,641	1,371	1,618
Ac-ft	56,310	30,780	34,240	52,870	50,950	65,250	156,400	243,400	403,200	223,900	84,280	96,260

Calendar year 1952: Max 9,870 Min 362 Mean 2,254 Ac-ft 1,636,000
Water year 1952-53: Max 9,020 Min 362 Mean 2,069 Ac-ft 1,498,000

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Feb. 27 to Mar. 5, Mar. 8-22; discharge estimated on basis of recorded range in stage, weather records, 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 1953 (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, 7.09 ft July 1; minimum, 1.99 ft Nov. 10, 11. 1921-53: 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.39	2.06	2.07	2.25	2.48	2.34	2.44	3.76	5.00	7.02	6.76	6.21
2	3.38	2.04	2.12	2.26	2.48	2.33	2.44	3.65	5.29	6.93	6.76	6.19
3	3.37	2.03	2.12	2.25	2.52	2.33	2.44	3.57	5.32	6.96	6.79	6.17
4	3.35	2.02	2.12	2.25	2.53	2.32	2.43	3.54	5.40	7.03	6.76	6.16
5	3.34	2.02	2.11	2.24	2.52	2.31	2.45	3.63	5.45	7.01	6.75	6.15
6	3.32	2.02	2.18	2.25	2.53	2.31	2.45	3.87	5.33	6.93	6.72	6.13
7	3.29	2.01	2.22	2.32	2.52	2.30	2.47	4.15	5.58	6.92	6.70	6.12
8	3.20	2.00	2.22	2.35	2.51	2.29	2.47	4.17	5.54	6.95	6.66	6.11
9	3.11	2.00	2.26	2.34	2.48	2.29	2.51	4.08	5.37	6.92	6.65	6.09
10	3.04	1.99	2.29	2.33	2.46	2.28	2.50	3.95	5.34	6.94	6.61	6.09
11	2.96	2.00	2.31	2.33	2.44	2.29	2.49	3.85	5.50	6.98	6.59	6.08
12	2.88	2.03	2.30	2.37	2.43	2.31	2.51	3.77	5.86	6.97	6.56	6.05
13	2.82	2.03	2.30	2.43	2.42	2.31	2.53	3.81	6.16	-	6.54	6.04
14	2.74	2.09	2.29	2.45	2.40	2.31	2.52	3.92	6.18	-	6.52	6.03
15	2.68	2.10	2.28	2.45	2.41	2.31	2.51	4.09	6.10	-	6.50	6.02
16	2.61	2.10	2.27	2.50	2.40	2.35	2.50	4.29	5.95	-	6.48	6.01
17	2.56	2.09	2.27	2.55	2.41	2.35	2.49	4.54	6.05	-	6.46	5.97
18	2.50	2.10	2.28	2.64	2.43	2.36	2.50	4.73	6.11	6.93	6.44	5.95
19	2.45	2.09	2.28	2.63	2.44	2.43	2.51	5.25	5.99	6.95	6.42	5.95
20	2.40	2.11	2.28	2.65	2.41	2.43	2.55	5.33	5.70	6.97	6.41	5.92
21	2.35	2.08	2.28	2.62	2.40	2.44	2.62	5.14	5.48	6.97	6.37	5.94
22	2.32	2.07	2.28	2.62	2.39	2.46	2.78	4.86	5.44	6.98	6.35	5.90
23	2.27	2.07	2.26	2.60	2.38	2.45	3.00	4.59	5.45	6.95	6.34	5.88
24	2.22	2.06	2.25	2.58	2.37	2.45	3.12	4.38	5.36	6.94	6.33	5.86
25	2.18	2.05	2.24	2.55	2.36	2.46	3.20	4.19	5.23	6.93	6.31	5.84
26	2.14	2.05	2.23	2.52	2.35	2.45	3.34	4.10	5.28	6.91	6.30	5.84
27	2.11	2.04	2.24	2.50	2.35	2.45	3.62	4.02	5.56	6.88	6.29	5.82
28	2.07	2.03	2.25	2.51	2.35	2.44	3.88	4.06	6.08	6.87	6.27	5.80
29	2.05	2.02	2.25	2.50	-	2.44	3.93	4.25	6.59	6.84	6.25	5.79
30	2.04	2.02	2.25	2.50	-	2.44	3.88	4.45	6.95	6.82	6.24	5.78
31	2.05	-	2.25	2.49	-	2.44	-	4.71	-	6.78	6.23	-

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 1953.

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.--42 years (1908-16, 1919-53), 355 cfs.

Extremes.--Maximum discharge during year, 2,660 cfs June 15 (gage height, 6.21 ft); minimum, 7 cfs Nov. 11-14, Nov. 22 to Dec. 1; minimum gage height, 1.27 ft Nov. 11, 12, 24, 25.

1908-17, 1919-53: Maximum discharge, 4,260 cfs June 10, 1933, June 4, 1948; maximum gage height, 7.71 ft June 4, 1948; practically no flow Nov. 5-8, 1931, Nov. 17-24, 1933, Nov. 14-27, 1935, Oct. 22 to Nov. 11, 1938.

Remarks.--Records good except those for period of no gage-height record and those below about 10 cfs, which are fair. Flow partly regulated by gates at outlet of Payette Lake (see preceding page) and several smaller lakes upstream. No diversions above station.

Cooperation.--Water-stage recorder inspected by employees of U. S. Forest Service.

Revisions.--WSP 963: Drainage area.

Rating table, water year 1952-53 (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	4.5	1,100
2.0	48	5.0	1,490
2.3	90	7.0	3,480
2.6	154		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	11	8	38	80	52	75	824	1,540	1,400	121	33
2	22	11	10	38	80	51	74	758	1,800	1,600	117	30
3	21	11	11	38	87	51	74	696	*1,900	1,360	115	26
4	20	11	11	37	90	50	74	666	1,940	1,230	117	26
5	19	10	11	35	90	47	77	690	1,990	1,360	115	25
6	19	10	11	35	90	46	78	782	1,940	1,420	111	25
7	75	9	22	44	87	45	78	953	1,980	1,210	105	25
8	210	8	24	48	85	44	82	1,030	2,090	1,090	99	24
9	204	8	*21	51	80	43	85	1,000	1,980	1,050	95	24
10	196	8	32	50	75	43	90	953	1,900	800	92	24
11	190	7	35	48	74	43	88	878	1,970	745	83	24
12	178	7	38	52	72	45	90	824	2,220	806	78	24
13	170	7	36	64	68	46	94	812	2,530	660	75	23
14	162	8	36	72	67	46	95	860	2,620	620	72	23
15	154	8	36	72	68	45	94	946	2,610	a450	70	24
16	149	8	36	77	70	48	92	1,060	2,470	a450	67	24
17	144	8	39	87	72	53	92	1,210	2,470	a400	64	21
18	140	8	41	105	75	53	92	1,330	2,550	*244	61	21
19	135	8	41	115	72	60	95	1,580	2,530	190	*59	21
20	130	8	43	119	68	*68	105	1,930	*2,320	157	56	20
21	126	8	42	117	64	71	124	1,840	2,090	157	55	20
22	119	8	41	*111	63	74	147	1,630	1,980	159	53	19
23	115	7	39	107	61	75	207	1,430	1,980	165	51	19
24	108	7	37	101	58	74	344	1,260	1,940	162	50	19
25	105	7	35	95	55	77	476	1,130	1,740	157	46	*19
26	101	7	35	90	54	75	532	1,040	1,160	149	41	19
27	97	7	36	85	52	74	614	988	627	147	40	19
28	94	7	35	83	52	74	812	967	279	140	39	19
29	*57	7	38	85	-	74	884	1,040	308	137	38	20
30	11	7	38	83	-	74	*878	1,160	679	132	38	20
31	11	-	38	82	-	75	-	1,320	-	128	37	-
Total	3,304	246	956	2,264	2,009	1,796	6,742	33,587	56,133	18,875	2,260	680
Mean	107	8.20	30.8	73.0	71.8	57.9	225	1,080	1,870	609	72.9	22.7
Ac-ft	6,550	488	1,900	4,490	3,980	3,560	13,370	66,620	111,300	37,440	4,480	1,350

Calendar year 1952: Max 3,100 Min 7 Mean 455 Ac-ft 330,400
Water year 1952-53: Max 2,620 Min 7 Mean 353 Ac-ft 255,500

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for Payette Lake and Lake Fork above Jumbo Creek near McCall.

Fish hatchery diversion at McCall, Idaho

Location.--Lat 44°54'30", long. 116°07'00", in sec. 8, T. 18 N., R. 3 E., immediately downstream from outlet from fish hatchery tanks, just upstream from point of return to North Fork Payette River, 1 mile west of McCall.

Records available.--October 1942 to February 1953 (discontinued).

Gage.--Staff gage and Parshall flume; gage read once daily. Altitude of gage is 4,980 ft (from topographic map).

Extremes.--1942-53: Maximum daily discharge, 4.8 cfs several days during April, May and July 1943; no flow Sept. 22 to Nov. 7, 1943.

Remarks.--Records fair. Flow regulated by fish hatchery, water for which is diverted from Payette Lake or North Fork Payette River and bypasses gaging station on that stream.

Cooperation.--Gage readings furnished by Idaho State Fish and Game Commission.

Rating table, Oct. 1, 1952, to Feb. 28, 1953 (gage height, in feet, and discharge, in cubic feet per second)

0.1	0.2
.2	.4
.3	.6
.4	1.0
.5	1.4

Discharge, in cubic feet per second, October 1952 to February 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.2	1.1	0.9	0.8							
2	.3	.2	1.0	1.0	.9							
3	.3	.2	1.0	1.0	.9							
4	.3	.2	1.0	1.0	1.0							
5	.3	.2	1.0	1.0	1.0							
6	.3	.2	.9	1.0	1.0							
7	.3	.2	.9	1.0	1.1							
8	.3	.2	.9	1.0	1.1							
9	.3	.2	1.0	.9	1.1							
10	.3	.3	*1.0	.9	1.2							
11	.3	.3	1.0	.9	1.2							
12	.3	.3	1.0	.9	1.1							
13	.3	.7	1.0	.9	1.2							
14	.3	.9	1.0	.9	1.2							
15	.3	.9	1.0	1.0	1.2							
16	.3	.9	1.0	1.0	1.1							
17	.3	.9	1.0	1.0	1.1							
18	.3	1.0	1.0	1.0	1.1							
19	.3	1.0	1.0	1.0	1.1							
20	.3	1.0	1.0	.9	1.1	†1.0						
21	.3	1.0	1.0	.9	1.1							
22	.3	1.0	1.0	*.9	1.1							
23	.3	1.1	1.0	.9	1.1							
24	.3	1.1	1.0	.9	1.1							
25	.3	1.1	1.0	.9	1.1							
28	.2	1.1	1.0	.9	1.2							
27	.2	1.1	1.0	.9	1.2							
28	.2	1.1	1.0	.9	1.1							
29	*.2	1.1	.9	.9	-							
30	.2	1.1	.9	.9	-		†0.9					
31	.2	-	.9	.9	-							
Total	8.8	20.8	30.5	29.1	30.5	-	-					
Mean	0.28	0.69	0.98	0.94	1.09	-	-					
Ac-ft	17	41	60	58	60	-	-					

Calendar year 1952: Max 3.4 Min 0.2 Mean 1.76 Ac-ft 1,280
Water year 1952-53: Max - Min - Mean - Ac-ft -

* Discharge measurement made on this day.
† Result of discharge measurement.

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 1953.

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.--8 years, 153 cfs.

Extremes.--Maximum discharge during year, 1,660 cfs June 13 (gage height, 8.03 ft); minimum, 5.5 cfs Nov. 9 (gage height, 1.62 ft).
1945-53: 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, that of Nov. 9, 1952.

Remarks.--Records excellent except those below about 15 cfs, which are good, and those for periods of ice effect, which are fair. No diversion above station.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 28				Apr. 29 to Sept. 30			
1.7	6	4.5	144	2.0	11	4.5	151
2.1	10	5.0	204	2.3	18	5.0	216
2.5	21	5.5	289	2.6	26	5.5	306
3.0	40	6.0	405	3.0	43	6.0	422
3.5	66	6.5	570	3.5	71	7.0	850
4.0	100			4.0	105	7.6	1,290

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	12	b8.5	10	21	19	42	239	640	649	60	23
2	10	10	b9	10	21	b18	40	193	790	626	58	21
3	10	9.6	b9.5	10	b30	18	39	183	676	662	75	20
4	10	9.9	a9.5	10	*b45	18	40	222	*690	644	68	20
5	10	11	a10	10	38	b18	44	319	672	618	57	19
6	10	12	a10	10	31	b18	45	456	549	613	50	19
7	10	10	a10	10	28	b18	44	508	774	613	47	18
8	10	8.8	a 11	10	26	b19	42	370	667	587	44	18
9	10	7.8	*b12	22	b24	20	40	296	561	488	42	17
10	10	8.9	11	24	b22	22	38	249	636	442	40	16
11	10	12	11	26	b24	22	37	222	826	436	38	16
12	10	13	11	33	b22	22	37	226	1,050	419	37	16
13	9.9	13	12	62	b23	21	37	284	-1,220	391	35	15
14	9.8	12	b10	42	b23	b19	36	354	922	342	34	15
15	10	12	b10	32	22	b20	35	456	820	286	32	14
16	10	11	b11	27	21	21	37	501	790	227	31	14
17	10	b10	11	25	22	21	38	600	978	*193	30	14
18	10	12	11	27	21	b21	40	604	1,020	175	28	14
19	10	11	11	28	b21	22	49	978	*820	160	*27	14
20	10	b9.5	11	29	b21	*22	72	649	649	142	26	14
21	10	b8	11	28	b20	22	117	462	649	126	25	13
22	10	b7	10	26	20	21	181	372	735	116	24	*13
23	10	b8	b9	24	19	22	397	325	774	110	23	13
24	10	b9	b8	23	19	24	322	298	676	103	27	13
25	10	b8.5	b9	22	18	36	311	267	582	95	30	13
26	10	b8	10	21	19	34	383	278	515	87	26	13
27	10	b9	10	b21	20	34	533	278	549	81	26	12
28	10	b7	10	b20	20	38	552	319	622	77	24	13
29	9.9	b7	10	20	-	40	356	436	644	72	24	15
30	*10	b7.5	10	20	-	42	*290	456	676	69	23	14
31	11	-	10	19	-	44	-	534	-	64	24	-
Total	311.6	294.5	316.5	701	661	757	4,274	11,934	22,172	9,713	1,135	469
Mean	10.1	9.82	10.2	22.6	23.6	24.4	142	385	739	313	36.8	15.6
Cfsm	0.207	0.201	0.209	0.462	0.483	0.499	2.90	7.87	15.1	6.40	0.748	0.319
In.	0.24	0.22	0.24	0.53	0.50	0.58	3.25	9.08	16.86	7.39	0.86	0.36
Ac-ft	618	584	628	1,390	1,310	1,500	8,480	23,670	43,980	19,270	2,250	930

Calendar year 1952: Max 1,000 Min 7 Mean 161 Cfsm 3.29 In. 44.74 Ac-ft 116,700
Water year 1952-53: Max 1,220 Min 7 Mean 144 Cfsm 2.94 In. 40.11 Ac-ft 104,600

Peak discharge (base, 850 cfs).--May 19 (7 a.m.) 1,150 cfs (7.42 ft); June 2 (9 a.m.) 870 cfs (7.03 ft); June 7 (7 p.m.) 936 cfs (7.13 ft); June 13 (1 a.m.) 1,660 cfs (8.03 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for station below Lake Irrigation District Canal and Johnson Creek at Yellow Pine.

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 1953 (fragmentary).

Gage.--Staff gage and graduations on concrete gate-control structure of dam, gage read once-daily. Datum of gage is at mean sea level (levels by Lake Irrigation District.

Extremes.--Maximum contents observed during year, 19,490 acre-ft July 14 (elevation, 5,118.60 ft); practically no storage at times during fall and winter.
1926-53: 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 during year reported below 5,101.0 ft as follows: Oct. 17, 5,100.90 ft; Oct. 31, 5,100.79 ft; Dec. 17, 5,099.50 ft; Feb. 2, 5,100.11 ft; Mar. 21, 5,100.06 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	†707							4,970	-	18,360	14,380	5,080
2	-								-	18,440	14,030	4,760
3	-								-	18,440	13,770	4,550
4	471								17,250	18,520	13,460	4,360
5	-								17,380	18,540	13,080	4,080
6	-								17,220	18,770	12,850	3,800
7	-								-	18,850	12,440	3,620
8	-								17,570	18,930	12,170	3,450
9	-								17,330	18,960	11,790	3,130
10	192								17,170	18,990	11,420	2,920
11	134								17,330	19,010	11,120	2,660
12	-								17,890	19,170	10,820	2,440
13	-								18,280	19,460	10,600	-
14	-								18,200	19,490	10,390	2,220
15	-								-	19,330	10,100	-
16	-								17,570	19,170	9,740	-
17	-								17,490	19,100	9,380	-
18	-								17,730	19,040	9,040	1,730
19	-								17,620	18,770	8,770	1,640
20	-								17,220	18,520	8,370	1,560
21	-								17,100	18,240	8,100	-
22	-								17,070	17,970	7,900	1,400
23	-								17,330	17,700	7,520	1,360
24	-								17,570	17,330	7,150	-
25	-								17,570	17,020	6,770	-
26	-								17,570	16,630	6,650	1,190
27	-								17,570	16,240	6,300	-
28	-								17,650	15,850	5,950	1,050
29	-								17,730	15,530	5,720	-
30	-								18,050	-	5,510	†990
31	-								-	†14,770	5,290	-

† Interpolated.

Monthly elevation and contents, water year October 1952 to September 1953

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
June 30	5,117.70	18,050	-
July 31	†5,115.80	14,770	-3,280
Aug. 31	5,108.70	5,290	-9,480
Sept.30	†5,103.04	990	-4,300

† 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 1953.

Gage.--Staff gage read once or twice daily. Altitude of gage, 5,090 ft (from topographic map). Prior to May 1947, staff gage at same site at different datum.

Extremes.--1926-53: 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 diversions between head and station. Canal diverts from right bank of Lake Fork Payette River in SW¼ sec. 13, T. 18 N., R. 3 E., for irrigation of 6,800 acres of land near McCall and Norwood, in the Lake Irrigation District project.

Cooperation.--Gage readings furnished by Lake Irrigation District.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a26							(*)	0	182	172	87
2	28								0	189	167	84
3	a27				(*)				0	183	182	78
4	27								*0	185	156	77
5	a26								9	181	150	77
6	a26								15	181	144	77
7	a25								a15	186	139	78
8	a24								15	184	138	78
9	a23								15	190	134	74
10	23								15	190	129	74
11	16								a15	190	129	67
12	a15								15	189	127	67
13	a14								16	192	123	62
14	a13								14	192	121	56
15	5								14	192	121	46
16	0								12	194	120	47
17	0		(*)						15	*184	120	47
18	0								26	205	119	28
19	0								*34	203	118	26
20	0								38	183	*117	23
21	0					(*)			42	186	115	a26
22	0								46	186	115	*26
23	0								73	183	116	22
24	0								104	185	106	a20
25	0								121	185	96	a18
26	0								145	178	89	16
27	0								158	178	89	16
28	0								165	178	88	11
29	0								165	177	90	11
30	0				-				171	177	90	11
31	*0				-				-	177	87	-
Total	318	0	0	0	0	0	0	0	1,473	5,765	3,808	1,433
Mean	10.3	0	0	0	0	0	0	0	49.1	186	123	47.8
Ac-ft	631	0	0	0	0	0	0	0	2,920	11,430	7,550	2,840

Calendar year 1952: Max 178 Min 0 Mean 40.2 Ac-ft 29,210
Water year 1952-53: Max 205 Min 0 Mean 35.1 Ac-ft 25,370

* 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 1953.

Gage.--Water-stage recorder. Altitude of gage is 5,080 ft (from topographic map).

Average discharge.--13 years, 133 cfs.

Extremes.--Maximum discharge during year, 1,300 cfs June 13 (gage height, 6.08 ft); minimum, 11 cfs Nov. 1-12 (gage height, 2.39 ft).
1940-53: 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 about 50 cfs, which are good. Flow regulated by Lake Fork Reservoir (see p. 163). Lake Irrigation District Canal diverts above station for irrigation of about 6,800 acres.

Revisions (water years).--WSP 963: 1941.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.3	7.5	4.0	273
2.4	12	4.5	436
2.5	17	5.0	635
2.7	33	5.5	900
3.0	66	6.0	1,220
3.5	148	7.0	2,030

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	12	14	15	34	b28	43	*276	514	422	74	55
2	26	11	15	15	33	b28	44	276	912	450	74	54
3	21	11	15	15	*35	28	45	276	862	443	74	58
4	20	11	14	14	38	27	46	273	*735	418	74	59
5	18	11	14	14	40	b27	47	276	762	365	75	58
6	17	11	14	14	42	b26	50	282	715	398	74	56
7	16	11	16	16	42	b26	51	291	735	391	69	55
8	15	11	15	16	43	b26	52	294	812	374	62	55
9	14	11	15	18	b41	b26	52	282	752	325	61	55
10	13	11	16	18	b40	26	54	279	710	242	64	53
11	14	11	16	20	39	26	54	273	735	177	61	53
12	16	33	16	22	b38	27	53	273	954	124	60	30
13	16	51	16	28	37	27	54	189	1,250	144	62	29
14	15	48	16	35	37	b27	53	91	1,230	212	64	28
15	19	45	16	37	b37	b27	53	91	1,130	184	62	28
16	13	42	15	39	36	27	52	91	990	108	61	28
17	13	37	*15	39	36	28	52	94	984	*69	61	28
18	13	34	15	41	b36	b28	52	104	1,050	94	61	28
19	12	32	15	43	b35	29	54	104	*1,040	92	60	26
20	12	29	15	44	b34	31	58	132	845	71	*60	26
21	12	28	15	44	b33	*30	65	209	700	82	59	26
22	12	25	15	43	b32	30	79	291	635	92	60	*25
23	12	23	b15	43	b31	30	110	318	626	99	61	23
24	12	21	b15	42	b30	30	140	328	570	90	66	20
25	12	b20	b15	40	b29	31	168	331	480	84	69	18
26	12	20	b15	39	b28	34	192	325	426	90	67	18
27	12	18	b15	37	28	35	216	318	412	90	62	18
28	12	17	15	36	28	36	256	273	418	85	60	19
29	12	16	15	36	-	39	270	297	404	82	58	21
30	12	15	15	35	-	40	276	350	364	79	55	22
31	*12	-	15	34	-	42	-	401	-	75	55	-
Total	463	676	468	932	992	922	2,791	7,688	22,752	6,051	1,985	1,072
Mean	14.9	22.5	15.1	30.1	35.4	29.7	93.0	248	758	195	64.0	35.7
Ac-ft	918	1,340	928	1,850	1,970	1,830	5,540	15,250	45,130	12,000	3,940	2,130

Calendar year 1952: Max 1,000 Min 11 Mean 150 Ac-ft 109,100
Water year 1952-53: Max 1,250 Min 11 Mean 128 Ac-ft 92,830

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

Cascade Reservoir at Cascade, Idaho

Location.--Lat 44°31'30", long. 116°03'00", in NE¼NE¼ sec. 26, T. 14 N., R. 3 E., just upstream from left abutment of dam on North Fork Payette River, half a mile downstream from Willow Creek and three-quarters of a mile northwest of Cascade.
Drainage area.--620 sq mi.
Records available.--January to November 1948 (fragmentary); January 1949 to September 1953.
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, 405,100 acre-ft June 20 (elevation, 4,815.01 ft); minimum observed, 81,640 acre-ft Oct. 16-20 (elevation, 4,792.04 ft).
1948-53: Maximum contents observed, that of June 20, 1953; 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86,940	83,420	83,850	85,070	114,100	131,900	150,200	233,800	376,500	398,700	391,300	286,300
2	86,670	83,330	84,280	84,980	115,100	132,200	151,500	239,200	380,100	400,200	390,700	284,500
3	86,490	83,250	84,280	85,070	117,000	132,400	152,800	243,200	382,500	400,800	391,300	282,300
4	86,310	83,250	84,280	85,160	119,300	132,600	154,200	246,700	383,700	400,800	390,900	280,700
5	85,980	83,160	84,280	85,070	120,600	132,900	156,300	250,200	385,000	400,000	391,100	279,100
6	85,690	83,250	84,280	85,070	121,800	133,100	158,000	253,800	385,800	400,800	390,100	277,000
7	85,420	83,330	84,720	85,250	122,700	133,300	159,800	258,900	386,300	401,600	388,000	275,200
8	85,160	83,330	84,900	85,420	123,800	133,500	160,800	264,200	388,000	401,600	385,800	271,500
9	85,070	83,160	84,810	85,690	124,500	133,800	162,100	269,800	389,000	400,800	382,000	270,700
10	84,900	83,080	84,900	86,220	125,100	134,200	163,300	273,900	388,800	399,800	378,900	268,500
11	84,550	83,160	84,980	86,760	125,600	134,400	164,300	276,700	388,400	398,700	374,800	266,000
12	84,200	82,990	85,340	88,090	126,000	134,900	166,000	279,700	388,000	397,700	371,000	263,400
13	83,850	83,160	85,510	90,520	126,700	135,400	167,200	283,300	389,800	397,100	367,100	260,600
14	82,820	84,110	85,600	92,150	127,100	135,800	168,500	286,900	393,200	396,700	362,900	258,100
15	82,060	84,280	85,690	93,150	127,600	136,100	169,200	290,200	396,100	397,500	358,700	255,300
16	81,640	84,480	85,780	94,160	128,100	136,500	170,200	294,200	398,800	397,300	354,200	252,900
17	81,640	84,480	85,870	95,820	128,800	137,100	170,900	298,600	400,200	397,500	349,700	250,200
18	81,640	84,460	86,040	98,230	129,700	137,300	172,500	302,900	401,800	397,300	345,000	247,200
19	81,640	84,630	86,130	100,700	129,900	138,100	175,100	310,400	403,100	397,100	340,700	244,400
20	81,640	84,720	86,220	102,700	130,000	139,200	177,600	318,000	405,100	397,100	335,800	241,700
21	81,800	84,810	86,220	104,600	130,200	139,700	181,200	326,000	404,500	396,900	331,200	239,000
22	81,970	84,630	86,040	106,000	130,500	140,400	185,200	333,500	403,300	396,300	326,300	236,500
23	82,140	84,550	85,960	107,100	130,700	140,700	191,400	340,700	403,300	395,700	321,300	233,500
24	82,310	84,550	85,780	108,300	130,800	141,100	197,800	346,600	402,700	395,400	316,300	230,800
25	82,480	84,460	85,510	109,400	130,800	142,100	202,400	351,500	401,800	394,600	312,500	228,300
26	82,650	84,370	85,340	109,900	130,900	143,200	207,000	357,200	401,600	394,200	307,700	225,400
27	82,820	84,280	85,160	110,700	131,100	143,900	212,300	361,400	399,400	393,800	303,300	222,900
28	82,900	84,110	85,070	111,600	131,300	145,000	219,800	365,800	399,000	393,200	298,800	219,900
29	82,990	84,020	85,160	112,400	-	146,200	225,400	371,000	398,100	392,800	294,400	217,000
30	83,160	83,850	85,160	112,900	-	147,300	230,400	372,500	398,100	392,300	290,900	214,300
31	83,330	-	85,070	113,400	-	148,800	-	374,600	-	391,900	288,400	-

Monthly elevation and contents, water year October 1952 to September 1953

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,792.66	87,020	-
Oct. 31	4,792.24	83,330	-3,690
Nov. 30	4,792.30	83,850	+520
Dec. 31	4,792.44	85,070	+1,220
Calendar year 1952	-	-	-24,130
Jan. 31	4,795.47	113,600	+28,530
Feb. 28	4,797.17	131,600	+18,000
Mar. 31	4,798.71	149,300	+17,700
Apr. 30	4,804.87	231,600	+82,300
May 31	4,813.45	375,200	+143,600
June 30	4,814.67	398,500	+23,300
July 31	4,814.31	391,500	-7,000
Aug. 31	4,808.41	286,800	-104,700
Sept.30	4,803.53	212,100	-74,700
Water year 1952-53	-	-	+125,080

† Elevation interpolated to midnight.

North Fork Payette River at Cascade, Idaho

Location.--Lat 44°31', long. 116°02', in NE¼ sec. 36, T. 14 N., R. 3 E., on right bank at Cascade, 285 ft downstream from Halleck and Howard mill dam, half a mile upstream from Beaver Creek, and 1½ miles downstream from Cascade Dam.

Drainage area.--626 sq mi.

Records available.--May 1941 to September 1953.

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.--12 years, 1,036 cfs.

Extremes.--Maximum discharge during year, 5,230 cfs June 20 (gage height, 4.85 ft); minimum, 8.4 cfs Mar. 1 (gage height, 0.07 ft, from partly estimated gage-height graph). 1941-53: Maximum discharge recorded, 7,320 cfs May 10, 1947 (gage height, 6.29 ft); minimum, 2 cfs or less in January 1948 when stage was below intake.

Remarks.--Records good. Flow regulated by Cascade Reservoir (see preceding page), Payette Lake (see p. 159), Lake Fork Reservoir (see p. 163), and occasionally by mill-dam at Cascade. Diversions above station for irrigation of about 37,000 acres.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 2-12, Aug. 9-31)

0.2	20	2.0	1,110
.3	31	2.5	1,910
.4	46	3.0	2,780
.7	120	3.5	3,410
1.0	237	4.0	4,060
1.3	409	5.0	5,440
1.6	653		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	257	162	185	262	282	26	224	*166	1,990	1,930	416	1,170
2	262	162	162	228	223	129	177	166	*2,980	2,580	424	938
3	262	162	162	202	268	174	197	166	3,710	2,960	431	827
4	262	162	189	197	157	177	197	162	4,050	2,940	424	907
5	262	162	162	257	211	177	219	170	4,260	2,420	668	967
6	262	162	189	252	220	181	206	166	4,400	2,080	1,110	1,030
7	262	162	162	247	174	181	189	166	4,630	2,440	1,430	1,120
8	262	162	*162	197	174	185	185	181	4,670	2,580	1,710	1,220
9	409	*166	189	195	181	185	185	170	4,730	2,560	1,840	1,300
10	490	177	174	116	189	185	185	170	4,770	2,460	1,910	1,370
11	506	170	166	140	202	193	202	170	4,780	2,100	2,140	1,380
12	506	170	166	166	177	193	197	177	4,770	1,730	2,200	1,480
13	625	170	162	162	181	189	193	*174	4,470	1,370	2,220	1,510
14	658	170	162	158	181	166	185	174	4,960	894	2,260	1,450
15	498	170	162	154	177	162	189	170	5,030	*783	2,430	1,450
16	375	170	162	158	177	158	339	177	5,130	762	2,500	1,450
17	257	181	162	166	185	154	460	174	5,160	644	2,440	1,450
18	262	170	162	177	174	158	299	174	*5,190	581	*2,430	1,450
19	262	166	202	174	206	162	185	197	5,200	424	2,440	1,450
20	247	174	257	181	215	162	166	197	5,220	390	2,530	1,460
21	211	174	267	177	262	*162	197	202	5,220	438	2,480	1,460
22	177	206	267	*174	252	170	158	193	4,820	438	2,500	1,460
23	162	170	267	174	252	174	177	206	4,490	438	2,510	*1,450
24	154	162	272	174	252	174	174	197	4,460	431	2,560	1,450
25	151	177	272	174	252	189	264	193	4,150	431	2,510	1,450
26	158	197	272	177	257	185	112	197	3,900	431	2,480	1,430
27	166	166	272	177	257	174	90	197	3,340	424	2,410	1,450
28	162	193	267	177	267	193	170	197	2,480	402	2,300	1,480
29	162	166	262	177	-	197	158	830	2,040	402	1,970	1,500
30	158	162	262	219	-	211	162	1,560	1,890	416	1,640	1,500
31	158	-	262	277	-	206	-	1,630	-	416	1,140	-
Total	9,205	5,123	6,441	5,866	6,005	5,332	6,041	9,069	126,890	39,295	58,453	40,009
Mean	297	171	208	189	214	172	201	293	4,230	1,268	1,886	1,334
Ac-ft	18,260	10,160	12,780	11,640	11,910	10,580	11,980	17,990	251,700	77,940	115,900	79,360

Calendar year 1952: Max 4,240 Min 147 Mean 1,266 Ac-ft 919,000
Water year 1952-53: Max 5,220 Min 26 Mean 870 Ac-ft 630,200

* 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 1953.

Gage.--Water-stage recorder. Datum of gage is 3,081.13 ft above mean sea level, preliminary unadjusted elevation.

Average discharge.--6 years, 1,400 cfs.

Extremes.--Maximum discharge during year, 6,370 cfs June 17, 18 (gage height, 11.85 ft); minimum, 102 cfs Mar. 2 (gage height, 3.52 ft).
1947-53: Maximum discharge, 8,930 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. 159), Lake Fork Reservoir (see p. 163), Cascade Reservoir (see p. 166), and occasionally by mill dam at Cascade. Many diversions from tributaries above station for irrigation.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.8	153	7.0	1,460
4.0	194	8.0	2,120
4.4	294	9.0	2,960
4.8	416	10.0	4,000
5.3	596	12.0	6,580
6.0	915		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	297	212	261	356	517	387	810	1,140	2,850	2,380	551	1,250
2	303	212	258	350	577	163	775	995	*3,750	2,480	543	1,280
3	308	209	230	317	635	294	715	925	4,700	3,410	547	935
4	308	209	226	286	805	332	775	935	5,040	3,470	554	1,000
5	306	216	240	288	675	317	900	995	5,400	3,340	558	1,060
6	308	216	233	347	675	317	1,020	1,120	5,490	2,560	905	1,120
7	306	212	230	332	569	326	800	1,230	5,920	2,690	1,360	1,170
8	306	212	205	*317	536	323	675	1,280	6,020	2,890	1,640	1,260
9	306	207	243	311	416	335	639	1,180	5,910	2,870	1,860	1,320
10	457	205	269	344	450	344	604	1,050	5,850	2,800	1,940	1,400
11	507	226	248	261	450	362	600	960	5,870	2,510	2,080	1,410
12	514	228	266	311	*443	372	604	920	5,960	2,180	2,230	1,480
13	517	240	266	423	416	375	558	925	6,150	1,870	2,250	1,500
14	728	248	258	436	400	347	525	1,010	5,800	1,480	2,340	1,520
15	655	248	b240	381	381	338	499	1,060	6,100	995	2,380	1,500
16	a510	228	b230	341	375	341	569	1,100	*6,160	*1,100	2,560	1,490
17	a450	221	235	359	378	335	920	1,140	6,270	915	2,530	1,480
18	a310	238	250	471	365	314	1,080	1,190	6,300	855	2,510	1,480
19	a310	233	248	503	306	341	1,040	1,450	6,240	735	2,500	1,500
20	a310	228	297	507	341	353	1,160	1,690	6,160	585	2,570	1,500
21	a280	218	344	507	368	341	1,270	1,500	6,100	604	*2,580	1,500
22	a250	212	344	474	460	335	1,410	1,450	6,030	604	2,550	1,510
23	a220	245	317	450	406	332	1,620	1,330	5,560	596	2,570	1,510
24	a210	226	286	443	406	356	1,590	1,250	5,360	596	2,580	1,500
25	*198	*184	294	423	397	413	1,420	1,170	5,220	581	2,530	*1,500
26	205	212	362	403	400	*454	1,450	1,110	4,790	573	2,560	1,500
27	212	248	b390	375	400	474	1,440	1,080	4,600	569	2,530	1,500
28	216	233	394	372	403	543	1,870	1,100	3,500	558	2,470	1,520
29	212	235	378	384	-	619	*1,590	1,360	3,070	540	2,320	1,530
30	216	248	365	378	-	687	1,320	2,400	2,400	545	1,920	1,530
31	214	-	365	436	-	780	-	2,660	-	551	1,550	-
Total	10,449	6,709	8,772	11,886	12,950	11,950	30,248	38,705	158,570	48,440	60,568	41,755
Mean	337	224	283	383	462	385	1,008	1,249	5,286	1,563	1,954	1,392
Ac-ft	20,730	13,310	17,400	23,580	25,690	23,700	60,000	76,770	314,500	96,080	120,100	82,820

Calendar year 1952: Max 5,040 Min 184 Mean 1,646 Ac-ft 1,195,000
Water year 1952-53: Max 6,300 Min 163 Mean 1,208 Ac-ft 874,700

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for station at Cascade and for Payette River near Horseshoe Bend.
b Stage-discharge relation affected by ice.

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 two miles north of Horseshoe Bend. Prior to Apr. 17, 1953, at site 1,000 ft downstream.

Drainage area.--2,230 sq mi, approximately.

Records available.--February 1906 to September 1916, July 1919 to September 1953.

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.--42 years (1907-15, 1919-53), 3,097 cfs.

Extremes.--Maximum discharge during year, 16,700 cfs June 13 (gage height, 12.93 ft); minimum, 390 cfs Nov. 26, but may have been less during period of ice effect.
1906-16, 1919-53: 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 except those for period Oct. 1 to Apr. 16, which are good. Flow regulated by Deadwood Reservoir (see p. 154), Payette Lake (see p. 159), Lake Fork Reservoir (see p. 163) and Cascade Reservoir (see p. 166). Diversions from tributaries above station for irrigation of about 50,000 acres.

Revisions.--WSP 533: Drainage area.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,770	809	750	940	1,380	1,200	2,870	5,220	8,050	8,310	3,340	3,670
2	2,020	792	850	908	1,630	863	2,670	4,570	9,820	8,090	3,340	3,730
3	2,030	744	900	854	2,210	953	2,490	4,200	11,200	8,820	3,430	3,380
4	2,070	744	900	792	2,980	1,070	2,550	4,320	11,500	8,860	3,400	3,380
5	2,040	809	850	792	2,420	1,030	2,870	4,780	12,300	8,620	3,180	3,410
6	1,400	845	840	863	2,150	*1,030	3,100	5,640	*11,900	7,690	3,180	3,230
7	1,430	818	860	899	1,850	1,050	2,760	6,540	12,800	7,650	3,310	3,200
8	1,450	760	820	881	2,070	1,120	2,430	6,170	13,200	7,710	3,250	3,140
9	1,490	706	860	*1,010	1,710	1,260	2,290	5,360	12,500	7,450	3,130	3,100
10	1,780	650	880	1,360	1,540	1,450	2,110	4,700	12,400	7,060	2,980	3,110
11	1,860	809	860	1,210	1,470	1,590	*2,000	4,250	12,600	6,660	3,080	3,110
12	1,860	935	900	1,150	*1,480	1,570	1,940	4,080	14,300	6,190	3,250	3,140
13	1,860	1,020	900	1,840	1,410	1,590	1,840	4,320	16,300	5,740	3,240	3,100
14	2,040	1,010	880	2,000	1,360	1,420	1,760	4,440	15,300	5,370	3,310	3,110
15	1,630	1,020	890	1,490	1,340	1,360	1,650	4,920	14,600	4,620	3,310	2,980
16	1,090	881	854	1,260	1,280	1,320	1,770	5,330	14,000	*4,240	3,480	2,960
17	1,000	776	845	1,400	1,290	1,320	2,230	5,540	14,700	3,800	3,460	2,920
18	917	818	881	2,760	1,280	1,230	2,620	5,780	*15,900	3,510	3,420	2,890
19	908	881	890	2,760	1,050	1,320	2,920	7,190	16,200	3,290	3,380	2,890
20	908	845	953	2,220	1,000	1,490	3,620	8,200	15,200	3,080	3,430	2,890
21	899	776	1,060	2,070	1,060	1,420	4,590	7,130	14,200	3,440	*3,430	2,880
22	845	622	1,030	1,760	1,250	1,370	5,600	6,350	13,900	3,310	3,400	2,840
23	800	600	935	1,550	1,100	1,370	7,340	5,740	13,500	3,280	3,400	2,800
24	768	750	750	1,450	1,080	1,520	6,950	5,360	13,100	3,350	3,410	2,730
25	774	700	600	1,330	1,080	1,940	6,240	4,910	12,400	3,310	3,400	2,720
26	792	*650	750	1,260	1,110	2,150	6,490	4,640	11,300	3,350	3,380	*2,680
27	818	550	900	1,170	1,140	2,110	7,150	4,500	10,700	3,320	3,440	2,680
28	809	700	1,000	1,120	1,200	2,300	8,180	4,730	9,440	3,220	3,440	2,700
29	*800	650	1,000	1,150	-	2,450	*7,430	*5,470	8,930	3,190	3,360	2,710
30	800	600	980	1,140	-	2,670	6,130	6,430	8,240	3,250	3,380	2,700
31	800	-	960	1,180	-	*2,810	-	7,200	-	3,320	3,790	-
Total	40,458	23,270	27,328	42,569	41,920	47,346	115,590	168,010	380,480	163,100	103,730	90,780
Mean	1,305	776	882	1,373	1,497	1,527	3,853	5,420	12,680	5,261	3,346	3,026
Ac-ft	80,250	46,160	54,200	84,430	83,150	93,910	229,300	333,200	754,700	323,500	205,700	180,100

Calendar year 1952: Max 15,600 Min 550 Mean 4,054 Ac-ft 2,943,000
Water year 1952-53: Max 16,300 Min 550 Mean 3,410 Ac-ft 2,469,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 23 to Dec. 14, Dec. 24 to Jan. 1, Feb. 20-23.

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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 1953.

Gage.--Water-stage recorder. Altitude of gage is 2,400 ft (from topographic map).

Average discharge.--28 years, 2,976 cfs.

Extremes.--Maximum discharge during year, 17,800 cfs June 13 (gage height, 11.28 ft); minimum daily, 349 cfs Nov. 15.
1925-53: Maximum discharge, 22,800 cfs May 1, 1938 (gage height, 21.90 ft); minimum daily, 3 cfs Jan. 10-14, Feb. 2, 22-25, 1938, when gates in dam were closed.

Remarks.--Records excellent except those for period of no gage-height record, which are fair. 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. 166), Deadwood Reservoir (see p. 154), Payette Lake (see p. 159), and Lake Fork Reservoir (see p. 163).

Cooperation.--Gage-height record collected in cooperation with Bureau of Reclamation.

Revisions (water years).--WSP 1153: 1946(m), 1948(m).

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 18 to Aug. 24)

1.6	340	6.0	5,710
2.0	530	8.0	9,600
3.0	1,480	10.0	14,200
4.0	2,620	11.1	17,200

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,280	872	714	607	1,630	1,380	3,000	4,930	8,670	7,550	1,900	2,160
2	1,280	1,090	1,000	1,260	1,760	727	3,090	4,070	11,000	7,300	1,910	2,300
3	1,280	973	988	1,090	3,150	1,000	2,340	3,590	12,300	7,970	1,960	2,010
4	1,230	743	930	990	3,890	1,100	2,600	3,600	12,300	8,150	2,040	1,930
5	1,200	801	896	892	3,270	1,180	2,880	4,010	13,100	7,890	1,800	2,030
6	1,050	892	767	853	2,970	1,220	3,170	4,900	12,600	7,100	1,690	1,940
7	960	675	656	991	3,760	1,180	2,840	6,090	13,400	6,830	1,830	1,850
8	940	569	948	906	3,270	1,240	2,500	5,840	14,300	6,900	1,840	1,840
9	1,020	890	871	1,250	2,430	1,560	2,340	4,780	13,400	6,600	1,760	1,800
10	1,110	719	916	1,600	2,180	1,390	2,150	3,920	13,100	6,160	1,560	1,820
11	1,120	559	942	1,620	2,030	1,730	2,010	3,130	13,200	5,710	1,590	1,910
12	1,110	1,100	905	1,710	1,980	1,740	1,890	3,000	14,800	5,150	1,800	1,920
13	1,110	864	897	1,710	1,830	1,770	1,780	3,170	17,000	4,580	1,790	1,960
14	1,110	a1,120	941	2,910	1,720	1,660	1,680	3,320	16,100	4,030	1,800	1,960
15	1,180	a349	930	1,850	1,680	1,560	1,460	3,820	15,200	3,530	1,780	1,910
16	1,020	a982	930	1,720	1,690	1,480	1,410	4,330	14,300	2,840	1,860	*1,860
17	870	a1,100	893	2,680	1,830	1,520	1,810	4,630	14,900	*2,460	1,920	1,880
18	870	a1,150	866	6,520	1,430	1,410	2,200	5,000	*15,900	2,080	*1,890	1,880
19	870	887	682	5,460	1,230	1,540	2,510	6,890	15,900	1,860	1,860	1,860
20	1,080	834	*669	3,780	1,340	1,850	3,150	8,530	14,900	1,560	1,880	1,860
21	1,150	784	1,090	3,140	958	1,770	4,250	7,280	13,800	1,900	1,900	1,850
22	1,070	692	1,330	2,430	1,180	1,770	5,490	6,520	13,300	1,780	1,880	1,850
23	940	685	*907	2,140	1,400	1,720	7,360	5,730	12,900	1,720	1,900	1,850
24	910	741	*737	1,920	1,290	1,820	7,100	5,280	12,400	1,810	1,920	1,850
25	900	693	434	1,770	1,300	*2,270	6,090	4,740	11,700	1,820	1,910	1,850
26	900	*642	546	1,690	*1,320	2,450	6,300	4,430	10,700	1,830	1,880	*1,860
27	900	523	512	1,560	1,320	2,300	7,080	4,280	10,100	1,930	1,940	1,840
28	655	764	1,350	1,440	1,370	2,480	9,640	4,520	8,990	1,840	2,050	1,850
29	*900	536	1,080	*1,440	-	2,680	7,910	6,340	8,350	1,730	1,950	1,880
30	808	535	1,080	1,480	-	2,850	*6,160	6,830	7,610	1,800	1,840	1,900
31	662	-	1,250	1,620	-	3,000	-	7,730	-	1,860	2,460	-
Total	31,485	23,764	27,637	61,029	55,208	53,347	114,190	155,230	386,220	126,270	58,090	57,260
Mean	1,016	792	892	1,969	1,972	1,721	3,806	5,007	12,870	4,073	1,874	1,909
Ac-ft	62,450	47,140	54,820	121,000	109,500	105,800	226,500	307,900	766,100	250,500	115,200	113,600

Calendar year 1952: Max 17,400 Min 20 Mean 3,893 Ac-ft 2,826,000
Water year 1952-53: Max 17,000 Min 349 Mean 3,150 Ac-ft 2,281,000

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

Payette River near Letha, Idaho

Location.--Lat 43°53', long. 116°37', in NE¼ sec. 6, T. 6 N., R. 2 W., on right bank 1 mile upstream from Bissell Creek and 1½ miles east of Letha.
Drainage area.--2,760 sq mi, approximately.
Records available.--July to November 1952, March to November 1953 (discontinued).
Gage.--Water-stage recorder. Altitude of gage is 2,280 ft (from topographic map). Aug. 13 to Nov. 3, 1953, supplementary water-stage recorder 180 ft upstream at same datum.
Extremes.--1952-53: Maximum discharge during water year, 16,400 cfs June 13 (gage height, 8.08 ft); minimum recorded, 152 cfs Oct. 28 (gage height, 1.43 ft).
1953: Maximum discharge during period October to November, 1,810 cfs Nov. 3 (gage height, 3.21 ft); minimum, 855 cfs Oct. 12, 13 (gage height, 2.52 ft).
1952-53: Maximum discharge, that of June 13, 1953; minimum recorded, that of Oct. 28, 1952.
Remarks.--Records excellent except those for period of no gage-height record, which are fair. Many diversions above station for irrigation (see Remarks for stations near Emmett and near Payette). Flow regulated by Black Canyon Dam and affected by storage reservoir on tributary streams.

Rating table, Oct. 1, 1952, to Nov. 3, 1953 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 13 to Nov. 3, 1953)

Oct. 1, 1952, to Mar. 18, 1953		Mar. 19 to Nov. 3, 1953			
1.8	350	1.6	595	4.0	4,530
2.0	525	2.0	975	5.0	6,940
2.5	1,130	2.5	1,650	6.0	9,750
3.0	1,850	3.0	2,490	8.0	16,100

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	653	606				-	2,980	4,550	8,300	6,330	825	1,250
2	642	858				-	3,020	3,560	10,200	6,230	835	*1,380
3	642	864				-	2,420	3,060	12,000	6,660	855	1,160
4	620	743				-	2,550	2,960	11,900	6,970	920	1,020
5	546	721				-	2,730	3,220	12,300	6,810	805	1,120
6	525	858				-	3,040	4,030	12,300	6,080	720	1,070
7	430	764				-	2,690	5,120	12,400	5,760	775	964
8	422	552				-	2,170	*5,210	13,700	5,790	785	964
9	458	858				-	2,070	4,130	13,000	*5,640	747	920
10	487	662				-	1,910	3,300	*12,800	5,210	*603	931
11	458	654				-	1,730	2,600	12,800	4,750	635	987
12	468	1,030				-	1,620	2,380	13,900	4,240	729	1,020
13	468	907				-	1,530	2,400	15,600	3,800	738	1,050
14	478	1,110				-	1,410	2,540	15,200	3,320	747	1,050
15	516	714				-	1,220	2,920	14,300	2,750	738	987
16	487	723				-	1,050	3,400	13,600	2,020	795	931
17	382	1,210				-	1,300	3,780	13,900	1,620	876	953
18	374	1,080				-	1,700	4,090	14,800	1,220	845	964
19	366	980				1,680	1,940	5,400	14,700	987	825	964
20	406	936				*1,910	2,470	8,200	14,000	729	815	964
21	458	833				1,940	*3,440	7,100	13,100	805	835	953
22	414	772				1,950	4,680	6,500	12,400	876	815	942
23	422	748				1,890	6,600	5,550	12,000	775	825	953
24	546	*726				1,970	6,660	5,200	11,500	765	855	953
25	546	-				2,280	5,520	4,700	10,900	785	876	953
26	536	-				2,600	5,590	4,300	9,870	795	855	964
27	536	-				2,380	6,360	4,100	9,100	845	865	953
28	430	-				2,450	9,130	4,150	8,080	815	999	953
29	525	-				2,630	7,990	6,000	7,280	756	1,080	987
30	*484	-				2,730	5,860	6,400	6,660	785	920	1,020
31	425	-				2,960	-	7,400	-	805	1,460	-
Total	15,150	-	-	-	-	-	103,360	138,250	362,390	95,723	25,998	30,300
Mean	489	-	-	-	-	-	3,445	4,460	12,080	3,088	839	1,010
Ac-ft	30,050	-	-	-	-	-	205,000	274,200	718,800	189,900	51,570	60,100

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

* Discharge measurement made on this day.
Note.--No gage-height record May 19 to June 9; discharge estimated on basis of records for station near New Plymouth.

Discharge, in cubic feet per second, 1953

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	1,010	1,640	9	975	-	17	920	-	25	1,290	-
2	1,010	1,650	10	953	-	18	953	-	26	1,270	-
3	1,010	*1,750	11	909	-	19	999	-	27	1,310	-
4	1,040	-	12	887	-	20	1,100	-	28	1,370	-
5	1,050	-	13	876	-	21	1,220	-	29	1,430	-
6	975	-	14	942	-	22	1,260	-	30	1,560	-
7	*975	-	15	975	-	23	1,290	-	31	1,600	-
8	975	-	16	920	-	24	1,270	-			
Total										34,324	-
Mean										1,107	-
Runoff in acre-feet										68,080	-

* Discharge measurement made on this day.

Payette River near New Plymouth, Idaho

Location.--Lat 43°57', long. 116°43', in SE¼ sec. 8, T. 7 N., R. 3 W., on right bank 17 ft upstream from right abutment of old steel road bridge north of Falk and 4.7 miles east of New Plymouth.

Drainage area.--2,850 sq mi, approximately.

Records available.--July to November 1952, March to November 1953 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 2,190 ft (from topographic map).

Extremes.--1952-53: Maximum discharge during water year, 16,600 cfs June 13 (gage height, 8.44 ft); minimum recorded, 266 cfs Oct. 29, 1952 (gage height, 1.84 ft).
1953: Maximum discharge during period October to November, 1,960 cfs Nov. 3 (gage height, 3.18 ft); minimum, 1,240 cfs Oct. 14 (gage height, 2.74 ft).
1952-53: Maximum discharge, that of June 13, 1952; minimum recorded, that of Oct. 29, 1952.

Remarks.--Records good. Many diversions above station for irrigation (see Remarks for station near Emmett and near Payette). Flow regulated by Black Canyon Dam and affected by storage reservoir on tributary streams.

Rating table, Oct. 1, 1952, to Nov. 3, 1953 (gage height, in feet, and discharge, in cubic feet per second)

2.1	490	4.0	3,630
2.5	955	5.0	6,210
3.0	1,670	6.0	9,100
3.5	2,530	8.1	15,600

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	982	805				-	3,230	4,980	8,440	6,760	1,230	1,660
2	955	1,070				-	3,180	3,940	10,300	6,620	1,260	*1,770
3	955	1,040				-	2,610	3,320	12,200	6,960	1,270	1,610
4	955	1,020				-	2,630	3,210	12,100	7,320	1,360	1,400
5	830	925				-	2,810	3,390	12,500	7,180	1,240	1,460
6	855	1,010				-	3,160	4,140	12,500	6,510	1,060	1,440
7	710	981				-	2,920	5,240	12,600	6,050	1,150	1,340
8	687	721				-	2,420	*5,510	13,900	6,130	1,200	1,330
9	710	974				-	2,270	4,520	13,200	*5,940	1,150	1,270
10	782	848				-	2,130	3,610	*12,900	5,540	*930	1,270
11	758	848				-	1,930	2,790	12,800	5,060	892	1,310
12	794	1,080				-	1,810	2,470	13,800	4,540	1,020	1,360
13	794	1,080				-	1,720	2,510	15,500	4,000	1,100	1,420
14	794	1,200				-	1,540	2,690	15,600	3,390	1,120	1,420
15	830	978				-	1,310	3,070	14,700	3,010	1,100	1,400
16	868	733				-	1,200	3,560	13,900	2,160	1,120	1,330
17	595	1,340				-	1,460	3,970	14,000	1,830	1,240	1,330
18	553	1,210				-	1,930	4,340	14,700	1,480	1,170	1,340
19	542	1,150				1,690	2,200	5,620	14,800	1,270	1,150	1,360
20	564	1,020				1,970	2,690	8,410	14,300	955	1,150	1,360
21	818	1,020				1,970	*3,680	7,290	13,300	955	1,170	1,360
22	770	903				1,970	4,880	6,700	12,600	1,170	1,160	1,360
23	722	897				1,970	6,590	5,750	12,200	1,060	1,150	1,370
24	806	*887				1,960	7,100	5,350	11,700	1,040	1,170	1,380
25	794	-				2,230	5,940	4,880	11,200	1,090	1,230	1,380
26	818	-				2,670	5,890	4,440	10,300	1,130	1,230	1,380
27	818	-				2,590	6,560	4,270	9,490	1,220	1,270	1,370
28	734	-				2,670	8,890	4,300	8,650	1,220	1,420	1,360
29	683	-				3,070	8,380	6,180	7,760	1,130	1,430	1,400
30	770	-				3,160	6,340	6,590	7,070	1,130	1,260	1,430
31	*676	-				3,300	-	7,580	-	1,190	1,770	-
Total	23,922	-	-	-	-	-	109,400	144,620	369,010	105,040	37,172	41,970
Mean	772	-	-	-	-	-	3,647	4,665	12,300	3,388	1,199	1,399
Ac-ft	47,450	-	-	-	-	-	217,000	286,800	731,900	208,300	73,730	83,250

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, 1953

Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.	Day	Oct.	Nov.
1	1,420	1,830	9	1,380	-	17	1,330	-	25	1,560	-
2	1,430	1,850	10	1,370	-	18	1,370	-	26	1,560	-
3	1,430	*1,930	11	1,310	-	19	1,430	-	27	1,580	-
4	1,440	-	12	1,270	-	20	1,460	-	28	1,640	-
5	1,490	-	13	1,260	-	21	1,560	-	29	1,700	-
6	1,430	-	14	1,330	-	22	1,580	-	30	1,750	-
7	*1,420	-	15	1,370	-	23	1,560	-	31	1,800	-
8	1,380	-	16	1,310	-	24	1,550	-			
Total										45,470	-
Mean										1,467	-
Acre-feet										90,190	-

* 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 1953. Records for January 1895 to July 1897, published as "at Payette" have been found to be unreliable and should not be used.

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.--18 years (1935-53), 3,144 cfs.

Extremes.--Maximum discharge during year, 17,900 cfs June 14 (gage height, 11.36 ft); minimum, 252 cfs Nov. 12 (gage height, 4.56 ft); minimum daily, 653 cfs Nov. 16.
1935-53: 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 except those for periods of no gage-height record, which are good. Diversions above station for irrigation of about 188,000 acres. Flow regulated by Black Canyon Dam and reservoirs on tributary streams.

Revisions.--See Records available paragraph.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 23-28, July 10 to Sept. 30)

4.8	545	8.0	6,740
5.0	820	9.0	9,490
5.5	1,610	10.0	12,800
6.0	2,490	11.2	17,300
7.0	4,440		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,470	1,140	1,000	1,500	1,860	1,780	3,200	5,280	8,630	6,170	1,660	2,000
2	1,420	1,200	1,200	1,200	1,880	1,930	3,130	4,270	*11,000	6,100	1,680	2,000
3	1,420	1,310	1,300	1,500	2,920	1,710	3,070	3,670	13,300	6,290	1,660	1,930
4	1,440	1,310	1,300	1,400	3,730	1,390	2,540	3,350	12,800	6,770	1,710	1,760
5	1,310	1,090	1,200	1,200	3,710	1,710	2,860	3,470	*13,200	6,540	1,630	1,810
6	1,330	*1,140	1,100	*1,200	3,390	1,700	3,110	3,990	13,400	6,070	1,460	1,810
7	1,170	1,140	960	1,250	3,010	1,700	3,030	4,930	13,500	5,480	1,540	1,730
8	1,150	895	1,300	1,300	4,710	1,730	2,670	5,390	15,300	5,510	1,610	1,700
9	1,120	940	1,250	1,300	3,240	1,810	2,530	4,590	14,300	5,370	1,540	1,700
10	1,220	1,200	1,300	1,800	2,600	1,990	2,420	3,790	13,700	5,060	1,410	1,700
11	1,220	970	1,300	2,000	2,380	2,080	2,270	3,130	13,400	4,690	1,280	1,730
12	1,250	940	1,250	2,100	2,290	2,170	2,170	2,710	14,000	4,210	1,380	1,760
13	1,260	1,310	*1,250	2,600	2,200	2,180	2,040	2,670	16,400	3,850	1,490	1,780
14	1,250	1,230	1,300	3,100	2,130	2,170	1,880	2,820	17,100	3,430	1,470	1,830
15	1,280	1,340	1,300	3,200	2,110	2,040	1,710	3,090	15,600	3,160	1,440	1,800
16	1,360	653	1,330	2,100	2,060	2,020	1,540	3,510	14,400	2,450	1,410	*1,750
17	1,150	1,380	1,250	2,100	2,170	2,000	1,700	3,950	14,300	*2,240	1,560	1,710
18	1,080	1,310	1,230	6,000	2,200	1,970	2,130	4,130	*15,100	1,930	1,510	1,750
19	1,080	1,420	1,150	9,000	1,560	1,970	2,290	5,300	15,500	1,780	*1,510	1,750
20	1,150	1,120	940	5,700	1,860	2,290	2,620	8,380	14,900	1,540	1,490	1,760
21	1,380	1,230	1,100	4,200	1,680	2,310	3,430	7,370	13,600	1,330	1,520	1,800
22	1,380	1,040	1,680	3,300	1,520	2,290	4,460	6,840	12,700	1,590	1,540	1,800
23	1,310	1,060	1,250	2,500	1,760	2,330	6,020	5,880	12,200	1,560	1,510	1,810
24	1,330	1,020	1,180	2,300	1,760	2,260	7,230	5,390	11,600	1,490	1,540	1,810
25	1,280	1,030	1,180	2,100	1,710	*2,440	6,020	4,900	10,900	1,520	1,590	1,810
26	1,260	1,000	800	2,000	*1,800	2,780	5,810	4,500	9,910	1,540	1,630	1,810
27	1,260	925	800	1,900	1,610	2,670	6,590	4,440	8,970	1,640	1,660	1,800
28	1,250	910	840	*1,750	1,810	2,710	8,880	4,360	8,270	1,680	1,750	1,800
29	1,030	1,100	1,650	1,750	-	3,010	9,080	6,640	7,180	1,590	1,800	1,830
30	1,250	800	1,400	1,750	-	3,050	*6,640	6,950	6,620	1,580	1,680	1,860
31	1,170	-	1,400	1,800	-	3,200	-	7,800	-	1,590	1,970	-
Total	39,030	33,153	37,490	76,900	65,660	67,390	113,070	147,490	381,780	105,750	48,630	53,890
Mean	1,259	1,105	1,209	2,481	2,345	2,174	3,769	4,758	12,730	3,411	1,569	1,796
Ac-ft	77,410	65,760	74,360	152,500	130,200	133,700	224,300	292,500	757,200	209,800	96,460	106,900

Calendar year 1952: Max 16,500 Min 230 Mean 4,029 Ac-ft 2,925,000
Water year 1952-53: Max 17,100 Min 653 Mean 3,206 Ac-ft 2,322,000

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 29 to Dec. 15, Dec. 26 to Jan. 27; discharge estimated on basis of weather records and records for station near Emmett and nearby streams.

Weiser River at Tamarack, Idaho

Location.--Lat 44°57', long. 116°23', in sec. 31, T. 19 N., R. 1 E., on left bank 43 ft upstream from railroad bridge, 0.65 mile south of Tamarack, and 1½ miles upstream from Beaver Creek.

Drainage area.--36.5 sq mi.

Records available.--September 1936 to September 1953.

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.--17 years, 43.8 cfs.

Extremes.--Maximum discharge during year, 520 cfs Apr. 28, maximum gage height, 4.91 ft Apr. 23; minimum discharge, 2.2 cfs Nov. 21; minimum gage height, 1.13 ft Aug. 25.
1936-53: Maximum discharge observed, 775 cfs Mar. 27, 1940 (gage height, 6.00 ft, site and datum then in use); minimum observed, 1.0 cfs Sept. 2, 1947 (gage height, 0.55 ft, site and datum then in use).

Remarks.--Records good except those for periods of ice effect, which are fair, and those for periods of no gage-height record, which are poor. No diversion 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 tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 21-23)

Oct. 1 to Apr. 23				Apr. 24 to Sept. 30			
1.2	3.2	2.3	55	1.2	4.6	2.5	98
1.3	5.0	2.6	85	1.4	11	3.0	170
1.5	10	3.0	142	1.6	20	3.5	256
1.7	18	4.0	314	1.9	39	4.5	450
2.0	34	5.0	500	2.2	65		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.0	6.7	5.5	6.4	21	16	140	243	78	22	7.2	6.7
2	6.0	6.4	6.5	6.4	22	14	126	203	86	20	7.9	6.7
3	6.0	6.0	7.0	6.4	30	15	124	178	*78	20	10	6.4
4	5.5	6.2	7.0	6.4	53	14	142	175	74	18	11	6.4
5	5.5	6.7	6.5	6.7	56	13	198	188	84	18	9.6	6.2
6	5.7	6.4	6.5	6.7	49	13	218	212	75	16	8.9	6.2
7	5.5	6.2	8.0	8.2	41	14	181	245	99	*14	7.9	6.2
8	5.5	6.0	7.5	6.9	39	17	*150	254	132	14	8.2	*6.2
9	5.5	5.7	7.0	8.2	35	23	130	205	133	14	7.5	5.9
10	5.5	6.7	7.0	8.8	31	30	122	167	118	14	*7.5	5.6
11	5.2	7.4	*6.7	9.4	30	34	105	140	102	14	7.9	5.6
12	5.5	8.2	6.7	10	b27	38	95	128	93	13	7.9	5.9
13	5.2	9.4	6.7	16	26	*38	89	124	98	12	7.9	5.4
14	5.0	9.1	6.7	16	23	35	88	124	78	12	7.9	5.9
15	5.5	7.7	6.2	11	22	33	97	125	70	12	6.9	6.2
16	5.0	7.2	6.2	9.9	21	32	128	129	65	12	7.9	6.9
17	5.2	6.7	6.2	10	20	30	181	132	58	11	6.9	6.4
18	4.8	6.9	b6.5	20	19	27	239	125	50	11	6.4	6.4
19	5.2	6.9	b7.0	36	b17	29	282	144	47	11	6.9	6.7
20	5.0	7.2	7.4	*32	b16	31	336	157	45	10	6.9	6.7
21	6.4	5.7	7.4	35	16	28	370	148	39	10	6.9	6.9
22	6.4	b5.0	7.2	33	16	26	404	133	36	9.9	6.7	6.9
23	6.4	b5.0	b6.0	34	15	27	500	125	33	9.9	6.7	6.7
24	6.7	5.2	b6.2	32	15	35	*442	111	30	9.6	8.9	6.9
25	6.7	b5.0	6.7	27	15	53	378	99	29	9.2	6.4	7.5
26	6.4	b5.0	6.4	24	15	74	366	97	27	8.6	8.2	7.2
27	6.7	5.2	6.4	b20	15	86	418	90	26	8.9	7.9	7.5
28	6.7	b5.0	6.7	20	16	130	488	82	25	8.9	7.5	8.2
29	6.2	b5.2	6.9	18	-	145	378	97	24	8.2	7.2	7.9
30	*6.0	5.0	6.9	19	-	155	306	87	22	7.9	7.2	7.5
31	6.7	-	6.7	19	-	150	-	83	-	7.9	7.5	-
Total	179.6	191.0	208.3	524.4	721	1,405	7,221	4,550	1,954	387.0	240.3	197.8
Mean	5.79	6.37	6.72	16.9	25.8	45.3	241	147	65.1	12.5	7.75	6.59
Ac-ft	356	379	413	1,040	1,430	2,790	14,320	9,020	3,880	768	477	392

Calendar year 1952: Max 722 Min 4.8 Mean 59.8 Ac-ft 43,440
Water year 1952-53: Max 500 Min 4.8 Mean 48.7 Ac-ft 35,260

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 30 to Dec. 10, Feb. 21 to Mar. 12; discharge estimated on basis of weather records, recorded range in stage, and records for station near Council and nearby streams.

Lost Valley Reservoir near Tamarack, Idaho

Location.--Lat 44°57'30", long. 116°28'00", in sec. 28, T. 19 N., R. 1 W., a short distance upstream from outlet gates near left end of dam on Lost Creek, 4 miles west of Tamarack and 16 miles north of Council.

Drainage area.--29.4 sq mi.

Records available.--May to September 1924, May 1926 to September 1953 (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, 26.75 ft June 9; minimum observed, 15.70 ft Nov. 5.

1924, 1926-53: 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 about 26 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, 1952-53

Oct. 30	15.90	June 8	26.70
Nov. 5	15.70	9	26.75
Dec. 16	16.70	10	26.60
May 13	24.30	13	26.35
15	24.32	18	25.90
21	24.85	July 7	26.10
29	24.10	Aug. 11	23.34
June 3	26.12	Sept. 8	19.2

Note.--Gage-height readings obtained only on days listed above.

Lost Creek near Tamarack, Idaho

Location.--Lat 44°57', long. 116°28', in sec. 28, T. 19 N., R. 1 W., on right bank a quarter of a mile downstream from dam of Lost Valley Reservoir, 4 miles west of Tamarack, and 16 miles north of Council.

Drainage area.--29.4 sq mi.

Records available.--January 1910 to August 1914, May 1920 to September 1921, May 1924 to September 1953.

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.--23 years (1930-53), 38.4 cfs.

Extremes.--Maximum discharge during year, 425 cfs Apr. 28 (gage height, 3.30 ft); minimum, 0.6 cfs Nov. 5 (gage height, 0.83 ft).
1910-14, 1920-21, 1924-53: Maximum discharge, 688 cfs May 17, 18, 1921 (gage height, 4.29 ft); practically no flow at times when gates in dam were closed.

Remarks.--Records good except those below 10 cfs and those for periods of no gage-height record, which are fair. No diversion between reservoir and station; practically entire flow diverted below station during irrigation season. Flow regulated since 1910 by Lost Valley Reservoir (see preceding page).

Cooperation.--Water-stage recorder inspected occasionally by Lost Valley Reservoir Co.

Revisions.--WSP 833: Drainage area.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

0.9	1.0	1.7	36
1.0	2.0	2.0	70
1.1	3.5	2.3	116
1.2	5.7	2.6	187
1.3	9.0	3.0	315
1.4	14	3.3	425
1.5	20		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	15	3.4	3.5	3.5	3.4	3.4	267	42	31	62	55
2	16	15	3.4	3.5	3.5	3.4	3.4	216	71	31	62	55
3	16	15	3.4	3.5	3.5	3.4	3.4	190	*96	30	62	55
4	16	15	3.4	3.5	3.5	3.4	3.4	176	111	29	62	54
5	16	7.1	3.5	3.5	3.5	3.4	3.5	182	120	29	61	55
6	15	1.2	3.5	3.5	3.5	3.4	3.5	204	126	27	61	56
7	15	1.2	3.5	3.5	3.5	3.4	3.4	244	136	*26	61	55
8	15	1.2	3.5	3.5	3.5	3.4	3.5	284	160	25	61	*55
9	15	1.2	3.6	3.4	3.5	3.4	5.3	287	190	23	61	55
10	15	1.2	3.6	3.4	3.5	3.4	9.0	238	190	18	60	55
11	15	1.2	3.6	3.4	3.5	3.4	11	207	176	17	*61	55
12	15	2.4	3.6	3.4	3.5	3.4	13	184	168	17	61	55
13	15	3.2	3.7	3.5	3.5	3.4	15	176	163	16	60	54
14	15	3.2	3.7	3.5	3.5	3.4	16	176	150	16	60	54
15	15	3.2	3.7	3.5	3.5	3.4	17	*176	138	15	60	54
16	15	3.2	*3.7	3.5	3.5	3.4	20	187	130	14	60	54
17	15	3.2	3.7	3.5	3.5	3.4	22	196	120	13	60	54
18	15	3.2	3.7	3.5	3.5	3.4	26	204	114	13	60	54
19	15	3.2	3.7	3.5	3.5	3.4	33	219	109	13	59	41
20	15	3.2	3.7	3.5	3.4	*3.4	48	250	61	12	58	26
21	15	3.2	3.7	3.5	3.4	3.4	77	257	33	12	58	27
22	15	3.2	3.7	3.5	3.4	3.4	111	235	39	11	58	27
23	15	3.2	3.7	3.5	3.4	3.4	168	213	42	11	58	27
24	15	3.2	3.7	3.5	3.4	3.4	210	193	35	38	58	27
25	15	3.4	3.7	3.5	3.4	3.4	238	176	22	68	58	27
26	15	3.4	3.7	3.5	3.4	3.4	254	163	26	65	59	27
27	15	3.4	3.7	3.5	3.4	3.4	329	150	27	64	59	27
28	15	3.4	3.7	3.5	3.4	3.2	401	141	29	62	58	27
29	15	3.4	3.7	3.5	-	3.2	401	71	31	62	58	27
30	*15	3.4	3.7	3.5	-	3.2	343	16	31	62	56	27
31	15	-	3.7	3.5	-	3.2	-	26	-	62	55	-
Total	470	135.5	112.3	108.1	97.1	104.6	2,794.8	5,884	2,886	932	1,847	1,321
Mean	15.2	4.52	3.62	3.49	3.47	3.37	93.2	190	96.2	30.1	59.6	44.0
Ac-ft	932	269	223	214	193	207	5,540	11,670	5,720	1,850	3,660	2,620

Calendar year 1952: Max 560 Min 1.2 Mean 58.4 Ac-ft 42,360
Water year 1952-53: Max 401 Min 1.2 Mean 45.7 Ac-ft 33,100

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 1-15, Jan. 23 to Mar. 19, when reservoir gates were not changed; discharge estimated on basis of head in reservoir.

Weiser River near Council, Idaho

Location.--Lat 44°41', long. 116°29', in sec. 29, T. 16 N., R. 1 W., on left bank 0.7 mile downstream from Cottonwood Creek, 2 miles upstream from Middle Fork, and 3¾ miles southwest of Council.

Drainage area.--390 sq mi.

Records available.--April 1937 to March 1953 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 2,850 ft (by barometer). Prior to Oct. 28, 1938, staff gage at site 370 ft downstream at datum 0.58 ft higher. Oct. 28, 1938, to Apr. 21, 1939, staff gage at present site and datum.

Average discharge.--15 years, 423 cfs.

Extremes.--Maximum discharge during period October 1952 to March 1953, 3,600 cfs Jan. 18 (gage height, 7.69 ft); minimum, 39 cfs Nov. 26 (gage height, 1.01 ft).
1937-53: Maximum discharge, 6,700 cfs Mar. 16 or 17, 1938 (gage height, 7.6 ft, from floodmark, site and datum then in use), from rating curve extended above 3,500 cfs; minimum, 22 cfs June 29, 1940.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow partly regulated by Lost Valley Reservoir (see p. 175) and other reservoirs. Diversions above station for irrigation of about 7,000 acres.

Rating table, Oct. 1, 1952, to Mar. 31, 1953, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	38	3.0	537
1.3	69	4.0	980
1.6	122	5.0	1,540
2.0	219	7.0	3,000

Discharge, in cubic feet per second, October 1952 to March 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	72	57	82	463	230						
2	46	69	68	81	533	209						
3	47	69	72	81	960	219						
4	48	70	84	81	1,040	211						
5	48	72	72	81	842	203						
6	48	70	70	82	773	203						
7	49	62	108	93	657	209						
8	51	61	104	133	657	232						
9	47	55	88	386	533	297						
10	47	56	86	403	481	386						
11	49	69	*84	263	449	443						
12	50	69	82	319	403	492						
13	49	80	84	1,350	386	488						
14	49	102	81	1,020	364	*446						
15	51	95	78	556	352	420						
16	52	80	75	507	333	390						
17	56	70	74	1,170	333	360						
18	57	74	78	2,310	321	330						
19	59	70	80	1,980	274	550						
20	62	67	84	2,070	235	1,000						
21	62	62	82	*1,350	235	820						
22	63	51	81	890	235	700						
23	63	56	62	768	224	660						
24	63	61	b52	624	219	720						
25	63	55	b65	553	214	820						
26	63	53	74	449	216	800						
27	63	53	80	429	222	790						
28	63	b50	81	403	238	880						
29	64	b51	82	422	-	940						
30	65	52	86	419	-	960						
31	*69	-	88	403	-	980						
Total	1,712	1,976	2,442	19,808	12,192	16,388						
Mean	55.2	65.9	78.8	639	435	529						
Ac-ft	3,400	3,920	4,840	39,290	24,180	32,510						

Calendar year 1952: Max 4,150 Min 46 Mean 602 Ac-ft 437,300
Water year 1952-53: Max - Min - Mean - Ac-ft -

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Mar. 15-31; discharge estimated on basis of weather records and records for station near Cambridge.

Mesa Orchards Canal near Mesa, Idaho

Location.--Lat 44°38', long. 116°25', in sec. 14, T. 15 N., R. 1 W., on left side of flume 1,500 ft from lower end, 1½ miles northeast of Mesa, and 3 miles downstream from headgates.

Records available.--1924, 1928-53 (irrigation seasons only prior to 1947).

Gage.--Staff gage read twice daily. Prior to 1938, staff gages in flume at sites within 600 ft of present site at different datums.

Extremes.--1924, 1928-53: Maximum daily discharge, 42 cfs July 20, 21, 1952; no flow during nonirrigation seasons.

Remarks.--Records good. 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	5.9					5.5	12	14	29	33	29
2	20	0					10	14	15	20	33	28
3	20	*0					10	14	*14	25	33	28
4	20	0					10	14	15	30	33	28
5	20	0					a10	16	15	30	33	27
6	18	0					10	19	15	32	33	27
7	16	0					10	18	13	32	34	26
8	16	0					10	13	12	*32	33	25
9	11	0					*10	13	12	32	33	*22
10	8.6	0					11	14	13	32	33	23
11	8.6	0					11	17	14	32	*33	24
12	7.9	0					7.7	20	12	32	33	23
13	7.9	0					7.4	13	12	32	33	23
14	7.9	0					7.5	13	13	32	33	22
15	7.9	0					9.0	19	12	32	33	22
16	7.9	0					9.0	22	12	30	33	22
17	7.9	0					9.6	22	13	31	33	22
18	7.9	0					9.9	23	13	33	32	23
19	7.9	0					9.6	22	12	32	32	23
20	7.9	0					8.8	22	10	33	32	22
21	7.9	0		(*)			7.0	24	10	33	32	22
22	7.9	0					8.1	24	14	33	32	22
23	7.9	0					10	14	16	33	32	22
24	7.9	0					*9.7	8.7	18	33	33	22
25	7.9	0					10	9.2	20	33	a32	22
26	7.9	0					a10	9.6	23	33	a31	21
27	7.9	0					a10	9.6	24	33	a30	21
28	7.9	0					a10	10	25	33	30	20
29	7.9	0					10	10	26	33	30	21
30	7.9	0					10	12	27	33	30	21
31	7.9	-					-	12	-	33	29	-
Total	337.2	5.9	0	0	0	0	280.8	483.1	464	976	999	703
Mean	10.9	0.20	0	0	0	0	9.36	15.6	15.5	31.5	32.2	23.4
Ac-ft	669	12	0	0	0	0	557	958	920	1,940	1,980	1,390

Calendar year 1952: Max 42 Min 0 Mean 12.4 Ac-ft 9,000
Water year 1952-53: Max 34 Min 0 Mean 11.6 Ac-ft 8,430

* Discharge measurement or observation of no flow made on this day.
a No gage-height record; discharge estimated on basis of reported gate operations.

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 1953.

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.--14 years, 674 cfs.

Extremes.--Maximum discharge during year, 4,820 cfs Jan. 18 (gage height, 8.00 ft); minimum, 47 cfs Sept. 24 (gage height, 0.53 ft).
1939-53: Maximum discharge, 6,670 cfs Mar. 31, 1940 (gage height, 8.30 ft); minimum, 23 cfs Oct. 1, 1943; minimum gage height, that of Sept. 24, 1953.

Remarks.--Records excellent. Flow partly regulated by Lost Valley Reservoir (see p. 175) and other reservoirs. Diversions above station for irrigation of about 9,200 acres.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 31 to July 14)

0.5	45	2.5	446
.7	62	3.0	657
1.0	95	4.0	1,200
1.5	175	6.0	2,760
2.0	286	8.0	4,820

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	62	*96	82	120	775	317	1,130	1,970	1,650	765	102	84
2	61	96	98	118	960	283	1,030	1,640	2,240	715	99	80
3	61	95	112	118	2,120	294	960	1,460	2,210	676	109	79
4	61	99	114	118	2,010	286	948	1,470	*2,090	652	118	79
5	61	102	120	118	1,500	273	1,130	1,670	2,150	601	118	79
6	62	103	112	120	1,410	268	1,320	1,980	1,990	566	106	81
7	64	94	138	129	1,160	270	1,150	2,360	2,500	537	96	82
8	66	94	148	181	1,160	300	998	2,320	3,050	504	94	78
9	67	90	129	743	894	363	877	1,990	2,730	484	91	*72
10	67	85	126	762	765	476	*790	1,670	2,570	*446	89	73
11	67	95	122	442	691	553	720	1,480	2,500	410	87	71
12	66	102	*120	540	588	624	671	1,390	2,540	360	*85	71
13	67	109	124	2,130	562	634	629	1,440	2,540	311	83	70
14	67	130	122	1,940	512	*553	597	1,530	2,280	283	78	67
15	73	135	118	926	476	512	562	1,620	2,120	250	75	66
16	75	118	115	755	450	496	606	1,690	1,970	223	76	66
17	80	108	102	1,900	450	465	720	1,800	1,950	206	79	66
18	82	108	121	3,790	442	424	921	1,820	1,870	186	76	67
19	83	110	115	3,490	370	773	1,170	2,470	1,690	173	75	67
20	88	105	120	3,250	314	1,340	1,510	2,610	1,480	164	74	65
21	91	99	120	2,350	329	1,030	1,960	2,280	1,310	150	72	55
22	90	82	118	*1,550	326	916	*2,300	2,060	1,250	140	72	52
23	88	83	102	1,460	308	840	2,890	1,840	1,210	126	72	53
24	84	87	78	1,100	300	904	2,900	1,680	1,120	115	73	51
25	85	80	96	932	294	1,090	2,570	1,510	1,030	112	84	56
26	88	76	106	810	294	1,060	2,590	1,430	965	137	87	57
27	88	76	118	652	297	1,030	2,960	1,370	904	132	88	57
28	85	70	122	597	323	1,150	3,660	1,350	888	122	89	58
29	84	71	120	648	-	1,220	3,080	1,660	850	118	89	59
30	85	73	124	681	-	1,240	2,440	1,490	815	112	88	64
31	90	-	126	652	-	1,210	-	1,540	-	105	87	-
Total	2,338	2,871	3,588	33,122	20,080	21,194	45,789	54,590	54,462	9,881	2,711	2,025
Mean	75.4	95.7	116	1,068	717	684	1,526	1,761	1,815	319	87.5	67.5
Ac-ft	4,640	5,690	7,120	65,700	39,830	42,040	90,820	108,300	108,000	19,600	5,380	4,020

Calendar year 1952: Max 5,520 Min 53 Mean 959 Ac-ft 696,500
Water year 1952-53: Max 3,790 Min 51 Mean 692 Ac-ft 501,100

* 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 1953.

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.--15 years, 40.1 cfs.

Extremes.--Maximum discharge observed during year, 208 cfs Jan. 19; maximum gage height observed, 2.97 ft June 14; minimum discharge observed, 3.7 cfs Aug. 5; minimum gage height observed, 1.00 ft Dec. 13-21, 27, 28, Jan. 3-5.
1938-53: Maximum discharge observed, 505 cfs May 27, 1948 (gage height, 3.60 ft), from rating curve extended above 200 cfs by logarithmic plotting, but may have been more when gage was overtopped June 3, 1948; minimum observed, 0.7 cfs Aug. 3, 1949; minimum gage height observed, 0.29 ft Aug. 5, 1952.

Remarks.--Records fair except those for periods of ice effect, doubtful gage-height record, or indefinite stage-discharge relation, which are poor. Several diversions above station for irrigation.

Rating tables, water year 1952-53, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 23 to Jan. 21, Mar. 12-18, Apr. 22-25)

Oct. 1 to Nov. 22		Nov. 23 to Sept. 30			
1.0	3.0	1.2	2.7	2.0	52
1.1	6.1	1.3	5.2	2.3	92
1.2	10	1.5	12	2.6	138
1.3	17	1.7	24	3.0	205
1.4	26				

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.2	*6.5	d14	12	42	28	85	113	127	92	7.8	6.8
2	9.2	6.5	d16	12	81	29	82	94	144	91	6.2	6.8
3	10	6.1	16	12	113	30	81	88	*149	86	5.0	6.5
4	10	6.1	16	12	106	31	82	89	148	81	4.4	6.2
5	9.6	6.5	15	12	98	31	d85	88	136	79	4.0	6.2
6	10	6.1	15	15	101	32	d80	86	133	77	4.2	6.5
7	10	6.5	15	15	92	34	d75	89	154	70	4.7	5.9
8	9.2	6.1	15	17	73	d35	d70	110	133	68	5.2	5.9
9	8.7	5.8	14	55	68	d40	*65	101	140	49	5.9	*5.5
10	9.2	6.1	12	52	59	d50	d60	91	130	*41	6.2	5.2
11	8.7	7.4	12	43	58	d50	d60	86	154	37	6.5	5.0
12	9.6	7.9	*12	52	51	49	52	84	176	38	*6.5	4.7
13	9.6	10	12	118	47	d48	52	92	190	d35	6.5	4.4
14	9.6	25	12	144	46	*47	52	91	193	d32	6.2	4.7
15	9.6	16	12	108	45	d45	55	102	185	d30	5.9	4.7
16	9.6	15	12	106	45	47	64	113	169	28	5.2	4.2
17	9.2	14	12	125	42	49	66	116	161	25	5.2	4.7
18	8.7	15	12	162	40	50	72	132	152	20	5.2	4.7
19	9.2	d14	12	-188	37	61	82	178	140	19	5.0	4.7
20	8.3	d13	12	200	32	65	89	130	136	18	4.7	4.4
21	7.4	*12	12	144	32	64	96	127	133	17	5.0	4.7
22	7.0	d10	12	*95	32	65	108	122	132	14	5.2	4.7
23	7.0	d11	b11	73	30	72	*128	110	128	14	5.9	5.2
24	7.4	d12	b10	69	28	79	122	116	122	13	5.9	5.2
25	6.5	d10	b11	60	26	82	128	116	124	12	6.5	5.0
26	6.5	d8	12	52	30	85	130	106	120	12	6.5	5.2
27	6.1	d9	12	49	29	86	162	81	114	d11	6.5	5.2
28	6.1	d10	12	46	29	88	176	77	106	d11	6.8	5.9
29	6.5	d10	14	44	-	88	144	100	96	d10	6.5	6.5
30	6.1	d11	14	42	-	86	122	119	94	9.7	6.8	6.5
31	7.0	-	12	42	-	82	-	125	-	8.5	6.5	-
Total	260.8	302.6	400	2,176	1,514	1,728	2,725	3,272	4,219	1,148.2	178.6	161.8
Mean	8.41	10.1	12.9	70.2	54.1	55.7	90.8	106	141	37.0	5.76	5.39
Ac-ft	517	600	793	4,320	3,000	3,430	5,400	6,490	8,370	2,280	354	321

Calendar year 1952: Max 370 Min 5.8 Mean 63.5 Ac-ft 46,090
Water year 1952-53: Max 200 Min 4.0 Mean 49.6 Ac-ft 35,880

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge estimated on basis of 3 discharge measurements, weather records, and records for other streams in Weiser River basin.
Note.--Stage-discharge relation indefinite about Jan. 1-25; discharge estimated on basis of gage readings, 1 discharge measurement, weather records, and records for other Weiser River tributaries. Gage readings Oct. 1 to Nov. 22 from supplementary staff gage 900 ft upstream.

Little Weiser River near Indian Valley, Idaho

Location.--Lat 44°30', long. 116°24', in NE¼ sec. 1, T. 13 N., R. 1 W., on left bank 60 ft downstream from barn at Richardson Ranch, 1 mile upstream from diversion feeding C. Ben Ross Reservoir, and 4¾ miles southeast of Indian Valley.

Drainage area.--81.9 sq mi.

Records available.--June 1920 to February 1921, March to September 1923, February 1924 to October 1927, April 1938 to September 1953.

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.--18 years (1924-27, 1938-53), 106 cfs.

Extremes.--Maximum discharge during year, 1,240 cfs June 7 (gage height, 4.77 ft); minimum, 3.3 cfs Nov. 22 (gage height, 0.25 ft).
1920-21, 1923-27, 1938-53: Maximum discharge observed, about 1,840 cfs Feb. 4, 1925; minimum recorded, that of Nov. 22, 1952.

Remarks.--Records excellent except those below about 20 cfs, which are good, and those for period of no 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.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

0.4	6.4	1.6	97
.6	12	2.0	173
.8	21	2.5	315
1.0	34	3.0	482
1.3	61	4.0	870

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	*12	11	13	83	38	119	281	460	278	38	16
2	12	10	13	13	98	36	108	240	766	254	37	15
3	11	10	15	13	284	36	103	234	*619	245	40	15
4	11	11	15	13	242	36	108	263	596	225	38	15
5	11	11	14	13	166	36	137	328	607	203	33	14
6	11	12	14	13	146	35	133	396	548	193	31	14
7	11	11	15	14	131	36	115	432	766	178	30	14
8	11	10	14	19	112	42	104	363	718	*166	30	14
9	11	8.6	14	77	93	50	*100	309	630	155	29	*13
10	11	9.5	14	48	80	59	97	269	603	145	26	13
11	11	13	14	36	74	58	92	248	611	135	*25	13
12	11	13	*15	64	68	56	87	257	698	125	23	13
13	11	13	16	186	61	54	82	284	766	115	22	12
14	11	15	14	124	57	*51	78	312	710	110	21	12
15	11	14	14	69	53	50	76	350	650	100	20	12
16	11	12	13	82	49	49	83	369	611	90	20	12
17	11	12	14	217	48	49	89	386	630	80	20	12
18	11	14	14	694	46	48	97	405	611	75	19	12
19	11	13	14	360	38	61	126	650	555	70	18	12
20	11	12	14	293	37	77	183	619	500	65	18	12
21	11	8.9	14	*193	40	72	260	529	471	62	18	12
22	11	7.6	13	126	39	70	325	471	468	60	18	12
23	11	8.6	9.5	114	37	77	*443	422	453	58	18	12
24	10	10	9.5	94	35	89	373	392	409	55	20	12
25	10	7.9	12	85	35	114	360	353	379	52	21	12
26	10	6.9	13	73	36	100	399	337	360	50	20	12
27	10	8.4	15	63	37	104	529	318	337	48	20	12
28	10	8.6	14	60	40	127	611	334	341	45	18	12
29	10	8.4	14	60	-	131	419	443	318	42	18	12
30	11	8.6	14	61	-	133	341	399	303	41	17	13
31	11	-	14	61	-	129	-	426	-	40	17	-
Total	337	320.0	423.0	3,351	2,265	2,101	6,177	11,419	16,494	3,560	743	386
Mean	10.9	10.7	13.6	108	80.9	67.8	206	368	550	115	24.0	12.9
Cfsm	0.133	0.131	0.166	1.32	0.988	0.828	2.52	4.49	6.72	1.40	0.293	0.158
In.	0.15	0.15	0.19	1.52	1.03	0.95	2.80	5.19	7.49	1.62	0.34	0.18
Ac-ft	668	635	839	6,650	4,490	4,170	12,250	22,650	32,720	7,060	1,470	766

Calendar year 1952: Max 942 Min 6.9 Mean 143 Cfsm 1.75 In. 23.67 Ac-ft 103,500
Water year 1952-53: Max 766 Min 6.9 Mean 130 Cfsm 1.59 In. 21.61 Ac-ft 94,370

Peak discharge (base, 400 cfs).--Jan. 18 (2 p.m.) 1,120 cfs (4.52 ft); Apr. 28 (3:30 a.m.) 766 cfs (3.74 ft); May 6 (10 p.m.) 482 cfs (3.00 ft); May 20 (3 a.m.) 754 cfs (3.71 ft); June 2 (11 a.m.) 1,130 cfs (4.54 ft); June 7 (9 p.m.) 1,240 cfs (4.77 ft); June 12 (12 p.m.) 942 cfs (4.16 ft).
* Discharge measurement made on this day.
Note.--No gage-height record July 9-27; discharge estimated on basis of recorded range in stage, weather records, and records for other stations in Weiser River basin.

Crane Creek Reservoir near Midvale, Idaho

Location.--Lat 44°22', long. 116°37', in SE¼ sec. 19, T. 12 N., R. 2 W., at gate-control structure near left end of dam on Crane Creek, 10 miles southeast of Midvale.

Drainage area.--242 sq mi.

Records available.--November 1923 to September 1953.

Gage.--Staff gage. Altitude of gage is 3,190 ft (by barometer).

Extremes.--Maximum gage height observed during year, 50.0 ft June 3, 4; no usable contents Oct. 22 to Dec. 3.
1923-53: 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, revised) and spillway crest (approximately 55.0 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	7.0	-	-	-	-		48.3	-	-	-
2	-	-	7.0	-	-	47.0	-		-	-	-	-
3	-	-	7.23	-	-	-	-	48.3	50.0	-	-	-
4	-	-	7.90	-	-	-	-		50.0	-	-	-
5	-	-	8.50	-	48.3	-	-		-	-	-	-
6	-	7.0	9.00	-	-	-	-		-	-	-	-
7	-	-	9.70	-	48.8	-	48.5		49.5	-	-	-
8	-	-	11.09	-	-	-	48.5		49.5	47.2	-	-
9	-	-	-	21.90	-	46.8	-		-	-	-	37.1
10	30.0	-	-	-	48.0	-	-		48.7	47.05	-	-
11	29.5	-	-	-	-	-	-		-	-	-	36.8
12	28.5	7.0	-	-	-	-	-		-	-	42.66	-
13	-	-	-	-	-	-	48.5		47.8	-	-	36.3
14	-	-	-	-	47.0	-	-		-	47.1	-	-
15	-	-	13.16	32.0	-	-	-		-	-	-	-
16	-	-	-	-	-	47.1	-		-	-	-	-
17	-	-	-	-	-	-	-		-	-	-	-
18	-	-	-	-	-	-	48.3		-	46.6	-	-
19	-	7.1	-	-	-	-	-		-	-	-	-
20	-	7.1	-	-	-	-	-		-	-	-	-
21	-	7.1	-	44.0	47.0	-	-		-	-	-	-
22	-	-	-	-	-	48.0	-		-	46.1	-	-
23	-	-	14.30	-	-	-	48.3		-	-	40.5	34.6
24	-	-	-	45.25	-	-	-		-	-	-	-
25	-	-	-	-	-	-	-		-	-	-	-
26	-	7.0	-	-	-	-	-		-	-	-	-
27	-	-	-	-	-	-	-		-	-	39.6	-
28	-	7.0	-	-	-	48.5	-		47.5	-	-	34.0
29	-	7.0	-	46.0	-	-	-		-	-	39.2	-
30	-	-	14.80	-	-	-	-		-	-	-	-
31	-	-	-	-	-	-	-		-	-	-	-

Crane Creek near Midvale, Idaho

Location.--Lat 44°21'30", long. 116°37'10", in SE¼ sec. 19, T. 12 N., R. 2 W., on right bank 400 ft downstream from Crane Creek Dam and 9½ miles (revised) southeast of Midvale.

Drainage area.--242 sq mi.

Records available.--October 1910 to April 1916, May 1924 to September 1953.

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.--32 years (1912-15, 1924-53), 73.4 cfs.

Extremes.--Maximum discharge during year, 653 cfs Oct. 12 (gage height, 3.24 ft, datum then in use); no flow Dec. 24 to Jan. 7, Jan. 10-12, 24-28.
1910-16, 1924-53: 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.

Remarks.--Records good except those below 10 cfs, which are poor. 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).

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 7				Dec. 8 to Sept. 30			
0.0	0	1.0	56	1.5	0	2.6	75
.1	.5	1.5	111	1.6	.2	3.0	124
.2	3.0	2.0	186	1.7	2.8	3.5	207
.3	6.5	2.5	323	1.8	7.0	4.0	350
.5	18	3.0	532	2.0	18	4.6	615
.8	39	3.2	631	2.3	43		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	188	*2.8	a3.9	0	35	94	86	51	51	37	152	142
2	78	2.8	a4.5	0	36	73	86	51	51	37	150	141
3	53	2.8	a2.3	0	36	53	86	51	152	37	150	141
4	106	2.8	a.1	0	36	53	86	51	*479	39	150	141
5	106	2.8	a.1	0	147	53	86	51	590	38	150	138
6	105	2.8	a.1	0	311	53	86	51	585	38	148	138
7	105	2.8	a.1	0	433	52	56	51	408	38	148	138
8	44	2.8	*.1	1.2	590	52	52	51	585	27	148	138
9	.2	2.5	.1	.1	585	22	86	51	585	17	148	138
10	48	2.5	.1	0	469	.2	86	51	488	*16	147	*137
11	284	2.8	.1	0	374	.2	86	49	430	16	147	135
12	606	2.8	.1	0	374	.2	86	47	430	16	147	135
13	355	3.4	.1	.1	374	.2	*86	47	225	16	*147	127
14	311	35	.1	.2	225	.2	86	50	28	30	148	104
15	621	10	.1	.1	94	.2	86	51	38	71	150	104
16	600	5.4	.1	.2	94	.2	86	51	38	71	173	104
17	570	4.4	.1	.5	94	.2	86	51	38	71	199	104
18	542	4.0	.1	1.5	94	.2	64	51	38	78	199	103
19	482	4.0	.1	.2	94	.2	51	51	38	114	199	103
20	208	4.4	.1	.5	94	.2	51	51	38	114	199	103
21	14	*4.0	.1	.2	94	*.2	51	51	38	114	197	103
22	6.5	3.5	.1	.1	94	19	51	51	38	120	197	101
23	5.1	4.0	.1	.1	94	50	*51	51	38	156	197	98
24	4.0	4.0	0	*0	94	50	51	51	38	156	197	81
25	4.0	3.7	0	0	94	50	51	51	37	156	195	81
26	3.7	a3.5	0	0	94	49	51	51	37	156	193	81
27	3.4	a3.5	0	0	94	50	51	51	37	155	182	81
28	3.4	a3.1	0	0	94	69	51	51	37	155	171	74
29	3.0	a3.4	0	17	-	85	51	51	37	155	152	49
30	3.4	a3.4	0	35	-	85	51	51	37	153	144	48
31	3.0	-	0	35	-	85	-	51	-	153	142	-
Total	5,465.7	139.7	12.7	92.0	5,341	1,099.4	2,068	1,570	5,689	2,550	5,166	3,311
Mean	176	4.66	0.41	2.97	191	35.5	68.9	50.6	190	82.3	167	110
Ac-ft	10,840	277	25	182	10,590	2,180	4,100	3,110	11,280	5,060	10,250	6,570

Calendar year 1952: Max 824 Min 0 Mean 179 Ac-ft 129,900
Water year 1952-53: Max 621 Min 0 Mean 89.1 Ac-ft 64,460

* Discharge measurement or observation of no flow made on this day.
a No gage-height record; discharge estimated on basis of record of gate change and records for station near Weiser.

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 1953.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 2,240 ft (by barometer).

Average discharge.--32 years (1921-53), 82.3 cfs.

Extremes.--Maximum discharge during year, 1,020 cfs Jan. 18 (gage height, 5.27 ft); minimum, 3.9 cfs Dec. 24 (gage height, 1.76 ft); minimum daily, 6.2 cfs Dec. 24.
1920-53: Maximum discharge, 2,350 cfs about Feb. 7, 1925 (gage height, 6.80 ft, from well-defined marks on gage), from rating curve extended above 1,000 cfs; minimum, 0.2 cfs May 26, 1931; minimum daily, 1 cfs or less at times during many years; minimum gage height, 1.30 ft Jan. 21, 1922.

Remarks.--Records excellent except those for period of no gage-height record and those below about 20 cfs, which are good. Flow regulated since 1911 by Crane Creek Reservoir (see p. 182). Several small ditches divert above station for irrigation.

Revisions.--WSP 833: Drainage area.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 4-10)

1.8	4.2	2.5	54
1.9	7.0	3.0	128
2.0	11	3.5	233
2.1	16	4.0	380
2.2	24	5.0	840

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*183	9.8	9.4	7.0	60	106	89	58	61	38	148	133
2	133	9.4	11	7.0	95	a100	89	58	301	35	144	133
3	25	*9.4	10	7.0	248	a60	89	56	128	32	139	133
4	108	9.4	9.0	6.7	116	a56	89	54	474	36	139	132
5	109	9.4	7.4	7.0	152	a56	89	53	*645	37	141	132
6	109	9.4	7.4	7.0	446	a55	90	55	655	37	144	132
7	111	9.4	11	9.0	485	a55	89	54	497	32	142	133
8	89	9.0	9.8	19	705	55	36	53	655	30	142	130
9	11	9.4	8.2	439	665	52	92	50	605	*16	139	132
10	7.4	9.4	8.6	94	545	12	92	50	520	13	141	*135
11	208	9.8	8.6	36	398	8.6	*90	47	430	8.6	141	133
12	575	11	8.2	25	395	8.6	89	50	422	13	141	132
13	472	12	8.2	223	395	9.4	90	47	294	14	141	132
14	187	34	7.8	270	278	9.8	90	45	40	12	*139	118
15	615	29	7.8	46	105	9.0	90	46	46	52	141	114
16	610	15	*7.4	115	101	*8.6	89	46	44	59	154	113
17	575	12	7.4	310	103	8.2	90	50	40	59	187	111
18	540	12	7.0	590	105	8.2	81	52	41	59	187	108
19	478	11	7.0	156	103	29	59	64	42	90	187	101
20	264	10	7.4	185	100	95	56	59	41	98	183	100
21	38	9.8	7.4	72	98	28	55	60	42	101	181	100
22	18	8.6	7.4	39	98	28	56	64	42	103	174	100
23	14	9.0	6.4	*47	98	60	56	60	42	141	176	100
24	13	9.4	6.2	34	98	61	58	58	38	142	181	89
25	12	9.0	6.4	27	98	61	*56	56	34	139	181	86
26	12	8.6	6.4	21	100	59	59	59	36	137	179	84
27	11	8.6	6.7	15	105	59	62	59	37	139	172	84
28	10	7.4	6.7	14	111	67	60	58	37	135	158	83
29	10	8.2	6.7	14	-	89	58	173	37	139	146	58
30	10	8.2	7.0	54	-	89	58	70	38	144	• 135	58
31	10	-	7.0	60	-	89	-	62	-	142	135	-
Total	5,567.4	336.6	242.9	2,955.7	6,406	1,491.4	2,246	1,826	6,364	2,232.6	4,838	3,329
Mean	180	11.2	7.84	95.3	229	48.1	74.9	58.9	212	72.0	156	111
Ac-ft	11,040	668	482	5,860	12,710	2,960	4,450	3,620	12,620	4,430	9,600	6,600

Calendar year 1952: Max 1,150 Min 2.3 Mean 205 Ac-ft 148,800
Water year 1952-53: Max 705 Min 6.2 Mean 104 Ac-ft 75,040

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

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 sites used prior to December 12, 1911.

Records available.--March 1890 to June 1891, December 1894 to December 1904, October 1910 to December 1914, October 1952 to September 1953.

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.

Extremes.--Maximum discharge during year, 11,400 cfs Jan. 18, 19 (gage height, 9.14 ft); minimum, 81 cfs Oct. 3, Nov. 29 (gage height, 1.58 ft), but may have been less during period of ice effect.
1890-91, 1894-1904, 1910-14, 1952-53: Maximum discharge observed, 17,900 cfs May 5, 1896 (gage height, 9.20 ft, site and datum then in use); minimum observed, 10 cfs Aug. 21, 1898 (gage height, 0.20 ft, site and datum then in use).
Flood of Mar. 19, 1932, reached a discharge of about 17,500 cfs.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow partly regulated by Crane Creek Reservoir (see p. 182), Lost Valley Reservoir (see p. 175), and other small reservoirs. Diversions above station for irrigation of about 22,000 acres.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.6	84	3.5	988
1.8	124	4.0	1,460
2.0	183	5.0	2,740
2.5	387	7.0	6,480
3.0	642	9.0	11,000

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	278	143	150	242	1,370	706	1,790	2,970	2,650	1,300	250	250
2	222	148	180	223	1,580	614	1,520	2,460	*3,860	1,220	242	238
3	88	*148	210	231	4,550	582	1,510	2,150	4,130	1,150	235	235
4	183	151	220	231	4,320	576	1,440	2,090	3,930	1,090	258	227
5	183	146	230	223	3,080	555	1,590	2,260	4,050	997	274	223
6	183	161	220	223	3,430	545	1,880	2,640	3,860	915	274	215
7	180	161	270	250	3,110	550	1,800	3,150	4,040	847	250	223
8	167	154	300	382	3,030	582	1,510	3,280	5,770	784	238	227
9	97	151	270	2,600	2,390	659	1,410	2,860	4,970	*725	227	223
10	97	143	260	3,040	2,030	750	*1,290	2,460	4,490	671	227	*215
11	264	140	245	1,450	1,740	854	1,190	2,150	4,110	614	250	219
12	677	157	240	1,210	1,550	939	1,100	1,980	4,200	566	231	219
13	632	177	240	4,640	1,480	1,010	1,050	2,000	4,390	514	223	219
14	254	266	230	5,690	1,270	907	1,010	2,140	3,890	463	*219	183
15	757	299	220	2,610	1,010	825	931	2,300	3,680	449	215	170
16	750	242	*201	2,010	931	*777	939	2,390	3,260	420	219	170
17	738	208	180	4,390	931	763	1,040	2,560	3,230	378	258	170
18	713	187	194	8,800	988	706	1,210	2,700	3,190	351	258	173
19	659	187	205	9,470	877	988	1,480	3,400	2,940	356	258	173
20	474	183	208	6,630	725	2,740	1,860	4,260	2,590	338	250	177
21	183	173	223	5,230	694	1,790	2,370	3,570	2,300	312	246	173
22	151	143	227	3,100	706	1,610	2,890	3,300	2,180	295	235	161
23	146	135	183	*2,910	694	1,520	3,570	2,920	2,140	303	235	154
24	143	b138	b125	2,260	671	1,550	4,000	2,660	1,990	287	246	138
25	143	b142	b150	1,860	648	1,750	*3,770	2,410	1,800	270	254	135
26	143	b130	b175	1,580	642	1,790	3,500	2,260	1,680	266	278	151
27	143	b125	b200	1,270	648	1,690	3,870	2,180	1,580	299	278	154
28	148	b120	b220	1,110	688	1,790	5,170	2,080	1,510	291	270	161
29	143	122	b220	1,080	-	1,910	4,700	2,780	1,440	270	262	132
30	143	128	b220	1,380	-	1,910	3,680	2,590	1,380	266	254	129
31	140	-	238	1,270	-	1,890	-	2,460	-	258	250	-
Total	9,222	4,908	6,654	77,595	45,783	35,828	65,070	81,410	95,230	17,265	7,664	5,637
Mean	297	164	215	2,503	1,635	1,156	2,169	2,626	3,174	557	247	188
Ac-ft	18,290	9,730	13,200	153,900	90,810	71,060	129,100	161,500	188,900	34,240	15,200	11,180

Calendar year 1952: Max - Min - Mean - Ac-ft -
Water year 1952-53: Max 9,470 Min 88 Mean 1,239 Ac-ft 897,100

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 29 to Dec. 15; discharge estimated on basis of weather records and records for station near Cambridge and Crane Creek at mouth, near Weiser.

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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 1953 (winter records fragmentary prior to 1950).

Gage.--Water-stage recorder. Altitude of gage is 2,160 ft (by barometer).

Extremes.--1920-53: Maximum daily discharge, 215 cfs July 16, 1953; no flow at times when gates were closed.

Remarks.--Records excellent except those below about 50 cfs, which are good, and those for periods of ice effect or no gage-height record, which are poor. Canal diverts water from right bank of Weiser River in sec. 35, T. 11 N., R. 4 W., 3¼ miles above station, 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*150	27	b12	10	3.2	2.4	0.9	188	157	194	202	184
2	147	16	b13	9.4	3.2	2.8	.9	184	158	193	201	179
3	66	19	13	10	3.6	2.8	.9	181	157	197	194	180
4	116	21	13	a10	4.0	2.8	.9	180	150	199	199	182
5	133	*18	14	a10	4.0	2.8	.9	180	*142	196	201	182
6	132	15	14	10	5.0	2.8	.9	180	141	195	203	174
7	131	14	14	11	4.5	a2.8	31	179	141	199	202	176
8	130	14	14	11	4.0	a2.8	72	177	141	197	200	179
9	75	13	b12	12	3.6	a2.8	62	171	137	*199	200	173
10	62	13	10	12	3.6	a2.8	20	170	140	204	201	*167
11	88	13	10	9.4	3.6	a1.0	18	170	140	209	202	170
12	100	13	10	8.8	3.6	a1.0	22	165	141	210	201	170
13	104	14	*11	10	3.6	a1.0	*34	177	132	207	201	169
14	74	14	11	7.6	3.6	a1.0	58	184	139	207	200	158
15	86	14	b11	5.5	3.2	a1.0	80	184	148	213	*196	150
16	84	14	b10	5.5	3.2	*.9	88	183	156	215	191	143
17	89	14	10	6.0	3.2	.9	87	181	155	213	203	144
18	88	13	11	11	3.6	.9	95	181	157	211	201	144
19	88	13	11	6.5	3.2	.9	96	184	157	212	198	147
20	86	13	11	5.0	3.2	.9	95	178	164	210	198	146
21	86	13	11	4.0	3.2	1.2	96	171	175	206	197	144
22	91	13	11	8.8	2.8	1.2	109	170	176	204	197	140
23	90	b12	b11	*5.0	2.8	1.2	118	168	185	208	197	135
24	90	b12	b7.0	3.2	2.8	1.2	*138	167	192	209	196	130
25	91	b12	b8.0	3.2	2.8	1.2	150	166	194	205	193	119
26	92	b13	8.8	2.8	2.8	1.2	152	166	197	201	190	128
27	92	b13	9.4	3.2	2.8	1.2	152	166	195	210	189	126
28	91	b12	10	3.2	2.8	1.2	151	166	197	204	188	126
29	90	b12	10	3.2	-	.9	163	161	195	202	189	121
30	89	b12	10	3.2	-	.9	184	156	194	197	190	119
31	72	-	10	3.2	-	.9	-	156	-	197	173	-
Total	3,003	429	341.2	223.7	95.5	49.4	2,276.4	5,390	4,853	6,323	6,093	4,605
Mean	96.9	14.3	11.0	7.22	3.41	1.59	75.9	174	162	204	197	154
Ac-ft	5,960	851	667	444	189	98	4,520	10,690	9,630	12,540	12,090	9,130

Calendar year 1952: Max 191 Min - Mean 87.5 Ac-ft 63,540
Water year 1952-53: Max 215 Min 0.9 Mean 92.3 Ac-ft 66,810

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

Mann Creek near Weiser, Idaho

Location.--Lat 44°24', long. 116°54', in sec. 11, T. 12 N., R. 5 W., on left bank 2 miles upstream from U. S. Highway 95, 10 miles northeast of Weiser, and 11½ miles upstream from mouth.

Drainage area.--56 sq mi, approximately.

Records available.--March 1911 to September 1913, July to November 1920, April 1937 to September 1953.

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.--18 years (1911-13, 1937-53), 42.9 cfs.

Extremes.--Maximum discharge observed during year, 403 cfs Apr. 26 (gage height, 2.70 ft); minimum observed, 1.4 cfs Sept. 17, 18 (gage height, 0.60 ft).
1911-13, 1920, 1937-53: Maximum discharge 1,540 cfs Mar. 27, 1940 (gage height, 5.45 ft, from floodmark, site and datum then in use), from rating curve extended above slope-area determination at gage height 4.21 ft; no flow Aug. 18 to Sept. 22, 1937, July 31 to Sept. 13, 1939.

Remarks.--Records fair except those for periods of ice effect or doubtful or no gage-height record, which are poor. One diversion above station for irrigation.

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 27				Apr. 28 to Sept. 30			
0.8	1.2	1.5	60	0.6	1.4	1.3	36
.9	3.3	1.8	117	.7	3.6	1.6	76
1.0	7.5	2.2	228	.9	9.5	2.0	168
1.2	24	3.0	520	1.1	20	2.5	330

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	4.2	5.0	7.5	39	28	146	168	117	31	7.4	3.6
2	2.2	4.4	5.0	7.5	62	28	124	168	146	30	7.2	3.2
3	2.2	*4.3	5.8	6.7	185	26	129	209	124	28	7.0	3.2
4	2.5	4.6	6.7	6.7	182	25	136	182	*113	26	6.7	2.9
5	2.5	4.6	5.8	6.7	91	24	209	154	117	24	6.5	3.4
6	2.5	4.7	5.4	7.1	76	24	168	157	136	23	6.3	3.4
7	2.5	4.4	11	7.5	73	34	154	163	152	22	6.2	3.6
8	2.5	4.2	9.8	12	74	42	134	168	124	21	6.0	2.9
9	2.5	4.1	6.7	53	66	73	108	163	119	20	5.9	2.3
10	2.5	4.0	7.5	46	52	71	87	129	108	*19	5.8	*2.3
11	2.5	4.2	6.7	34	41	65	76	122	104	19	5.6	2.1
12	2.5	4.5	6.7	59	36	68	66	106	104	19	5.4	2.1
13	2.5	5.0	*6.7	171	34	59	*66	113	106	18	*5.2	2.3
14	2.5	5.4	6.7	99	34	54	63	117	91	16	5.2	2.1
15	2.5	7.1	6.7	46	29	49	66	119	87	16	5.2	1.8
16	2.5	7.1	6.7	42	30	*46	70	117	87	14	5.2	1.6
17	2.6	6.7	6.7	80	30	44	86	127	84	13	5.2	1.4
18	2.8	5.4	6.7	261	30	45	117	141	80	12	5.0	1.4
19	2.9	4.6	6.7	139	31	60	146	171	73	12	4.7	1.8
20	3.1	4.6	6.7	251	34	71	228	141	68	12	4.4	2.1
21	3.3	4.6	7.5	99	30	57	281	136	68	11	4.1	2.1
22	3.4	3.7	6.7	*70	27	56	*295	141	66	11	3.9	2.1
23	3.4	3.3	6.7	65	24	63	330	141	62	11	3.9	2.5
24	3.4	b4.5	b4.6	49	28	95	292	144	57	10	4.1	2.3
25	3.6	b4.0	b4.6	42	26	157	309	134	55	10	4.4	2.3
26	3.8	b3.8	b5.6	39	24	144	348	104	50	10	4.7	2.1
27	3.3	b3.6	6.7	36	26	146	373	110	44	9.2	5.2	2.3
28	3.8	b3.4	6.7	32	28	144	330	131	38	8.7	5.0	2.7
29	3.8	b3.3	6.7	32	-	152	235	149	34	8.3	4.7	3.2
30	3.9	3.3	6.7	33	-	152	191	136	33	8.0	4.7	3.2
31	4.0	-	7.5	33	-	144	-	117	-	7.6	4.1	-
Total	90.5	135.6	205.7	1,872.7	1,442	2,246	5,363	4,378	2,647	499.8	164.9	74.3
Mean	2.92	4.52	6.64	60.4	51.5	72.5	179	141	88.2	16.1	5.32	2.48
Ac-ft	180	269	408	3,710	2,860	4,450	10,640	8,680	5,250	991	327	147

Calendar year 1952: Max 684 Min 2.0 Mean 66.0 Ac-ft 47,910
Water year 1952-53: Max 373 Min 1.4 Mean 52.4 Ac-ft 37,910

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Doubtful or no gage-height record Oct. 17-19, Oct. 21 to Nov. 2, Nov. 4-13, Dec. 15, July 1-9, July 28 to Aug. 12; discharge estimated on basis of 3 discharge measurements, weather records, engineers' notes, and records for other streams in Weiser River basin.

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 1953. 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, 56,900 cfs June 14 (gage height, 11.42 ft); minimum, 9,030 cfs Dec. 30 (gage height, 3.11 ft).
1910-53: 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.

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Mar. 10)

Oct. 1 to Mar. 10				Mar. 11 to Sept. 30			
2.9	9,530	7.0	28,800	3.2	10,200	8.0	33,700
4.0	13,900	9.0	41,400	4.0	13,300	10.0	46,800
5.0	18,400			6.0	22,400	11.4	56,700

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15,400	13,700	11,500	14,500	19,100	16,000	25,200	22,200	33,200	20,800	10,700	12,200
2	15,900	13,500	10,300	13,200	18,600	18,200	24,000	20,500	37,300	21,000	11,200	12,400
3	14,700	13,100	12,800	13,900	18,400	17,200	23,000	19,200	42,600	22,600	11,600	12,500
4	13,300	11,100	12,900	15,600	21,000	16,700	21,500	19,000	40,300	20,200	11,600	12,000
5	14,400	*13,400	12,900	13,700	19,600	16,100	20,900	18,000	39,800	19,100	11,600	13,300
6	15,600	13,300	13,700	11,000	19,300	*15,600	22,400	18,500	40,700	*18,500	12,000	13,400
7	14,900	13,200	13,500	13,700	18,600	15,600	23,100	19,400	39,000	17,800	12,700	12,200
8	14,400	13,000	12,000	14,100	23,000	14,800	22,000	20,200	45,000	17,400	11,400	12,300
9	13,300	12,800	10,000	*16,100	21,700	16,600	20,600	18,600	43,000	17,400	11,600	12,800
10	13,600	12,300	*13,800	18,400	21,200	17,400	20,700	17,000	41,200	17,400	11,500	12,800
11	13,900	11,200	13,500	16,400	19,800	19,600	20,000	16,000	46,200	17,000	10,900	*13,500
12	14,900	12,100	14,200	15,300	19,200	18,700	18,100	14,500	54,900	16,600	10,800	13,600
13	14,800	12,200	14,000	16,200	17,500	20,200	17,400	15,200	56,000	16,000	10,800	13,400
14	13,800	13,900	13,500	22,600	19,000	20,700	17,800	15,600	56,400	14,900	10,900	13,100
15	14,600	14,500	12,800	21,000	18,200	20,600	16,700	15,600	*54,300	14,100	*11,000	13,300
16	15,700	13,200	10,100	18,600	18,400	20,800	14,800	16,700	49,200	12,900	10,900	13,000
17	16,200	12,300	13,200	21,200	18,000	20,000	14,100	18,300	45,000	12,300	10,700	12,700
18	15,600	11,800	13,200	28,100	18,200	20,200	16,000	17,000	47,300	11,900	10,700	13,200
19	17,000	13,600	13,400	38,400	17,000	20,800	18,300	18,800	49,700	11,600	11,700	13,700
20	16,000	13,100	13,400	28,300	18,200	22,000	18,600	25,200	49,200	11,100	11,600	13,700
21	14,100	12,400	13,400	30,300	16,700	21,400	18,500	25,800	45,100	10,800	10,800	13,900
22	15,200	*11,400	12,700	24,400	16,400	22,200	18,200	26,000	40,200	10,700	10,700	13,200
23	14,700	13,000	10,600	22,400	17,000	22,800	19,400	25,800	37,600	10,500	10,400	13,400
24	14,800	12,300	13,900	21,600	16,600	22,300	22,400	24,700	36,400	10,400	10,600	14,100
25	14,400	10,400	14,000	18,200	17,200	22,600	20,700	25,600	34,500	10,300	10,800	14,200
26	13,500	12,800	13,200	*15,600	16,700	22,500	19,600	22,600	31,100	10,400	11,200	13,900
27	13,300	12,400	12,400	14,000	17,400	22,900	20,100	24,800	29,000	10,600	11,600	15,000
28	12,900	11,200	13,000	17,500	17,500	23,100	*23,800	24,200	27,800	10,800	11,400	14,300
29	13,300	10,800	11,600	17,400	-	22,800	27,000	*28,100	26,200	10,700	12,100	13,300
30	14,100	12,000	9,680	17,200	-	*22,200	23,800	30,200	23,000	10,700	12,400	14,900
31	13,700	-	13,500	17,000	-	23,600	-	29,300	-	10,700	12,000	-
Total	452,000	376,000	392,680	585,900	519,500	616,200	608,700	652,600	‡1,241.2	447,200	349,900	399,300
Mean	14,580	12,530	12,670	18,900	18,550	19,880	20,290	21,050	41,370	14,430	11,290	13,310
Ac-ft	896,500	745,800	778,900	‡1,162	‡1,030	‡1,222	‡1,207	‡1,294	‡2,462	887,000	694,000	792,000

Calendar year 1952: Max 83,800 Min 9,680 Mean 25,770 Ac-ft 18,710,000
Water year 1952-53: Max 56,400 Min 9,680 Mean 18,200 Ac-ft 13,170,000

* 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 1953.

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, 25,490 acre-ft June 1-7 (elevation, 3,820.3 ft); minimum observed, 1,270 acre-ft Nov. 5, 6 (elevation, 3,782.8 ft).
1938-53: 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 1952 to September 1953

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	3,787.8	3,040	-
Oct. 31	3,783.1	1,350	-1,690
Nov. 30	3,785.0	1,960	+610
Dec. 31	3,787.6	2,960	+1,000
Calendar year 1952	-	-	-1,590
Jan. 31	3,793.3	5,680	+2,720
Feb. 28	3,798.4	8,600	+2,920
Mar. 31	3,807.5	14,780	+6,180
Apr. 30	3,820.0	25,220	+10,440
May 31	3,819.8	25,030	-190
June 30	3,818.2	23,590	-1,440
July 31	3,810.8	17,300	-6,290
Aug. 31	3,802.2	11,030	-6,270
Sept.30	3,793.5	5,790	-5,240
Water year 1952-53	-	-	+2,750

† Elevation at 8 a.m.

Burnt River near Hereford, Oreg.

Location (revised).--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 1953.

Gage.--Water-stage recorder. Datum of gage is 3,756.75 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Mar. 16, 1915, to Sept. 4, 1916, staff gage at site 2 miles downstream at different datum, below Van Cleve ditch and another small irrigation ditch. Oct. 22, 1928, to June 28, 1932, water-stage recorder at site half a mile downstream from present site at different datum, below Van Cleve ditch. June 29, 1932, to Sept. 16, 1937, water-stage recorder at site 300 ft upstream from present site at different datum. Sept. 17 to Oct. 28, 1937, temporary staff gage at site 300 ft downstream from present site at different datum. 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.--24 years (1929-53), 80.9 cfs.

Extremes.--Maximum discharge during year, 602 cfs June 4, 5 (gage height, 4.58 ft); minimum, 2.1 cfs Sept. 6.

1915-16, 1928-53: 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 (corrected), 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. 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 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from debris Aug. 20 to Sept. 30)

Oct. 1 to Apr. 6				Apr. 7 to Sept. 30			
1.3	5.5	2.0	46	2.5	81	4.0	400
1.4	9	2.5	100	3.0	153	4.6	610
1.5	14	3.0	185	3.5	260		
1.7	25	4.0	440				

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	79	48	*28	29	37	41	338	442	302	179	123	108
2	78	48	28	29	38	*41	335	439	406	175	138	108
3	77	47	28	29	38	41	335	433	506	173	133	110
4	75	47	28	29	37	41	335	427	578	136	143	110
5	74	30	28	30	37	41	350	421	598	130	139	111
6	73	8.3	28	30	37	41	362	279	582	*125	138	88
7	73	8.3	28	30	38	40	308	217	578	123	138	96
8	73	8.3	28	30	39	40	*305	260	574	117	130	97
9	73	8.3	29	30	39	40	300	282	*570	110	125	92
10	69	8.3	29	30	39	41	290	280	566	123	120	92
11	68	19	29	30	39	41	280	280	558	126	*116	93
12	67	24	29	31	39	42	270	278	372	108	123	85
13	66	24	29	32	39	42	255	201	298	105	118	91
14	65	24	29	32	39	42	245	120	298	100	122	91
15	64	25	29	32	40	43	231	116	295	104	118	91
16	63	25	29	33	40	43	150	112	295	134	117	91
17	58	25	29	33	40	44	86	116	255	150	118	91
18	56	25	29	34	40	44	88	114	199	139	126	90
19	55	25	29	*34	40	44	89	175	144	131	128	89
20	54	26	29	34	40	44	91	298	151	131	131	89
21	53	26	29	35	40	44	93	300	157	133	118	89
22	52	26	29	35	40	44	95	300	151	116	120	95
23	51	26	29	35	40	34	96	295	122	108	112	100
24	51	26	29	36	40	69	98	295	126	111	111	97
25	50	27	29	36	40	167	101	290	187	108	*111	96
26	50	27	29	37	40	221	141	288	187	111	111	95
27	50	27	29	37	40	250	187	285	181	105	111	93
28	50	28	29	37	41	285	255	220	187	106	110	93
29	49	28	29	37	-	300	355	231	187	116	108	92
30	49	28	29	37	-	312	433	258	179	111	108	91
31	48	-	29	37	-	325	-	262	-	110	108	-
Total	1,913	772.5	891	1,020	1,096	2,887	6,897	8,314	9,789	3,854	3,772	2,854
Mean	61.7	25.8	28.7	32.9	39.1	93.1	230	268	326	124	122	95.1
Ac-ft	3,790	1,530	1,770	2,020	2,170	5,730	13,680	16,490	19,420	7,640	7,480	5,660

Calendar year 1952: Max 818 Min 8.3 Mean 121 Ac-ft 87,680
Water year 1952-53: Max 598 Min 8.3 Mean 121 Ac-ft 87,380

* Discharge measurement made on this day.

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 1953 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 1905 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.--35 years (1904-13, 1926-28, 1929-53), 113 cfs.

Extremes.--Maximum discharge during year, 804 cfs June 1 (gage height, 4.78 ft); minimum, 1.6 cfs Nov. 8.
1903-14, 1926-53: 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 shifting control, which are fair, and those for periods of ice effect, which are poor. Diversions above station for irrigation.

Revisions (water years).--WSP 813: 1935. WSP 1093: Drainage area.

Rating table, water year 1952-53, except periods of ice effect or shifting control (gage height, in feet, and discharge, in cubic feet per second)

1.1	3.8	2.1	124
1.2	7.5	2.5	210
1.3	13	3.0	328
1.5	30	5.0	870
1.8	70		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.5	10	8.0	16	66	87	249	402	690	338	45	*26
2	7.5	9.7	9.2	17	70	85	231	333	771	328	42	24
3	7.5	7.5	9.7	18	107	89	226	275	750	323	42	22
4	7.1	7.5	10	19	113	87	226	256	702	321	46	21
5	7.1	8.0	12	18	124	87	254	304	666	309	46	20
6	7.1	9.2	12	19	126	98	278	393	615	294	43	19
7	6.8	9.2	14	20	128	113	268	495	702	275	41	18
8	6.8	6.4	13	22	122	126	*266	521	678	258	40	17
9	6.8	6.8	14	30	120	144	235	472	*618	235	40	16
10	6.8	8.6	15	48	105	*161	222	428	575	217	38	15
11	6.8	9.2	16	42	105	174	198	354	565	198	*37	15
12	6.8	10	*17	42	98	169	180	299	642	180	35	15
13	6.8	11	16	52	96	159	172	285	708	169	35	15
14	7.1	11	15	54	94	144	159	316	696	157	34	15
15	7.1	11	15	47	91	140	144	359	684	142	30	16
16	7.5	9.7	14	46	87	140	146	418	660	124	29	16
17	8.0	9.2	13	61	87	136	163	485	642	114	28	13
18	8.0	9.2	14	101	82	132	176	540	651	92	28	13
19	8.6	8.0	15	107	78	132	208	672	624	78	27	15
20	8.6	6.8	13	103	70	134	266	729	542	*72	26	14
21	8.6	7	12	89	78	128	402	603	470	70	24	15
22	8.6	6.5	11	73	82	136	525	505	452	67	21	14
23	9.2	6.5	10	73	80	157	669	455	*462	64	19	14
24	8.6	6	11	77	73	183	654	412	442	64	20	14
25	9.2	6	13	75	72	242	598	354	412	62	20	13
26	9.2	6.5	14	72	72	235	615	328	378	60	22	12
27	*9.2	6	13	*67	84	240	667	294	354	58	26	12
28	9.2	6.5	12	62	89	258	*699	268	364	58	28	13
29	9.7	7	13	61	-	258	627	475	359	54	29	13
30	9.7	7.5	15	60	-	261	508	500	347	51	28	12
31	10	-	15	62	-	266	-	568	-	47	27	-
Total	247.5	243.5	403.9	1,653	2,599	4,901	10,231	13,098	17,221	4,879	996	477
Mean	7.98	8.12	13.0	53.3	92.8	158	341	423	574	157	32.1	15.9
Ac-ft	491	483	801	3,280	5,160	9,720	20,290	25,980	34,160	9,680	1,980	946

Calendar year 1952: Max 1,070 Min 6 Mean 140 Ac-ft 101,900
Water year 1952-53: Max 771 Min 6 Mean 156 Ac-ft 113,000

Peak discharge (base, 300 cfs).--Apr. 28 (2:30 p.m.) 720 cfs (4.70 ft); May 8 (3 a.m.) 532 cfs (4.03 ft); May 20 (5 a.m.) 780 cfs (4.70 ft); May 29 (2 p.m.) 645 cfs (4.25 ft); June 1 (11 p.m.) 804 cfs (4.78 ft); June 13 (3 p.m.) 729 cfs (4.53 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 21-30, Dec. 13 to Jan. 3. Shifting-control method used Jan. 19 to Feb. 4, Mar. 25 to Apr. 22, Apr. 27 to May 8.

Powder River near Haines, Oreg.

Location (revised).--Lat 44°56'30", long. 117°56'40", in SW¼ sec. 21, T. 7 S., R. 39 E., on left bank 0.1 mile upstream from Muddy Creek, 1 mile downstream from Rock Creek, and 1.7 miles north of Haines.

Drainage area.--572 sq mi.

Records available.--October 1946 to September 1953 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 3,293.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Average discharge.--7 years, 132 cfs.

Extremes.--Maximum discharge during year, 1,260 cfs June 8 (gage height, 6.31 ft); minimum, 3.0 cfs Aug. 5.
1946-53: Maximum discharge, 1,300 cfs June 8, 9, 1948 (gage height, 6.67 ft); no flow Aug. 13-29, 1952.

Remarks.--Records good except those for periods of ice effect or shifting control, which are fair. Many diversions above station for irrigation; slight regulation by small diversion dams above station. One small ditch diverts water past gage.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	10	15	26	124	123	277	618	966	173	8.8	*20
2	12	10	18	27	127	104	258	506	*895	157	12	17
3	12	11	19	27	157	119	244	408	946	148	17	16
4	12	11	17	27	210	124	236	320	1,010	170	14	16
5	12	12	16	28	200	116	228	232	*1,040	173	7.2	16
6	11	12	18	27	192	119	239	181	1,040	164	14	16
7	12	12	21	27	220	125	256	197	1,220	164	12	15
8	12	11	21	35	277	135	263	*198	1,230	170	14	16
9	12	11	19	213	204	147	248	253	1,230	164	12	16
10	10	11	20	152	180	*165	224	275	1,160	143	19	16
11	9.4	12	*21	127	174	175	212	268	1,050	131	16	15
12	9.4	13	22	128	154	191	200	216	998	129	12	18
13	9.8	16	24	143	158	185	192	160	1,030	124	10	18
14	9.8	19	24	153	153	171	182	127	1,030	115	7.4	17
15	9.8	18	24	123	143	158	162	101	1,080	106	7.4	17
16	10	14	22	114	133	154	154	100	1,080	73	5.9	16
17	11	14	23	128	138	152	149	143	1,040	46	4.0	15
18	10	16	24	157	127	148	148	160	1,050	44	4.8	14
19	10	16	24	215	b100	166	142	220	982	39	6.7	14
20	10	17	25	236	b80	208	119	374	895	*34	10	14
21	10	14	23	215	b90	215	135	472	827	33	7.7	14
22	9.8	13	21	174	b100	210	175	605	*733	27	5.9	15
23	9.8	13	b19	165	b100	231	284	603	622	24	6.4	14
24	9.4	12	21	156	b90	237	408	520	474	23	8.8	14
25	9.4	12	24	143	104	249	444	468	414	22	9.8	14
26	9.4	12	24	130	114	281	478	425	335	19	12	14
27	*9.4	14	25	*111	129	270	526	401	215	17	16	14
28	9.8	14	23	118	156	268	*627	347	206	14	17	15
29	10	12	21	118	-	291	692	470	194	13	29	16
30	10	13	25	119	-	286	674	783	190	13	26	16
31	10	-	26	119	-	286	-	1,080	-	12	25	-
Total	325.2	395	669	3,681	4,134	5,809	8,576	11,231	25,182	2,684	377.8	468
Mean	10.5	13.2	21.6	119	148	187	286	362	839	86.6	12.2	15.6
Ac-ft	645	783	1,330	7,300	8,200	11,520	17,010	22,280	49,950	5,320	749	928

Calendar year 1952: Max 950 Min 0 Mean 153 Ac-ft 111,000
Water year 1952-53: Max 1,230 Min 4.0 Mean 174 Ac-ft 126,000

Peak discharge (base, 300 cfs).--Mar. 26 (3:30 p.m.) 302 cfs (2.79 ft); Apr. 29 (9 a.m.) 703 cfs (4.78 ft); May 22 (7:30 p.m.) 651 cfs (4.55 ft); May 31 (4:30 a.m.) 1,130 cfs (6.06 ft); June 8 (2:30 a.m.) 1,260 cfs (6.31 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Shifting-control method used Oct. 1 to Jan. 3, June 27 to Sept. 30.

Wolf Creek near North Powder, Oreg.

Location.--Lat 45°03', long. 118°01', in SE¼ sec. 11, T. 6 S., R. 38 E., on left bank 5 miles northwest of North Powder and 6½ miles upstream from mouth.
Drainage area.--32.9 sq mi.
Records available.--September 1946 to September 1953 (discontinued). May 1913 to July 1914 at site 1½ miles upstream, records not equivalent.
Gage.--Water-stage recorder. Datum of gage is 3,577.36 ft above mean sea level (Bureau of Reclamation benchmark).
Average discharge.--7 years, 25.7 cfs.
Extremes.--Maximum discharge during year, 307 cfs Apr. 28 (gage height, 3.90 ft); minimum, 0.7 cfs Sept. 28.
1946-53: Maximum discharge, 433 cfs May 23, 1948 (gage height, 4.46 ft); minimum, 0.2 cfs Sept. 12, 13, 14, Aug. 5, 1951.
Remarks.--Records good above 100 cfs and fair below. Diversions above station for irrigation of 100 acres above and 700 acres below station.
Revisions.--Revised figures of discharge, in cubic feet per second, for period of ice effect in the water year 1948, superseding figures published in WSP 1123, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1948		1948-Con.		1948-Con.		1948-Con.	
Jan. 9	8.8	Jan. 19	5.2	Jan. 29	4.6	Feb. 8	4.0
10	7.2	20	4.9	30	5.2	9	4.0
11	6.4	21	6	31	6	10	3.4
12	5.5	22	7	Feb. 1	4.7	11	2.6
13	5	23	7.6	2	3.6	12	3
14	5	24	8	3	2.7	13	3.9
15	5.2	25	7.2	4	3.8	14	4.9
16	5.4	26	5.6	5	3.2		
17	5.1	27	4.6	6	2.9		
18	5.4	28	4	7	3.3		

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
January 1948	177.3	10	3.7	5.72	352
February	143.1	7.3	2.6	4.93	284
Water year 1947-48	11,968.3	368	0.2	32.7	23,740
Calendar year 1948	11,929.7	368	0.2	32.6	23,670

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	1.9	0.9	2.0	6.8	b8	31	122	203	13	2.7	*2.4
2	1.1	1.8	.8	2.2	7.6	b7.5	30	103	185	12	2.7	2.2
3	1.1	1.7	1.1	2.0	13	b7.5	29	97	*161	12	4.0	1.9
4	1.1	1.8	1.5	2.0	14	7.2	32	114	135	9.3	4.0	1.9
5	1.0	2.0	2.2	2.0	12	7.2	41	156	117	6.5	6.5	1.8
6	1.0	2.0	2.4	1.9	12	7.9	42	212	114	10	4.0	1.7
7	1.1	1.8	2.6	2.0	16	9.6	39	266	117	10	2.3	1.8
8	1.1	1.8	2.7	2.2	15	14	35	*215	109	11	2.2	1.6
9	1.0	1.5	b2.5	3.6	14	18	31	170	102	10	2.3	1.4
10	1.1	2.3	2.7	5.1	b10	*22	29	130	86	10	2.4	1.3
11	1.2	2.4	2.7	3.8	10	22	27	112	81	10	2.4	1.2
12	1.2	3.0	*2.9	3.4	b9.5	21	26	104	84	9.6	2.3	1.1
13	1.1	3.0	3.2	4.4	9.3	19	25	112	79	8.6	2.0	1.1
14	1.3	3.0	3.0	4.6	9.3	17	24	135	70	8.6	1.9	1.1
15	1.3	3.0	2.9	4.0	9.0	16	23	155	65	8.2	1.8	1.1
16	1.5	2.6	2.9	4.0	8.6	15	26	178	58	8.2	1.7	1.1
17	1.4	2.3	b2.5	5.6	8.6	14	35	185	50	6.5	1.6	1.1
18	1.4	2.7	2.7	12	7.9	14	46	172	41	5.9	1.7	1.2
19	1.4	2.0	2.7	15	b7	14	66	208	45	6.2	1.6	1.2
20	1.5	1.9	2.7	14	b6	14	97	189	31	*6.5	1.7	1.2
21	1.6	1.5	b2.5	11	b6.5	13	127	146	25	7.6	1.7	1.2
22	1.6	1.5	b2.2	9.6	b6.5	13	156	120	*22	5.6	1.7	1.1
23	1.5	1.6	b1.9	8.6	b6.5	14	189	111	17	4.8	1.7	1.2
24	1.6	1.6	b2.2	8.2	b6	23	172	102	15	4.6	2.7	1.2
25	1.8	b1.5	2.2	7.9	b6.5	38	177	90	17	4.4	2.6	1.2
26	1.9	1.6	2.2	7.9	b7	37	197	93	15	4.2	3.6	1.1
27	*1.8	1.5	2.3	*7.2	6.5	37	230	94	14	4.0	4.4	.9
28	1.7	1.3	2.2	6.2	7.6	40	*251	96	14	3.8	4.0	.8
29	1.7	1.1	2.2	6.2	-	38	180	164	14	3.6	3.6	.9
30	1.7	1.1	2.2	6.2	-	37	143	205	13	3.4	3.2	.9
31	1.8	-	2.2	6.2	-	35	-	203	-	3.0	2.7	-
Total	42.7	58.8	71.9	181.0	258.7	599.9	2,556	4,559	2,099	231.1	83.7	39.9
Mean	1.38	1.96	2.32	5.84	9.24	19.4	85.2	147	70.0	7.45	2.70	1.33
Ac-ft	85	117	143	359	513	1,190	5,070	9,040	4,160	458	166	79

Calendar year 1952: Max 324 Min 0.8 Mean 28.9 Ac-ft 20,970
Water year 1952-53: Max 266 Min 0.8 Mean 29.5 Ac-ft 21,380

Peak discharge (base, 200 cfs).--Apr. 28 (12:30 a.m.) 307 cfs (3.90 ft); May 7 (1 p.m.) 292 cfs (3.83 ft); May 19 (6:30 p.m.) 221 cfs (3.46 ft); May 30 (2:30 p.m.) 223 cfs (3.48 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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 1953.

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.--25 years, 527 cfs.

Extremes.--Maximum discharge during year, 4,210 cfs June 15 (gage height, 5.32 ft); minimum, 69 cfs Nov. 29 (gage height, 0.17 ft).
1928-53: 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 good. 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 tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 1		Dec. 2 to Sept. 30			
0.3	89	0.3	100	2.0	790
.5	129	.6	163	3.0	1,540
1.0	282	1.0	290	4.0	2,520
		1.5	510	6.0	5,300

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	114	153	175	153	420	515	969	1,990	2,710	a1,600	362	233
2	121	167	190	156	424	485	920	1,800	*3,300	1,590	358	214
3	131	164	182	153	744	451	885	1,670	3,210	1,680	358	*196
4	141	159	171	151	955	438	878	1,620	2,970	1,660	362	185
5	141	164	168	149	864	442	941	1,680	2,880	1,650	354	179
6	139	164	171	146	920	442	1,020	1,830	2,850	1,760	326	171
7	134	164	196	153	1,010	460	955	1,980	2,960	1,830	306	168
8	136	161	176	163	1,320	500	899	1,870	3,000	1,850	272	168
9	139	156	158	240	1,110	550	864	1,670	3,110	1,740	257	163
10	134	161	182	290	864	590	844	1,450	3,020	1,650	246	161
11	134	159	*168	268	748	*610	796	1,310	3,090	1,680	233	158
12	134	167	171	260	688	616	754	1,270	3,300	1,680	233	158
13	136	181	171	350	628	616	730	1,290	3,750	1,740	223	156
14	141	203	163	438	600	600	700	1,320	3,860	1,500	217	146
15	146	209	158	388	585	580	658	1,360	3,830	1,260	208	144
16	143	200	153	302	560	570	628	1,430	3,450	1,030	217	139
17	141	184	151	366	555	550	670	1,540	3,670	913	214	141
18	139	184	156	836	550	540	754	1,600	3,720	826	211	146
19	139	181	151	814	480	565	832	1,980	3,390	766	202	149
20	134	178	151	832	400	646	976	2,100	2,990	688	193	146
21	134	170	146	706	420	688	1,170	2,010	2,790	622	185	144
22	127	136	151	550	420	724	1,400	1,830	2,720	*575	174	151
23	127	123	135	510	438	790	1,820	1,750	*2,710	545	163	151
24	127	127	113	480	438	844	1,830	1,740	a2,600	520	177	153
25	127	114	140	442	433	983	1,830	1,690	a2,400	475	230	161
26	129	129	150	410	428	1,030	1,980	1,720	a2,100	460	233	153
27	129	127	156	370	438	969	2,730	1,630	a2,200	424	268	156
28	*129	106	130	*362	475	997	3,030	1,610	a2,200	410	275	156
29	127	104	140	358	-	1,010	*2,580	1,970	a2,000	392	275	163
30	125	119	158	366	-	1,000	2,230	2,390	a1,800	392	268	168
31	125	-	151	397	-	1,000	-	2,560	-	379	250	-
Total	4,123	4,714	4,932	11,559	17,915	20,801	37,273	53,660	88,580	34,287	7,850	4,877
Mean	133	157	159	373	640	671	1,242	1,731	2,953	1,106	253	163
Ac-ft	8,180	9,350	9,780	22,930	35,530	41,260	73,930	106,400	175,700	68,010	15,570	9,670

Calendar year 1952: Max 4,960 Min 95 Mean 836 Ac-ft 606,900
Water year 1952-53: Max 3,860 Min 104 Mean 796 Ac-ft 576,300

Peak discharge (base, 1,100 cfs).--Jan. 18 (7 p.m.) 1,160 cfs (2.54 ft); Feb. 8 (8 p.m.) 1,390 cfs (2.83 ft); Apr. 28 (1 a.m.) 3,360 cfs (4.71 ft); June 3 (1 a.m.) 3,480 cfs (4.80 ft); June 15 (2 a.m.) 4,210 cfs (5.32 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage, weather record, and records for nearby stations.

Snake River at Oxbow, Oreg.

Location.--Lat 44°57', long. 116°51', in NW¼ sec. 16, T. 7 S., R. 48 E., on left bank at Oxbow, five-eighths of a mile upstream from intake of diversion tunnel for Oxbow powerplant and 2½ miles upstream from Indian Creek.

Drainage area.--72,800 sq mi, approximately.

Records available.--May 1923 to September 1953.

Gage.--Water-stage recorder. Datum of gage is 1,696.71 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to Dec. 20, 1923, staff gage at same site and datum.

Extremes.--Maximum discharge during year, 60,400 cfs June 13 (gage height, 18.40 ft); minimum, 10,000 cfs Dec. 2 (gage height, 8.21 ft).
1923-53: 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 powerplant. About 2,243,000 acres of land irrigated by diversions from river and its tributaries above station.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 21-25, May 28 to July 13)

8.1	9,860	12.0	25,100
8.5	11,100	14.0	35,500
9.0	12,800	16.0	46,800
10.0	16,500	19.0	64,500

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,200	13,500	12,800	15,200	18,300	17,300	26,200	25,800	33,000	22,600	11,000	12,400
2	15,500	13,600	10,900	13,400	20,700	17,100	25,400	24,300	37,900	22,000	11,500	12,100
3	15,900	13,200	12,400	14,200	18,400	18,700	24,100	23,000	43,900	24,500	12,200	12,800
4	13,800	*12,400	13,000	15,500	22,300	17,800	23,200	22,000	44,100	22,100	12,000	12,400
5	14,000	12,100	13,100	15,000	22,100	16,600	22,400	21,200	42,600	20,400	11,900	12,400
6	14,900	13,300	13,900	13,000	21,400	16,500	23,000	21,100	44,000	19,800	12,200	13,700
7	15,200	13,400	14,000	12,000	20,900	16,100	24,600	22,200	43,000	19,500	13,200	13,200
8	14,900	13,300	12,900	14,000	20,600	15,600	24,100	23,000	44,700	18,700	12,000	12,300
9	14,100	13,100	11,400	14,500	26,000	15,700	22,200	21,900	49,000	18,900	11,800	12,700
10	13,500	12,700	12,200	17,000	22,100	17,900	21,800	20,000	45,400	18,600	12,000	12,800
11	13,800	11,800	*14,100	19,500	22,200	18,700	*22,000	18,700	44,800	17,900	11,100	*13,100
12	14,500	12,100	13,900	17,000	21,000	20,000	20,000	17,300	54,800	17,300	10,800	13,700
13	15,000	12,400	14,300	17,000	20,100	19,900	18,600	16,700	59,700	*16,700	11,100	13,700
14	14,500	13,900	14,000	24,000	18,100	21,100	19,100	17,800	59,900	15,700	11,000	13,300
15	14,200	14,400	13,400	23,000	20,200	21,200	18,300	17,300	59,100	14,600	11,300	13,300
16	15,000	14,800	10,600	20,000	19,000	21,100	16,600	17,900	*56,200	13,800	*11,300	13,400
17	16,000	12,700	13,200	21,000	19,300	*21,000	15,400	19,300	49,800	12,800	10,900	12,700
18	16,000	12,300	13,500	27,000	18,700	20,400	16,100	20,400	48,800	12,300	10,900	12,900
19	15,800	13,500	13,700	40,000	18,900	21,200	19,000	19,800	51,900	12,000	11,100	13,400
20	17,100	14,000	13,700	31,000	17,500	22,600	19,800	23,000	52,000	11,500	12,200	13,800
21	15,100	13,500	13,900	32,000	18,700	21,900	20,400	28,600	49,600	11,100	11,300	13,700
22	14,600	11,700	13,200	28,000	17,100	22,700	20,600	27,900	44,800	11,000	11,000	13,700
23	15,000	13,500	11,300	24,000	17,100	23,400	21,200	28,400	40,100	11,100	10,600	13,300
24	14,600	13,400	14,500	23,000	17,600	23,300	24,000	27,600	38,900	11,000	10,600	13,500
25	14,900	11,400	14,600	20,000	17,100	23,600	24,200	27,200	36,800	10,800	10,900	14,300
26	14,000	12,000	13,700	17,000	17,900	23,600	22,800	26,400	34,200	11,100	11,200	14,300
27	13,700	13,400	13,500	*14,800	17,100	24,000	*23,000	25,400	31,400	11,100	11,800	14,000
28	13,000	12,200	13,400	17,000	18,900	24,200	25,300	*26,900	29,700	11,100	11,800	15,500
29	13,400	11,200	12,100	18,400	-	24,000	29,400	27,900	28,400	11,100	11,800	13,500
30	13,500	11,800	11,600	18,400	-	23,500	28,800	32,800	26,000	11,000	12,700	14,300
31	14,100	-	14,700	18,000	-	24,800	-	33,100	-	11,000	12,400	-
Total	453,800	386,400	407,500	613,900	549,300	635,500	661,600	724,900	$1,324.5	473,100	357,600	400,200
Mean	14,640	12,880	13,150	19,800	19,620	20,500	22,050	23,380	44,150	15,260	11,540	13,340
Ac-ft	900,100	766,400	808,300	$1,218	$1,090	$1,260	$1,312	$1,438	$2,627	938,400	709,300	793,800

Calendar year 1952: Max 88,700 Min 10,600 Mean 26,710 Ac-ft 19,390,000
Water year 1952-53: Max 59,900 Min 10,600 Mean 19,150 Ac-ft 13,860,000

* Discharge measurement made on this day.
$ Expressed in thousands.
Note.--No gage-height record Jan. 3-26; discharge estimated on basis of weather records and records for station at Weiser.

Imnaha River above Gumboot Creek, Oreg.

Location.--Lat 45°11', long. 116°53', in sec. 30 or 31, T. 4 S., R. 48 E., on left bank at downstream side of bridge, 0.1 mile upstream from Gumboot Creek and 5 miles northeast of Coverdale forest guard station.

Drainage area.--98 sq mi, approximately.

Records available.--October 1944 to September 1953 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 3,812.67 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Average discharge.--9 years, 266 cfs.

Extremes.--Maximum discharge during year, 1,390 cfs July 8 (gage height, 4.13 ft); minimum, 30 cfs Nov. 22 (gage height, 0.33 ft).
1944-53: Maximum discharge, 2,400 cfs May 27, 1948 (gage height, 5.07 ft); minimum, 10 cfs Jan. 29, 1951 (gage height, 0.18 ft), result of freezeup.

Remarks.--Records excellent except those for period of backwater from logs, which are fair. No regulation or diversion above station.

Revisions (water years).--WSP 1247: 1949-50.

Rating tables, water year 1952-53, except period of backwater from logs (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 22		Nov. 23 to Sept. 30			
0.4	34	0.4	35	2.0	348
.7	61	.6	53	3.0	700
1.0	103	.9	95	4.0	1,290
		1.5	218		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	65	71	63	79	72	171	503	700	936	368	152
2	78	61	75	59	84	70	160	451	790	960	357	146
3	77	61	87	58	97	72	180	444	800	1,040	354	144
4	77	61	76	57	124	68	191	492	795	1,040	345	140
5	75	61	76	55	113	65	211	592	805	1,050	*326	138
6	74	61	72	54	104	69	223	710	775	1,140	315	134
7	74	61	57	54	100	69	211	805	825	1,170	306	132
8	74	60	60	61	99	81	195	688	790	1,200	298	128
9	73	58	68	69	90	99	182	588	730	1,110	285	126
10	73	61	71	76	81	117	171	517	710	1,060	272	122
11	73	*60	69	72	87	121	162	482	810	1,080	262	119
12	71	68	75	85	81	126	154	492	942	1,140	254	115
13	71	70	76	158	79	117	148	548	1,060	1,160	247	113
14	70	71	69	130	76	113	144	608	1,020	1,030	237	113
15	70	68	66	106	73	113	140	684	996	885	230	111
16	70	59	65	97	73	113	150	770	942	740	225	109
17	69	59	69	90	73	106	173	835	1,070	672	218	108
18	69	65	72	92	72	106	206	835	1,120	636	211	*106
19	68	61	71	97	72	119	262	*960	1,010	616	204	104
20	68	60	69	109	59	109	340	860	850	570	200	102
21	68	48	65	111	68	102	441	745	840	538	195	100
22	68	36	63	100	68	99	506	628	*930	524	188	99
23	66	45	42	92	63	97	612	592	990	510	180	97
24	66	53	43	90	60	111	552	545	900	489	200	95
25	66	38	46	84	65	165	552	510	850	468	184	93
26	66	48	65	84	64	158	620	545	840	451	188	92
27	65	50	68	79	*64	156	969	545	880	441	188	90
28	64	37	64	79	71	182	1,000	552	885	424	177	90
29	64	41	64	76	-	182	705	668	850	415	171	90
30	64	57	69	75	-	177	588	660	900	405	162	89
31	65	-	*55	75	-	*182	-	660	-	389	156	-
Total	2,176	1,704	2,058	2,587	2,239	3,536	10,319	19,514	26,405	24,289	7,503	3,397
Mean	70.2	56.8	66.4	83.5	80.0	114	344	629	880	784	242	113
Ac-ft	4,320	3,380	4,080	5,130	4,440	7,010	20,470	38,710	52,370	48,180	14,880	6,740

Calendar year 1952: Max 1,920 Min 36 Mean 312 Ac-ft 226,300
Water year 1952-53: Max 1,200 Min 36 Mean 290 Ac-ft 209,700

Peak discharge (base, 800 cfs).--Apr. 27 (11:30 p.m.) 1,260 cfs (3.95 ft); May 6 (11:30 p.m.) 850 cfs (3.30 ft); May 19 (8:30 p.m.) 1,040 cfs (3.64 ft); June 17 (11 p.m.) 1,280 cfs (3.98 ft); July 8 (9:30 p.m.) 1,390 cfs (4.13 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by backwater from logs Feb. 27 to Mar. 13.

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 1953.

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.--25 years, 476 cfs.

Extremes.--Maximum discharge during year, 3,250 cfs Apr. 28 (gage height, 5.41 ft); minimum, 37 cfs Nov. 21 (gage height, 1.34 ft), but may have been less during period of no gage-height record.
1928-53: Maximum discharge, 5,700 cfs May 28, 1948 (gage height, 7.06 ft); minimum observed, 16 cfs Nov. 22, 1931.

Remarks.--Records excellent except those for periods of no gage-height record, which are fair. 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 1952-53 (gage height, in feet, and discharge in cubic feet per second)

Oct. 1 to Mar. 24				Mar. 25 to Sept. 30			
1.4	46	2.5	400	1.8	126	3.5	1,010
1.7	111	3.0	690	2.0	184	4.0	1,470
2.0	197			2.5	379	6.0	4,130
				3.0	640		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	132	120	150	140	208	204	515	1,320	2,070	1,440	441	200
2	134	120	160	*137	218	204	465	1,140	2,240	1,430	417	200
3	134	120	180	134	240	208	437	1,050	2,180	1,520	427	190
4	134	120	170	129	294	200	427	1,120	2,130	1,560	437	190
5	129	120	160	129	298	191	465	1,350	2,260	1,520	*393	190
6	129	120	140	127	286	191	505	1,750	2,180	1,600	370	180
7	130	120	130	129	278	191	500	2,090	2,260	1,670	352	180
8	130	120	140	132	302	200	465	1,840	2,310	1,700	352	170
9	130	120	150	175	274	255	427	1,500	2,210	1,640	340	170
10	120	120	160	211	255	330	408	1,260	2,080	1,550	340	170
11	120	*129	150	200	270	350	393	1,100	2,080	1,550	340	160
12	120	134	160	228	243	346	389	1,050	2,130	1,570	320	160
13	120	159	160	405	243	322	384	1,150	2,180	1,660	320	150
14	120	151	150	430	232	294	379	1,300	2,090	1,550	300	150
15	120	154	150	334	232	286	374	1,450	2,050	1,390	290	150
16	120	134	150	290	222	282	389	1,720	1,890	1,160	290	150
17	120	129	150	266	228	270	451	1,910	1,960	1,030	280	150
18	120	132	160	270	*222	255	525	1,890	2,010	954	270	*148
19	120	127	160	294	197	274	668	*2,070	1,890	906	270	146
20	120	116	160	322	171	286	914	2,120	1,640	829	260	140
21	120	61	150	375	191	266	1,270	1,860	1,510	759	250	140
22	120	52	140	342	194	266	1,480	1,610	*1,560	731	250	134
23	120	70	95	310	191	262	2,010	1,450	1,660	689	240	134
24	120	100	100	278	168	302	1,780	1,340	1,520	628	270	132
25	120	65	120	259	165	547	1,680	1,240	1,400	598	260	132
26	120	90	150	243	187	616	1,850	1,310	1,370	569	250	129
27	120	95	160	225	191	558	2,340	1,370	1,410	542	250	129
28	120	80	150	222	200	586	2,740	1,390	1,440	525	240	129
29	120	90	160	214	-	592	2,010	1,910	1,340	500	230	132
30	120	110	150	208	-	558	1,640	2,130	1,390	490	220	129
31	120	-	130	197	-	*542	-	2,080	-	475	210	-
Total	3,822	3,378	4,595	7,355	6,400	10,234	28,280	47,870	56,440	34,735	9,479	4,664
Mean	123	113	148	237	229	330	943	1,544	1,881	1,120	306	155
Ac-ft	7,580	6,700	9,110	14,590	12,690	20,300	56,090	94,950	111,900	68,900	18,800	9,250

Calendar year 1952: Max 3,520 Min 52 Mean 666 Ac-ft 483,400
Water year 1952-53: Max 2,740 Min 52 Mean 595 Ac-ft 430,900

Peak discharge (base, 1,300 cfs).--Apr. 23 (8:30 a.m.) 2,170 cfs (4.60 ft); Apr. 28 (5 a.m.) 3,250 cfs (5.41 ft); May 7 (4 a.m.) 2,130 cfs (4.57 ft); May 20 (1 a.m.) 2,270 cfs (4.68 ft); June 7 (10 p.m.) 2,510 cfs (4.86 ft); July 9 (2 a.m.) 1,890 cfs (4.38 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Oct. 7 to Nov. 10, Nov. 23 to Jan. 1, Aug. 9 to Sept. 17; discharge estimated on basis of weather records and records for station upstream above Gumboot Creek.

Salmon River near Obsidian, Idaho

Location.--Lat 43°58', long. 114°48', in sec. 3, T. 7 N., R. 14 E., on left bank three-eighths of a mile below irrigation diversion dam, 1 mile upstream from Lost Creek, and 2½ miles southeast of Obsidian.

Drainage area.--94.7 sq mi.

Records available.--November 1940 to January 1953 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 6,950 ft (by barometer).

Average discharge.--11 years (1941-52), 81.1 cfs.

Extremes.--Maximum daily discharge during period October 1952 to January 1953, 55 cfs Jan. 13; minimum discharge recorded, 15 cfs Dec. 3 (gage height, 1.48 ft), but may have been less during period of ice effect.

1940-53: Maximum discharge, 721 cfs probably May 29, 1952 (gage height, 4.01 ft); maximum gage height, 5.50 ft probably between Jan. 27 and Mar. 1, 1949 (ice jam); minimum discharge, 2 cfs Sept. 7-11, 1942, Apr. 1, 1945.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 1,700 acres above station.

Rating table Oct. 1, 1952, to Jan. 31, 1953, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	16
1.6	22
1.8	38
2.0	62

Discharge, in cubic feet per second, October 1952 to January 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	38	18	32								
2	41	36	18	32								
3	40	38	*18	32								
4	40	40	30	30								
5	40	40	28	32								
6	39	40	30	32								
7	40	40	31	32								
8	41	35	32	33								
9	41	32	32	34								
10	41	35	33	37								
11	41	38	32	37								
12	41	39	32	42								
13	42	38	31	55								
14	44	38	30	50								
15	44	38	32	45								
16	44	36	32	42								
17	42	36	33	39								
18	42	35	34	38								
19	42	34	34	37								
20	41	35	34	36								
21	*41	30	34	*35								
22	41	25	33	34								
23	41	27	25	33								
24	41	28	24	33								
25	41	25	25	32								
26	40	20	28	32								
27	40	18	33	31								
28	39	16	33	31								
29	38	17	33	30								
30	38	18	34	30								
31	38	-	33	30								
Total	1,265	965	929	1,098								
Mean	40.8	32.2	30.0	35.4								
Ac-ft	2,510	1,910	1,840	2,180								

Calendar year 1952: Max 610 Min 5.0 Mean 98.1 Ac-ft 71,240
Water year 1952-53: Max - Min - Mean - Ac-ft -

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 8-10, 17, Nov. 21 to Dec. 2, Dec. 4 to about Jan. 10. No gage-height record Oct. 19, 20, Nov. 28, Nov. 30 to Dec. 2, Dec. 5 to Jan. 20, Jan. 22-31; discharge estimated on basis of 3 discharge measurements, weather records, and records for nearby streams.

Alturas Lake Creek near Obsidian, Idaho

Location.--Lat 43°56', long. 114°50', in SW¼ sec. 9, T. 7 N., R. 14 E., on right bank 1 mile downstream from outlet of Perkins Lake, 1½ miles downstream from outlet of Alturas Lake, and 4 miles south of Obsidian.

Drainage area.--35.7 sq mi.

Records available.--November 1940 to January 1953 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 7,000 ft (by barometer).

Average discharge.--11 years (1941-52), 75.6 cfs.

Extremes.--Maximum daily discharge during period October 1952 to January 1953, 42 cfs Jan. 15; minimum discharge recorded, 7.9 cfs Oct. 1 (gage height, 1.87 ft), but may have been less during period of ice effect.
1940-53: Maximum discharge, 633 cfs June 7, 1952 (gage height, 5.34 ft); maximum gage height, 5.41 ft June 9, 1948; minimum discharge recorded, that of Oct. 1, 1952.

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

Rating table, Oct. 1, 1952, to Jan. 31, 1953, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	7	2.2	29
1.9	10	2.4	46
2.0	16		

Discharge, in cubic feet per second, October 1952 to January 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.2	10	9	13								
2	8.5	9.7	10	13								
3	8.8	9.7	*11	13								
4	9.1	10	11	13								
5	9.7	10	12	13								
6	13	11	11	13								
7	14	11	11	13								
8	14	11	11	14								
9	14	11	11	17								
10	13	11	12	25								
11	14	11	12	30								
12	14	11	12	36								
13	14	12	12	40								
14	13	12	12	41								
15	13	12	12	42								
16	12	11	12	40								
17	12	10	12	38								
18	12	11	13	36								
19	12	11	14	34								
20	12	11	13	33								
21	*12	10	13	*32								
22	12	9	14	30								
23	12	10	15	28								
24	12	11	12	27								
25	12	10	12	26								
26	12	9	13	25								
27	12	9	13	24								
28	12	8	14	23								
29	12	8	14	22								
30	11	9	14	21								
31	11	-	14	21								
Total	370.5	309.4	379	796								
Mean	11.9	10.3	12.2	25.7								
Cfsm	0.333	0.289	0.342	0.720								
In.	0.39	0.32	0.39	0.83								
Ac-ft	734	614	752	1,580								

Calendar year 1952: Max 621 Min 8 Mean 78.7 Cfsm 2.20 In. 30.01 Ac-ft 57,140
Water year 1952-53: Max - Min - Mean - Cfsm - In. - Ac-ft -

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice about Nov. 16 to Jan. 31 (no gage-height record Nov. 16 to Dec. 2, Dec. 9 to Jan. 20, Jan. 22-31; discharge estimated on basis of 2 discharge measurements, weather records, and records for stations on nearby streams).

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 1953.

Gage.--Water-stage recorder. Datum of gage is 6,221.81 ft above mean sea level, datum of 1929. Prior to May 28, 1911, staff gage at site a quarter of a mile upstream and May 28, 1911, to Oct. 31, 1913, at site three-quarters of a mile upstream, at different datum. May 2, 1921, to Apr. 30, 1949, staff gage at present site and datum.

Average discharge.--33 years (1911-13, 1922-53), 192 cfs.

Extremes.--Maximum discharge during year, 1,010 cfs June 19 (gage height, 3.03 ft); minimum, 56 cfs Nov. 3 (gage height, 0.83 ft).
1910-13, 1921-53: Maximum discharge observed, 1,850 cfs May 19, 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 or no gage-height record, which are fair. Diversions for irrigation of about 590 acres above station.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	55	1.8	333
1.0	82	2.0	426
1.2	120	2.5	680
1.5	212	3.0	990

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85	87	71	b82	96	89	99	342	560	630	194	112
2	87	76	78	b83	94	b87	94	312	600	636	208	118
3	87	72	*78	b82	105	b86	96	320	590	620	246	105
4	87	81	78	81	116	87	97	*369	*590	630	205	103
5	85	82	78	81	107	89	103	407	686	636	191	103
6	85	85	76	81	107	89	101	480	625	647	180	105
7	85	81	72	74	105	*89	101	505	647	652	168	103
8	85	76	76	65	105	85	97	441	630	647	158	103
9	85	72	75	92	97	84	94	374	580	636	152	101
10	85	76	76	112	85	84	*90	320	570	605	146	101
11	85	85	76	112	96	85	89	299	605	595	138	101
12	85	85	79	123	94	84	92	316	741	585	133	101
13	85	87	79	130	96	84	90	356	920	580	128	96
14	87	89	b78	118	b94	78	89	369	927	575	125	96
15	85	87	b77	101	b92	79	87	426	837	535	125	96
16	85	79	b78	103	b92	84	92	455	789	465	125	101
17	87	81	82	101	b92	82	99	480	819	407	128	101
18	87	87	82	97	b90	81	105	485	*914	*374	125	97
19	87	81	82	96	b87	85	120	570	983	351	123	96
20	87	78	81	99	b82	84	149	575	894	324	118	94
21	*89	74	82	97	b87	84	198	560	789	303	114	94
22	87	71	b81	*92	b94	82	262	490	753	286	114	94
23	87	75	b74	101	b90	84	342	450	771	266	*110	92
24	87	81	b68	96	b86	85	356	421	765	250	114	*92
25	85	b74	a70	96	b86	96	374	364	708	242	120	92
26	85	b69	a76	92	b87	92	431	356	647	231	116	90
27	85	b72	a81	90	87	94	505	351	615	220	114	90
28	84	b70	a82	92	89	97	610	421	595	212	110	92
29	85	b68	a84	94	-	97	500	490	590	205	110	96
30	89	b70	b84	94	-	99	416	460	610	198	114	94
31	89	-	b82	94	-	101	-	515	-	198	110	-
Total	2,668	2,351	2,415	2,951	2,638	2,706	5,978	13,079	21,350	13,741	4,362	2,959
Mean	86.1	78.4	77.9	95.2	94.2	87.3	199	422	712	443	141	98.6
Cfsm	0.489	0.445	0.443	0.541	0.535	0.496	1.13	2.40	4.05	2.52	0.801	0.560
In.	0.56	0.50	0.51	0.62	0.56	0.57	1.26	2.76	4.51	2.90	0.92	0.63
Ac-ft	5,290	4,660	4,790	5,850	5,230	5,370	11,860	25,940	42,350	27,250	8,650	5,870

Calendar year 1952: Max 1,120 Min 68 Mean 234 Cfsm 1.33 In. 18.10 Ac-ft 169,900
Water year 1952-53: Max 983 Min 65 Mean 212 Cfsm 1.20 In. 16.30 Ac-ft 153,100

Peak discharge (base, 600 cfs).--Apr. 28 (12:30 a.m.) 680 cfs (2.50 ft); May 6 (9 p.m.) 636 cfs (2.42 ft); May 20 (3 a.m.) 625 cfs (2.40 ft); June 19 (1 p.m.) 1,010 cfs (3.03 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Salmon River below Valley Creek, at Stanley, Idaho

Location.--Lat 44°14', long. 114°55', in SE¼SE¼ sec. 34, T. 11 N., R. 13 E., on left bank three-quarters of a mile downstream from Valley Creek and 1¼ miles northeast of upper Stanley.

Drainage area.--535 sq mi.

Records available.--July 1925 to September 1953.

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.--28 years, 642 cfs.

Extremes.--Maximum discharge during year, 3,200 cfs June 19 (gage height, 3.54 ft): minimum daily, 180 cfs Dec. 25.
1925-53: 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 periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation of about 6,000 acres.

Rating table, water year 1952-53, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	188	2.0	1,200
.8	254	2.5	1,750
1.0	346	3.0	2,420
1.5	722	4.0	4,300

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	358	358	296	335	381	316	341	964	1,240	2,120	678	431
2	358	346	315	335	375	316	331	906	1,410	2,120	696	458
3	363	336	*321	340	398	311	336	906	1,430	2,080	860	431
4	363	352	321	320	438	316	341	*954	*1,440	2,100	713	424
5	363	352	315	330	411	311	352	1,050	1,650	2,160	652	418
6	363	363	325	330	398	311	346	1,210	1,580	2,190	609	418
7	363	358	330	335	392	*311	346	1,300	1,650	2,230	584	418
8	363	336	335	320	398	306	341	1,190	1,620	2,230	550	418
9	363	331	345	358	381	311	*341	1,100	1,510	2,210	527	404
10	363	336	350	445	b310	316	331	1,010	1,480	2,100	511	404
11	369	363	348	445	b345	321	336	964	1,590	2,080	495	404
12	369	358	350	472	b345	321	341	973	1,970	2,040	472	398
13	369	369	350	495	352	321	336	1,020	2,550	2,000	458	387
14	369	375	340	465	346	306	336	1,030	2,750	1,970	458	381
15	369	369	330	465	352	316	331	1,130	2,550	1,870	452	387
16	369	336	345	431	341	316	341	1,200	2,390	1,730	458	392
17	369	346	363	424	352	321	358	1,230	2,520	1,540	458	392
18	375	358	365	431	352	311	369	1,250	2,840	*1,400	445	387
19	369	352	365	431	331	331	392	1,460	*3,090	1,290	431	381
20	375	346	360	438	321	331	452	1,530	2,930	1,220	418	375
21	*375	326	350	438	326	331	534	1,500	2,600	1,130	431	369
22	375	316	340	*418	321	326	643	1,370	2,420	1,050	431	375
23	375	321	300	431	311	326	804	1,250	2,470	983	*424	375
24	375	336	225	418	311	336	850	1,180	2,500	935	424	*369
25	375	311	180	404	311	346	897	1,080	2,360	887	438	358
26	375	292	220	398	326	341	1,010	1,030	2,190	841	431	363
27	369	300	300	392	311	341	1,190	992	2,050	813	424	363
28	369	280	350	398	316	346	1,420	1,070	1,970	777	404	369
29	375	262	350	398	-	346	1,220	1,180	1,990	740	411	369
30	381	275	340	392	-	346	1,090	1,090	2,040	722	424	358
31	369	-	335	381	-	346	-	1,170	-	696	418	-
Total	11,435	10,059	10,059	12,413	9,852	10,051	16,656	35,289	62,780	48,254	15,585	11,776
Mean	369	335	324	400	352	324	555	1,138	2,093	1,557	503	393
Cfsm	0.690	0.626	0.606	0.748	0.658	0.606	1.04	2.13	3.91	2.91	0.940	0.735
In.	0.79	0.70	0.70	0.86	0.68	0.70	1.16	2.45	4.36	3.36	1.08	0.82
Ac-ft	22,680	19,950	19,950	24,620	19,540	19,940	33,040	69,990	124,500	95,710	30,910	23,360

Calendar year 1952: Max 3,650 Min 180 Mean 783 Cfsm 1.46 In. 19.91 Ac-ft 568,300
Water year 1952-53: Max 3,090 Min 180 Mean 696 Cfsm 1.30 In. 17.66 Ac-ft 504,200

Peak discharge (base, 1,700 cfs).--June 19 (1 to 2 p.m.) 3,200 cfs (3.54 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 27 to Jan. 8 except for staff-gage reading Dec. 3, 4, 17; discharge estimated on basis of weather records and records for other Salmon River stations.

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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 1953.

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.--30 years (1922-24, 1925-53), 938 cfs.

Extremes.--Maximum discharge during year, 5,720 cfs June 19 (gage height, 8.49 ft); minimum daily, 250 cfs Dec. 25.
1921-53: Maximum discharge, 8,000 cfs (estimated) June 27, 1927; minimum, 160 cfs (estimated) Nov. 25-30, 1929.

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 6,000 acres above Stanley.

Rating table, water year 1952-53. except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	233	4.0	1,410
2.5	508	6.0	3,070
3.0	733	9.0	6,300

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	483	473	381	438	473	414	513	1,490	2,470	3,600	948	585
2	488	429	419	438	463	400	483	1,320	2,810	3,520	959	622
3	493	424	424	443	503	400	498	1,270	2,840	3,470	1,190	580
4	493	448	*424	424	539	400	508	*1,350	*2,840	3,460	1,030	559
5	493	463	419	438	508	390	544	1,580	3,150	3,450	971	554
6	488	483	434	438	493	390	544	1,950	3,020	3,470	925	549
7	493	468	443	443	488	*400	528	2,220	3,170	3,460	884	549
8	493	434	453	434	498	404	498	1,950	3,160	3,420	845	554
9	493	414	458	513	458	409	*488	1,720	2,990	3,310	806	544
10	493	429	473	580	395	429	473	1,550	2,960	3,110	778	539
11	488	478	468	559	443	438	463	1,440	3,420	3,000	762	534
12	488	478	473	595	438	434	468	1,410	4,410	2,930	729	528
13	483	488	473	616	448	429	468	1,540	5,360	2,850	702	513
14	488	493	453	580	438	404	463	1,590	5,300	2,780	691	508
15	483	488	448	534	443	419	443	1,820	4,840	2,650	680	508
16	483	443	458	528	438	429	468	1,960	4,620	2,390	680	518
17	488	453	478	523	453	434	488	2,100	4,920	2,110	713	528
18	488	478	483	534	448	404	508	2,200	5,470	1,910	664	513
19	488	463	478	534	419	443	559	2,570	*5,640	1,750	643	508
20	*488	458	483	528	404	443	696	2,720	5,180	*1,660	622	493
21	488	429	468	528	419	438	936	2,520	4,650	1,560	606	488
22	488	395	458	*493	424	434	1,230	2,190	4,430	1,460	595	493
23	488	414	409	518	414	438	1,540	1,990	4,500	1,370	580	493
24	493	453	b300	498	414	448	1,530	1,850	4,440	1,300	*580	488
25	488	409	a250	498	419	488	1,550	1,670	4,120	1,240	595	*478
26	493	371	a260	488	419	468	1,750	1,580	3,750	1,180	585	463
27	488	386	448	473	404	473	1,980	1,540	3,510	1,120	580	463
28	483	367	453	473	414	493	2,320	1,710	3,390	1,070	569	468
29	478	348	453	483	-	493	1,920	2,070	3,370	1,030	569	473
30	488	353	448	473	-	503	1,700	2,030	3,480	994	585	468
31	473	-	438	468	-	518	-	2,240	-	971	575	-
Total	15,123	13,110	13,408	15,513	12,517	13,507	26,557	57,140	118,210	71,595	22,641	15,561
Mean	488	437	433	500	447	436	885	1,843	3,940	2,310	730	519
Cfsm	0.580	0.520	0.515	0.595	0.532	0.518	1.05	2.19	4.68	2.75	0.868	0.617
In.	0.67	0.58	0.59	0.69	0.55	0.60	1.17	2.52	5.22	3.17	1.00	0.69
Ac-ft	30,000	26,000	26,590	30,770	24,830	26,790	52,680	113,300	234,500	142,000	44,910	30,860

Calendar year 1952: Max 5,920 Min 250 Mean 1,162 Cfsm 1.38 In. 18.80 Ac-ft 843,200
Water year 1952-53: Max 5,640 Min 250 Mean 1,082 Cfsm 1.29 In. 17.45 Ac-ft 783,200

Peak discharge (base, 2,350 cfs).--Apr. 28 (3 a.m.) 2,500 cfs (5.38 ft); May 6 (12 p.m.) 2,460 cfs (5.33 ft); May 20 (4 a.m.) 2,860 cfs (5.78 ft); June 19 (1 a.m.) 5,720 cfs (8.49 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for other Salmon River stations.

b Stage-discharge relation affected by ice.

Salmon River near Challis, Idaho

Location.--Lat 44°23, long. 114°15', in sec. 7, T. 12 N., R. 19 E., on left bank 250 ft downstream from Bayhorse Creek and 9 miles south of Challis.

Drainage area.--1,800 sq mi, approximately.

Records available.--October 1928 to September 1953.

Gage.--Water-stage recorder. Datum of gage is 5,163.99 ft above mean sea level, datum of 1929.

Average discharge.--25 years, 1,396 cfs.

Extremes.--Maximum discharge during year, 8,640 cfs June 19 (gage height, 7.88 ft); minimum, 247 cfs Dec. 26 (gage height, 1.28 ft).
1928-53: Maximum discharge, 10,600 cfs May 28, 1951 (gage height, 8.74 ft); minimum, 160 cfs Dec. 14, 1940.

Remarks.--Records excellent except those for period of ice effect, which are fair. Diversions above station for irrigation of about 10,000 acres.

Revisions.--WSP 1043: Drainage area.

Rating table, water year 1952-53, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	339	4.0	2,030
2.0	555	5.0	3,300
2.5	820	6.0	4,930
3.0	1,140	8.0	8,950

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	726	705	498	668	694	641	753	2,010	3,190	5,500	1,580	957
2	726	668	b580	668	684	605	721	1,800	3,620	5,290	1,550	1,030
3	726	631	b600	694	694	605	732	1,680	3,830	5,200	1,810	988
4	726	657	*b580	662	764	621	742	1,700	*3,780	5,220	1,710	950
5	726	689	b580	662	742	600	775	*1,920	4,150	5,220	1,580	926
6	732	699	b605	684	726	600	809	2,390	4,130	5,270	1,500	914
7	726	694	b630	699	705	*600	792	2,990	4,230	5,270	1,450	902
8	726	657	b630	678	726	605	748	2,740	4,320	5,220	1,390	914
9	715	600	641	726	678	610	*732	2,430	4,100	5,150	1,320	896
10	715	595	668	908	545	631	715	2,160	4,010	4,760	1,280	878
11	715	684	678	861	600	652	689	1,990	4,590	4,570	1,260	878
12	715	699	726	872	657	641	694	1,800	6,110	4,490	1,240	872
13	715	710	726	908	657	641	684	1,990	7,820	4,420	1,180	866
14	715	710	684	872	652	595	668	2,040	7,860	4,350	1,170	843
15	710	715	615	803	684	600	641	2,300	7,050	4,160	1,160	837
16	710	689	647	770	641	626	673	2,500	6,710	3,750	1,150	843
17	705	668	641	792	684	636	694	2,720	7,110	3,360	1,220	866
18	705	673	710	792	678	590	715	2,870	8,000	3,070	1,140	855
19	705	684	699	786	610	636	748	3,200	8,470	2,840	1,120	837
20	*710	689	689	764	555	652	855	3,560	*7,750	2,670	1,070	826
21	710	626	684	764	585	631	1,090	3,310	6,890	*2,500	1,050	826
22	710	526	657	721	631	631	1,510	3,030	6,570	2,330	1,040	820
23	710	560	580	*742	610	626	1,940	2,720	6,750	2,210	1,010	820
24	710	673	428	726	590	647	2,040	2,550	6,710	2,110	*981	814
25	705	580	347	721	595	694	2,010	2,280	6,150	2,000	1,010	*809
26	699	498	347	710	641	694	2,240	2,160	5,540	1,890	994	798
27	710	507	489	689	647	689	2,600	2,070	5,160	1,800	975	798
28	705	494	636	684	647	715	3,020	2,180	4,970	1,740	963	792
29	705	462	710	705	-	732	2,680	2,690	4,950	1,690	963	798
30	726	449	757	705	-	732	2,340	2,690	5,180	1,640	994	798
31	710	-	715	694	-	764	-	2,930	-	1,810	963	-
Total	22,149	18,891	19,157	23,130	18,322	19,942	36,050	75,480	169,700	111,300	37,823	25,951
Mean	714	630	618	746	654	643	1,202	2,435	5,657	3,590	1,220	865
Cfsm	0.397	0.350	0.343	0.414	0.363	0.357	0.668	1.35	3.14	1.99	0.678	0.481
In.	0.46	0.39	0.40	0.48	0.38	0.41	0.75	1.56	3.50	2.29	0.78	0.54
Ac-ft	43,930	37,470	38,000	45,880	36,340	39,550	71,500	149,700	336,600	220,800	75,020	51,470

Calendar year 1952: Max 8,300 Min 347 Mean 1,646 Cfsm 0.914 In. 12.44 Ac-ft 1,195,000
Water year 1952-53: Max 8,470 Min 347 Mean 1,583 Cfsm 0.879 In. 11.94 Ac-ft 1,146,000

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

Challis Creek near Challis, Idaho

Location.--Lat 44°34', long. 114°19', in 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 1953.

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.--10 years, 45.3 cfs.

Extremes.--Maximum discharge during year, 319 cfs June 19 (gage height, 6.23 ft); minimum, 8.3 cfs Mar. 6-8, 18; minimum gage height, 3.23 ft Feb. 9, Mar. 6-8, 18.
1943-53: 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 good except those for periods of ice effect or indefinite stage-discharge relation, which are fair, and those for periods of no gage-height record, which are poor. Diversions above station for irrigation.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 18-20, Apr. 27 to May 22)

3.3	10	4.5	104
3.5	17	5.0	162
3.7	30	6.0	289
4.0	55	6.2	315

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	18	a16	a15	15	10	13	58	111	172	65	47
2	21	17	a16	a14	12	b10	b13	54	149	179	68	49
3	19	16	b16	a14	12	b10	b13	50	151	176	69	45
4	19	17	*16	a14	13	11	13	49	151	174	67	41
5	19	18	15	a14	12	11	13	*50	168	170	66	40
6	20	18	15	a14	12	*11	13	55	*174	167	64	38
7	20	18	16	a14	12	11	13	66	190	163	61	38
8	20	17	b16	a14	12	11	*13	65	191	158	59	38
9	20	16	b16	15	12	11	b13	63	193	156	57	35
10	20	18	b16	15	b11	12	13	61	190	149	57	35
11	19	17	16	16	b12	12	b13	60	194	144	57	34
12	19	17	16	16	b12	12	b13	56	218	140	60	34
13	20	17	16	16	b13	11	12	52	236	140	60	31
14	20	17	16	16	b12	b11	12	53	253	131	58	32
15	21	17	16	15	12	b11	12	58	263	122	58	32
16	21	17	16	15	b12	12	12	65	278	115	55	30
17	20	17	16	15	11	11	12	68	285	103	55	32
18	19	17	16	15	11	b11	12	74	301	98	54	34
19	18	16	15	15	b10	12	13	84	~306	94	52	33
20	*18	16	16	15	b10	12	15	82	*289	90	50	31
21	19	15	15	15	b10	b11	19	82	272	*87	50	29
22	19	b14	15	15	b11	11	25	80	259	82	49	29
23	19	b16	b13	*15	b10	12	32	77	254	78	48	26
24	19	17	a12	14	b10	12	34	72	252	76	*50	23
25	18	b13	a13	14	a10	13	35	68	241	74	50	*23
26	18	b13	a14	14	a 11	12	43	66	226	71	50	24
27	18	a13	a15	14	a12	12	50	66	213	68	50	25
28	18	a14	a15	15	11	13	64	73	200	67	49	25
29	18	a14	a15	14	-	13	64	84	192	67	50	26
30	18	a14	a15	14	-	13	62	86	185	64	49	26
31	18	-	a15	14	-	13	-	96	-	60	48	-
Total	595	484	474	455	323	358	684	2,073	6,585	3,635	1,735	985
Mean	19.2	16.1	15.3	14.7	11.5	11.5	22.8	66.9	220	117	56.0	32.8
Ac-ft	1,180	960	940	902	641	710	1,360	4,110	13,060	7,210	3,440	1,950

Calendar year 1952: **Max** 196 **Min** 12 **Mean** 45.2 **Ac-ft** 32,800
Water year 1952-53: **Max** 306 **Min** 10 **Mean** 50.4 **Ac-ft** 36,460

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.
b Stage-discharge relation affected by ice.
Note.--Stage-discharge relation indefinite Apr. 20 to June 6; discharge computed on basis of gage-height record, 2 discharge measurements, weather records, and records for stations on nearby streams.

Pahsimeroi River near May, Idaho

Location.--Lat 44°42', long. 114°03', in W½ sec. 25, T. 16 N., R. 20 E., on right bank a quarter of a mile downstream from old highway bridge on Challis-Salmon River highway, a quarter of a mile upstream from mouth, and 10 miles northwest of May.

Drainage area.--845 sq mi, approximately.

Records available.--October 1929 to September 1953.

Gage.--Staff gage read once daily. Datum of gage is 4,636.95 ft above mean sea level, adjustment of 1912.

Average discharge.--23 years (1930-53), 209 cfs.

Extremes.--Maximum discharge observed during year, 356 cfs Nov. 16 (gage height, 2.69 ft); minimum observed, 107 cfs May 14 (gage height, 1.72 ft).
1929-53: Maximum discharge observed, 454 cfs May 30, 1943 (gage height, 2.81 ft); maximum gage height observed, 3.21 ft June 4, 1948 (backwater from Salmon River); minimum discharge observed, 75 cfs Apr. 28, 1934.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Diversions for irrigation of about 12,500 acres above station.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

1.7	93	2.3	240
1.8	109	2.7	390
2.0	150		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	247	322	269	284	318	287	269	a160	160	204	155	182
2	247	322	265	287	318	284	244	a155	287	192	158	192
3	251	322	269	284	310	284	227	150	207	176	163	192
4	276	325	265	287	310	295	227	148	195	a176	163	188
5	287	333	265	284	303	299	230	*155	207	176	168	188
6	295	333	*262	291	306	299	237	153	*207	173	171	192
7	295	329	269	295	303	299	240	150	224	168	171	207
8	306	333	272	303	306	295	237	148	220	176	163	201
9	303	329	280	314	303	295	237	143	217	182	160	201
10	299	329	284	314	299	*295	244	141	214	182	163	201
11	287	333	284	322	299	295	247	137	210	179	168	204
12	287	333	280	325	299	295	*254	132	210	173	171	204
13	287	341	280	325	295	287	247	122	214	185	166	204
14	284	344	284	318	295	287	247	107	247	182	166	204
15	287	352	287	318	295	287	233	111	299	179	166	204
16	299	356	284	318	295	284	227	109	299	176	179	201
17	299	348	287	318	299	284	227	113	299	176	173	201
18	*306	344	295	318	303	280	217	115	295	179	176	201
19	303	344	299	329	291	280	210	118	322	173	176	201
20	303	341	299	337	284	280	207	124	*322	179	179	198
21	314	341	299	333	280	280	201	128	310	*179	179	201
22	314	337	299	333	276	280	195	128	306	176	179	201
23	314	337	299	*314	272	280	195	132	303	173	179	201
24	314	329	295	325	276	280	168	135	254	179	179	201
25	314	322	295	318	272	280	168	137	265	176	*182	201
26	314	318	291	318	269	280	168	137	240	171	185	*204
27	314	299	287	318	269	276	166	141	233	153	182	201
28	310	291	284	314	287	276	168	141	220	155	182	201
29	314	272	280	306	-	276	a165	146	217	153	186	201
30	318	269	280	306	-	280	a160	160	210	158	179	204
31	318	-	284	314	-	280	-	158	-	158	182	-
Total	9,206	9,828	8,772	9,670	8,232	8,859	6,462	4,234	7,413	5,417	5,351	5,982
Mean	297	328	283	312	294	286	215	137	247	175	173	199
Ac-ft	18,260	19,490	17,400	19,180	16,330	17,570	12,820	8,400	14,700	10,740	10,610	11,870

Calendar year 1952: Max 356 Min 103 Mean 240 Ac-ft 174,500
Water year 1952-53: Max 356 Min 107 Mean 245 Ac-ft 177,400

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

Salmon River at 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 1953.

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.--36 years (1913-16, 1920-53), 1,869 cfs.

Extremes.--Maximum discharge during year, 9,800 cfs June 19 (gage height, 6.92 ft); minimum, 719 cfs Dec. 26 (gage height, 2.43 ft).
1912-16, 1919-53: Maximum discharge observed, 16,400 cfs June 12, 1921 (gage height, 9.35 ft, site and datum then in use); minimum, 242 cfs Jan. 8, 1937 (gage height, 1.50 ft).

Remarks.--Records excellent except those computed from once-daily staff-gage readings, which are good, and those for periods of ice effect, which are fair. Diversions above station for irrigation.

Revisions.--WSP 1043: Drainage area.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.4	695	5.0	4,750
3.0	1,260	6.0	7,270
3.5	1,900	7.0	10,000
4.0	2,700		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,020	1,310	901	1,300	1,240	1,150	1,190	2,650	3,570	6,230	1,830	1,200
2	1,020	1,320	1,010	1,240	1,250	1,110	1,170	2,320	4,290	6,280	1,820	1,200
3	1,020	1,280	b1,150	1,250	1,250	1,090	1,130	2,120	5,050	6,100	1,890	1,250
4	1,060	1,270	b1,160	1,260	1,280	1,100	1,130	2,010	4,820	6,020	2,100	1,230
5	1,130	1,330	*b1,120	1,200	1,340	1,100	1,120	2,060	*5,120	6,020	1,940	1,190
6	1,150	1,370	b1,160	1,260	1,300	1,080	1,160	*2,320	5,620	6,020	1,840	1,200
7	1,170	1,380	b1,200	1,270	1,270	1,080	1,200	2,890	5,700	6,020	1,770	1,230
8	1,180	1,370	b1,200	1,270	1,260	1,080	1,190	3,270	5,970	5,970	1,720	1,230
9	1,190	1,310	1,190	1,270	b1,120	*1,090	1,130	2,890	5,770	5,900	1,640	1,120
10	1,190	1,260	1,190	1,430	b980	1,090	1,120	2,590	5,520	5,670	1,560	1,090
11	1,200	1,300	1,220	1,510	1,040	1,120	1,110	2,380	5,600	5,370	1,510	1,080
12	1,200	1,370	1,230	1,480	1,110	1,130	*1,090	2,180	6,700	5,170	1,480	1,070
13	1,220	1,400	1,280	1,530	1,150	1,120	1,100	2,080	8,390	5,120	1,460	1,090
14	1,220	1,420	1,260	1,540	1,170	1,100	1,090	2,100	9,450	5,030	1,420	1,090
15	1,220	1,430	1,240	1,460	1,170	1,050	1,050	2,160	9,170	4,820	1,390	1,110
16	1,230	1,420	1,170	1,380	1,170	1,060	1,030	2,420	8,480	4,510	1,390	1,090
17	1,240	1,380	1,160	1,370	1,160	1,090	1,030	2,630	8,450	4,160	1,430	1,010
18	1,270	1,360	1,180	1,420	1,190	1,090	1,040	2,930	8,950	3,790	1,450	1,110
19	*1,280	1,370	1,320	1,440	1,170	1,050	1,050	3,270	9,600	3,510	1,400	1,010
20	1,270	1,360	1,300	1,420	b1,000	1,100	1,060	3,810	9,570	3,250	1,380	1,100
21	1,270	1,320	1,280	1,400	1,060	1,110	1,160	3,830	*8,920	3,050	1,320	1,080
22	1,280	1,260	1,260	1,360	1,090	1,090	1,430	3,650	8,200	*2,850	1,280	1,060
23	1,280	1,170	1,180	1,280	b1,030	1,080	1,870	3,310	8,040	2,680	1,270	1,060
24	1,270	1,220	1,000	*1,310	b1,040	1,090	2,290	3,150	8,040	2,560	1,260	1,060
25	1,270	1,270	829	1,280	1,070	1,100	2,290	2,890	7,770	2,420	*1,230	1,040
26	1,270	1,140	759	1,280	1,100	1,140	2,300	2,660	7,110	2,330	1,250	*1,080
27	1,260	b1,050	784	1,240	1,140	1,150	2,650	2,500	6,520	2,190	1,240	1,060
28	1,250	1,070	974	1,230	1,160	1,150	3,110	2,500	6,230	2,040	1,240	1,050
29	1,280	928	1,190	1,240	-	1,170	3,330	2,930	6,000	1,980	1,220	1,040
30	1,300	901	1,310	1,250	-	1,170	2,950	3,230	6,050	1,940	1,230	1,050
31	1,320	-	1,360	1,240	-	1,170	-	3,270	-	1,890	1,240	-
Total	37,530	38,339	35,567	41,390	32,310	34,300	45,570	85,000	208,670	130,890	46,200	33,280
Mean	1,211	1,278	1,147	1,335	1,154	1,106	1,519	2,742	6,956	4,222	1,490	1,109
Ac-ft	74,440	76,040	70,550	82,100	64,090	68,030	90,390	168,600	413,900	259,600	91,640	66,010

Calendar year 1952: Max 9,420 Min 759 Mean 2,196 Ac-ft 1,594,000
Water year 1952-53: Max 9,600 Min 759 Mean 2,107 Ac-ft 1,525,000

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Discharge computed from once-daily staff-gage readings Sept. 6-25.

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 1953.

Gage.--Staff gage read twice daily. Altitude of gage is 3,280 ft (from river-profile map).

Average discharge.--9 years, 257 cfs.

Extremes.--Maximum discharge observed during year, 2,640 cfs June 13 (gage height, 4.30 ft); minimum observed, 30 cfs Feb. 10 (gage height, -0.21 ft).
1944-53: Maximum discharge observed, that of June 13, 1953; maximum gage height observed, 4.4 ft Jan. 6, 1947 (backwater from ice); minimum discharge observed, that of Feb. 10, 1953.

Remarks.--Records fair except those for periods of ice effect, which are poor. Diversions above station for irrigation of about 1,000 acres.

Revisions (water years).--WSP 1063: 1945.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

-0.2	29	1.5	449
0.0	45	2.0	715
.2	70	3.0	1,410
.5	126	4.4	2,700
1.0	256		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	82	93	73	85	85	84	121	280	1,200	1,000	238	130
2	82	86	79	85	85	78	121	253	1,440	960	235	129
3	84	80	82	85	85	77	117	240	1,850	970	250	128
4	85	82	85	83	107	75	114	240	1,800	989	220	126
5	85	92	*86	85	98	83	119	259	*1,780	950	210	124
6	85	96	86	87	90	85	122	*364	2,000	850	200	120
7	85	91	90	87	87	85	114	520	1,850	785	195	115
8	85	84	92	85	80	82	105	470	1,800	700	188	114
9	85	75	90	90	65	*78	95	427	1,790	670	185	113
10	86	78	90	96	32	93	87	360	1,850	660	180	110
11	87	103	92	95	85	94	*80	330	1,950	646	177	110
12	88	106	94	92	84	94	86	308	2,200	630	172	108
13	88	104	97	89	82	92	91	340	2,640	590	168	105
14	89	100	94	89	78	84	95	370	2,300	547	165	105
15	89	98	92	88	80	86	95	400	2,200	520	160	104
16	89	95	89	87	80	86	97	445	2,140	480	155	103
17	88	91	83	85	82	85	100	530	2,250	460	155	102
18	87	89	91	89	80	83	106	620	2,400	423	155	101
19	*85	85	89	91	74	87	130	761	2,200	395	145	100
20	85	80	85	91	70	86	155	770	1,870	400	142	101
21	85	60	83	90	75	85	182	680	*1,490	360	140	102
22	85	40	81	85	80	85	250	600	1,440	320	138	104
23	85	52	60	82	85	86	330	558	1,400	*290	138	105
24	84	64	55	*82	80	89	310	530	1,330	285	137	100
25	84	53	60	82	85	100	297	520	1,250	276	137	100
26	84	50	80	82	90	110	325	516	1,150	265	*144	98
27	84	65	88	84	90	115	360	530	1,040	258	140	*96
28	84	60	86	84	89	114	410	570	1,000	250	138	98
29	85	62	85	84	-	120	360	690	990	247	135	100
30	86	66	87	84	-	115	310	828	989	242	132	102
31	91	-	85	84	-	118	-	1,000	-	240	130	-
Total	2,656	2,380	2,609	2,687	2,283	2,834	5,284	15,309	51,589	16,658	5,204	3,253
Mean	85.7	79.3	84.2	86.7	81.5	91.4	176	494	1,720	537	168	108
Cfsm	0.162	0.150	0.159	0.164	0.154	0.173	0.333	0.934	3.25	1.02	0.318	0.204
In.	0.19	0.17	0.18	0.19	0.16	0.20	0.37	1.08	3.63	1.17	0.37	0.23
Ac-ft	5,270	4,720	5,170	5,330	4,530	5,620	10,480	30,360	102,300	33,040	10,320	6,450

Calendar year 1952: Max 1,160 Min 40 Mean 233 Cfsm 0.440 In. 6.01 Ac-ft 169,300
Water year 1952-53: Max 2,640 Min 32 Mean 309 Cfsm 0.584 In. 7.94 Ac-ft 223,600

* Discharge measurement made on this day.

Note.--Discharge for the entire year computed on basis of 2 readings per day about twice each week, discharge measurements, weather records, and records for Big Creek near Big Creek, Johnson Creek at Yellow Pine, and other nearby stations. Stage-discharge relation affected by ice about Nov. 9-12, Nov. 26 to Dec. 13, Dec. 23 to Jan. 9, Feb. 17-23.

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 1953.

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.--9 years, 3,059 cfs.

Extremes.--Maximum discharge observed during year, 15,800 cfs June 14 (gage height, 10.20 ft); minimum daily, 1,160 cfs Dec. 26; minimum gage height, 2.08 ft Dec. 26.
1944-53: 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, Feb. 1, 1951.

Remarks.--Records excellent except those June 10 to July 15, which are good, and those for periods of ice effect which are fair. Diversions for irrigation of about 88,000 acres above station.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 10 to Aug. 3)

2.0	1,140	6.0	7,600
2.5	1,660	8.0	11,700
3.0	2,300	9.8	15,700
4.0	3,800		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,420	1,830	1,300	1,880	1,740	1,660	1,770	3,830	6,310	8,840	2,370	1,630
2	1,440	1,820	1,500	1,800	1,760	1,590	1,730	3,380	7,640	8,920	2,330	1,640
3	1,440	1,790	1,660	1,800	1,790	1,590	1,710	3,050	9,810	8,660	2,400	1,680
4	1,440	1,770	1,700	1,780	1,790	1,570	1,670	2,860	9,140	8,540	2,590	1,700
5	1,500	1,830	*1,620	1,700	1,830	1,600	1,650	2,900	*9,260	8,460	2,590	1,670
6	1,540	1,900	1,640	1,760	1,840	1,590	1,700	*3,160	10,100	8,360	2,430	1,630
7	1,530	1,900	1,680	1,820	1,790	1,580	1,740	3,920	10,400	8,240	2,360	1,620
8	1,550	1,880	1,650	1,810	1,770	1,590	1,770	4,600	10,900	8,160	2,260	1,600
9	1,580	1,830	1,610	1,810	1,740	*1,620	1,670	4,240	10,600	7,980	2,130	1,600
10	1,580	1,740	1,620	2,000	1,500	1,640	1,620	3,780	10,100	7,720	2,060	1,600
11	1,590	1,800	1,700	2,100	1,540	1,700	*1,620	3,460	10,000	7,280	1,990	1,560
12	1,620	1,900	1,780	2,050	1,560	1,720	1,590	3,180	11,300	6,980	1,910	1,540
13	1,640	1,950	1,800	2,060	1,650	1,710	1,580	3,000	14,200	6,840	1,880	1,540
14	1,650	1,980	1,800	2,090	1,620	1,650	1,580	2,960	15,600	6,760	1,840	1,520
15	1,670	1,990	1,800	2,070	1,650	1,600	1,540	3,020	15,200	6,560	1,780	1,460
16	1,700	1,980	1,780	1,980	1,660	1,570	1,520	3,350	14,100	6,140	1,800	1,460
17	1,720	1,950	1,680	1,900	1,650	1,600	1,520	3,740	13,800	5,660	1,850	1,440
18	1,730	1,900	1,710	1,960	1,670	1,570	1,530	4,170	14,400	5,140	1,850	1,430
19	*1,780	1,900	1,780	2,040	1,640	1,570	1,530	4,740	15,100	4,760	1,830	1,430
20	1,780	1,890	1,850	2,030	1,400	1,600	1,570	5,520	14,900	4,380	1,780	1,410
21	1,780	1,840	1,840	1,980	1,450	1,650	1,680	5,700	*13,600	4,060	1,720	1,400
22	1,790	1,730	1,830	1,900	1,480	1,620	1,930	5,350	12,200	3,780	1,720	1,420
23	1,800	1,520	1,730	1,840	1,400	1,590	2,580	4,960	11,600	*3,510	1,670	1,450
24	1,790	1,570	1,430	*1,800	1,400	1,590	3,120	4,760	11,400	3,350	1,660	1,470
25	1,790	1,600	1,250	1,790	1,460	1,640	3,260	4,600	11,000	3,180	1,640	1,510
26	1,790	1,480	1,160	1,770	1,550	1,720	3,280	4,220	10,200	3,060	*1,640	1,510
27	1,780	1,400	1,220	1,730	1,680	1,740	3,640	4,140	9,340	2,920	1,670	*1,480
28	1,780	1,440	1,430	1,700	1,670	1,730	4,220	4,110	8,860	2,690	1,660	1,460
29	1,800	1,300	1,550	1,710	-	1,770	4,630	4,890	8,600	2,590	1,650	1,470
30	1,820	1,250	1,800	1,730	-	1,780	4,190	5,540	8,580	2,510	1,650	1,480
31	1,830	-	1,900	1,720	-	1,770	-	5,800	-	2,430	1,650	-
Total	51,650	52,660	50,800	58,110	45,680	50,920	65,140	126,930	338,240	178,460	60,360	45,810
Mean	1,666	1,755	1,639	1,875	1,631	1,643	2,171	4,095	11,270	5,757	1,947	1,527
Ac-ft	102,400	104,400	100,800	115,300	90,600	101,000	129,200	251,800	670,900	354,000	119,700	90,860

Calendar year 1952: Max 13,000 Min 1,160 Mean 3,133 Ac-ft 2,274,000
Water year 1952-53: Max 15,600 Min 1,160 Mean 3,082 Ac-ft 2,231,000

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 23, 24, Nov. 27 to Dec. 16, Dec. 25 to Jan. 14, Feb. 10, 20, 21, 23, 24.

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 1953 (no winter records 1941-45).

Gage.--Water-stage recorder. Altitude of gage is 6,435 ft (by barometer).

Average discharge.--21 years (1928-41, 1945-53), 227 cfs.

Extremes.--Maximum discharge during year, 1,890 cfs June 13 (gage height, 5.94 ft); minimum, 38 cfs Mar. 14 (gage height, 2.18 ft), but may have been less during period of ice effect.
1928-53: 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 periods of ice effect, which are fair. No diversion above station.

Revisions.--WSP 738: Drainage area.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 16-22, May 28 to June 30)

2.2	40	3.5	359
2.3	53	4.0	575
2.5	85	5.0	1,180
3.0	195	6.0	2,060

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	85	51	64	76	66	73	264	930	1,030	195	130
2	96	80	54	64	75	64	68	242	994	975	203	132
3	96	82	56	64	80	66	70	229	1,000	949	226	123
4	94	85	56	62	87	66	71	245	982	916	206	121
5	94	90	56	64	80	70	76	290	1,070	892	195	119
6	94	89	57	64	80	70	75	382	962	862	185	115
7	94	85	58	64	78	70	73	439	1,030	838	182	115
8	94	80	58	62	76	*71	71	390	968	802	174	113
9	94	75	57	60	68	71	68	348	*949	735	172	111
10	94	80	58	70	60	71	*75	315	1,000	686	169	109
11	92	85	60	88	65	68	76	290	1,190	630	164	107
12	92	85	61	86	65	68	80	308	1,540	590	162	105
13	90	87	60	95	68	66	80	359	1,810	561	159	105
14	90	89	59	98	69	62	80	410	1,670	518	152	103
15	90	83	59	92	69	68	75	514	1,460	469	150	105
16	89	78	58	90	69	70	80	605	1,430	427	150	107
17	89	78	*58	87	68	66	80	691	1,580	394	150	105
18	90	84	58	89	68	66	82	752	1,740	*363	147	103
19	90	80	59	89	62	70	87	910	*1,710	344	143	103
20	90	75	60	*87	60	68	103	850	1,440	322	138	99
21	90	70	59	85	64	65	123	713	1,300	304	136	99
22	*90	65	58	84	66	66	157	595	1,280	287	*134	98
23	90	65	48	83	62	66	206	522	1,330	274	132	96
24	90	68	47	82	61	68	212	491	1,260	261	138	*99
25	89	60	50	82	63	75	226	439	1,140	254	138	99
26	89	55	58	82	65	68	270	469	1,030	245	136	98
27	87	58	65	80	66	71	333	522	968	235	134	98
28	87	50	65	80	68	75	382	642	956	229	132	101
29	87	48	66	82	-	71	333	735	968	220	132	101
30	90	48	66	82	-	71	304	762	1,010	212	132	99
31	87	-	65	80	-	75	-	874	-	203	127	-
Total	2,824	2,242	1,800	2,441	1,938	2,128	4,089	15,597	36,697	16,027	4,893	3,220
Mean	91.1	74.7	58.1	78.7	69.2	68.6	136	503	1,223	517	158	107
Cfsm	0.660	0.541	0.421	0.570	0.501	0.497	0.986	3.64	8.86	3.75	1.14	0.775
In.	0.76	0.60	0.49	0.66	0.52	0.57	1.10	4.20	9.89	4.32	1.32	0.87
Ac-ft	5,600	4,450	3,570	4,840	3,840	4,220	8,110	30,940	72,790	31,790	9,710	6,390

Calendar year 1952: Max 1,650 Min 47 Mean 285 Cfsm 2.07 In. 28.08 Ac-ft 206,700
Water year 1952-53: Max 1,810 Min 47 Mean 257 Cfsm 1.86 In. 25.30 Ac-ft 186,200

Peak discharge base, 930 cfs).--May 19 (8:30 p.m.) 1,070 cfs (4.95 ft); June 13 (2 a.m.) 1,890 cfs (5.94 ft); June 18 (11 p.m.) 1,870 cfs (5.92 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 9, 10, Nov. 16 to Jan. 13, Jan. 15, 22, 24, 26-28, Feb. 9 to Mar. 3, Mar. 5-7, 18.

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 1953 (no winter records 1941-45).

Gage.--Water-stage recorder. Altitude of gage is 6,340 ft (by barometer).

Average discharge.--21 years (1928-41, 1945-53), 278 cfs.

Extremes.--Maximum discharge during year, 2,800 cfs June 13 (gage height, 5.06 ft); minimum daily, 65 cfs Dec. 24; minimum gage height recorded, 1.31 ft Nov. 8.
1921-53: 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 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Apr. 28)

1.1	58	2.5	555
1.3	92	3.0	875
1.6	161	4.0	1,670
2.0	304	5.0	2,730

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	110	108	71	82	97	94	110	386	1,570	1,150	208	138
2	109	98	75	83	100	94	105	357	1,610	1,090	211	136
3	108	90	76	82	110	96	105	353	1,540	1,040	236	130
4	106	96	77	81	120	100	108	357	1,720	1,010	222	128
5	103	100	78	81	112	105	108	450	1,710	960	208	126
6	102	97	78	81	108	100	105	609	1,540	924	194	126
7	102	92	79	78	105	100	103	714	1,670	889	185	124
8	102	86	79	72	102	100	100	627	1,650	840	182	121
9	102	82	78	90	98	100	100	555	1,520	766	176	121
10	102	89	79	108	90	100	100	500	1,600	701	176	119
11	102	96	81	102	94	95	103	467	1,650	651	173	117
12	102	97	82	125	*98	93	108	456	2,120	609	170	117
13	102	98	82	132	99	92	110	579	2,500	561	164	117
14	108	100	82	120	100	90	110	701	2,250	522	161	114
15	107	96	80	114	100	96	103	861	2,040	472	158	114
16	105	95	79	108	100	100	115	960	1,900	430	156	114
17	105	95	78	107	100	100	112	1,040	2,000	395	156	114
18	107	102	78	105	100	100	115	1,100	2,140	367	153	112
19	108	96	81	105	95	95	120	1,340	2,120	344	151	112
20	108	92	82	105	88	92	130	1,380	1,860	*330	148	112
21	108	87	82	105	95	90	179	1,100	1,660	313	143	112
22	*108	82	78	105	100	93	222	854	*1,620	300	*140	112
23	106	83	68	103	96	97	300	746	1,630	284	138	112
24	106	84	65	102	90	100	330	675	1,560	271	138	*112
25	106	83	70	101	92	108	353	609	1,430	263	148	112
26	104	72	75	100	95	105	430	615	1,310	252	145	112
27	104	78	81	100	96	100	516	682	1,220	244	145	112
28	104	70	82	100	94	110	603	868	1,190	236	140	112
29	104	66	84	100	-	108	533	1,060	1,170	229	138	117
30	108	66	84	100	-	109	462	1,160	1,170	222	138	114
31	108	-	82	100	-	*110	-	1,380	-	215	135	-
Total	3,266	2,676	2,426	3,077	2,774	3,072	6,098	23,541	50,670	16,880	5,136	3,541
Mean	105	89.2	78.3	99.3	99.1	99.1	203	759	1,689	545	166	118
Cfsm	0.583	0.496	0.435	0.552	0.551	0.551	1.13	4.22	9.38	3.03	0.922	0.656
In.	0.67	0.55	0.50	0.64	0.57	0.63	1.26	4.86	10.47	3.49	1.06	0.73
Ac-ft	6,480	5,310	4,810	6,100	5,500	6,090	12,100	46,690	100,500	33,480	10,190	7,020

Calendar year 1952: Max 1,950 Min 65 Mean 348 Cfsm 1.93 In. 26.34 Ac-ft 252,900
Water year 1952-53: Max 2,500 Min 65 Mean 337 Cfsm 1.87 In. 25.43 Ac-ft 244,300

Peak discharge (base, 1,200 cfs).--May 19 (10 p.m.) 1,510 cfs (3.85 ft); June 13 (9 a.m.) 2,800 cfs (5.06 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice about Nov. 2 to Mar. 30, Apr. 1-14. No gage-height record Oct. 1-21, Nov. 27 to Feb. 11, Feb. 22 to Mar. 30, Apr. 1-20; discharge estimated on basis of weather records, recorded range in stage, and records for Middle Fork Salmon River near Cape Horn and other nearby stations.

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 1953.

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.--9 years, 502 cfs.

Extremes.--Maximum discharge during year, 4,060 cfs June 13 (gage height, 6.21 ft); minimum, 72 cfs Feb. 10 (gage height, 1.81 ft).
1944-53: Maximum discharge, 5,800 cfs June 3, 1948 (gage height, 7.12 ft, from flood-mark, 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 table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	83	3.0	681
2.0	125	4.0	1,620
2.3	229	5.0	2,680
2.6	385	6.0	3,840

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a150	142	b110	b124	125	133	217	761	1,800	1,860	379	213
2	a150	131	b115	b124	125	b125	213	648	1,990	1,780	373	213
3	a147	125	b118	b124	131	b125	213	560	1,900	1,810	457	208
4	a147	128	b125	b120	167	128	208	552	1,860	1,830	418	204
5	a147	145	b125	b125	150	b130	221	656	2,100	1,760	385	200
6	a145	147	b125	b125	142	b130	229	950	1,950	1,720	368	192
7	a145	133	b130	b125	142	b125	221	1,260	1,960	1,700	350	192
8	a145	120	b133	b120	139	b130	217	1,130	2,030	1,650	327	192
9	a145	102	b130	b160	128	b140	196	959	1,930	1,530	317	196
10	a145	109	b130	b170	91	153	188	833	1,910	1,380	311	188
11	a145	b140	b134	164	164	153	174	717	2,230	1,310	306	184
12	a142	b150	b140	184	145	153	174	656	*3,060	1,300	296	181
13	*142	147	145	192	145	153	170	664	3,730	1,240	285	178
14	142	139	136	170	139	142	167	*726	3,190	1,180	280	174
15	142	139	131	147	142	147	164	833	2,820	1,060	275	174
16	142	136	123	142	142	147	167	986	2,660	950	275	174
17	142	133	109	139	145	145	174	1,200	2,910	842	275	170
18	142	133	133	145	139	139	174	1,400	3,340	788	266	170
19	142	133	131	147	b130	153	188	1,630	3,100	734	266	170
20	142	128	128	142	120	150	243	1,670	2,570	690	257	170
21	142	114	125	142	b120	145	392	1,440	2,260	640	252	170
22	142	100	123	131	b125	145	598	1,210	2,250	598	247	167
23	142	b115	b92	131	b135	142	1,010	1,080	2,420	560	238	167
24	139	133	b90	*131	b105	147	905	995	2,280	536	243	164
25	139	102	b96	131	b120	170	824	905	2,000	*507	247	164
26	139	b95	b120	125	b145	178	941	878	1,790	486	243	164
27	139	b109	b126	b115	b145	174	1,130	860	1,690	464	238	160
28	139	b94	b124	123	142	196	1,360	914	1,720	444	*234	160
29	139	b96	b124	125	-	208	1,130	1,150	1,820	430	229	164
30	139	b98	b128	125	-	*204	923	1,300	1,860	411	225	164
31	142	-	b124	123	-	213	-	1,560	-	392	221	-
Total	4,430	3,716	3,823	4,291	3,788	4,723	13,131	31,083	69,130	32,582	9,083	5,387
Mean	143	124	123	138	135	152	438	1,003	2,304	1,051	293	180
Cfsm	0.304	0.264	0.262	0.294	0.287	0.323	0.932	2.13	4.90	2.24	0.623	0.383
In.	0.35	0.29	0.30	0.34	0.30	0.37	1.04	2.46	5.47	2.58	0.72	0.43
Ac-ft	8,790	7,370	7,580	8,510	7,510	9,370	26,040	61,650	137,100	64,630	18,020	10,680

Calendar year 1952: Max 3,170 Min 90 Mean 510 Cfsm 1.09 In. 14.74 Ac-ft 370,000
Water year 1952-53: Max 3,730 Min 90 Mean 507 Cfsm 1.08 In. 14.65 Ac-ft 367,200

Peak discharge (base, 2,000 cfs).--June 13 (6:30 a.m.) 4,060 cfs (6.21 ft); June 18 (3:30 a.m.) 3,590 cfs (5.82 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Johnson Creek at Yellow Pine and other nearby stations.

b Stage-discharge relation affected by ice.

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 1953.

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.--25 years, 140 cfs.

Extremes.--Maximum discharge during year, 1,260 cfs June 13 (gage height, 5.91 ft); minimum recorded, 14 cfs Nov. 3 (gage height, 2.23 ft), but may have been less during period of ice effect.

1928-53: 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, that of Nov. 3, 1952.

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 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.3	20	3.5	227
2.4	28	4.0	384
2.6	48	5.0	817
3.0	116	6.0	1,340

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	36	31	40	47	45	83	263	522	589	95	55
2	35	34	34	40	*47	43	81	235	656	555	105	52
3	35	32	35	41	60	45	77	227	*670	546	124	51
4	35	39	36	38	93	44	83	246	680	534	108	49
5	35	42	36	41	67	43	92	299	684	505	97	48
6	35	38	37	41	58	43	93	384	629	489	92	48
7	35	38	38	41	55	43	88	439	718	474	86	47
8	35	*37	39	41	52	44	83	384	665	443	83	47
9	34	29	39	55	46	45	76	329	638	395	81	46
10	34	32	39	72	42	48	70	289	675	360	77	45
11	34	42	39	56	52	49	67	263	742	332	76	44
12	34	41	40	90	46	49	65	263	937	305	72	45
13	35	42	40	116	48	48	64	289	1,140	280	70	44
14	35	41	40	92	46	44	61	312	1,010	254	67	44
15	35	40	*38	64	46	46	59	*356	937	230	65	44
16	35	37	38	56	45	45	64	406	922	*210	67	44
17	35	35	38	54	45	45	72	447	967	195	64	42
18	35	36	39	54	44	44	81	478	*1,040	181	*62	42
19	35	33	39	54	41	*46	95	718	988	170	61	42
20	35	30	39	54	37	45	134	656	837	161	58	42
21	36	28	39	54	40	44	193	538	752	153	58	42
22	36	26	39	49	45	44	277	450	772	144	56	42
23	36	32	30	48	41	44	428	409	802	138	55	*41
24	35	36	29	48	40	47	352	374	728	130	61	40
25	35	30	32	47	42	64	335	332	661	126	62	40
26	35	28	39	46	42	59	380	315	611	120	58	39
27	35	31	41	43	44	59	458	312	593	116	59	39
28	34	27	40	44	45	70	522	335	602	110	55	40
29	34	27	41	46	-	74	577	366	593	106	54	44
30	37	28	43	45	-	79	315	380	602	103	55	41
31	36	-	41	44	-	83	-	450	-	99	58	-
Total	1,085	1,027	1,168	1,654	1,356	1,571	5,225	11,544	22,773	8,553	2,241	1,329
Mean	35.0	34.2	37.7	53.4	48.4	50.7	174	372	759	276	72.3	44.3
Cfsm	0.380	0.372	0.410	0.580	0.526	0.551	1.89	4.04	8.25	3.00	0.786	0.482
In.	0.44	0.42	0.47	0.67	0.55	0.64	2.11	4.67	9.21	3.46	0.91	0.54
Ac-ft	2,150	2,040	2,320	3,280	2,690	3,120	10,360	22,900	45,170	16,960	4,440	2,640

Calendar year 1952: Max 1,020 Min 26 Mean 184 Cfsm 2.00 In. 27.17 Ac-ft 133,300
Water year 1952-53: Max 1,140 Min 26 Mean 163 Cfsm 1.77 In. 24.09 Ac-ft 118,100

Peak discharge (base, 600 cfs).--May 19 (1 p.m.) 777 cfs (4.93 ft); June 13 (3 a.m.) 1,260 cfs (5.91 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 4, 5, 8-10, 17, Nov. 20 to Dec. 11, Dec. 15-17, Dec. 23 to about Jan. 8, Jan. 27, Feb. 9-15, 18-28, Mar. 2,3, 5-10, 14, 15, 18 (no gage-height record Dec. 25 to Jan. 8; discharge estimated on basis of weather records and records for Johnson Creek at Yellow Pine and other nearby stations).

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 1953.

Gage.--Water-stage recorder. Datum of gage is 4,657.70 ft above mean sea level, datum of 1929 (preliminary).

Average discharge.--25 years, 329 cfs.

Extremes.--Maximum discharge during year, 3,680 cfs June 13 (gage height, 6.31 ft); minimum, 30 cfs Nov. 22 (gage height, 0.84 ft).
1928-53: 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, and those for periods of no gage-height record, which are fair. Small diversion from Johnson Creek basin to Deadwood River basin (see Remarks for Deadwood Reservoir near Lowman).

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

0.9	38	2.5	475
1.0	48	3.0	725
1.3	89	4.0	1,360
1.6	155	5.0	2,220
2.0	275	6.0	3,270

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	63	51	66	72	69	97	526	1,620	1,500	226	116
2	68	61	56	66	72	67	97	475	1,760	1,430	222	113
3	67	55	57	67	82	69	99	449	*1,800	1,420	261	109
4	67	65	59	64	97	68	101	471	1,870	1,370	244	107
5	67	71	59	66	88	67	109	589	1,820	1,310	222	107
6	66	57	60	66	80	67	111	799	1,670	1,290	207	101
7	66	56	62	66	80	67	109	936	1,840	1,260	196	99
8	66	*56	64	66	80	68	107	775	1,740	1,200	184	97
9	66	46	63	86	75	69	105	671	1,620	1,070	178	95
10	66	50	62	91	63	71	105	604	1,750	972	173	93
11	66	67	63	89	79	72	101	555	2,020	912	171	91
12	64	68	64	111	69	72	101	564	2,670	852	163	89
13	63	66	66	120	77	71	101	676	3,090	787	158	88
14	63	67	62	103	74	68	99	*753	2,630	714	153	86
15	63	66	62	93	74	71	93	894	2,410	635	150	84
16	63	66	63	85	72	71	99	990	2,360	*564	148	84
17	64	63	66	81	74	69	99	1,150	2,610	512	145	82
18	64	64	67	81	71	68	105	1,270	2,750	475	138	82
19	64	66	67	81	66	72	111	1,700	*2,500	440	*136	82
20	66	60	66	81	59	71	136	1,520	2,080	431	131	82
21	66	48	66	81	66	69	171	1,180	1,940	385	129	80
22	66	43	66	77	71	68	241	990	2,000	361	124	79
23	66	52	49	75	66	68	373	888	2,070	341	122	79
24	63	63	48	*75	64	71	389	810	1,860	326	124	*79
25	63	49	52	75	67	86	427	742	1,660	311	133	79
26	64	45	64	74	68	82	540	731	1,530	293	127	77
27	64	51	68	72	71	82	666	742	1,470	279	127	77
28	63	44	67	72	72	89	764	870	1,500	261	124	77
29	63	44	68	74	-	91	671	1,040	1,500	251	120	80
30	66	45	69	72	-	95	599	1,140	1,530	241	120	80
31	65	-	67	72	-	*99	-	1,420	-	232	122	-
Total	2,016	1,717	1,923	2,448	2,049	2,287	6,926	26,920	59,670	22,425	4,978	2,676
Mean	65.0	57.2	62.0	79.0	73.2	73.8	231	868	1,989	723	161	89.2
Cfsm	0.305	0.269	0.291	0.371	0.344	0.346	1.08	4.08	9.34	3.39	0.756	0.419
In.	0.35	0.30	0.34	0.43	0.36	0.40	1.21	4.70	10.42	3.92	0.87	0.47
Ac-ft	4,000	3,410	3,810	4,860	4,060	4,540	13,740	53,400	118,400	44,480	9,870	5,310

Calendar year 1952: Max 2,430 Min 43 Mean 399 Cfsm 1.87 In. 25.46 Ac-ft 289,400
Water year 1952-53: Max 3,090 Min 43 Mean 373 Cfsm 1.75 In. 23.77 Ac-ft 269,900

Peak discharge (base, 1,800 cfs).--June 13 (1 a.m.) 3,680 cfs (6.31 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Oct. 23 to Nov. 7, Jan. 15-23; discharge estimated on basis of weather records and records for stations on other Salmon River tributaries.

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 1953.

Gage.--Staff gage read once daily. Datum of gage is 1,098.92 ft above mean sea level, unadjusted. Since Jan. 13, 1952, supplementary staff gage 3 miles upstream.

Average discharge.--9 years, 10,430 cfs.

Extremes.--Maximum discharge during year, 64,200 cfs June 13 (gage height, 24.50 ft, supplementary gage, from graph based on gage readings); minimum observed, 1,790 cfs Dec. 27 (gage height, -1.30 ft, supplementary gage), but may have been less during period of ice effect.
1944-53: Maximum discharge observed, 75,300 cfs May 29, 1948 (gage height, 33.50); minimum observed, that of Dec. 27, 1952.

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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,400	3,810	b2,100	3,700	3,690	3,610	5,470	16,900	33,000	35,600	7,760	4,570
2	3,400	3,780	b2,600	3,430	3,790	3,520	5,340	14,800	36,900	35,200	7,580	4,520
3	3,400	3,670	*3,380	3,260	4,030	3,380	5,170	13,300	41,500	34,800	7,630	4,460
4	3,380	3,540	3,800	3,260	4,700	3,320	5,120	12,400	41,700	33,400	7,870	4,500
5	3,380	3,540	3,680	3,220	4,980	3,310	5,130	12,900	41,900	31,900	7,680	4,480
6	3,450	3,700	3,480	3,200	4,710	3,310	5,200	*15,400	*42,400	31,700	7,360	4,420
7	3,430	3,740	3,740	3,220	4,520	3,260	5,200	20,500	42,800	31,200	7,070	4,290
8	3,490	3,740	3,680	3,400	4,420	3,320	*5,170	22,300	44,700	30,400	6,860	4,270
9	3,510	3,620	3,600	3,610	4,260	*3,430	5,030	20,400	43,800	28,100	6,670	4,260
10	3,510	3,440	3,500	4,260	3,970	3,520	4,710	17,300	42,000	26,800	6,480	4,200
11	3,540	3,380	3,480	4,680	3,440	3,690	4,550	15,600	43,500	24,600	6,260	4,120
12	3,540	3,930	3,440	4,770	3,270	3,890	4,420	14,600	50,500	23,200	6,120	4,050
13	3,580	4,000	3,620	*5,270	3,610	4,060	4,320	14,300	61,800	22,000	5,920	4,000
14	*3,580	4,060	3,610	5,760	3,540	3,940	4,260	14,400	63,200	20,600	5,740	4,010
15	3,580	4,030	3,540	5,100	3,570	3,690	4,160	15,800	59,700	19,100	5,480	3,900
16	3,610	4,000	3,480	4,520	3,630	3,580	4,110	18,500	55,600	18,000	5,330	3,850
17	3,630	3,860	3,420	4,280	3,600	3,570	4,120	21,500	57,200	16,600	5,280	3,800
18	3,630	3,780	3,320	4,490	3,610	3,440	4,360	24,300	59,100	15,400	5,380	3,750
19	3,660	3,790	3,380	4,780	3,560	3,570	4,670	28,400	59,900	*14,600	5,240	3,760
20	3,680	3,750	3,450	4,850	3,340	3,740	5,060	31,300	55,800	13,900	*5,120	3,720
21	3,730	3,740	3,440	4,710	3,060	3,790	6,520	29,800	50,100	d13,000	4,960	3,670
22	3,750	3,680	3,490	4,480	3,050	3,840	9,260	27,200	45,800	d12,000	4,810	3,640
23	3,780	b3,150	3,490	4,230	3,120	3,900	13,200	23,700	47,400	d11,200	4,660	3,670
24	3,780	b3,000	3,320	4,030	3,090	3,940	15,300	20,800	*46,200	d10,500	4,640	3,690
25	3,780	b3,200	b2,800	3,890	3,010	4,230	15,000	19,000	42,800	d10,200	4,910	*3,720
26	3,750	b2,900	b2,100 *	3,850	3,020	4,740	15,900	18,700	40,200	d9,800	4,820	3,690
27	3,730	b2,500	b1,900	3,730	3,270	4,820	18,700	18,100	37,800	d9,400	4,710	3,670
28	3,700	b2,300	b2,100	3,620	3,450	4,990	21,800	18,200	36,000	9,240	4,670	3,690
29	3,730	g2,200	b2,700	3,460	-	5,270	23,100	21,900	35,500	8,630	4,660	3,690
30	3,700	b2,100	b3,200	3,560	-	5,410	19,800	25,700	35,500	8,390	4,670	3,670
31	3,700	-	3,610	3,500	-	5,440	-	29,400	-	8,040	4,620	-
Total	111,510	103,930	100,450	126,120	103,310	121,520	254,150	617,400	‡1,394.3	617,500	180,960	119,730
Mean	3,597	3,464	3,240	4,068	3,690	3,920	8,472	19,920	46,480	19,920	5,837	3,991
Cfsm	0.293	0.282	0.264	0.332	0.301	0.319	0.690	1.62	3.79	1.62	0.476	0.325
In.	0.34	0.32	0.30	0.38	0.31	0.37	0.77	1.87	4.23	1.87	0.55	0.36
Ac-ft	221,200	206,100	199,200	250,200	204,900	241,000	504,100	‡1,225	‡2,766	‡1,225	358,900	237,500

Calendar year 1952: Max 53,200 Min 1,900 Mean 10,670 Cfsm 0.870 In. 11.86 Ac-ft 7,748,000
Water year 1952-53: Max 63,200 Min 1,900 Mean 10,550 Cfsm 0.860 In. 11.67 Ac-ft 7,639,000

* Discharge measurement made on this day.
‡ Expressed in thousands.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge estimated on basis of weather records and records for stations 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 1953.

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.--8 years (1945-53), 19.6 cfs.

Extremes.--Maximum discharge during year, 257 cfs Apr. 28 (gage height, 4.25 ft); maximum gage height, 4.62 ft Jan. 20 (backwater from ice); minimum discharge recorded, 0.2 cfs Nov. 19, 20, but may have been less during period of ice effect; minimum gage height, 2.26 ft Sept. 17.
1937-38, 1945-53: Maximum discharge, 395 cfs Apr. 27, 1952 (gage height, 5.00 ft); minimum, that of Nov. 19, 20, 1952.

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

Revisions (water years).--WSP 1153: 1948.

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 12 to Apr. 19, Apr. 23, 28)

Oct. 1 to Apr. 19				Apr. 20 to Sept. 30			
2.6	1.0	3.2	19	2.2	1.0	3.0	30
2.7	2.2	3.4	39	2.3	2.3	3.2	46
2.8	4.0	3.6	72	2.4	4.4	3.5	87
3.0	9.5	4.0	150	2.6	10	4.0	179
				2.8	18	4.3	242

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	1.8	1.1	2.3	7.0	3.5	51	103	36	9.7	3.1	1.9
2	1.8	1.4	1.5	2.3	8.0	3.0	44	86	37	9.1	3.1	1.8
3	1.8	1.2	2.4	2.4	11	3.3	40	80	*33	8.5	7.6	1.6
4	1.8	1.3	2.7	2.3	19	2.8	51	86	32	8.5	7.3	1.6
5	1.8	1.4	2.6	2.3	20	2.8	74	100	38	7.6	4.4	1.6
6	1.8	1.5	2.5	2.4	18	2.8	83	114	35	7.3	3.8	1.6
7	1.8	1.2	2.8	2.9	15	2.8	68	132	45	*6.7	3.6	1.6
8	1.7	1.1	3.0	2.5	13	2.7	51	117	53	6.5	3.4	*1.6
9	1.7	1.0	2.6	2.9	12	3.0	*40	93	53	6.2	3.1	1.5
10	1.7	1.4	*2.7	3.1	11	5.0	34	75	46	6.2	*2.9	1.5
11	1.7	1.7	2.5	3.3	11	10	30	64	43	5.7	2.9	1.5
12	1.7	1.9	2.5	3.5	10	13	26	59	39	5.4	2.7	1.5
13	1.7	2.4	2.5	4.2	9.5	*12	25	62	36	5.2	2.7	1.4
14	1.7	2.1	2.5	4.2	8.8	12	23	65	30	5.2	2.5	1.4
15	1.7	2.1	2.3	3.9	8.5	11	24	69	28	5.2	2.5	1.3
16	1.7	1.3	2.2	3.7	7.9	11	33	74	26	4.9	2.5	1.4
17	1.7	1.4	2.2	3.7	7.6	10	56	75	22	4.7	2.3	1.4
18	1.7	1.8	2.4	7.0	7.0	9.0	94	69	21	4.4	2.2	1.4
19	1.7	1.4	2.5	14	6.0	9.9	117	82	20	4.2	2.2	1.5
20	1.5	1.4	2.7	*12	5.0	9.5	140	82	18	4.0	2.2	1.5
21	1.5	1.3	2.7	13	4.5	9.2	171	71	17	4.0	2.2	1.5
22	1.5	1.2	2.5	12	4.0	8.8	200	61	15	4.0	2.2	1.5
23	1.5	1.1	2.0	13	3.5	8.8	236	54	14	3.8	2.0	1.5
24	1.5	1.0	1.6	12	3.2	11	*190	48	13	3.8	2.0	1.4
25	1.5	1.0	1.5	9.5	3.0	15	171	43	12	3.8	2.5	1.5
26	1.5	1.0	1.9	8.5	3.0	19	173	43	12	3.8	2.2	1.5
27	1.5	1.0	2.3	7.5	3.0	25	202	41	12	3.6	2.2	1.6
28	1.5	1.0	2.4	6.5	3.5	34	234	39	11	3.6	2.2	1.6
29	1.5	1.0	2.5	6.0	-	45	163	46	11	3.4	2.2	1.6
30	1.5	1.0	2.5	6.0	-	51	127	43	10	3.1	2.0	1.6
31	*1.7	-	2.4	6.5	-	54	-	40	-	2.9	1.9	-
Total	51.2	41.4	72.5	185.4	243.0	419.9	2,971	2,216	818	165.0	90.6	45.9
Mean	1.65	1.38	2.34	5.98	8.68	13.5	99.0	71.5	27.3	5.32	2.92	1.53
Cfsm	0.104	0.087	0.148	0.378	0.549	0.854	6.27	4.53	1.73	0.337	0.185	0.097
In.	0.12	0.10	0.17	0.44	0.57	0.99	6.99	5.22	1.93	0.39	0.21	0.11
Ac-ft	102	82	144	368	482	833	5,890	4,400	1,620	327	180	91

Calendar year 1952: Max 362 Min 1.0 Mean 25.8 Cfsm 1.63 In. 22.22 Ac-ft 18,740
Water year 1952-53: Max 236 Min 1.0 Mean 20.1 Cfsm 1.27 In. 17.24 Ac-ft 14,520

Peak discharge (base, 100 cfs).--Apr. 23 (1 to 3 a.m.) 252 cfs (4.23 ft); Apr. 28 (4 a.m.) 257 cfs (4.25 ft); May 7 (1 p.m.) 138 cfs (3.77 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 21-30, Dec. 4 to Feb. 11, Feb. 18 to Mar. 3, Mar. 14, 15, 18 (no gage-height record Dec. 23-29, Jan. 5-7, Jan. 27, 28, Feb. 22 to Mar. 3, Mar. 9-12; discharge estimated on basis of weather records and records for Weiser River at Tamarack and Little Salmon River at Riggins).

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 1953.

Gage.--Water-stage recorder. Altitude of gage is 1,760 ft (from topographic map).

Extremes.--Maximum discharge during year, 5,650 cfs June 13 (gage height, 7.39 ft); minimum, 136 cfs sometime during period Nov. 21-30 (gage height, 1.57 ft).
1951-53: Maximum discharge, that of June 13, 1953; minimum, that during period Nov. 21-30, 1952.
Flood about June 1, 1948, reached a discharge of 9,200 cfs (slope-area determination).

Remarks.--Records excellent except those below about 300 cfs, which are good. Diversions for irrigation of about 13,600 acres above station.

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 8 to June 10)

Oct. 1 to July 31				Aug. 1 to Sept. 30	
1.5	120	3.0	700	1.8	181
1.7	167	4.0	1,320	2.0	251
2.0	252	5.0	2,220	2.2	330
2.5	460	7.0	5,080	2.6	506

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	197	189	150	183	376	245	1,030	1,710	2,820	2,350	394	251
2	197	184	160	185	415	242	902	1,450	3,500	2,250	385	244
3	194	172	*179	180	488	245	848	1,310	3,290	2,300	398	233
4	191	191	177	178	750	239	836	1,350	3,200	2,240	478	226
5	189	210	177	180	675	232	914	1,590	3,390	2,090	451	222
6	189	180	184	185	577	229	1,020	2,040	*3,060	1,990	406	215
7	189	165	199	190	515	236	*914	2,430	3,510	1,910	376	215
8	189	162	199	200	530	245	806	2,240	3,570	1,820	364	215
9	186	150	191	230	465	*271	735	1,870	3,220	1,650	347	212
10	186	150	189	320	*424	310	700	1,560	3,260	1,520	334	208
11	186	185	189	270	411	355	670	1,380	3,800	1,460	326	208
12	184	195	191	350	359	433	626	1,330	4,230	1,380	314	205
13	181	195	194	*577	368	465	596	1,420	4,810	1,300	302	205
14	*181	195	191	534	338	420	582	1,610	4,270	1,180	294	198
15	184	193	189	428	326	402	544	1,910	3,990	1,050	286	198
16	184	193	184	372	310	385	553	2,250	3,820	932	282	195
17	184	188	181	372	310	381	596	2,540	4,140	842	274	191
18	184	188	184	497	302	368	690	2,520	*4,170	*785	267	191
19	184	191	184	725	279	402	812	3,320	3,680	740	255	191
20	184	180	186	806	232	520	980	3,190	3,120	690	247	191
21	184	160	186	866	267	515	1,170	2,600	2,880	645	*251	188
22	184	140	184	715	271	456	1,440	2,230	3,110	616	247	191
23	184	155	179	596	256	438	1,990	1,930	3,150	582	244	195
24	184	185	160	520	242	553	2,160	1,760	2,740	553	267	191
25	184	160	160	465	242	745	1,990	1,620	2,480	525	278	*195
26	184	142	180	415	242	854	2,030	1,630	2,370	501	267	198
27	181	150	185	372	249	848	2,470	1,650	2,380	474	271	198
28	181	140	185	355	263	962	*3,080	1,660	2,460	456	271	201
29	179	140	190	338	-	1,020	2,510	2,070	2,470	442	278	201
30	179	140	185	330	-	1,110	2,060	2,210	2,430	428	271	205
31	186	-	185	334	-	1,100	-	2,440	-	406	259	-
Total	5,753	5,168	5,657	12,268	10,482	15,226	36,254	60,820	99,320	36,107	9,684	6,177
Mean	186	172	182	396	374	491	1,208	1,962	3,311	1,165	312	206
Ac-ft	11,410	10,250	11,220	24,330	20,790	30,200	71,910	120,600	197,000	71,620	19,210	12,250

Calendar year 1952: Max 5,140 Min 140 Mean 1,059 Ac-ft 768,500
Water year 1952-53: Max 4,810 Min 140 Mean 830 Ac-ft 600,800

Peak discharge (base, 2,000 cfs).--Apr. 28 (6 to 7 a.m.) 3,220 cfs (5.90 ft); May 7 (1 a.m.) 2,500 cfs (5.34 ft); May 19 (11 p.m.) 3,540 cfs (6.16 ft); June 13 (12:30 a.m.) 5,650 cfs (7.39 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Nov. 2 to Dec. 2, Dec. 24 to Jan. 12; discharge computed on basis of weather records, telemark readings made once daily to tenths of a foot, recorded range in stage, and records for Johnson Creek at Yellow Pine and South Fork Salmon River near Knox.

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 1953.

Gage.--Water-stage recorder. Datum of gage is 1,412.65 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Aug. 18, 1910, to Sept. 30, 1917, Oct. 1, 1919, to Sept. 13, 1920, staff gages at site 600 ft downstream at different datum. Sept. 14, 1920, to Jan. 2, 1931, chain gage on highway bridge 200 ft upstream at datum 10 ft higher.

Average discharge.--41 years, 10,720 cfs.

Extremes.--Maximum discharge during year, 75,500 cfs June 14 (gage height, 28.98 ft); minimum, 2,030 cfs Dec. 27 (gage height, 10.88 ft).

1910-17, 1919-53: Maximum discharge, 103,000 cfs June 3, 1948 (gage height, 32.95 ft); minimum, 1,580 cfs Dec. 11, 1932 (gage height, 10.23 ft), from rating curve extended below 2,200 cfs.

Maximum stage known, about 37.5 ft, present datum, June 1894 (discharge, 120,000 cfs).

Remarks.--Records excellent. Amount of water diverted above station for irrigation is a negligible percentage of total flow.

Revisions (water years).--WSP 753: 1932. WSP 1043: Drainage area.

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 13 to Apr. 20, Apr. 28-30, May 20 to June 2, June 15, Aug. 7 to Sept. 17)

Oct. 1 to June 14				June 15 to Sept. 30			
10.9	2,060	17.0	14,300	12.4	4,000	21.0	30,500
11.8	3,070	21.0	28,500	13.0	5,060	25.0	51,600
13.0	5,060	25 o	49,300	15.0	9,290	29.0	76,200
15.0	9,270	29.0	75,600	17.0	14,800		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,770	4,150	2,270	4,270	4,170	4,190	6,940	20,600	35,800	41,100	8,490	5,010
2	3,770	4,170	2,860	4,190	4,260	4,080	6,770	17,800	41,500	40,800	8,210	4,920
3	3,770	4,070	3,390	3,860	4,410	3,970	6,480	15,800	46,900	39,800	8,240	4,830
4	3,770	3,900	4,100	3,810	5,140	3,880	6,260	14,900	47,400	39,300	8,860	4,830
5	3,770	3,830	4,200	3,830	5,720	3,860	6,240	15,400	48,800	38,100	8,740	4,830
6	3,770	3,970	4,100	3,770	5,540	3,830	6,560	17,800	*48,900	36,700	8,350	4,750
7	3,800	4,170	4,000	3,700	5,230	3,850	6,700	23,000	48,700	35,700	7,880	4,650
8	3,830	4,150	4,150	3,930	5,140	3,880	6,560	28,400	51,700	34,700	7,530	4,590
9	3,830	4,000	*4,190	4,170	*5,010	4,000	6,280	24,200	49,400	33,200	7,270	4,560
10	3,880	3,730	4,120	4,750	4,790	4,240	5,920	20,900	47,400	30,800	7,020	4,540
11	3,900	3,570	4,050	5,080	4,360	4,560	5,710	18,300	49,100	28,600	6,810	4,470
12	3,880	3,920	4,050	5,400	4,000	4,830	5,520	16,600	57,600	26,800	6,600	4,390
13	3,880	4,520	4,100	5,940	4,170	*4,880	5,360	16,200	70,800	25,600	6,380	4,310
14	3,900	4,450	4,220	*6,420	4,270	4,750	5,290	16,800	74,100	24,200	6,160	4,270
15	*3,880	4,410	4,270	6,040	4,200	4,560	5,170	18,300	70,200	22,800	6,020	4,240
16	3,900	4,380	4,170	5,330	4,170	4,360	5,040	21,100	65,100	20,800	5,880	4,170
17	3,930	4,310	4,000	4,930	4,200	4,360	5,120	24,700	65,000	18,900	5,780	4,140
18	3,970	4,240	3,850	5,100	4,190	4,340	5,340	28,000	69,100	17,300	5,840	4,140
19	3,980	4,140	3,880	5,570	4,140	4,320	5,710	33,000	*69,500	*16,000	5,710	4,080
20	4,020	4,170	4,000	5,840	3,880	4,450	6,300	38,000	64,900	15,000	5,570	4,080
21	4,050	4,100	4,100	5,820	3,670	4,590	7,700	35,200	58,400	13,900	*5,440	4,070
22	4,070	3,850	4,080	5,540	3,480	4,560	10,300	31,000	54,600	13,100	5,290	4,000
23	4,080	3,460	4,020	5,140	3,650	4,470	15,200	27,100	54,200	12,400	*5,210	4,030
24	4,120	3,270	3,810	4,840	3,670	4,560	20,000	24,400	53,200	11,700	5,170	4,070
25	4,100	3,620	3,270	4,650	3,560	5,080	19,400	22,700	49,700	11,200	5,270	4,070
26	4,050	3,480	2,400	4,560	3,480	5,840	19,400	21,400	45,900	10,700	5,310	*4,080
27	4,030	2,940	2,110	4,380	3,640	6,160	21,900	20,500	42,600	10,300	5,210	4,080
28	4,020	2,520	2,440	4,220	4,030	6,240	27,000	20,700	41,000	9,800	5,210	4,080
29	4,000	2,430	3,010	4,120	-	6,540	*28,100	24,100	40,800	9,390	5,160	4,080
30	3,980	2,330	3,610	4,100	-	6,850	24,500	*28,700	40,800	9,150	5,080	4,120
31	4,050	-	4,220	4,120	-	*6,940	-	31,800	-	8,740	5,020	-
Total	121,750	114,250	115,040	147,420	120,170	147,020	312,770	715,400	‡1,603.1	706,580	198,710	130,480
Mean	3,927	3,808	3,711	4,755	4,292	4,743	10,430	23,080	53,440	22,790	6,410	4,349
Cfsm	0.290	0.281	0.274	0.351	0.317	0.350	0.770	1.70	3.94	1.68	0.473	0.321
In.	0.33	0.31	0.32	0.40	0.33	0.40	0.86	1.96	4.40	1.94	0.55	0.36
Ac-ft	241,500	226,600	228,200	292,400	238,400	291,600	620,400	‡1,419	‡3,180	‡1,401	394,100	258,800

Calendar year 1952: Max 62,200 Min 2,110 Mean 12,320 Cfsm 0.909 In. 12.38 Ac-ft 8,944,000
Water year 1952-53: Max 74,100 Min 2,110 Mean 12,140 Cfsm 0.896 In. 12.16 Ac-ft 8,792,000

* 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 1953.

Gage.--Water-stage recorder. Altitude of gage is 4,380 ft (by barometer).

Extremes.--Maximum discharge during year, 146 cfs Apr. 28 (gage height, 3.21 ft); maximum gage height, 3.60 ft Jan. 23 (backwater from ice); minimum discharge, 0.2 cfs Oct. 4 (gage height, 1.62 ft), but may have been less during period of ice effect.
1951-53: Maximum discharge, that of Apr. 28, 1953; maximum gage height, that of Jan. 23, 1953; minimum discharge recorded, 0.2 cfs Sept. 23, Oct. 4, 1952 (gage height, 1.62 ft).

Remarks.--Records excellent except those below about 5 cfs, which are good, and those for periods of ice effect or no gage-height record, which are poor.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.6	0.2	2.4	26
1.7	1.0	2.6	43
1.8	2.4	2.8	70
2.0	7.4	3.0	105
2.2	15	3.1	124

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.7	0.5	0.6	1.1	0.9	20	70	35	7.8	0.8	1.0
2	.4	.6	.5	.6	1.4	.9	20	*58	35	6.8	1.0	.8
3	.4	.6	.5	.6	1.6	.9	19	49	32	6.3	1.2	.7
4	.4	.6	.5	.6	2.5	1.0	22	44	31	5.7	1.9	.7
5	.4	.6	.6	.6	2.7	1.0	27	40	49	5.2	1.5	.6
6	.4	.6	.6	.6	2.5	1.5	28	40	44	4.6	1.2	.6
7	.4	.6	.6	.6	2.4	3.0	26	44	66	4.2	1.1	.6
8	.4	.5	.6	.6	2.2	4.0	24	43	75	4.0	1.1	.6
9	.5	.5	.6	.7	2.1	5.0	23	38	*68	3.5	1.2	.6
10	.5	.5	.6	.8	1.9	6.0	21	33	56	3.3	1.1	.6
11	.6	.6	.6	.8	1.8	*7.0	20	29	47	3.3	1.0	.6
12	.6	.7	.5	.9	1.7	7.5	18	26	44	3.1	.8	.6
13	.6	.8	.5	1.0	1.5	7.0	17	24	46	3.1	.8	.6
14	.7	.7	.5	1.0	1.4	6.5	16	23	36	2.9	.7	.6
15	.6	.7	.5	*.9	1.3	6.0	16	21	31	2.9	.8	.5
16	.6	.7	.5	.8	1.2	6.0	18	19	28	2.7	1.2	.5
17	*.6	.6	*.5	.8	1.1	5.5	26	18	23	2.7	.8	.6
18	.5	.6	.5	1.0	1.1	5.0	38	17	21	2.2	.7	.6
19	.5	.6	.5	1.6	1.0	5.5	52	26	19	2.1	1.0	.6
20	.5	.5	.5	1.5	1.0	6.0	63	25	*18	1.9	1.0	.6
21	.7	.5	.5	1.5	.9	5.5	75	24	15	1.9	.8	.6
22	.8	.4	.5	1.5	.9	5.0	82	25	14	1.8	.8	.6
23	.7	.4	.4	1.5	.9	5.0	98	26	12	1.6	.8	.6
24	.6	.4	.4	1.4	.9	7.0	87	28	12	*1.5	2.2	.6
25	.5	.4	.4	1.3	.9	10	77	26	11	1.5	1.8	.6
26	.5	.4	.5	1.2	.9	16	74	29	10	1.3	*1.5	*.6
27	.5	.4	.5	1.1	.9	18	79	29	9.5	1.3	1.5	.6
28	.5	.4	.5	1.0	.9	20	122	26	9.8	1.5	1.3	.7
29	.5	.4	.5	1.0	-	20	91	33	9.5	1.5	1.5	.7
30	.7	.4	.5	1.0	-	22	80	*32	8.8	1.2	1.1	.7
31	.7	-	.5	1.0	-	22	-	30	-	.7	1.0	-
Total	16.7	16.4	15.9	30.1	40.7	236.7	1,379	995	915.6	94.1	35.2	18.9
Mean	0.54	0.55	0.51	0.97	1.45	7.64	46.0	32.1	30.5	3.04	1.14	0.63
Cfsm	0.037	0.038	0.035	0.067	0.100	0.527	3.17	2.21	2.10	0.210	0.079	0.043
In.	0.04	0.04	0.04	0.08	0.10	0.61	3.54	2.55	2.35	0.24	0.09	0.05
Ac-ft	33	33	32	60	81	469	2,740	1,970	1,820	187	70	37

Calendar year 1952: Max 122 Min 0.3 Mean 11.6 Cfsm 0.800 In. 10.84 Ac-ft 8,390
Water year 1952-53: Max 122 Min 0.4 Mean 10.4 Cfsm 0.717 In. 9.73 Ac-ft 7,530

Peak discharge (base, 50 cfs).--Apr. 23 (5 to 6 p.m.) 103 cfs (2.99 ft); Apr. 28 (2:30 a.m.) 146 cfs (3.21 ft); June 4 (4 a.m.) 58 cfs (2.72 ft); June 7 (6 p.m.) 87.0 cfs (2.90 ft); June 12 (11 p.m.) 62 cfs (2.74 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice about Nov. 2-10, 15, Nov. 18 to Mar. 26, Mar. 29, 30, Apr. 1, 2 (no gage-height record Nov. 29 to Dec. 16, Feb. 20 to Mar. 10; 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 1953 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.--16 years, 270 cfs.

Extremes.--Maximum discharge during year, 2,210 cfs Apr. 28 (gage height, 4.72 ft); minimum, 8 cfs Nov. 9 (gage height, 0.53 ft).
1937-53: 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 periods of ice effect, which are fair. No regulation. Several small diversions for irrigation above station.

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 12				June 13 to Sept. 30			
0.6	10	2.0	355	0.8	19	4.7	210
.7	17	3.0	840	.9	28	2.3	480
.8	28	4.0	1,520	1.1	55	3.0	840
1.0	60	4.5	1,960	1.4	118	4.1	1,600
1.5	185						

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	25	b11	b28	287	233	555	996	1,090	290	48	38
2	16	22	*b11	b28	355	191	480	834	1,190	270	46	33
3	16	16	b13	b32	915	218	449	740	1,110	258	54	30
4	16	17	14	b32	*930	200	454	710	1,010	238	64	29
5	16	24	14	b30	665	188	570	745	900	218	66	28
6	16	25	20	b32	700	215	640	906	882	206	60	28
7	16	24	31	35	750	259	570	1,100	1,030	192	54	27
8	16	16	b32	35	770	301	508	1,000	1,070	178	48	27
9	16	12	b32	87	516	*339	458	834	1,100	160	43	26
10	16	22	b26	82	404	395	408	705	*1,190	148	40	25
11	16	34	29	73	359	400	371	610	1,200	137	40	24
12	16	35	34	73	280	379	359	545	1,240	126	38	24
13	16	35	35	96	270	339	351	530	1,560	116	33	25
14	16	31	b40	120	245	294	327	*565	1,310	108	33	25
15	16	29	b40	96	224	287	*308	595	1,180	106	33	23
16	17	29	b38	94	209	266	359	645	1,100	99	32	22
17	*18	b22	b30	b180	224	256	660	715	972	90	32	22
18	18	b20	27	b950	203	239	888	780	882	84	30	22
19	*19	b18	28	792	174	259	1,010	1,100	780	77	29	22
20	19	b15	28	595	128	256	1,230	1,170	700	73	29	22
21	20	b15	b32	521	174	262	1,460	996	625	*71	29	22
22	20	b14	b30	383	177	280	*1,460	882	570	68	28	22
23	20	b13	b28	426	168	408	1,740	816	530	66	27	21
24	20	b13	b26	391	135	986	1,570	804	*470	62	29	21
25	20	b12	b22	335	144	*1,610	1,380	745	430	62	35	21
26	21	b11	b24	*273	163	1,110	1,460	786	395	60	40	21
27	21	b11	b26	224	182	960	1,580	792	366	59	57	21
28	21	b11	b25	215	248	954	*1,940	755	358	55	49	22
29	22	b11	b28	203	-	775	1,500	840	348	*54	48	*24
30	22	b11	b30	218	-	690	1,210	912	*326	49	46	24
31	22	-	b28	227	-	655	-	960	-	48	*42	-
Total	560	593	832	6,906	9,999	14,204	26,255	25,113	25,914	3,828	1,282	737
Mean	18.1	19.8	26.8	223	357	458	875	810	864	123	41.4	24.6
Ac-ft	1,110	1,180	1,650	13,700	19,830	28,170	52,080	49,810	51,400	7,590	2,540	1,460

Calendar year 1952: Max 2,050 Min 11 Mean 217 Ac-ft 157,800
Water year 1952-53: Max 1,940 Min 11 Mean 318 Ac-ft 230,500

Peak discharge (base 1,500 cfs).--Mar. 24 (11 p.m.) 1,920 cfs (4.46 ft); Apr. 23 (8 to 10 a.m.) 1,810 cfs (4.34 ft); Apr. 28 (5 a.m.) 2,210 cfs (4.72 ft); June 13 (3 a.m.) 1,750 cfs (4.28 ft).
* 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 1953. 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, several staff gages at site 4 miles upstream, just downstream from Fivepoint Creek, at various datums. Feb. 16, 1918, to Nov. 24, 1931, several staff gages at site 1 mile downstream from present site at various datums.

Average discharge.--39 years (1905-9, 1910-11, 1912-15, 1918-20, 1921-22, 1925-53), 363 cfs.

Extremes.--Maximum discharge during year, 3,520 cfs Mar. 25 (gage height, 6.30 ft); minimum daily, 11 cfs Nov. 26 to Dec. 1.
1903-15, 1918-23, 1925-53: Maximum discharge, 8,880 cfs Mar. 18, 1932 (gage height, 8.90 ft); minimum, 3.9 cfs Aug. 26, 1940 (gage height, 1.23 ft).

Remarks.--Records good except those for periods of ice effect, which are 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 1952-53, 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	6.0	3,130

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	26	b11	b28	644	395	875	1,570	1,590	354	55	42
2	20	26	*b12	b32	815	311	746	1,310	1,650	327	53	37
3	20	20	b13	b36	2,160	336	692	1,150	1,520	306	59	34
4	20	21	b15	b36	1,790	298	698	1,110	1,380	286	76	32
5	20	28	b20	b34	*1,200	274	854	1,180	1,240	270	74	31
6	20	29	b30	b36	1,280	323	966	1,410	1,190	258	74	30
7	20	26	b35	b36	1,390	415	875	1,710	1,420	240	63	30
8	20	b20	b40	b38	1,400	500	758	1,560	1,480	226	56	29
9	21	b15	b50	b90	938	*638	680	1,280	1,470	205	51	29
10	21	24	b40	b120	722	710	602	1,060	*1,560	188	45	28
11	21	35	b35	b110	620	704	546	910	1,550	179	44	27
12	21	41	b40	b100	470	650	530	812	1,580	163	41	26
13	21	39	b45	b120	440	579	520	784	2,060	154	35	24
14	21	37	b50	b150	390	495	500	*819	1,690	137	34	23
15	22	35	b55	140	349	470	*465	875	1,510	135	34	23
16	22	34	b45	132	332	435	540	945	1,410	126	32	22
17	*22	28	b40	330	340	415	1,240	1,030	1,220	116	32	22
18	23	b25	b35	1,730	302	385	1,510	1,110	1,090	108	31	22
19	23	b20	b30	1,340	258	395	1,620	1,480	973	101	30	22
20	23	b18	b35	973	208	415	1,930	1,650	861	94	30	22
21	23	b16	b40	896	282	415	2,280	1,380	752	*92	29	22
22	23	b15	b50	632	262	440	*2,280	1,220	692	87	29	22
23	23	b14	b40	758	240	712	2,610	1,130	638	80	29	22
24	23	b13	b35	722	195	1,920	2,340	1,120	*568	76	30	22
25	23	b12	b30	574	205	*2,810	2,100	1,040	520	74	35	22
26	23	b11	b25	*455	233	1,840	2,150	1,160	480	70	44	22
27	24	b11	b28	354	266	1,540	2,390	1,160	440	67	61	22
28	24	b11	b30	327	400	1,530	*3,100	1,080	420	65	58	22
29	24	b11	b35	298	-	1,260	2,430	1,220	415	*61	55	*23
30	24	b11	b32	349	-	1,100	1,920	1,340	*385	58	51	27
31	26	-	b30	425	-	1,030	-	1,380	-	55	*48	-
Total	681	672	1,051	11,401	18,131	23,740	40,747	36,985	33,754	4,758	1,418	781
Mean	22.0	22.4	33.9	368	648	766	1,358	1,193	1,125	153	45.7	26.0
Ac-ft	1,350	1,330	2,080	22,610	35,960	47,090	80,820	73,360	66,950	9,440	2,810	1,550

Calendar year 1952: Max 2,840 Min 11 Mean 313 Ac-ft 227,500
Water year 1952-53: Max 3,100 Min 11 Mean 477 Ac-ft 345,400

Peak discharge (base, 1,900 cfs).--Jan. 18 (6:30 p.m.) 2,660 cfs (5.62 ft); Feb. 3 (6:30 p.m.) 2,840 cfs (5.77 ft); Mar. 25 (1 a.m.) 3,520 cfs (6.30 ft); Apr. 23 (8 a.m.) 2,720 cfs (5.67 ft); Apr. 28 (7:30 a.m.) 3,420 cfs (6.22 ft); June 13 (5:30 a.m.) 2,280 cfs (5.27 ft).

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

Catherine Creek near Union, Oreg.

Location.--Lat 45°09', long. 117°47', in SE¼ sec. 2, T. 5 S., R. 40 E., on right bank 3 miles downstream from Little Catherine Creek and 6 miles southeast of Union.

Drainage area.--105 sq mi.

Records available.--May 1906 to May 1907 (gage heights only), August 1911 to December 1912, March to September 1915, February 1918 to August 1919, October 1925 to September 1953.

Gage.--Water-stage recorder. Datum of gage is 3,082.11 ft above mean sea level, datum of 1929. Prior to Nov. 27, 1938, staff gages at several sites within 2½ miles of present site at various datums. Nov. 27, 1938, to May 17, 1939, water-stage recorder at site 400 ft downstream from present site at different datum.

Average discharge.--29 years (1911-12, 1918-19, 1925-44, 1945-53), 121 cfs.

Extremes.--Maximum discharge during year, 872 cfs June 13 (gage height, 3.37 ft); minimum not determined, occurred during period of ice effect.
1906-7, 1911-12, 1915, 1918-19, 1925-53: Maximum discharge, 1,740 cfs May 27, 1948 (gage height, 4.57 ft); minimum recorded, 4 cfs Nov. 26, 27, 1930.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions above station for irrigation of about 200 acres; some water diverted into Big Creek, in Powder River basin.

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Aug. 26				Aug. 27 to Sept. 30	
0.5	18	1.6	178	0.7	32
.8	42	2.5	450	.9	50
1.1	79	3.3	830	1.1	75

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	29	b36	b28	63	59	131	321	715	373	76	47
2	27	27	b34	b26	69	b55	119	282	750	362	76	45
3	27	28	b32	b27	133	55	113	273	705	370	79	44
4	26	30	b34	b28	155	54	117	315	660	359	87	43
5	26	30	b34	27	131	52	146	415	605	348	79	42
6	26	30	b32	29	115	51	153	526	600	348	75	42
7	26	29	b34	28	115	52	142	625	725	348	72	41
8	25	b27	b32	30	123	64	125	506	680	342	69	40
9	25	b25	b30	*50	108	*87	113	404	615	318	66	39
10	26	30	b32	46	95	111	102	339	*575	303	65	38
11	26	31	b34	45	84	109	93	309	615	291	63	38
12	25	33	b36	50	73	104	90	312	710	285	61	38
13	25	35	b34	64	68	92	87	352	755	270	59	37
14	25	37	31	63	65	82	84	*401	715	244	57	37
15	27	30	31	53	63	76	81	436	660	215	55	36
16	27	28	31	51	59	72	*87	470	620	185	55	36
17	*27	25	b30	58	59	66	109	522	640	166	54	36
18	27	29	29	127	57	64	135	575	640	153	53	36
19	27	29	28	123	b48	65	183	780	557	142	51	36
20	27	28	27	111	b44	64	250	*670	470	131	51	35
21	27	b27	27	106	b48	61	327	562	440	*123	51	35
22	27	b25	a26	89	52	61	*380	470	443	115	51	34
23	27	b23	a24	82	46	75	486	426	443	109	51	34
24	27	b23	a22	81	b40	115	440	387	*422	106	61	34
25	27	b21	a20	76	b44	200	454	352	418	100	55	34
26	27	b21	a22	*69	b50	188	518	359	404	97	69	34
27	27	b19	a24	63	51	a170	*720	366	412	92	65	34
28	27	b21	a26	59	57	a160	700	373	401	89	54	34
29	27	b25	b28	55	-	a160	*498	635	380	*85	55	*35
30	28	b30	b25	55	-	a150	390	755	*376	82	*51	34
31	28	-	b27	57	-	142	-	720	-	79	48	-
Total	823	825	912	1,856	2,115	2,916	7,373	14,238	17,151	6,630	1,914	1,128
Mean	26.5	27.5	29.4	59.9	75.5	94.1	246	459	572	214	61.7	37.6
Ac-ft	1,630	1,640	1,810	3,680	4,200	5,780	14,620	28,240	34,020	13,150	3,800	2,240

Calendar year 1952: Max 992 Min 19 Mean 145 Ac-ft 105,000
Water year 1952-53: Max 780 Min 19 Mean 159 Ac-ft 114,800

Peak discharge (base, 500 cfs).--Apr. 28 (1 a.m.) 866 cfs (3.36 ft); May 6 (10:30 p.m.) 660 cfs (2.97 ft); May 19 (6 p.m.) 830 cfs (3.30 ft); May 30 (3 a.m.) 780 cfs (3.21 ft); June 13 (12:30 a.m.) 872 cfs (3.37 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 Grande Ronde River at La Grande and near Hilgard.

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 1953. 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.--29 years, 20.6 cfs.

Extremes.--Maximum discharge during year, 164 cfs July 14 (no flow in powerplant tailrace), from rating curve extended above 60 cfs by logarithmic plotting; minimum daily, 10 cfs Feb. 26.

1924-53: 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 of 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 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	14	14	13	13	11	12	19	33	79	52	26
2	15	13	14	14	12	11	12	18	38	78	51	25
3	15	14	15	14	13	12	12	17	36	79	*52	24
4	15	14	13	13	13	12	12	18	35	82	51	24
5	15	14	14	13	12	11	12	21	33	82	50	24
6	*15	14	15	*13	12	11	11	24	35	82	47	23
7	15	14	13	13	12	11	12	24	38	96	45	23
8	15	13	16	13	12	11	12	22	35	114	45	23
9	15	13	15	14	12	11	12	21	35	120	44	23
10	15	13	15	14	12	11	12	20	36	107	42	22
11	15	13	15	14	12	11	12	19	39	111	40	21
12	15	*13	15	15	11	12	12	18	42	120	38	21
13	14	14	14	15	11	12	12	20	51	141	37	20
14	14	14	14	14	11	11	12	21	57	149	37	20
15	14	14	14	13	11	12	12	24	56	133	36	20
16	14	13	14	13	11	11	12	27	55	107	35	20
17	14	14	14	14	11	12	12	29	60	92	34	20
18	14	15	14	14	*12	12	12	30	61	90	32	20
19	14	15	14	14	11	12	13	33	61	85	32	20
20	14	15	14	14	11	13	14	*30	59	80	32	18
21	13	14	14	14	11	12	15	28	62	76	31	18
22	14	14	14	14	11	12	16	26	68	71	30	18
23	14	15	14	14	11	12	18	24	*68	68	30	*18
24	14	14	14	13	11	13	17	23	66	66	32	18
25	14	14	13	13	11	14	18	22	67	62	31	18
26	14	15	14	12	10	12	20	23	68	61	31	18
27	14	15	14	12	11	12	27	23	71	58	29	18
28	14	14	14	12	11	12	25	23	72	57	28	18
29	14	14	14	12	-	12	22	30	73	56	28	18
30	14	14	14	12	-	*12	20	30	76	55	27	16
31	14	-	14	13	-	12	-	30	-	53	26	-
Total	445	419	439	415	322	365	440	737	1,586	2,710	1,155	615
Mean	14.4	14.0	14.2	13.4	11.5	11.8	14.7	23.8	52.9	87.4	37.3	20.5
Cfsm	1.44	1.40	1.42	1.34	1.15	1.18	1.47	2.38	5.29	8.74	3.73	2.05
In.	1.65	1.56	1.63	1.54	1.20	1.36	1.64	2.74	5.90	10.08	4.30	2.29
Ac-ft	883	831	871	823	639	724	873	1,460	3,150	5,380	2,290	1,220

Calendar year 1952: Max 101 Min 7.2 Mean 23.1 Cfsm 2.31 In. 31.48 Ac-ft 16,770
Water year 1952-53: Max 149 Min 10 Mean 26.4 Cfsm 2.64 In. 35.89 Ac-ft 19,140

* Discharge measurement made on this day.

Wallowa Lake near Joseph, Oreg.

Location.--Lat 45°20', long. 117°14', in N½ sec. 5, T. 3 S., R. 45 E., on trash rack structure near west end of Wallowa Lake Dam and three-quarters of a mile south of Joseph.

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), October 1950 to September 1953 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, 45,160 acre-ft July 15, 16 (gage height, 28.25 ft); minimum observed, 25,400 acre-ft Dec. 6-13 (gage height, 16.20 ft).
1925-53: 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 1952 to September 1953

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	17.00	26,690	-
Oct. 31	16.70	26,210	-480
Nov. 30	16.30	25,560	-650
Dec. 31	16.35	25,640	+80
Calendar year 1952...	-	-	+15,730
Jan. 31	17.40	27,330	+1,690
Feb. 28	17.70	27,820	+490
Mar. 31	17.70	27,820	0
Apr. 30	18.90	29,760	+1,940
May 31	21.60	34,160	+4,400
June 30	26.25	41,840	+7,680
July 31	26.20	41,750	-90
Aug. 31	21.40	33,840	-7,910
Sept.30	21.30	33,670	-170
Water year 1952-53...	-	-	+6,980

† 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 1953 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.--26 years (1927-53), 122 cfs adjusted for storage and diversion.
Extremes.--Maximum discharge during year, 538 cfs July 15, 16 (gage height, 3.52 ft); minimum, 2 cfs Apr. 9 (gage height, 0.30 ft).
1903-15, 1926-53: 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 tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Sept. 22				Sept. 23-30	
0.3	1.5	1.5	73	1.2	14
.4	3	2.0	143	1.4	31
.5	5	2.5	240	1.6	54
.7	12	3.0	370		
1.0	28	3.6	570		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	12	12	14	10	10	10	5	97	439	376	*20
2	4	12	12	14	10	10	10	5	97	*427	325	20
3	4	12	12	14	10	10	10	5	78	397	322	20
4	4	12	12	14	*10	10	10	5	*71	370	*280	20
5	4	12	12	14	10	10	10	5	81	367	208	20
6	4	12	12	14	10	10	10	13	76	415	186	20
7	4	12	12	*14	10	10	10	15	58	472	180	20
8	4	12	12	14	10	10	10	3	72	487	188	*20
9	4	12	12	11	10	10	7	3	105	487	192	20
10	4	*12	10	10	10	10	4	3	116	448	130	20
11	4	12	9	10	10	10	5	4	118	412	107	20
12	4	12	9	10	10	10	3	6	101	436	110	20
13	4	12	8	10	10	*10	3	6	90	442	126	16
14	4	12	7	10	10	10	3	16	90	498	a130	16
15	4	12	7	10	10	10	*3	19	110	534	a132	15
16	4	12	7	10	10	10	3	60	124	*530	a135	15
17	4	12	7	10	10	10	3	92	100	464	a138	15
18	4	12	7	10	10	10	4	96	114	305	a140	15
19	4	12	7	10	10	10	5	108	154	315	*143	15
20	4	12	7	10	10	10	5	116	156	335	129	15
21	4	12	7	10	10	10	10	116	136	332	129	15
22	4	12	7	10	10	10	16	126	133	332	105	a15
23	4	12	8	10	10	10	16	152	216	328	78	*14
24	4	12	9	10	10	10	12	184	282	290	62	14
25	4	12	9	10	10	10	8	208	400	268	59	14
26	4	12	12	10	10	10	8	240	430	255	58	14
27	9	12	14	10	10	10	13	214	430	245	58	14
28	12	12	14	10	10	10	8	200	448	318	30	24
29	12	12	14	10	-	10	5	161	463	335	18	44
30	12	12	14	10	-	10	5	133	463	*361	20	31
31	12	-	14	10	-	10	-	108	-	379	20	-
Total	161	360	315	343	280	310	229	2,427	5,409	12,013	4,314	561
Mean	5.2	12.0	10.2	11.1	10.0	10.0	7.6	78.3	180	388	139	18.7
Ac-ft	319	714	625	680	555	615	454	4,810	10,730	23,830	8,560	1,110
Adjusted†												
Mean	45.7	33.4	34.8	61.5	50.1	46.5	79.0	217	430	583	181	75.3
Cfsm	0.879	0.642	0.669	1.18	0.963	0.894	1.52	4.17	8.27	11.21	3.48	1.45
In.	1.01	0.72	0.77	1.36	1.00	1.03	1.70	4.81	9.23	12.93	4.01	1.62
Ac-ft	2,810	1,990	2,140	3,780	2,780	2,860	4,700	13,350	25,590	35,850	11,120	4,480

Observed

Calendar year 1952: Max 534 Min 3 Mean 73.6 Ac-ft 53,440
Water year 1952-53: Max 534 Min 3 Mean 73.2 Ac-ft 53,000

Adjusted

Calendar year 1952: Mean 156 Cfsm 3.00 In. 40.96 Ac-ft 113,600
Water year 1952-53: Mean 154 Cfsm 2.96 In. 40.19 Ac-ft 111,400

* Discharge measurement made on this day.
† Adjusted for change in contents in Wallowa Lake and diversions at Joseph powerplant tailrace and Silver Lake Canal.
a No gage-height record; discharge interpolated.

Diversions from Wallowa Lake, Oreg.

The following canals divert from Wallowa Lake:

Joseph powerplant tailrace 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 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. Prior to October 1952, records 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 1952 to September 1953

Month	Joseph powerplant tailrace	Silver Lake Canal
October	2,020	946
November	1,510	415
December	1,130	313
Calendar year 1952	30,740	13,690
January	1,040	371
February	1,400	336
March	1,840	404
April	1,960	346
May	3,490	645
June	4,300	2,880
July	5,970	6,140
August	5,890	4,580
September	2,830	714
Water year 1952-53	33,380	18,090

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 1953.

Gage.--Water-stage recorder. Altitude of gage is 4,500 ft, revised (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.--26 years (1927-53), 70.8 cfs.

Extremes.--Maximum discharge during year, 1,010 cfs July 12 (gage height, 3.60 ft); minimum, 17 cfs Oct. 18, 19.
1915, 1924-53: Maximum discharge, 1,110 cfs June 9, 1948 (gage height, 3.55 ft); maximum gage height, that of 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 except those for periods of no gage-height record, which are poor. No diversion or regulation above station.

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Aug. 3				Aug. 4 to Sept. 30	
1.6	18	2.5	170	1.8	31
1.7	23	2.8	300	2.0	58
1.8	29	3.0	430	2.2	98
2.0	50	3.4	780	2.4	150
2.2	86				

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	21	22	a21	25	22	24	80	156	348	a156	58
2	24	22	23	a21	24	21	23	74	198	374	a154	*56
3	23	22	24	*21	27	20	24	74	198	430	a150	55
4	22	22	24	21	*27	20	24	86	206	409	*147	52
5	22	23	23	21	26	20	25	107	198	416	139	52
6	21	24	23	21	25	20	25	132	194	510	142	50
7	20	24	24	21	25	20	25	146	198	526	139	50
8	20	24	23	22	25	21	24	122	186	590	130	49
9	20	23	22	27	24	22	24	112	178	*494	125	49
10	19	*24	22	23	23	22	24	102	186	510	115	48
11	18	24	22	23	24	22	24	95	*246	574	112	46
12	18	24	23	24	24	22	24	93	330	662	110	46
13	18	24	23	25	24	*22	24	*102	374	730	105	44
14	18	24	22	22	24	22	23	117	330	617	100	44
15	18	24	22	22	23	22	24	142	312	430	100	44
16	18	24	22	22	24	22	24	170	285	*318	100	43
17	18	22	22	22	24	22	25	182	336	265	91	43
18	18	24	22	24	22	22	24	190	367	265	89	41
19	18	24	22	24	22	22	26	218	318	250	89	38
20	18	24	22	23	22	22	*28	174	285	226	83	38
21	18	22	22	*22	22	22	37	152	265	*210	78	37
22	18	20	22	22	22	22	49	135	318	222	72	37
23	18	20	21	22	22	22	72	127	324	210	71	36
24	18	20	a21	22	22	22	63	117	290	198	78	36
25	18	21	a20	22	22	25	70	107	280	194	69	36
26	18	21	a20	22	22	24	88	107	285	186	87	35
27	18	22	a20	22	22	24	127	102	295	182	76	33
28	19	21	a21	22	22	24	122	104	290	170	69	33
29	20	20	a21	23	-	24	102	135	290	*163	65	33
30	20	21	a21	23	-	24	86	132	336	a160	62	32
31	20	-	a21	24	-	24	-	135	-	a158	60	-
Total	601	675	682	696	660	685	1,304	3,871	8,034	10,997	3,163	1,294
Mean	19.4	22.5	22.0	22.5	23.6	22.1	43.5	125	268	355	102	43.1
Cfsm	0.626	0.726	0.710	0.726	0.761	0.713	1.40	4.03	8.65	11.5	3.29	1.39
In.	0.72	0.81	0.82	0.83	0.79	0.82	1.56	4.64	9.64	13.19	3.79	1.55
Ac-ft	1,190	1,340	1,350	1,380	1,310	1,360	2,590	7,680	15,940	21,810	6,270	2,570

Calendar year 1952: Max 526 Min 18 Mean 87.1 Cfsm 2.81 In. 38.23 Ac-ft 63,200
Water year 1952-53: Max 730 Min 18 Mean 89.5 Cfsm 2.89 In. 39.16 Ac-ft 64,790

Peak discharge (base, 400 cfs).--June 12 (12 p.m.) 454 cfs (3.03 ft); July 12 (6 p.m.) 1,010 cfs (3.60 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Bear Creek near Wallowa and Lostine River near Lostine.

Lostine River near Lostine, Oreg.

Location (revised).--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.

Drainage area.--70 sq mi, approximately.

Records available.--August 1912 to March 1914, April to September 1915, July 1925 to September 1953.

Gage.--Water-stage recorder. Altitude of gage is 3,650 ft, revised (by barometer). Aug. 24, 1912, to Sept. 25, 1915, staff gage at site 600 ft upstream at different datum. July 21, 1925, to Sept. 30, 1929, water-stage recorder at site 200 ft upstream from present site at datum about 0.5 ft higher than present datum.

Average discharge.--26 years (1912-13, 1928-53), 188 cfs.

Extremes.--Maximum discharge during year, 1,620 cfs July 12 (gage height, 5.63 ft); minimum, 20 cfs Nov. 9, 21-30, Dec. 25.
1912-14, 1915, 1925-53: Maximum daily discharge, 2,540 cfs May 27, 1913; maximum gage height, 7.64 ft June 16, 1933; minimum discharge recorded, 10 cfs Nov. 28-30, 1936.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. Diversions for irrigation of about 100 acres above station. Flow slightly regulated by Minam Lake.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	32	23	26	57	39	65	250	450	948	327	90
2	40	29	24	*26	53	38	64	220	594	968	305	*88
3	40	28	24	26	72	40	64	206	618	1,050	300	88
4	39	29	25	26	78	38	65	228	609	1,180	*298	86
5	39	29	26	26	68	38	67	*288	594	1,150	276	82
6	39	29	26	26	65	40	67	412	549	1,230	259	80
7	39	29	27	26	63	40	68	492	579	*1,270	*245	78
8	38	27	27	32	60	41	67	402	555	1,340	237	76
9	38	24	27	52	55	42	67	330	483	1,270	214	75
10	38	29	27	42	51	44	65	282	480	1,200	192	72
11	38	29	27	39	*53	46	63	246	657	1,240	177	70
12	38	32	27	44	48	45	60	230	*906	1,340	166	70
13	38	32	27	53	50	44	62	254	1,070	1,420	162	68
14	38	32	26	44	49	44	60	311	934	1,280	146	66
15	38	31	26	39	48	44	59	415	888	1,050	140	65
16	37	29	26	45	47	45	58	516	811	822	143	64
17	37	27	26	55	49	45	58	594	935	691	136	62
18	36	30	26	84	45	44	*60	624	1,040	650	125	60
19	35	29	26	70	44	45	68	776	902	643	120	60
20	35	27	26	64	44	44	91	609	708	611	119	58
21	33	22	25	56	44	43	148	475	702	557	110	56
22	32	20	24	48	44	*43	204	395	839	509	104	55
23	32	20	23	54	44	45	306	342	912	491	97	54
24	31	21	21	51	42	51	256	297	797	460	118	52
25	31	20	20	48	44	65	258	264	755	424	109	52
26	30	20	21	47	44	66	342	256	727	404	132	50
27	29	20	22	44	42	63	483	250	766	390	132	49
28	29	20	24	44	42	65	478	252	804	376	113	48
29	28	20	25	45	-	64	355	412	783	353	113	46
30	*28	21	26	46	-	65	291	422	881	350	103	45
31	29	-	26	48	-	64	-	418	-	345	95	-
Total	1,093	787	776	1,376	1,445	1,480	4,419	11,468	22,328	26,012	5,313	1,965
Mean	35.3	26.2	25.0	44.4	51.6	47.7	147	370	744	839	171	65.5
Ac-ft	2,170	1,560	1,540	2,730	2,870	2,940	8,760	22,750	44,290	51,590	10,540	3,900

Calendar year 1952 : Max 1,590 Min 20 Mean 216 Ac-ft 156,700
Water year 1952-53 : Max 1,420 Min 20 Mean 215 Ac-ft 155,600

Peak discharge (base, 1,100 cfs).--June 13 (3 a.m.) 1,190 cfs (4.81 ft); July 12 (11:30 p.m.) 1,620 cfs (5.63 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Oct. 15-22, Dec. 11 to Jan. 1, Sept. 5-30; discharge estimated on basis of records for Hurricane Creek near Joseph and Bear Creek near Wallowa.

Bear Creek near Wallowa, Oreg.

Location (revised).--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 1953.

Gage.--Water-stage recorder. Altitude of gage is 3,250 ft, revised (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.--24 years (1929-53), 109 cfs.

Extremes.--Maximum discharge during year, 781 cfs June 12 (gage height, 3.13 ft); minimum, 3 cfs Nov. 29.
1915, 1924-53: 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, 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 tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 19, 20, May 29 to June 8, June 11-19, 23, July 2-8)

Oct. 1 to May 18

0.9	3	1.7	81
1.0	6	2.0	154
1.1	10	2.3	267
1.3	26	2.6	430
1.5	49	2.9	670

May 19 to Sept. 30

1.0	8	1.5	54
1.1	12	1.7	87
1.3	28	2.0	154

Note.--Same as preceding table above 2.0 ft.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8	10	6	7	71	41	81	225	437	400	57	24
2	8	9	6	7	78	40	78	187	564	406	54	*23
3	8	9	7	7	111	40	72	167	524	437	60	22
4	8	9	8	7	145	39	71	187	465	412	72	21
5	8	9	8	8	134	37	74	*267	444	412	60	19
6	8	9	8	8	120	36	76	376	424	444	51	19
7	8	9	8	*9	108	35	76	486	451	430	*46	18
8	8	9	8	15	97	35	72	370	406	418	43	17
9	8	9	7	25	85	40	69	291	388	388	38	16
10	8	9	7	18	76	49	64	238	*370	382	38	16
11	8	10	8	18	71	55	62	202	460	376	34	15
12	8	11	9	23	62	56	61	187	607	388	32	15
13	8	12	9	31	58	55	60	221	625	364	*28	14
14	8	11	9	27	55	50	56	281	524	315	26	14
15	8	10	8	24	50	49	55	376	465	263	25	13
16	8	10	8	32	49	48	60	472	444	210	24	13
17	8	9	8	36	*49	45	71	524	500	*187	24	13
18	8	9	9	72	45	44	*78	540	524	174	23	13
19	8	8	9	83	40	44	91	548	437	157	22	12
20	8	8	8	81	35	42	123	424	342	138	21	12
21	9	7	7	76	38	41	206	342	348	123	20	12
22	9	6	7	71	40	40	296	281	400	116	19	11
23	9	6	6	71	35	*41	400	246	406	107	19	11
24	9	6	6	72	35	54	354	217	359	100	24	11
25	9	6	5	72	35	91	337	195	348	94	22	11
26	8	6	5	67	35	108	424	202	348	89	30	10
27	8	5	6	61	35	101	572	206	364	82	33	10
28	8	5	6	56	40	99	524	221	354	75	28	11
29	9	5	6	55	-	97	359	392	348	70	32	11
30	9	5	7	55	-	93	281	465	376	67	30	11
31	9	-	7	56	-	87	-	424	-	62	26	-
Total	256	246	226	1,250	1,832	1,732	5,203	9,760	13,052	7,686	1,061	438
Mean	8.3	8.2	7.3	40.3	65.4	55.9	173	315	435	248	34.2	14.6
Ac-ft	508	488	448	2,480	3,630	3,440	10,320	19,360	25,890	15,240	2,100	869

Calendar year 1952: Max 750 Min 5 Mean 119 Ac-ft 86,200
Water year 1952-53: Max 625 Min 5 Mean 117 Ac-ft 84,770

Peak discharge (base, 600 cfs).--Apr. 27 (10 p.m.) 661 cfs (2.87 ft); May 19 (3 a.m.) 616 cfs (2.96 ft); June 12 (10:30 p.m.) 781 cfs (3.13 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 3, 4, 8-11, Nov. 18 to Jan. 6, Jan. 8, 9, Feb. 19-21, 24-26, Mar. 2.

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 1953.

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.--27 years, 2,051 cfs.

Extremes.--Maximum discharge during year, 10,100 cfs June 12 (gage height, 6.50 ft); minimum, 344 cfs Dec. 25 (gage height, 0.89 ft).
1926-53: 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 interbasin 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. 223).

Revisions (water years).--WSP 1093: 1927-29, 1932-33, 1936, 1938, 1939(M), 1943.

Rating tables, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 18		Jan. 19 to Sept. 30			
0.9	350	1.1	410	3.0	2,540
1.5	780	1.5	755	5.0	6,600
2.5	1,840	2.0	1,240	7.0	11,300
4.0	4,450				

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	482	489	510	510	3,060	1,630	*3,500	6,780	7,400	5,120	1,170	898
2	489	482	500	517	2,970	1,570	3,190	6,120	8,060	5,080	1,150	860
3	489	489	500	531	5,120	1,480	2,880	5,590	7,880	5,250	1,240	812
4	482	489	489	538	5,760	1,440	2,680	5,290	7,740	5,330	1,330	774
5	489	482	482	538	4,980	1,400	2,710	5,570	7,650	5,120	1,250	737
6	489	482	489	531	4,870	1,410	2,780	6,120	7,540	5,250	1,190	710
7	462	482	510	538	4,580	1,490	2,800	7,020	8,000	5,400	1,160	692
8	475	489	510	575	4,240	1,570	2,730	6,780	7,770	5,320	1,110	674
9	*482	496	489	*840	3,780	1,700	2,560	6,200	7,420	5,310	1,080	656
10	468	475	517	806	3,250	1,890	2,350	5,650	7,330	5,000	1,030	620
11	462	531	517	764	2,830	2,040	2,190	5,120	7,950	4,950	954	611
12	462	531	545	797	2,400	2,120	2,180	4,740	9,010	4,980	907	584
13	462	568	560	974	2,070	2,030	2,220	4,660	9,540	5,330	860	566
14	462	552	552	1,080	1,900	1,890	2,180	4,810	9,110	4,910	840	524
15	462	*545	545	974	1,790	1,780	2,040	5,080	8,570	4,320	812	490
16	468	531	538	1,110	1,690	1,740	2,060	5,650	8,250	3,540	793	490
17	475	531	510	2,050	*1,720	1,670	2,800	6,030	8,500	3,010	784	482
18	468	517	517	3,500	1,670	1,620	3,480	6,340	8,390	2,620	737	474
19	468	496	510	4,370	1,520	1,730	3,880	7,670	7,510	2,400	*692	466
20	475	489	510	4,490	1,420	1,990	4,390	7,540	6,670	2,130	665	474
21	489	482	510	3,820	1,310	2,040	5,210	*6,910	6,450	1,890	674	466
22	475	404	510	3,020	1,370	2,220	5,870	6,290	6,560	1,760	665	450
23	468	380	442	3,400	1,340	3,210	6,910	5,810	6,160	1,720	656	442
24	468	404	410	3,020	1,280	4,510	6,860	5,330	a5,500	1,600	755	442
25	468	380	360	2,590	1,240	5,870	6,800	5,080	a5,000	1,490	860	458
26	475	442	410	2,190	1,260	5,370	7,190	5,180	a5,000	1,440	898	450
27	475	449	496	1,840	1,340	5,040	8,180	5,080	a5,000	1,370	1,030	442
28	475	436	500	1,660	1,600	4,810	9,230	5,120	a5,000	1,340	974	458
29	475	423	503	1,660	-	4,510	8,270	7,490	*4,870	1,300	1,020	*466
30	489	423	524	2,100	-	4,180	7,510	7,280	4,950	1,260	983	466
31	482	-	517	2,300	-	3,880	-	7,080	-	1,210	926	-
Total	14,710	14,369	15,482	53,633	72,360	79,830	127,630	185,410	214,780	106,950	29,195	17,134
Mean	475	479	499	1,730	2,584	2,575	4,254	5,981	7,159	3,450	942	571
Ac-ft	29,180	28,500	30,710	106,400	143,500	158,300	253,200	367,800	426,000	212,100	57,910	33,980

Calendar year 1952: Max 9,420 Min 360 Mean 2,258 Ac-ft 1,639,000
Water year 1952-53: Max 9,540 Min 360 Mean 2,552 Ac-ft 1,848,000

Peak discharge (base, 5,000 cfs).--Jan. 18 (9:30 p.m.) 5,330 cfs (4.42 ft); Feb. 3 (8 p.m.) 6,510 cfs (4.96 ft); Mar. 24 (11:30 p.m.) 6,160 cfs (4.80 ft); Apr. 28 (4:30 a.m.) 9,690 cfs (6.34 ft); May 19 (10 p.m.) 8,060 cfs (5.65 ft); June 12 (9 p.m.) 10,100 cfs (6.50 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for station at Troy.

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 1953.

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.--9 years, 3,400 cfs.

Extremes.--Maximum discharge during year, 13,400 cfs Apr. 28 (gage height, 7.85 ft); minimum, 434 cfs Nov. 29 (gage height, 1.71 ft).
1944-53: Maximum discharge observed, 30,000 cfs Dec. 15, 1946 (gage height, 11.20 ft, present datum); minimum, that of Nov. 29, 1952.

Remarks.--Records excellent. Many diversions for irrigation of about 95,000 acres above station, chiefly in vicinity of La Grande, Enterprise, and Wallowa; one interbasin 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. 223).

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

1.9	525	5.0	4,440
2.5	920	6.0	7,000
3.5	1,950	8.0	14,000
4.0	2,600		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	650	694	682	749	5,950	2,730	5,140	8,740	8,410	5,640	1,450	1,130
2	650	694	763	756	5,440	2,670	4,720	7,870	9,150	5,540	1,400	1,090
3	650	694	791	770	7,450	2,570	4,400	7,120	9,290	5,640	1,570	1,070
4	650	694	777	777	8,900	2,470	4,200	6,800	9,010	5,850	1,680	1,040
5	650	694	763	784	7,480	2,400	4,310	7,210	9,010	5,560	1,610	984
6	650	694	763	777	7,000	2,340	4,440	7,870	8,590	5,620	*1,540	960
7	*652	694	763	798	6,780	2,420	4,370	8,940	9,040	5,740	1,450	936
8	652	694	749	819	6,410	2,560	4,200	8,680	9,120	5,800	1,390	912
9	670	688	728	1,160	5,720	2,780	3,980	7,780	8,710	5,720	1,370	904
10	664	682	749	1,510	4,970	3,080	3,750	6,940	8,290	5,320	1,310	864
11	652	721	763	1,360	4,420	3,310	3,570	6,360	8,500	5,290	1,240	848
12	646	*742	791	1,560	3,810	3,400	3,420	5,900	9,430	5,290	1,160	826
13	652	763	819	1,990	3,460	3,290	3,420	5,820	11,000	5,640	1,110	819
14	652	770	798	2,170	3,190	3,080	3,420	5,950	10,600	5,390	1,090	784
15	652	763	784	1,850	3,030	2,950	3,220	6,250	10,100	4,900	1,070	756
16	658	756	777	1,820	2,910	2,890	3,350	6,800	9,080	4,090	1,040	749
17	664	749	763	4,070	2,910	2,820	4,400	7,270	9,040	3,550	1,020	749
18	664	742	756	7,240	2,840	2,760	5,670	*7,600	9,360	3,140	1,000	749
19	664	749	756	8,140	*2,670	2,830	6,170	8,870	8,740	2,880	960	749
20	670	756	756	7,750	2,570	3,170	6,940	9,220	7,630	2,630	912	742
21	688	735	756	7,330	2,450	3,270	8,230	8,230	6,940	2,400	912	735
22	688	658	756	5,460	2,430	3,400	9,040	7,510	6,890	2,240	912	728
23	682	610	700	5,980	2,400	4,150	10,600	6,830	*7,000	2,160	912	714
24	682	640	652	5,930	2,320	5,980	10,200	6,410	6,550	2,030	976	*714
25	670	622	634	4,970	2,280	8,290	9,820	5,950	6,040	1,910	1,090	721
26	676	646	622	4,150	2,280	7,600	10,200	6,040	5,770	1,830	1,110	728
27	682	634	742	3,550	2,320	6,940	11,000	6,170	5,690	1,700	1,240	707
28	688	574	763	3,170	2,600	6,610	12,800	6,040	5,720	1,640	1,220	728
29	688	536	791	3,070	-	6,280	11,200	7,360	5,420	1,610	1,250	742
30	694	540	*791	3,550	-	*5,900	9,920	8,980	5,420	1,540	1,220	742
31	694	-	763	4,260	-	5,620	-	8,440	-	1,510	1,160	-
Total	20,644	20,628	23,261	98,270	116,990	120,560	190,100	225,950	243,540	119,800	37,374	24,920
Mean	666	688	750	3,170	4,178	3,889	6,337	7,289	8,118	3,865	1,206	831
Ac-ft	40,950	40,920	46,140	194,900	232,000	239,100	377,100	448,200	483,000	237,600	74,130	49,430

Calendar year 1952: Max 14,400 Min 536 Mean 3,092 Ac-ft 2,244,000
Water year 1952-53: Max 12,800 Min 536 Mean 3,403 Ac-ft 2,463,000

Peak discharge (base, 7,000 cfs).--Jan. 19 (1:30 a.m.) 9,360 cfs (6.76 ft); Feb. 4 (12:30 a.m.) 9,880 cfs (6.91 ft); Mar. 25 (5 a.m.) 8,590 cfs (6.53 ft); Apr. 28 (8:30 a.m.) 13,400 cfs (7.85 ft); May 20 (1 a.m.) 9,850 cfs (6.90 ft); June 13 (10:30 a.m.) 11,600 cfs (7.39 ft).
* Discharge measurement made on this day.

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 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 1953. 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.--25 years (1928-53), 65.5 cfs.

Extremes.--Maximum discharge observed during year, 270 cfs Apr. 28 (gage height, 2.00 ft); minimum observed, 31 cfs Nov. 28 (gage height, 0.74 ft).
1904-6, 1910-11, 1928-53: 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. Large part of flow diverted for irrigation. No regulation.

Cooperation.--Gage-height record furnished by Washington Water Power Co.

Revisions.--WSP 1217: Drainage area.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 30. Dec. 25, 26)

0.7	31
1.0	64
1.5	153
2.0	275

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	37	36	36	149	55	96	*162	180	79	43	38
2	37	37	36	36	166	55	88	141	*178	76	42	38
3	37	38	36	36	164	56	84	125	178	72	43	37
4	36	37	38	36	160	55	79	122	162	68	44	*38
5	36	37	38	35	157	54	79	135	171	67	44	37
6	38	36	39	*35	145	54	81	168	162	66	42	38
7	38	36	42	37	125	54	81	215	178	63	40	36
8	38	36	38	36	120	52	81	202	168	61	42	36
9	38	37	36	48	107	56	76	173	157	60	42	36
10	38	37	36	50	101	*59	72	145	149	58	42	36
11	38	37	37	48	93	61	72	131	147	56	41	36
12	38	37	38	64	86	61	70	124	157	55	40	36
13	38	38	38	93	81	59	68	124	171	55	40	36
14	*38	38	37	81	76	59	*63	125	157	54	40	36
15	38	36	37	67	74	58	63	137	149	52	38	35
16	38	36	37	61	73	59	63	151	141	52	38	36
17	38	36	36	89	70	56	68	164	135	51	38	36
18	38	36	36	141	68	56	72	173	135	51	38	36
19	38	*36	36	164	63	59	79	208	125	49	37	36
20	38	36	37	166	59	67	84	202	116	49	37	36
21	38	36	36	182	59	59	139	185	107	48	38	36
22	39	34	36	157	59	58	173	155	*100	47	38	36
23	39	34	35	157	58	56	192	141	98	47	37	36
24	39	35	32	171	56	68	182	133	94	46	47	36
25	38	34	33	153	56	141	168	120	93	44	44	36
26	38	33	34	133	56	143	182	153	88	44	43	36
27	37	35	35	114	55	131	215	141	86	42	42	36
28	37	32	36	101	58	122	268	145	82	*43	43	36
29	37	33	36	96	-	112	235	168	81	43	42	36
30	36	34	36	*96	-	107	190	175	82	42	40	*36
31	36	-	36	98	-	98	-	173	-	41	39	-
Total	1,167	1,074	1,129	2,817	2,594	2,240	3,463	4,816	4,027	1,682	1,264	1,089
Mean	37.6	35.8	36.4	90.9	92.6	72.3	115	155	134	54.3	40.8	36.3
Ac-ft	2,310	2,130	2,240	5,590	5,150	4,440	6,870	9,550	7,990	3,340	2,510	2,160

Calendar year 1952: Max 342 Min 32 Mean 84.3 Ac-ft 61,190
Water year 1952-53: Max 268 Min 32 Mean 75.0 Ac-ft 54,280

* Discharge measurement made on this day.

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 1953.

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.--24 years (1929-53), 3,567 cfs.

Extremes.--Maximum discharge during year, 27,500 cfs June 13 (gage height, 11.85 ft); minimum daily, 150 cfs Nov. 28, 29; minimum gage height, 2.13 ft sometime during period Dec. 9 to Jan. 17.
1929-53: 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 Nov. 10 to Jan. 17, which are fair. Small diversions from headwaters.

Revisions.--WSP 1043: Drainage area.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 23 to July 27)

2.0	180	5.0	3,360
2.3	286	6.0	5,440
2.5	389	8.0	11,400
3.0	748	12.0	28,800
4.0	1,810		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	432	497	300	460	2,150	1,080	2,320	7,300	18,100	11,500	1,310	651
2	432	497	370	440	2,210	1,020	*2,140	6,300	21,900	10,200	1,250	643
3	432	457	480	470	2,370	992	2,040	5,680	20,400	9,910	1,250	651
4	426	426	500	500	2,990	963	1,970	*5,610	*17,400	9,780	1,310	643
5	420	426	500	440	2,550	934	2,140	6,400	18,300	8,940	1,260	620
6	420	457	490	390	2,240	916	2,220	8,780	17,800	8,230	1,180	589
7	420	457	480	380	2,070	916	2,110	12,300	18,600	7,820	1,120	575
8	420	426	470	400	1,970	916	1,970	11,400	18,600	7,390	1,070	560
9	420	384	440	800	1,770	1,190	1,820	9,650	16,800	7,220	1,040	553
10	420	350	420	1,000	1,520	1,400	1,730	8,140	16,500	6,470	1,010	546
11	420	350	410	900	1,430	1,520	1,670	7,080	19,100	5,820	992	517
12	420	540	540	1,200	1,370	*1,520	1,630	6,600	23,700	5,560	944	510
13	420	650	700	1,300	1,250	1,460	1,580	6,760	25,500	5,210	898	490
14	420	640	600	1,200	1,180	1,370	1,560	7,300	21,800	4,980	852	477
15	420	600	550	1,100	1,160	1,310	1,460	8,690	19,100	4,410	834	477
16	*420	550	520	1,000	1,100	1,280	1,510	10,800	17,800	3,770	817	470
17	420	540	480	1,600	1,110	1,240	1,630	12,700	18,900	3,250	843	457
18	413	520	480	*2,440	1,050	1,170	1,840	13,900	18,300	2,920	817	457
19	413	500	460	2,360	992	1,160	2,120	17,000	17,100	2,730	774	457
20	407	470	460	1,840	925	1,230	2,820	16,200	14,800	2,540	748	450
21	407	420	460	1,600	889	1,220	4,250	13,400	*12,600	*2,360	732	444
22	413	400	460	1,350	889	1,210	6,040	11,200	13,000	2,180	723	444
23	413	330	450	1,440	880	1,210	9,680	9,680	13,800	2,040	707	438
24	407	330	400	1,520	800	1,360	9,390	9,480	12,300	1,940	*732	444
25	407	300	240	1,410	782	1,950	8,470	8,910	10,300	1,840	852	444
26	407	230	230	1,320	870	2,210	9,130	8,880	9,420	1,730	808	438
27	407	200	400	1,180	898	2,110	11,100	9,320	9,260	1,630	748	432
28	407	150	430	1,080	1,060	2,250	13,400	10,300	9,420	1,570	740	444
29	401	150	450	1,100	-	2,480	10,700	13,300	10,500	1,500	748	463
30	413	180	470	1,360	-	2,480	8,720	16,100	10,900	1,430	715	*477
31	432	-	490	1,520	-	2,500	-	17,400	-	1,360	682	-
Total	12,929	12,427	14,130	35,100	40,475	44,567	129,160	316,560	492,000	148,230	28,506	15,261
Mean	417	414	456	1,132	1,446	1,438	4,305	10,210	16,400	4,782	920	509
Cfsm	0.218	0.217	0.239	0.593	0.757	0.753	2.25	5.35	8.59	2.50	0.482	0.266
In.	0.25	0.24	0.28	0.68	0.79	0.87	2.51	6.16	9.58	2.89	0.56	0.30
Ac-ft	25,640	24,650	28,030	69,620	80,280	88,400	256,200	627,900	975,900	294,000	56,540	30,270

Calendar year 1952: Max 22,500 Min 150 Mean 3,725 Cfsm 1.95 In. 26.56 Ac-ft 2,704,000
Water year 1952-53: Max 25,500 Min 150 Mean 3,532 Cfsm 1.85 In. 25.11 Ac-ft 2,557,000

Peak discharge (base, 18,000 cfs).--June 2 (10 p.m.) 23,900 cfs (11.07 ft); June 13 (5 a.m.) 27,500 cfs (11.85 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 8-15, Nov. 10 to Dec. 7, Dec. 9 to Jan. 17; discharge estimated on basis of recorded range in stage, weather records, and records for other stations in Clearwater River basin. Stage-discharge relation affected by ice about Nov. 22 to Dec. 10 and about Dec. 23 to Jan. 10.

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 1953.

Gage.--Water-stage recorder. Datum of gage is 1,452.98 ft above mean sea level, unadjusted. Prior to Nov. 21, 1930, staff gage 1 mile upstream at different datum.

Average discharge.--24 years (1929-53), 2,684 cfs.

Extremes.--Maximum discharge during year, 18,900 cfs June 13 (gage height, 9.82 ft); minimum, 102 cfs Nov. 28 (gage height, 1.06 ft), but may have been less during period of ice effect.
1929-53: 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 except those for periods of ice effect, which are fair.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	110	3.0	1,560
1.3	165	4.0	3,030
1.6	290	6.0	6,990
2.0	560	8.0	12,500
2.5	1,000	10.0	19,700

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	296	358	b210	328	2,550	990	1,900	5,740	12,600	6,650	950	466
2	296	358	b250	312	2,380	891	*1,770	4,990	15,000	6,280	910	452
3	296	323	b330	345	2,480	882	1,690	4,560	13,800	5,960	940	560
4	290	280	b380	358	2,870	864	1,620	*4,620	*12,000	5,810	1,020	576
5	290	280	384	318	2,340	846	1,790	5,320	12,200	5,400	920	488
6	285	306	378	285	2,090	819	1,820	7,040	11,900	5,050	864	452
7	285	328	364	275	1,880	810	1,740	9,240	12,800	4,750	828	431
8	285	285	358	285	1,770	873	1,620	8,550	12,700	4,490	783	417
9	280	245	334	647	1,540	970	1,520	7,220	11,500	4,370	765	404
10	280	216	328	783	1,320	1,100	1,480	6,160	11,300	4,010	738	384
11	280	236	312	656	1,240	1,230	1,480	5,530	13,100	3,670	712	378
12	280	390	438	828	1,210	*1,220	1,480	5,250	16,300	3,440	688	364
13	280	512	592	1,380	1,140	1,200	1,440	5,380	17,800	3,330	656	352
14	280	445	459	1,280	1,070	1,120	1,400	5,900	41,900	3,130	632	340
15	280	410	371	980	1,050	1,080	1,300	6,920	13,200	2,890	600	334
16	*280	378	352	855	1,000	1,050	1,400	8,230	12,000	2,550	576	328
17	280	352	323	*1,360	1,000	1,080	1,560	9,210	12,600	2,280	576	318
18	280	340	318	2,250	930	1,010	1,700	10,200	12,800	2,070	568	318
19	280	328	306	1,970	873	1,040	1,950	13,100	10,700	1,930	536	312
20	280	328	301	1,650	819	1,110	2,440	12,100	9,320	1,790	504	312
21	290	323	296	1,590	810	1,100	3,430	9,950	*8,050	*1,660	488	312
22	296	290	296	1,300	792	1,110	4,500	8,440	7,950	1,550	480	312
23	301	236	290	1,440	792	1,120	6,820	7,540	8,360	1,460	473	306
24	296	236	260	1,550	729	1,240	6,990	7,560	7,490	1,380	*504	316
25	290	b210	182	1,360	720	1,950	6,650	7,090	6,400	1,320	576	318
26	290	b165	b170	1,220	765	1,930	7,120	7,040	5,920	1,250	600	312
27	285	b150	b300	1,050	774	1,790	8,080	7,240	5,850	1,190	600	306
28	285	b110	b320	950	1,040	1,880	10,200	7,840	6,010	1,130	536	328
29	280	b110	b330	960	-	2,060	8,280	9,000	6,490	1,080	584	371
30	285	b140	b340	1,220	-	2,040	6,870	11,200	6,460	1,040	560	*352
31	306	-	b350	1,390	-	2,070	-	12,000	-	980	504	-
Total	8,887	8,668	10,222	31,175	37,974	38,475	102,020	240,180	327,500	94,090	20,671	11,221
Mean	287	289	330	1,006	1,356	1,241	3,401	7,748	10,920	3,035	667	374
Cfsm	0.243	0.245	0.280	0.853	1.15	1.05	2.88	6.57	9.25	2.57	0.565	0.317
In.	0.28	0.27	0.32	0.98	1.20	1.21	3.22	7.57	10.32	2.97	0.65	0.35
Ac-ft	17,630	17,190	20,280	61,830	75,320	76,310	202,400	476,400	649,600	186,600	41,000	22,260

Calendar year 1952: Max 16,600 Min 110 Mean 2,619 Cfsm 2.22 In. 30.20 Ac-ft 1,901,000
Water year 1952-53: Max 17,800 Min 110 Mean 2,551 Cfsm 2.16 In. 29.34 Ac-ft 1,847,000

Peak discharge (base, 12,000 cfs).--May 19 (5 p.m.) 13,500 cfs (8.31 ft); June 2 (3 p.m.) 16,100 cfs (9.07 ft); June 13 (7:30 a.m.) 18,900 cfs (9.82 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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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 1953.

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.--9 years, 261 cfs.

Extremes.--Maximum discharge during year, 1,460 cfs Apr. 28 (gage height, 5.02 ft); minimum daily, 10 cfs Nov. 28, 29; minimum gage height, 1.31 ft Sept. 13.
1944-53: Maximum discharge observed, 3,700 cfs May 29, 1948 (gage height, 13.06 ft, site and datum then in use); minimum daily, that of Nov. 28, 29, 1952.

Remarks.--Records good except those for periods of ice effect, which are poor. No diversion or regulation above station except for mining operations.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 5)

1.3	16	2.5	217
1.4	22	3.0	368
1.6	38	3.5	585
1.8	62	4.0	870
2.0	96	5.0	1,540

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	35	23	32	80	70	231	774	1,030	257	50	33
2	23	35	27	32	90	65	212	662	1,120	228	50	32
3	23	25	28	32	100	65	*201	602	1,120	212	56	31
4	23	25	32	32	130	62	220	624	1,040	198	76	30
5	22	32	31	32	120	62	260	*739	*1,250	182	64	28
6	23	34	30	33	110	62	257	900	1,120	174	58	28
7	23	29	30	34	100	64	223	1,090	1,160	164	54	27
8	24	28	29	31	100	70	201	1,030	1,200	154	49	28
9	24	22	29	40	90	80	185	870	1,070	149	48	29
10	24	20	29	60	70	90	174	750	1,010	139	47	28
11	24	48	30	55	70	95	169	668	956	134	46	25
12	25	52	33	70	70	*100	162	651	918	130	42	24
13	25	52	40	75	70	100	159	673	900	137	40	23
14	25	46	40	75	65	90	154	695	804	114	38	23
15	*24	40	37	65	65	95	142	744	728	108	36	23
16	26	39	35	60	62	95	146	798	668	100	35	23
17	25	37	34	55	60	90	190	840	607	98	38	23
18	25	35	33	85	58	85	223	876	555	92	36	22
19	26	36	34	*95	55	90	280	1,030	502	87	34	22
20	26	33	33	90	50	90	382	1,110	484	*83	33	21
21	26	27	30	80	50	90	521	976	432	82	32	21
22	26	22	32	75	50	88	662	888	393	78	*31	21
23	26	20	30	70	50	86	1,180	834	*368	75	30	21
24	26	20	28	90	45	95	1,110	828	348	72	34	22
25	26	18	18	80	47	160	962	804	345	68	57	21
26	26	16	16	75	52	180	969	786	348	65	44	21
27	26	14	25	65	58	190	995	774	310	62	38	20
28	26	10	33	60	70	240	1,330	780	304	61	39	21
29	25	10	34	55	-	270	1,050	1,030	289	58	42	24
30	28	14	35	60	-	250	924	1,030	262	56	40	26
31	29	-	33	65	-	260	-	1,010	-	53	34	-
Total	773	874	951	1,858	2,037	3,529	13,874	25,866	21,641	3,670	1,351	741
Mean	24.9	29.1	30.7	59.9	72.8	114	462	834	721	118	43.6	24.7
Cfsm	0.095	0.111	0.118	0.230	0.279	0.437	1.77	3.20	2.76	0.452	0.167	0.095
In.	0.11	0.12	0.14	0.26	0.29	0.50	1.98	3.69	3.08	0.52	0.19	0.11
Ac-ft	1,530	1,730	1,890	3,690	4,040	7,000	27,520	51,300	42,920	7,280	2,680	1,470

Calendar year 1952: Max 1,640 Min 10 Mean 257 Cfsm 0.985 In. 13.41 Ac-ft 186,600
Water year 1952-53: Max 1,330 Min 10 Mean 211 Cfsm 0.808 In. 10.99 Ac-ft 153,000

Peak discharge (base, 1,300 cfs).--Apr. 28 (12 m.) 1,460 cfs (5.02 ft); June 5 (12 m.) 1,390 cfs (4.93 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 9, 10, Nov. 22 to Mar. 31.

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., 6 miles east of Grangeville.

Drainage area.--865 sq mi.

Records available.--November 1910 to September 1916, April 1923 to September 1953.

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.--34 years (1912-16, 1923-53), 841 cfs.

Extremes.--Maximum discharge during year, 4,640 cfs June 5 (gage height, 7.91 ft); minimum, 1 cfs Dec. 18 (gage height, 1.68 ft); minimum daily, 29 cfs Nov. 23, 27, 29. 1910-16, 1923-53: Maximum discharge observed, 12,600 cfs May 29, 1948 (gage height, 12.50 ft); no flow part of day Aug. 27, 1947; minimum daily, that of Nov. 23, 27, 29, 1952.

Remarks.--Records 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 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

2.1	22	4.0	649
2.5	79	5.0	1,340
3.0	199	6.0	2,270
3.5	394	8.0	4,760

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	114	144	61	144	336	280	594	2,290	3,330	1,360	257	168
2	112	152	102	142	372	257	536	1,970	3,730	1,260	246	156
3	118	137	123	139	456	254	516	1,790	3,490	1,200	276	152
4	113	132	130	139	666	236	505	1,780	3,290	1,160	303	145
5	111	120	147	138	536	232	583	*1,990	*4,470	1,050	299	138
6	115	132	134	152	470	239	*666	2,440	3,920	995	264	141
7	114	137	151	131	436	246	610	2,920	4,110	960	246	130
8	112	116	142	148	451	268	568	2,830	4,120	892	229	145
9	114	84	*140	198	385	307	531	2,440	3,710	834	212	132
10	110	71	146	281	303	345	505	2,110	3,490	777	219	132
11	111	148	144	250	299	385	490	1,880	3,490	736	212	132
12	112	172	157	318	303	*385	480	1,790	3,590	689	190	120
13	111	193	216	372	291	367	470	1,830	3,640	655	187	120
14	116	182	225	376	276	311	456	1,890	3,210	616	184	114
15	*110	162	181	288	280	324	422	2,080	3,040	578	172	113
16	120	168	165	250	264	315	480	2,300	2,830	546	170	113
17	114	141	162	236	257	311	552	2,490	2,730	505	169	110
18	116	148	148	446	246	280	546	2,590	2,660	485	169	110
19	115	140	162	*573	232	303	683	3,280	2,460	446	169	108
20	118	155	158	446	202	311	940	3,550	2,240	*422	160	108
21	117	134	140	390	219	303	1,320	3,030	2,050	403	*152	112
22	118	106	159	332	225	303	1,710	2,760	*1,940	376	150	108
23	124	29	144	303	225	295	3,090	2,620	1,880	372	150	108
24	120	94	116	394	193	354	3,010	2,670	1,740	349	173	113
25	116	90	68	345	199	500	2,580	2,640	1,650	341	226	110
26	118	58	32	315	219	541	2,640	2,610	1,610	332	208	108
27	117	29	136	280	243	536	2,770	2,540	1,510	315	172	110
28	117	55	158	264	276	616	3,800	2,500	1,520	288	171	108
29	114	29	164	239	-	689	3,060	3,130	1,470	284	193	*126
30	115	30	166	257	-	649	2,650	3,260	1,370	276	190	124
31	124	-	140	264	-	672	-	3,250	-	268	171	-
Total	3,576	3,488	4,417	8,550	8,860	11,414	37,763	77,250	84,290	19,770	6,289	3,714
Mean	115	116	142	276	316	368	1,259	2,492	2,810	638	203	124
Cfsm	0.133	0.134	0.164	0.319	0.365	0.425	1.46	2.88	3.25	0.738	0.235	0.143
In.	0.15	0.15	0.19	0.37	0.38	0.49	1.62	3.32	3.62	0.85	0.27	0.16
Ac-ft	7,090	6,920	8,760	16,960	17,570	22,640	74,900	153,200	167,200	39,210	12,470	7,370

Calendar year 1952: Max 5,500 Min 29 Mean 892 Cfsm 1.03 In. 14.05 Ac-ft 647,700
Water year 1952-53: Max 4,470 Min 29 Mean 738 Cfsm 0.853 In. 11.57 Ac-ft 534,300

Peak discharge (base, 3,200 cfs).--Apr. 23 (7 p.m.) 3,630 cfs (7.15 ft); Apr. 28 (11:30 a.m.) 4,070 cfs (7.49 ft); May 20 (2:30 a.m.) 3,860 cfs (7.32 ft); June 5 (5 a.m.) 4,640 cfs (7.91 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 1953.

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.--43 years, 8,072 cfs.

Extremes.--Maximum discharge during year, 53,100 cfs June 13 (gage height, 13.91 ft); minimum, 179 cfs about Dec. 1 (gage height, 1.98 ft).
1910-53; Maximum discharge, 99,000 cfs May 29, 1948 (gage height, 19.22 ft); minimum, that of about Dec. 1, 1952.

Remarks.--Records excellent except those below 5,000 cfs, which are good, and those for period of no gage-height record, which are fair. Some diurnal regulation at low stages caused by powerplant on South Fork.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

2.0	200	5.0	4,000
2.3	330	6.0	6,410
2.6	520	8.0	13,200
3.0	900	10.0	23,700
3.5	1,480	14.0	53,200
4.0	2,170		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	944	1,060	224	a1,150	5,190	3,100	5,700	*18,400	*35,800	20,600	2,590	1,370
2	933	1,130	710	a1,100	6,060	2,790	5,240	15,600	42,500	19,000	2,500	1,310
3	933	1,080	1,100	1,220	6,360	2,640	4,970	13,600	41,800	17,900	2,460	1,320
4	933	988	*1,100	1,250	8,560	2,580	*4,780	13,200	34,800	17,600	2,620	1,470
5	911	933	1,170	1,190	*7,160	2,460	5,040	14,300	37,800	16,400	2,590	1,350
6	922	966	1,140	1,120	6,300	2,400	5,500	18,500	35,900	15,000	2,400	1,260
7	911	1,040	1,120	1,110	5,680	2,380	5,530	25,900	38,400	14,000	2,290	1,220
8	911	988	1,110	1,110	5,360	2,450	5,310	25,500	40,200	13,200	2,170	1,190
9	900	922	1,100	1,220	4,780	2,690	4,970	21,600	34,800	12,800	2,080	1,170
10	900	750	1,100	2,370	4,110	3,080	4,650	18,300	33,200	11,800	2,020	1,160
11	900	740	1,110	2,240	3,710	*3,500	4,460	16,000	36,200	10,600	1,990	1,100
12	900	1,060	1,170	2,230	3,560	3,640	4,350	14,700	45,400	9,890	1,890	1,060
13	900	1,460	1,690	3,180	3,360	3,560	4,220	14,700	50,000	9,360	1,820	1,040
14	889	1,480	1,610	3,730	3,100	3,360	4,110	15,600	43,500	8,840	1,740	1,010
15	889	1,370	1,360	2,850	2,990	3,140	3,870	18,000	38,200	8,130	1,680	988
16	*900	1,290	1,250	2,420	2,860	3,080	3,830	21,800	34,600	7,160	1,620	977
17	922	1,180	1,170	*2,880	2,830	3,070	4,240	25,300	35,200	6,360	1,610	944
18	911	1,140	1,140	5,580	2,720	2,920	4,580	27,700	37,400	5,700	1,610	933
19	911	1,120	1,100	6,410	2,540	2,920	5,120	34,400	32,900	5,330	1,560	933
20	911	1,050	1,130	4,900	2,350	3,280	6,360	35,500	28,600	4,970	1,490	933
21	922	999	1,110	4,560	2,260	3,360	8,840	29,500	*24,500	4,670	1,440	922
22	933	889	1,100	3,850	2,260	3,300	12,100	25,600	23,800	*4,330	*1,410	922
23	944	609	1,080	3,960	2,240	3,340	19,700	22,800	25,500	4,070	1,370	922
24	933	609	1,040	4,350	2,160	3,560	21,900	22,300	23,500	3,850	1,400	922
25	922	710	663	3,900	1,990	4,620	19,500	22,200	19,900	3,640	1,600	933
26	922	544	a500	3,560	2,080	5,680	20,200	21,200	18,100	3,480	1,700	922
27	922	464	a450	3,100	2,180	5,310	23,000	21,300	17,600	3,280	1,610	911
28	922	402	a550	2,790	2,660	5,360	29,800	22,500	17,400	3,120	1,520	922
29	911	300	a750	2,710	-	5,980	25,800	26,400	19,400	2,970	1,540	*988
30	911	256	a900	3,240	-	5,960	21,900	31,800	19,700	2,810	1,570	1,030
31	944	-	a1,100	3,680	-	6,090	-	34,800	-	2,690	1,470	-
Total	28,417	27,529	31,847	88,960	107,410	111,600	299,570	689,000	966,600	273,550	57,360	32,132
Mean	917	918	1,027	2,870	3,836	3,600	9,986	22,230	32,220	8,824	1,850	1,071
Cfsm	0.189	0.189	0.212	0.592	0.791	0.742	2.06	4.58	6.64	1.82	0.381	0.221
In.	0.22	0.21	0.24	0.68	0.82	0.86	2.30	5.28	7.41	2.10	0.44	0.25
Ac-ft	56,360	54,600	63,170	176,400	213,000	221,400	594,200	‡1,367	‡1,917	542,600	113,800	63,730

Calendar year 1952: Max 46,900 Min 224 Mean 7,810 Cfsm 1.61 In. 21.92 Ac-ft 5,669,000
Water year 1952-53: Max 50,000 Min 224 Mean 7,436 Cfsm 1.53 In. 20.81 Ac-ft 5,383,000

Peak discharge (base, 28,200 cfs).--Apr. 28 (1 p.m.) 32,000 cfs (11.20 ft); May 20 (6 a.m.) 38,300 cfs (12.06 ft); June 3 (2 a.m.) 45,800 cfs (13.00 ft); June 13 (9 a.m.) 53,100 cfs (13.91 ft).

* Discharge measurement made on this day.

‡ Expressed in thousands.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for other stations in Clearwater River basin.

Note.--Discharge computed from once-daily staff-gage readings Nov. 9 to Dec. 4, Jan. 3-17.

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 1953.

Gage.--Water-stage recorder. Altitude of gage is 2,240 ft (from river-profile map).

Average discharge.--9 years, 2,888 cfs.

Extremes.--Maximum discharge during year, 12,900 cfs June 13 (gage height, 7.31 ft); minimum daily, 180 cfs Nov. 29; minimum gage height, 2.25 ft Nov. 25.
1944-53: Maximum discharge, 27,400 cfs May 29, 1948 (gage height, 11.13 ft); minimum daily, that of Nov. 29, 1952.

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

Cooperation.--Water-stage recorder inspected by U. S. Forest Service ranger at Bungalow ranger station.

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.2	300	4.0	2,610
2.4	420	5.0	5,070
2.7	660	6.0	8,220
3.0	980	8.0	15,600
3.5	1,680		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	498	562	b400	b500	3,140	914	1,920	*5,570	11,000	4,420	1,040	670
2	498	506	b420	b480	2,550	815	1,760	4,640	*11,800	4,100	1,020	720
3	490	455	570	b500	2,630	848	1,680	4,470	10,200	3,970	1,060	760
4	490	455	579	b540	3,270	837	*1,630	4,580	9,840	3,820	1,230	680
5	483	483	554	b570	2,550	826	1,830	5,390	10,200	3,580	1,080	651
6	483	483	538	b520	2,120	804	1,870	6,840	10,100	3,360	1,000	633
7	483	448	514	b510	*1,870	804	1,710	8,390	10,300	3,180	980	615
8	483	420	514	b700	1,850	881	1,600	7,850	10,200	3,010	947	606
9	476	b350	498	b900	1,600	992	1,490	6,840	9,420	2,900	947	597
10	476	b400	490	b1,100	1,370	1,140	1,430	5,960	9,360	2,690	925	579
11	476	562	506	b1,050	1,420	1,260	1,430	5,330	10,500	2,510	903	579
12	469	597	597	b1,400	1,300	1,300	1,430	5,130	11,600	2,370	870	570
13	469	642	815	b1,500	1,220	1,230	1,380	5,300	12,100	2,280	837	562
14	469	562	740	b1,350	1,140	1,150	1,340	5,750	10,500	2,140	815	554
15	469	562	579	b1,200	1,140	1,130	1,290	6,640	9,460	2,010	804	546
16	469	530	530	1,090	1,080	1,130	1,420	7,880	8,830	1,900	782	538
17	469	498	b530	1,380	1,060	1,150	1,630	8,970	8,870	1,780	793	538
18	*469	483	530	1,990	980	1,050	1,870	9,720	8,560	1,680	760	538
19	469	476	530	2,470	947	1,110	2,160	11,300	7,650	1,600	740	538
20	469	483	514	2,010	870	1,140	2,760	11,000	6,870	1,540	720	538
21	476	462	498	2,030	903	1,100	3,770	9,720	6,150	1,490	720	530
22	476	350	490	1,570	870	1,090	4,780	8,530	*5,900	*1,430	710	522
23	469	b320	476	1,650	870	1,080	6,800	7,680	5,810	1,370	710	522
24	469	b320	b420	1,890	750	1,180	7,160	7,780	5,300	1,330	760	546
25	462	b330	b260	1,520	859	1,850	6,960	7,350	4,840	1,310	*848	538
26	462	b280	b250	1,310	848	1,800	7,160	7,910	4,530	1,270	782	522
27	462	b230	b400	1,130	859	1,680	7,810	8,290	4,360	1,200	903	579
28	462	b190	b450	1,040	936	1,820	9,320	8,560	4,420	1,160	771	*579
29	462	b180	b470	1,090	-	2,050	7,810	9,180	4,450	1,140	793	588
30	483	b250	b500	1,370	-	2,070	6,580	10,400	4,360	1,110	740	538
31	530	-	b520	1,760	-	2,140	-	10,800	-	1,060	700	-
Total	14,770	12,869	15,782	38,120	41,002	38,371	101,780	233,950	247,480	68,710	26,690	17,476
Mean	476	429	509	1,230	1,464	1,238	3,393	7,547	8,249	2,216	861	583
Cfsm	0.478	0.431	0.511	1.23	1.47	1.24	3.41	7.58	8.28	2.22	0.864	0.585
In.	0.55	0.48	0.59	1.42	1.53	1.43	3.80	8.74	9.24	2.57	1.00	0.65
Ac-ft	29,300	25,530	31,300	75,610	81,330	76,110	201,900	464,000	490,900	136,300	52,940	34,660

Calendar year 1952: Max 14,000 Min 180 Mean 2,590 Cfsm 2.60 In. 35.40 Ac-ft 1,880,000
Water year 1952-53: Max 12,100 Min 180 Mean 2,348 Cfsm 2.36 In. 32.00 Ac-ft 1,700,000

Peak discharge (base, 9,000 cfs).--Apr. 28 (8 to 10 a.m.) 9,800 cfs (6.49 ft); May 19 (10 p.m.) 12,000 cfs (7.09 ft); June 2 (2 a.m.) 12,800 cfs (7.28 ft); June 13 (3:30 a.m.) 12,900 cfs (7.31 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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 1953.

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.--27 years, 5,526 cfs.

Extremes.--Maximum discharge during year, 24,800 cfs Apr. 28 (gage height, 16.29 ft); minimum daily, 280 cfs Dec. 1.

1926-53: Maximum discharge, 100,000 cfs Dec. 23, 1933 (gage height, 35.5 ft, from floodmarks), from rating curve extended above 24,000 cfs by logarithmic plotting; minimum, probably less than 250 cfs Jan. 8, 1937, during period of ice effect.

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

Rating tables, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 7-9, Sept. 15-30)

Oct. 1 to Mar. 9				Mar. 10 to Sept. 30			
2.0	680	5.0	3,000	2.4	960	9.0	8,820
2.5	940	7.0	5,460	3.0	1,320	11.0	12,400
3.0	1,250	9.0	8,300	4.0	2,120	13.0	16,600
4.0	2,000	12.0	13,600	5.0	3,150	16.0	24,000
				7.0	5,730		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,000	1,080	a280	1,140	9,290	3,190	6,070	13,900	19,100	8,330	2,070	1,390
2	1,020	1,100	a400	1,080	8,940	2,650	5,410	11,900	21,300	8,010	2,020	1,360
3	988	1,040	b1,150	1,050	9,420	2,520	*5,060	10,800	19,800	7,720	1,980	1,440
4	976	958	b1,200	1,200	12,800	2,550	4,770	10,700	18,000	7,550	2,310	1,460
5	970	929	*1,170	1,270	*9,500	2,420	5,140	11,900	18,400	7,150	2,320	1,330
6	964	970	1,130	1,130	7,760	2,340	5,700	14,500	17,800	6,800	2,050	1,300
7	964	976	1,130	1,050	7,540	2,280	5,310	16,400	18,300	6,480	1,940	1,260
8	964	934	1,170	1,070	7,370	2,400	4,900	18,000	19,200	6,250	1,900	1,230
9	958	890	1,110	1,300	6,240	2,840	4,510	15,400	17,600	6,020	1,920	1,200
10	952	805	1,080	3,560	5,280	*3,450	4,250	13,200	16,500	5,660	1,870	1,180
11	946	815	1,100	3,390	4,770	4,070	4,180	11,700	17,400	5,320	1,790	1,150
12	952	1,100	1,140	4,320	4,660	4,500	4,180	11,100	19,700	5,100	1,760	1,120
13	952	1,330	1,620	7,080	3,950	4,250	4,120	11,300	21,600	4,880	1,680	1,090
14	952	1,390	1,710	6,210	3,650	3,870	4,020	12,000	19,700	4,600	1,620	1,070
15	929	1,370	1,580	3,930	3,560	3,670	3,790	13,500	17,500	4,320	1,580	1,060
16	934	1,250	1,240	*3,290	3,380	3,660	3,920	15,200	16,100	3,980	1,540	1,050
17	*952	1,140	1,100	4,590	3,320	4,100	4,370	17,100	15,900	3,740	1,530	1,030
18	952	1,070	1,070	6,820	3,120	3,800	4,880	18,400	15,700	3,550	1,520	1,030
19	940	1,030	1,070	9,620	2,840	3,820	5,440	21,100	14,200	3,370	1,470	1,020
20	940	1,020	1,080	8,570	2,560	4,270	6,900	22,400	*12,900	3,180	1,450	1,020
21	934	1,020	1,060	8,160	2,530	4,180	9,470	18,900	11,700	3,100	1,400	1,020
22	924	964	1,060	6,240	2,510	3,990	11,300	17,000	11,000	2,930	1,400	1,010
23	940	830	1,050	6,310	2,440	3,990	15,400	14,900	10,800	*2,800	1,390	1,000
24	929	760	1,020	6,960	2,300	4,250	17,300	15,000	10,100	2,680	1,450	1,000
25	940	890	830	5,690	2,210	5,930	16,000	16,200	9,330	2,600	*1,770	1,030
26	940	725	a550	4,840	2,290	6,720	16,300	15,300	8,870	2,580	1,690	1,020
27	924	a550	a500	4,050	2,280	5,930	17,700	15,700	8,470	2,460	1,570	1,020
28	929	a470	b600	3,590	3,060	5,870	22,500	15,500	8,310	2,360	1,680	*1,130
29	918	a400	b800	3,400	-	6,370	19,600	16,200	8,400	2,280	1,550	1,180
30	946	a320	b950	4,370	-	6,520	*16,300	17,800	8,330	2,210	1,520	1,140
31	1,020	-	b1,150	5,920	-	6,560	-	*18,000	-	2,130	1,460	-
Total	29,549	28,126	32,110	131,200	139,270	126,960	258,790	473,000	452,050	140,140	53,200	34,320
Mean	953	938	1,036	4,232	4,974	4,095	8,626	15,260	15,070	4,521	1,716	1,144
Cfsm	0.391	0.384	0.425	1.73	2.04	1.68	3.54	6.25	6.18	1.85	0.703	0.469
In.	0.45	0.43	0.49	2.00	2.12	1.94	3.94	7.21	6.89	2.14	0.81	0.52
Ac-ft	58,610	55,790	63,690	260,200	276,200	251,800	513,300	938,200	896,600	278,000	105,500	68,070

Calendar year 1952: Max 30,700 Min 280 Mean 5,205 Cfsm 2.13 In. 29.04 Ac-ft 3,779,000
Water year 1952-53: Max 22,500 Min 280 Mean 5,202 Cfsm 2.13 In. 28.94 Ac-ft 3,766,000

Peak discharge (base, 18,000 cfs).--Apr. 28 (2 p.m.) 24,800 cfs (16.29 ft); May 7 (11:30 a.m.) 19,900 cfs (14.44 ft); May 20 (7 a.m.) 23,500 cfs (15.82 ft); June 2 (12 m.) 22,600 cfs (15.50 ft); June 13 (2 p.m.) 22,700 cfs (15.53 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for stations on Clearwater River at Spalding and at Kamiah.

b Stage-discharge relation affected by ice.

Potlatch Creek at Kendrick, Idaho

Location.--lat 46°37', long. 116°39', in NW¼ sec. 25, T. 38 N., R. 3 W., near center of main span on upstream side of Mill Street Bridge in Kendrick, 0.9 mile downstream from Bear Creek and 3.2 miles upstream from Middle Potlatch Creek.

Drainage area.--460 sq mi, approximately.

Records available.--October 1945 to September 1953.

Gage.--Wire-weight gage read once daily. Datum of gage is 1,198.2 ft above mean sea level, unadjusted.

Average discharge.--8 years, 443 cfs.

Extremes.--Maximum discharge during year, 4,540 cfs Jan. 23 (gage height, 9.19 ft, from graph based on gage readings); minimum daily, 6.0 cfs Nov. 28; minimum gage height observed, 4.18 ft Nov. 29.
1945-53: 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 fair except those for periods of ice effect or doubtful gage-height record, which are poor. No diversion or regulation.

Revisions (water years).--WSP 1093: 1946(M).

Rating table, water year 1952-53, 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	6.5	830
4.7	42	7.0	1,260
4.9	74	8.0	2,350
5.1	122	9.0	4,120

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.7	12	b10	22	2,470	1,300	*614	902	*429	64	14	13
2	8.7	12	12	22	1,540	697	554	*774	365	60	16	12
3	9.0	10	14	24	2,770	494	482	641	299	54	12	10
4	9.0	10	16	25	3,660	440	440	530	282	45	13	9.9
5	8.1	10	20	28	2,040	396	482	440	345	45	15	10
6	9.3	12	*19	28	1,910	385	512	407	304	40	15	10
7	8.4	12	22	29	2,280	396	506	440	407	38	14	10
8	8.4	8.4	21	31	1,790	440	470	536	614	36	14	9.0
9	9.0	9.3	22	40	1,170	512	390	424	412	35	14	9.3
10	8.4	9.6	26	56	886	*614	345	407	312	31	14	9.3
11	9.0	14	22	96	697	614	322	370	266	31	16	9.0
12	9.0	16	30	192	548	641	326	258	232	28	13	9.0
13	9.3	16	30	554	482	627	350	226	340	25	12	8.1
14	9.3	18	35	620	418	512	365	212	299	27	12	8.7
15	9.0	25	47	385	418	470	335	205	226	25	12	8.4
16	9.0	27	36	*385	375	602	317	170	208	24	12	8.1
17	*9.3	24	30	1,320	380	886	322	157	179	23	10	8.1
18	9.6	22	26	2,470	385	697	326	151	157	22	10	7.8
19	9.9	20	25	2,910	286	746	345	192	145	22	10	7.3
20	10	18	22	2,000	215	1,200	375	254	*131	22	9.6	7.3
21	10	18	22	2,230	278	1,220	446	370	125	22	9.3	8.1
22	9.9	11	22	1,290	258	1,240	530	608	112	21	8.1	8.1
23	9.6	9.3	22	3,280	236	d1,500	620	512	96	*19	9.9	8.1
24	9.9	13	20	2,280	189	d1,600	711	854	92	20	9.9	8.1
25	9.9	b11	15	1,380	166	1,620	548	2,300	92	20	16	8.1
26	10	b9.0	13	999	212	1,230	476	1,370	81	18	27	8.1
27	10	b7.0	18	683	254	990	530	1,120	78	18	*18	*9.0
28	9.9	b6.0	28	554	1,720	878	1,450	781	74	18	14	9.3
29	11	b7.0	26	697	-	781	1,480	704	74	16	16	14
30	10	b8.0	26	1,430	-	718	1,050	572	70	15	14	12
31	11	-	22	1,620	-	711	-	458	-	16	14	-
Total	291.6	404.6	719	27,680	28,033	25,157	16,019	17,345	6,846	900	413.8	277.2
Mean	9.41	13.5	23.2	893	1,001	812	534	560	228	29.0	13.3	9.24
Cfsm	0.020	0.029	0.050	1.94	2.18	1.77	1.16	1.22	0.496	0.063	0.029	0.020
In.	0.02	0.03	0.06	2.24	2.27	2.03	1.30	1.40	0.55	0.07	0.03	0.02
Ac-ft	578	803	1,430	54,900	55,600	49,900	31,770	34,400	13,580	1,790	821	550

Calendar year 1952: Max 4,380 Min 6.0 Mean 363 Cfsm 0.789 In. 10.74 Ac-ft 263,500
Water year 1952-53: Max 3,660 Min 6.0 Mean 340 Cfsm 0.739 In. 10.02 Ac-ft 246,100

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge computed by direct application of gage heights.

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 and three-eighths of a mile northwest of Spalding Post Office.

Drainage area.--9,570 sq mi, approximately.

Records available.--March 1926 to September 1953.

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.--27 years, 14,820 cfs.

Extremes.--Maximum discharge during year, 81,100 cfs June 13 (gage height, 15.71 ft); minimum daily, 500 cfs Dec. 1.
1926-53: 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 periods of ice effect, which are good. Small diversions from tributaries; slight diurnal fluctuation at times caused by powerplant on South Fork.

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,980	2,100	b500	2,410	16,500	9,090	14,700	37,400	57,600	27,800	4,920	2,960
2	2,000	2,230	b960	2,230	18,600	7,380	13,200	31,300	64,100	26,900	4,780	2,810
3	1,960	2,250	b1,800	2,150	19,500	6,670	12,200	27,500	67,900	25,000	4,660	2,750
4	1,950	2,070	2,460	2,180	28,600	6,440	11,600	25,900	56,900	24,500	4,900	2,920
5	1,920	1,950	2,430	2,460	22,100	6,160	11,700	27,200	58,500	23,000	5,390	2,900
6	1,890	1,940	*2,380	2,330	18,700	5,930	13,400	32,100	57,000	21,600	4,870	2,700
7	1,900	2,010	2,340	2,150	17,800	5,740	13,200	43,500	58,300	20,400	4,490	2,560
8	1,880	2,010	2,330	2,120	16,600	5,580	12,500	47,100	65,700	19,400	4,330	2,480
9	1,880	1,900	2,310	2,250	14,100	6,500	11,600	40,300	58,400	18,700	4,240	2,410
10	1,880	1,720	2,300	4,580	11,900	7,470	10,900	34,300	52,500	17,800	4,130	2,380
11	1,860	1,620	2,280	5,820	10,600	*8,620	10,400	29,900	54,800	16,200	4,000	2,300
12	1,850	1,880	2,300	6,020	9,680	10,000	10,200	27,500	65,700	15,200	3,890	2,220
13	1,850	2,600	2,840	9,090	8,880	9,860	10,200	27,000	75,600	14,400	3,720	2,140
14	1,850	3,050	3,620	11,400	8,260	8,950	9,890	27,800	69,600	13,600	3,580	2,090
15	1,850	2,880	3,310	*8,450	7,900	8,260	9,540	30,800	59,400	12,800	3,410	2,040
16	1,830	2,670	2,750	6,580	7,560	8,190	9,260	36,000	52,700	11,700	3,350	2,020
17	*1,860	2,410	2,440	8,880	7,350	8,820	9,960	41,400	52,000	10,800	3,290	2,000
18	1,890	2,300	2,280	15,400	7,110	8,360	11,000	46,600	54,300	9,750	3,290	1,980
19	1,880	2,220	2,230	21,300	6,470	8,160	11,900	54,300	*49,200	9,090	3,230	1,960
20	1,880	2,140	2,200	18,600	5,880	9,860	14,200	64,800	42,800	8,620	3,110	1,960
21	1,880	2,150	2,230	17,800	5,660	10,500	18,900	53,700	36,800	8,090	3,010	1,950
22	1,890	2,100	2,220	13,900	5,550	10,300	24,200	47,800	34,100	7,650	2,960	1,940
23	1,000	1,850	2,200	16,000	5,470	10,800	33,400	41,200	35,200	*7,200	2,900	1,900
24	1,890	1,580	2,150	16,200	5,220	11,500	43,200	38,600	33,600	6,840	2,940	1,880
25	1,900	1,630	1,960	13,300	4,870	13,800	38,100	45,400	29,800	6,580	3,230	1,900
26	1,890	1,620	b1,010	11,300	4,970	16,400	37,500	40,200	27,100	6,380	*3,620	*1,890
27	1,890	b1,100	b913	9,540	5,190	14,800	41,000	40,000	25,600	6,130	3,430	1,880
28	1,890	b910	b1,050	8,220	8,490	14,100	55,000	39,600	25,000	5,790	3,390	1,960
29	1,880	b740	b1,800	7,930	-	14,800	*54,700	42,800	26,600	5,580	3,230	2,010
30	1,890	b615	b2,000	9,400	-	15,200	43,600	50,200	27,200	5,370	3,210	2,100
31	1,950	-	b2,300	11,800	-	*15,200	-	*55,500	-	5,140	3,150	-
Total	58,690	58,225	65,893	271,790	309,510	303,540	621,150	‡1,227.7	‡1,474	417,810	116,650	66,990
Mean	1,893	1,941	2,126	8,767	11,050	9,792	20,700	39,600	49,130	13,480	3,763	2,233
Cfsm	0.198	0.203	0.222	0.916	1.15	1.02	2.16	4.14	5.13	1.41	0.393	0.233
In.	0.23	0.23	0.26	1.06	1.20	1.18	2.41	4.77	5.73	1.62	0.45	0.26
Ac-ft	116,400	115,500	130,700	539,100	613,900	602,100	‡1,232	‡2,435	‡2,924	828,700	231,400	132,900

Calendar year 1952: Max 85,600 Min 500 Mean 14,500 Cfsm 1.52 In. 20.64 Ac-ft 10,530,000
Water year 1952-53: Max 75,600 Min 500 Mean 13,680 Cfsm 1.43 In. 19.40 Ac-ft 9,902,000

Peak discharge (base, 50,000 cfs).--Apr. 28 (7 p.m.) 64,900 cfs (13.97 ft); May 20 (12 m.) 67,400 cfs (14.29 ft); June 3 (7 a.m.) 70,800 cfs (14.66 ft); June 13 (4 p.m.) 81,100 cfs (15.71 ft).

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

Snake River near Clarkston, Wash.

Location.--Lat 46°25'30", long. 117°10'30", in lot 1, sec. 16, T. 11 N., R. 45 E., on right bank 2 miles upstream from Alpowa Creek, 7 miles downstream from Clarkston, and 134 miles upstream from mouth.

Drainage area.--103,200 sq mi, approximately.

Records available.--October 1915 to September 1922 and August 1928 to September 1953 in reports of Geological Survey. October 1909 to September 1933 in State Water-Supply Bulletin 5. Published as "at Riparia" 1915-22, 1928-35. 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, 232,000 cfs June 13 (gage height, 32.73 ft); minimum, 14,800 cfs Nov. 30 (gage height, 9.45 ft); minimum daily, 15,600 cfs Nov. 30.
1909-53: 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. Small diversions by pumping between this station and station at Oxbow, Oreg. Large diurnal fluctuation caused by powerplant on Clearwater River above Lewiston, Idaho. Records of chemical analyses and water temperatures for water year 1953 are given in WSP 1293.

Revisions (water years).--WSP 463: 1916. WSP 933: 1937.

Rating table, water year 1952-53 (gage height, in feet, and discharge, in cubic feet per second)

9.6	15,300	21.0	88,700
12.0	24,800	27.0	154,000
16.0	47,700	33.0	236,000

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20,900	22,100	16,700	21,300	47,700	37,700	55,600	*107,000	*142,000	105,000	27,600	22,900
2	21,700	21,600	18,200	23,500	54,800	34,100	54,900	93,500	154,000	103,000	27,000	22,600
3	22,700	22,300	18,300	23,600	56,300	33,300	52,600	83,500	171,000	100,000	27,200	22,100
4	23,000	21,200	20,200	21,600	70,500	33,400	49,800	77,500	171,000	101,000	28,400	*23,000
5	21,000	20,100	21,700	23,800	68,300	32,300	48,700	77,500	169,000	95,800	29,600	22,300
6	21,400	19,800	21,800	*24,300	61,300	30,700	49,700	84,300	170,000	91,200	28,400	22,200
7	22,300	21,200	22,300	21,000	58,800	30,200	50,600	100,000	171,000	88,100	27,800	22,800
8	22,300	21,400	22,700	21,700	56,300	30,000	51,800	113,000	182,000	85,700	28,400	21,900
9	22,200	21,300	21,400	23,600	53,200	30,300	49,400	107,000	180,000	83,200	26,300	21,200
10	21,400	20,800	20,200	26,800	53,100	*32,500	46,000	95,300	171,000	80,000	25,800	21,600
11	21,100	20,000	20,500	33,400	46,700	36,900	44,400	84,300	168,000	75,300	25,700	21,500
12	21,100	19,300	22,400	32,500	44,200	39,700	44,000	76,600	184,000	71,400	24,300	21,800
13	22,100	20,300	22,500	35,700	41,000	41,000	41,400	72,900	218,000	68,800	23,600	22,100
14	*22,300	22,000	24,400	40,500	38,800	39,800	*39,500	73,200	226,000	66,200	23,500	22,000
15	21,700	23,300	23,200	43,400	36,900	39,800	39,200	79,300	215,000	62,400	23,100	21,500
16	21,600	23,500	22,900	41,500	37,300	39,200	38,100	86,800	199,000	57,200	23,000	21,400
17	22,400	23,400	20,700	40,300	36,000	39,400	37,600	97,300	188,000	52,200	23,000	21,300
18	23,400	21,600	20,500	53,800	36,200	39,000	39,800	108,000	188,000	48,000	22,200	21,400
19	23,400	*21,200	21,800	70,500	35,000	38,000	42,800	118,000	188,000	44,800	22,300	20,900
20	23,500	21,400	22,000	79,200	33,400	40,700	49,300	141,000	180,000	42,100	21,600	21,200
21	24,200	22,200	22,100	73,800	32,000	43,800	58,200	136,000	*167,000	39,500	22,700	21,900
22	22,700	21,400	22,000	66,000	32,300	43,200	68,300	128,000	153,000	37,400	21,700	21,400
23	22,600	19,800	21,800	60,700	30,400	44,100	82,400	116,000	146,000	35,700	20,900	21,400
24	23,100	20,000	20,300	59,100	30,600	47,800	102,000	108,000	141,000	34,600	21,500	21,200
25	22,500	20,100	20,300	52,600	30,300	53,400	102,000	111,000	133,000	33,200	21,100	21,300
26	22,400	18,900	20,700	47,400	29,600	59,200	99,700	105,000	123,000	32,200	22,100	22,000
27	21,400	18,500	19,300	39,800	30,400	57,700	103,000	102,000	115,000	31,500	22,500	22,000
28	21,400	19,000	18,400	34,600	32,500	55,300	123,000	101,000	109,000	30,600	23,000	21,900
29	20,700	16,700	20,200	36,100	-	57,100	135,000	105,000	108,000	*30,000	23,100	23,200
30	*21,200	15,600	20,500	*38,100	-	56,900	121,000	125,000	107,000	29,000	22,800	*21,700
31	21,700	-	19,800	42,200	-	55,900	-	137,000	-	28,200	23,600	-
Total	685,400	620,000	649,800	‡1,252.4	‡1,213.9	‡1,292.4	‡1,917.8	‡3,150	‡4,937	‡1,883.3	753,800	655,700
Mean	22,110	20,670	20,960	40,400	43,350	41,690	63,930	101,600	164,600	60,750	24,320	21,860
Ac-ft	‡1,359	‡1,230	‡1,289	‡2,484	‡2,408	‡2,563	‡3,804	‡6,248	‡9,792	‡3,735	‡1,495	‡1,301

Calendar year 1952: Max 237,000 Min 15,600 Mean 61,070 Ac-ft 44,340,000
Water year 1952-53: Max 226,000 Min 15,600 Mean 52,090 Ac-ft 37,710,000

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

Palouse River at Hooper, Wash.

Location.--Lat 46°45'30", long. 118°08'50", in SE¼ sec. 27, T. 15 N., R. 37 E., on left bank 150 ft downstream from State Highway 11B bridge at Hooper, and 0.4 mile upstream from Cow Creek.

Drainage area.--2,540 sq mi, approximately.

Records available.--April to August 1897 (gage heights only), September 1897 to April 1907, June 1908 to March 1916, February 1951 to September 1953 (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 at different datums. Feb. 8 to Mar. 28, 1951, staff gage at present site and datum.

Extremes.--Maximum and minimum discharges for the water years 1898-1904, 1910, 1915-16, 1953, some of which have been revised, superseding figures published in water-supply papers indicated, are contained in the following table:

WSP	Water year	Maximum			Minimum		
		Date	Discharge (cfs)	Gage height (feet)	Date	Discharge (cfs)	Gage height (feet)
-	1898	Feb. 16, 1898	a15,000	13.99	Aug. 3, 14, 15, 1898	a43	1.60
-	1899	Apr. 14, 1899	6,060	b10.00	Aug. 11-15, 18, 1899	a30	1.40
-	1900	Apr. 8, 1900	a931	5.00	Sept.27-29, 1900	a32	1.25
-	1901	Feb. 17, 1901	9,110	b11.80	Oct. 1, 1900	a38	1.35
-	1902	Feb. 19, 1902	4,150	b8.65	Sept.15-18, 1902	a41	1.40
-	1903	Jan. 6, 1903	10,500	b12.45	Aug. 22 to Sept. 3, 1903	a25	.95
-	1904	Mar. 9, 1904	16,600	b14.80	Sept. 9-14, 1904	a15	.75
393	1910	Mar. 2, 1910	c29,800	b22.00*	-	-	-
413	1915	May 21, 1915	c2,670	b6.80	-	-	-
443	1916	Feb. 11, 1916	c19,400	b16.80	-	-	-
-	1953	Jan. 23, 1953	6,920	11.00	Sept.21, 1953	24	3.47

a Observed.
b From graph based on gage readings.
c Revised.
Note.--1898-1904, datum then in use.

1897-1916, 1951-53: Maximum discharge, 29,800 cfs (revised) 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 and those for periods of ice effect, which are fair. No regulation. Diversions above station for irrigation, domestic, and municipal use.

Revisions.--WSP 1217: Drainage area. Revised figures of discharge, in cubic feet per second, for the water years 1897-1904, superseding those published in WSP 16, 28, 38, 51, 66, 85, 100, and 135 are given herein.

Date	Discharge	Date	Discharge	Date	Discharge
1897		1897-Con.		1897-Con.	
Sept. 9	72	Sept.17	60	Sept.25	50
10	84	18	60	26	50
11	72	19	60	27	50
12	72	20	60	28	50
13	84	21	60	29	50
14	84	22	60	30	50
15	72	23	60		
16	72	24	50		

Palouse River at Hooper, Wash.--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	50	60	275	2,310	581	2,540	1,890	1,300	659	160	73	51
2	50	60	301	1,850	581	2,640	1,850	1,140	581	160	59	51
3	55	66	383	1,560	639	2,940	2,160	1,010	527	160	43	51
4	60	66	413	1,390	701	2,940	2,220	906	509	152	47	51
5	60	66	383	1,200	810	3,480	2,090	765	475	144	55	47
6	55	66	383	1,200	1,170	3,600	2,210	810	459	144	59	47
7	55	84	931	1,140	1,660	3,480	2,340	881	413	144	59	47
8	50	84	1,490	1,140	2,400	3,150	2,990	810	398	136	59	51
9	50	72	2,310	1,060	2,490	2,940	3,150	787	355	136	51	51
10	55	84	2,350	787	1,810	2,940	2,640	701	328	128	51	51
11	60	90	2,220	743	1,460	2,640	2,350	659	303	128	51	51
12	60	97	1,740	787	1,390	2,310	2,540	639	291	121	51	51
13	55	126	1,970	787	7,830	1,930	2,730	619	267	114	47	51
14	50	160	1,890	787	10,100	1,810	2,340	600	256	107	43	51
15	50	355	2,830	787	12,300	1,770	2,400	600	256	101	43	51
16	50	475	2,310	743	15,000	1,740	2,680	581	245	101	47	51
17	55	383	1,740	743	13,100	1,740	3,090	563	245	101	55	51
18	55	328	1,140	787	11,000	1,630	3,040	527	245	101	59	51
19	55	328	1,030	881	7,530	1,520	2,680	492	234	101	68	51
20	60	383	881	787	5,330	1,460	2,310	492	234	101	59	51
21	60	639	787	701	4,750	1,460	1,910	475	234	101	59	51
22	60	833	743	680	4,350	1,420	1,850	459	224	101	51	51
23	60	787	701	639	3,970	1,170	1,850	428	214	101	51	51
24	60	581	659	509	3,480	1,090	1,930	413	194	101	51	51
25	60	509	639	545	3,260	1,140	2,010	398	185	95	51	51
26	66	398	743	563	2,940	1,230	1,930	398	185	95	51	51
27	66	383	765	563	2,640	1,090	1,740	527	185	89	51	51
28	60	355	881	581	2,540	1,090	1,770	527	176	83	51	51
29	60	328	2,050	545	-	1,090	1,810	509	160	83	51	51
30	60	301	2,400	545	-	1,140	1,590	639	160	78	51	51
31	60	-	2,680	600	-	1,330	-	659	-	73	51	-
Total	1,762	8,547	40,018	27,940	125,812	62,450	68,090	20,314	9,197	3,540	1,648	1,518
Mean	56.8	285	1,290	901	4,490	2,010	2,270	655	307	114	53.2	50.6
Ac-ft	3,490	17,000	79,300	55,400	249,000	124,000	135,000	40,300	18,300	7,010	3,270	3,010

Calendar year 1897: Max - Min - Mean - Ac-ft -
Water year 1897-98: Max 15,000 Min 43 Mean 1,020 Ac-ft 735,000

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	51	89	114	176	1,090	787	982	1,140	341	107	43	43
2	51	89	121	160	1,030	1,850	931	1,140	315	114	43	43
3	51	89	128	160	787	1,740	1,090	1,060	303	121	39	43
4	51	83	136	160	619	1,460	1,090	881	291	114	39	43
5	51	83	144	152	509	1,140	1,170	701	303	107	39	43
6	55	83	121	114	509	1,060	1,090	619	315	107	36	47
7	59	83	121	89	475	982	1,030	581	328	101	36	43
8	63	89	114	114	443	1,170	1,030	659	279	101	33	43
9	63	95	95	136	443	1,390	1,260	881	256	95	33	43
10	63	101	89	144	475	1,810	1,420	1,300	234	89	33	47
11	63	101	83	152	581	1,890	1,770	1,420	194	73	30	51
12	63	89	78	152	475	1,460	2,180	1,460	176	59	30	51
13	63	89	78	144	475	1,330	2,940	1,230	176	55	30	47
14	63	89	78	144	475	1,170	5,500	1,030	194	55	30	47
15	59	83	78	194	1,010	1,010	4,220	881	194	51	30	47
16	59	83	78	545	2,590	931	2,590	659	168	51	33	47
17	59	83	73	475	3,430	833	1,890	563	152	73	33	43
18	59	89	78	1,260	3,480	1,140	1,970	509	136	68	30	43
19	63	95	78	1,810	3,310	982	2,310	527	121	59	36	47
20	68	95	95	1,850	3,200	881	2,050	509	121	47	43	51
21	63	101	114	1,930	2,780	857	1,810	475	107	43	39	47
22	63	121	101	2,830	2,310	1,060	1,390	459	107	43	47	43
23	63	128	114	3,310	1,890	931	1,300	443	107	39	47	43
24	63	144	128	3,900	1,090	1,010	1,390	398	101	36	43	43
25	78	136	114	2,990	931	1,330	1,260	413	101	30	43	43
26	78	121	121	2,400	787	1,170	1,140	459	101	33	39	39
27	83	114	128	1,890	701	982	1,120	509	95	36	36	39
28	83	101	144	1,740	743	833	1,520	509	95	43	39	39
29	83	101	176	1,560	-	787	1,660	443	95	43	43	39
30	83	107	214	1,460	-	833	1,460	383	101	43	47	36
31	89	-	176	1,330	-	931	-	341	-	43	47	-
Total	2,006	2,954	3,510	33,471	36,638	35,740	52,563	22,582	5,607	2,079	1,169	1,323
Mean	64.7	98.5	113	1,080	1,310	1,150	1,750	728	187	67.1	37.7	44.1
Ac-ft	3,980	5,860	6,950	66,400	72,800	70,700	104,000	44,800	11,100	4,130	2,320	2,620

Calendar year 1898: Max 15,000 Min 43 Mean 901 Ac-ft 652,000
Water year 1898-99: Max 5,500 Min 36 Mean 547 Ac-ft 396,000

Palouse River at Hooper, Wash.--Continued

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	36	89	659				833	482	362	90	53	41
2	36	83	931				701	466	348	90	53	41
3	36	83	1,200				659	450	335	90	53	38
4	36	78	1,390				619	420	310	90	53	38
5	36	73	1,200				680	405	286	90	49	35
6	36	73	787				787	390	262	90	49	35
7	36	73	619				743	390	239	78	49	38
8	36	68	545				931	420	239	73	49	41
9	36	68	475				885	390	239	73	45	45
10	36	73	475				838	376	218	73	45	45
11	36	73	475				793	376	198	68	45	41
12	36	73	475				665	362	188	68	45	41
13	36	73	443				624	348	179	68	45	41
14	36	78	527				550	335	170	68	45	41
15	36	78	475				584	435	170	68	41	41
16	36	83	398				707	482	161	68	41	45
17	39	89	355				584	550	153	68	41	45
18	43	95	328				516	707	145	68	41	45
19	47	95	303				482	838	145	68	41	45
20	59	95	256				420	665	145	68	41	45
21	83	101	315				420	550	145	63	41	45
22	114	267	328				420	482	170	63	41	45
23	114	256	383				376	450	161	63	41	49
24	160	214	787				335	450	145	63	41	49
25	128	214	931				310	466	115	63	41	38
26	114	176	1,030				286	450	115	63	41	35
27	114	160	931				348	420	108	58	41	32
28	107	176	833				362	390	102	53	41	32
29	101	204	743				362	420	102	53	41	32
30	89	383	659				390	420	90	53	41	35
31	89	-	545				-	390	-	53	41	-
Total	1,977	3,744	19,801	-	-	-	17,210	14,175	5,745	2,165	1,375	1,219
Mean	63.8	125	639	-	-	-	574	457	192	69.8	44.4	40.6
Ac-ft	3,920	7,440	39,300	-	-	-	34,200	28,100	11,400	4,290	2,730	2,420

Calendar year 1899: Max 5,500 Min 30 Mean 594 Ac-ft 430,000
Water year 1899-1900: Max - Min - Mean - Ac-ft -

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	38	198	584	771	885	6,610	1,260	771	482	405	122	45
2	41	179	685	815	793	6,610	1,200	771	435	405	122	45
3	49	170	749	793	793	7,790	1,580	815	405	405	108	45
4	68	161	749	838	665	8,820	1,580	861	376	390	108	45
5	73	239	885	885	624	7,970	1,710	861	348	390	108	49
6	78	335	1,070	838	584	4,720	1,710	838	348	376	108	53
7	90	310	1,200	793	624	3,620	1,640	771	348	376	102	63
8	102	286	1,320	771	584	3,620	1,860	686	348	376	102	68
9	115	239	1,380	793	550	3,620	1,860	686	348	376	102	73
10	122	218	1,320	749	516	3,740	1,780	644	348	362	102	73
11	122	198	1,200	749	516	3,620	1,640	604	376	348	96	73
12	122	179	1,070	983	482	2,990	1,440	604	420	322	90	73
13	115	179	983	1,820	482	2,700	1,510	584	499	322	84	78
14	115	161	885	4,090	482	2,510	1,510	567	533	298	78	78
15	115	161	838	7,910	516	2,260	1,580	533	567	298	78	73
16	115	145	933	5,470	1,510	2,010	1,510	533	604	298	73	73
17	115	161	983	4,850	8,530	1,860	1,380	499	624	274	73	73
18	122	170	1,140	3,680	7,280	1,860	1,140	499	644	274	63	68
19	122	179	1,380	2,430	7,280	1,860	1,070	466	604	274	63	68
20	115	161	1,620	2,010	4,270	1,860	1,070	499	604	250	63	68
21	145	145	1,860	1,780	4,880	1,780	1,140	466	584	250	63	68
22	153	161	2,010	1,510	3,740	1,580	1,200	466	956	250	58	68
23	179	179	2,170	1,410	2,990	1,780	1,200	516	533	239	58	63
24	198	218	2,790	1,440	2,790	1,860	1,320	533	499	228	53	63
25	218	218	2,340	1,350	2,890	2,010	1,260	550	482	208	53	68
26	228	239	2,090	1,320	3,400	1,860	1,140	567	435	179	53	68
27	239	262	1,780	1,140	4,850	1,710	1,040	533	405	161	49	73
28	239	450	1,580	1,140	6,140	1,580	1,040	499	405	153	49	73
29	239	749	1,380	1,140	-	1,440	983	499	405	145	49	78
30	218	624	1,040	1,070	-	1,380	933	466	405	137	49	84
31	198	-	933	983	-	1,260	-	533	-	122	49	-
Total	4,208	7,274	40,927	56,321	69,646	98,890	41,286	18,720	14,372	8,891	2,428	1,990
Mean	136	242	1,320	1,820	2,490	3,190	1,380	604	479	287	78.3	66.3
Ac-ft	8,360	14,400	81,200	112,000	138,000	196,000	82,100	37,100	28,500	17,600	4,810	3,950

Calendar year 1900: Max - Min - Mean - Ac-ft -
Water year 1900-1901: Max 8,820 Min 38 Mean 1,000 Ac-ft 724,000

Palouse River at Hooper, Wash.--Continued

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	84	84	198	348	188	2,170	550	450	624	137	115	49
2	84	84	170	335	170	1,930	516	450	550	137	115	49
3	78	84	170	310	170	1,780	516	435	550	129	115	49
4	73	90	170	322	170	1,620	550	435	550	145	115	49
5	73	90	239	335	188	1,320	624	435	450	179	115	49
6	73	108	250	322	228	1,140	707	707	420	218	115	49
7	73	115	250	405	298	1,070	707	707	362	1,510	115	49
8	78	122	250	533	405	1,070	838	665	362	1,140	115	49
9	78	122	250	771	405	983	885	644	362	665	115	45
10	84	137	274	861	909	1,140	1,040	584	362	450	108	45
11	78	153	274	1,010	1,290	1,140	1,070	550	335	390	102	45
12	73	137	250	815	1,230	1,260	885	550	286	362	102	45
13	73	129	228	686	1,440	1,140	793	516	262	310	96	45
14	73	129	208	604	1,350	1,260	707	482	239	262	96	45
15	73	122	188	567	1,230	1,200	665	466	239	239	90	41
16	68	115	188	533	1,410	1,070	624	420	218	228	84	41
17	68	108	179	499	2,040	1,070	550	390	218	228	84	41
18	68	108	170	435	3,350	1,040	550	390	218	218	78	41
19	68	108	153	376	4,150	1,010	550	362	179	218	73	45
20	73	108	153	322	3,910	885	624	420	179	198	73	45
21	73	108	145	310	3,350	838	665	482	179	188	68	45
22	73	115	153	298	2,650	793	793	838	161	161	63	45
23	73	129	161	298	2,040	793	793	2,260	161	161	58	45
24	73	137	170	286	1,820	793	707	2,700	161	153	58	45
25	73	161	405	274	1,680	749	665	2,600	145	153	58	49
26	73	322	686	250	1,620	749	584	1,860	145	145	58	49
27	73	298	771	228	2,210	707	550	1,320	145	145	58	49
28	73	274	686	218	2,380	665	516	983	145	145	58	49
29	78	250	499	208	-	584	482	838	145	145	53	53
30	78	228	405	188	-	584	482	707	145	129	53	58
31	78	-	376	188	-	550	-	665	-	122	53	-
Total	2,311	4,275	8,669	13,135	42,281	33,103	20,188	25,311	8,497	9,010	2,659	1,403
Mean	74.5	143	280	424	1,510	1,070	673	816	283	291	85.8	46.8
Ac-ft	4,580	8,510	17,200	26,100	83,900	65,800	40,000	50,200	16,800	17,900	5,280	2,780

Calendar year 1901: Max 8,820 Min 45 Mean 898 Ac-ft 650,000
Water year 1901-2: Max 4,150 Min 41 Mean 468 Ac-ft 339,000

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	58	63	179	1,040	2,080	1,300	4,820	1,720	828	110	41	25
2	58	73	188	1,070	1,640	1,230	4,600	1,470	782	103	41	25
3	63	73	665	2,380	1,440	1,230	4,060	1,330	782	103	41	25
4	68	73	550	9,610	1,230	1,100	3,030	1,260	738	103	41	28
5	68	73	516	9,640	1,170	985	2,240	1,170	738	103	41	36
6	68	73	933	10,100	1,100	985	1,930	1,140	649	110	36	36
7	68	90	665	7,280	1,170	928	1,780	1,170	608	110	36	32
8	63	90	567	4,500	1,170	928	1,720	1,170	570	110	36	32
9	63	108	482	3,420	1,230	928	1,580	1,170	534	103	32	32
10	58	129	1,710	2,840	1,360	875	1,860	1,140	517	103	32	32
11	58	335	1,930	2,480	1,230	828	1,860	1,020	534	96	32	32
12	58	420	1,640	1,780	1,230	928	1,780	985	457	96	32	32
13	58	310	1,510	1,640	875	1,640	1,720	928	457	89	28	32
14	63	262	749	1,580	828	1,720	1,500	900	444	89	28	32
15	63	218	665	1,440	738	1,680	1,360	828	444	89	28	32
16	63	198	550	1,230	692	1,500	1,360	828	430	82	28	32
17	63	179	420	985	738	1,500	1,360	828	418	82	28	32
18	63	179	286	828	760	1,470	1,360	828	405	82	28	46
19	63	286	286	570	760	1,440	1,440	900	368	76	28	46
20	63	450	310	570	760	1,360	1,680	1,640	368	76	28	41
21	63	435	310	608	875	1,360	2,040	1,860	331	69	28	41
22	63	376	310	2,240	1,040	1,300	1,960	1,500	319	69	25	36
23	63	310	310	2,160	1,170	1,360	2,000	1,400	319	63	25	36
24	63	286	310	2,320	1,230	1,360	2,080	1,170	283	63	25	32
25	63	218	310	3,420	1,230	1,440	2,360	1,040	271	57	25	32
26	63	218	450	6,680	1,300	1,640	2,160	928	236	57	25	36
27	68	198	1,320	7,460	1,360	2,000	1,960	828	205	57	25	36
28	73	198	1,200	5,290	1,300	2,320	1,960	782	186	52	25	36
29	68	198	1,040	3,220	-	2,580	1,960	805	158	46	25	32
30	63	198	933	2,660	-	3,320	1,960	828	133	46	25	32
31	63	-	838	2,320	-	5,170	-	828	-	46	25	-
Total	1,963	6,317	22,132	103,361	31,706	48,405	63,480	34,394	13,512	2,540	943	1,009
Mean	63.3	211	714	3,330	1,130	1,560	2,120	1,110	450	81.9	30.4	33.6
Ac-ft	3,890	12,600	43,900	205,000	62,800	95,900	126,000	68,200	26,800	5,040	1,870	2,000

Calendar year 1902: Max 4,150 Min 41 Mean 510 Ac-ft 369,000
Water year 1902-3: Max 10,100 Min 25 Mean 903 Ac-ft 654,000

Palouse River at Hooper, Wash.--Continued

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	32	46	158	176	307	1,890	4,000	1,750	259	96	36	17
2	32	46	158	176	283	1,820	3,270	1,680	259	110	36	17
3	32	46	186	158	295	1,365	2,935	1,330	283	103	36	17
4	32	46	271	158	295	1,265	3,025	1,167	367	110	36	17
5	32	46	307	176	319	1,265	3,370	1,075	457	110	36	17
6	36	46	236	176	380	1,435	3,270	927	405	158	32	17
7	36	46	195	167	417	2,240	3,370	900	367	110	32	17
8	36	46	176	158	380	5,710	3,470	850	430	96	28	17
9	36	46	176	167	355	16,430	3,120	805	471	96	28	15
10	36	46	176	185	319	13,440	2,710	737	417	133	28	15
11	36	52	167	271	331	10,080	2,845	670	367	103	25	15
12	69	57	133	205	430	7,200	3,370	692	331	89	25	15
13	57	69	133	307	405	5,110	4,770	692	307	75	25	15
14	52	125	133	551	405	4,220	5,170	670	271	69	25	15
15	76	141	133	649	430	4,110	5,350	551	259	69	25	17
16	69	125	167	1,075	649	4,275	5,590	534	236	82	25	17
17	63	158	176	900	760	4,055	5,950	517	215	75	22	17
18	63	133	319	1,015	1,075	3,725	6,470	501	195	75	22	17
19	63	110	271	875	985	4,110	4,110	486	185	75	22	17
20	52	118	259	649	985	4,220	3,025	471	176	63	19	17
21	52	110	236	517	850	4,110	2,935	471	167	63	19	19
22	57	110	319	457	827	4,715	2,890	457	158	63	19	19
23	63	176	331	457	955	3,870	2,800	430	158	63	19	19
24	63	186	405	486	1,965	3,320	2,530	405	141	51	19	19
25	52	259	380	443	1,927	2,710	2,200	380	141	51	19	19
26	41	226	307	392	2,120	2,665	1,750	355	133	46	17	19
27	46	195	259	355	2,240	2,240	1,505	355	125	46	17	19
28	46	176	236	343	2,440	2,160	1,400	331	125	41	17	19
29	46	158	236	355	2,200	2,485	1,575	307	141	41	17	19
30	52	158	226	343	-	2,755	1,750	271	117	41	17	19
31	52	-	195	331	-	4,660	-	259	-	41	17	-
Total	1,510	3,302	7,060	12,673	25,329	133,455	100,525	21,026	7,663	2,444	760	518
Mean	48.7	110	228	409	873	4,300	3,350	678	255	78.8	24.5	17.3
Ac-ft	2,990	6,550	14,000	25,200	50,200	265,000	199,000	41,700	15,200	4,840	1,510	1,030

Calendar year 1903: Max 10,100 Min 25 Mean 852 Ac-ft 617,000
Water year 1903-4: Max 16,430 Min 15 Mean 864 Ac-ft 627,000

Rating table, water year 1952-53, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.4	19	4.5	157	6.0	660	9.0	3,400
3.7	42	5.0	275	7.0	1,290	11.0	6,920
4.0	73	5.5	440	8.0	2,180		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	58	62	125	2,750	1,830	1,170	1,390	695	169	41	38
2	37	59	84	129	2,990	1,570	1,050	1,400	610	163	*43	36
3	36	59	87	134	3,320	1,180	970	1,100	570	163	41	32
4	37	61	93	144	5,140	1,010	904	922	500	138	40	32
5	37	61	98	*163	4,730	976	844	802	460	134	40	34
6	38	60	138	169	4,400	868	802	715	433	127	49	32
7	40	59	151	167	3,500	802	790	675	460	120	46	32
8	40	59	120	173	3,110	760	820	680	484	112	44	32
9	40	61	115	442	2,550	*745	850	755	650	100	43	32
10	41	62	138	905	2,140	730	750	690	590	101	43	31
11	40	62	127	610	1,820	725	685	610	484	93	42	30
12	40	63	144	1,240	1,640	630	650	544	433	89	40	30
13	*44	69	144	1,430	1,440	922	*665	492	405	87	39	28
14	44	71	142	1,580	1,440	904	680	456	394	76	37	28
15	40	71	134	1,400	1,410	826	650	419	433	73	35	28
16	42	71	131	1,040	1,330	838	605	398	380	73	35	27
17	44	71	140	2,880	1,440	1,240	570	384	338	69	33	25
18	45	*69	125	4,090	1,710	1,420	556	374	305	65	*30	25
19	44	72	131	4,800	1,340	1,350	536	*363	284	62	28	25
20	45	69	136	*3,820	1,140	1,780	520	352	264	60	26	25
21	47	69	129	4,850	994	2,570	516	363	256	61	26	25
22	49	67	*129	3,580	940	2,360	556	416	248	60	26	25
23	48	b66	124	5,330	970	1,910	695	419	233	57	26	26
24	51	b66	127	4,350	990	1,730	808	484	221	54	28	25
25	52	b65	b113	3,370	922	1,710	910	492	*206	48	30	25
26	53	b64	b79	*2,840	862	1,700	844	1,830	236	51	31	28
27	54	b63	b88	2,150	868	1,620	772	1,270	228	49	32	32
28	55	b61	b93	1,820	922	1,510	796	1,300	177	48	35	32
29	56	b57	b98	2,210	-	1,380	1,180	1,060	148	48	40	*32
30	57	b58	b114	2,580	-	1,260	1,560	886	185	43	43	32
31	58	-	122	2,230	-	1,180	-	790	-	41	41	-
Total	1,391	1,923	3,656	60,751	56,808	40,036	23,704	22,831	11,288	2,634	1,133	884
Mean	44.9	64.1	118	1,960	2,029	1,291	790	736	376	85.0	36.5	29.5
Ac-ft	2,760	3,810	7,250	120,500	112,700	79,410	47,020	45,280	22,390	5,220	2,250	1,750

Calendar year 1952: Max 10,400 Min 36 Mean 779 Ac-ft 565,800
Water year 1952-53: Max 5,330 Min 25 Mean 622 Ac-ft 450,300

Peak discharge (base, 3,700 cfs).--Jan. 19 (2 p.m.) 5,640 cfs (10.38 ft); Jan. 23 (1:30 p.m.) 6,920 cfs (11.00 ft); Feb. 4 (5 p.m.) 5,610 cfs (10.38 ft).

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

Cow Creek at Hooper, Wash.

Location.--Lat 46°45'57", long. 118°08'45", in NW¼ sec. 26, T. 15 N., R. 37 E., on left bank at downstream side of highway bridge, half a mile upstream from mouth, and half a mile north of Hooper.
Drainage area.--670 sq mi, approximately.
Records available.--February 1951 to December 1953 (discontinued).
Gage.--Water-stage recorder. Altitude of gage is 1,070 ft (from topographic map).
Extremes.--1952-53: Maximum discharge during water year, 79 cfs Apr. 13; maximum gage height, 2.83 ft Apr. 9; minimum discharge, 3 cfs Aug. 8 (gage height, 1.24 ft).
1953: Maximum discharge during period October to December, 14.5 cfs Nov. 23 (gage height, 1.77 ft); minimum, 4.9 cfs Oct. 1 (gage height, 1.39 ft).
1951-53: Maximum discharge, 966 cfs Feb. 5, 1952 (gage height, 6.62 ft), from rating curve extended above 350 cfs; no flow July 27 to Aug. 3, 1951, Sept. 29, 1952.
Remarks.--Records fair except those for periods of ice effect or doubtful or no gage-height record, which are poor. Probably some small diversions for domestic use. No regulation.
Revisions.--WSP 1247: Drainage area.

Rating table, Oct. 1, 1952, to Dec. 7, 1953, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 12, 1952, to Apr. 26, 1953, Oct. 6 to Dec. 7, 1953)

1.2	2.3	2.0	33
1.4	6.3	2.5	72
1.6	12.5	3.0	127
1.8	21		

Discharge, in cubic feet per second, water year October 1952 to September 1953

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	7.5	b7.0	17	26	20	35	45	25	22	a5.8	14.5
2	3.8	7.5	b10	17	26	20	34	40	24	23	*5.4	14
3	4.7	7.8	12.5	17	27	20	34	27	22	24	4.5	13
4	5.2	8.6	13	16.5	26	20	35	27	20	25	4.7	13.5
5	4.9	8.9	15	*16.5	27	19.5	41	23	30	26	4.5	13.5
6	4.9	8.9	15.5	17.5	27	19	49	17	31	25	4.5	13.5
7	5.6	7.8	17.5	19	27	18.5	54	11	31	23	3.5	14.5
8	5.4	7.8	17	21	26	18.5	66	12	30	22	5.6	14
9	5.2	8.0	17.5	24	26	*19	71	14.5	28	23	5.4	13
10	6.1	8.6	20	24	26	18.5	72	15.5	26	23	5.8	11
11	7.2	8.9	19	24	26	18.5	76	16.5	24	23	5.6	8.9
12	6.9	9.3	19	24	26	17	77	17.5	22	25	6.1	9.2
13	*6.9	9.9	18	24	26	15	*79	15.5	22	24	6.6	8.9
14	7.2	11	17.5	23	26	15.5	77	17.5	17	19.5	6.9	10.5
15	7.5	9.5	15.5	22	26	15.5	76	17	14	15.5	7.2	11
16	7.5	9.2	15	23	26	18	67	15.5	11	13.5	9.9	8.0
17	7.8	9.5	13.5	26	26	18.5	53	17.5	11.5	13	9.2	7.8
18	7.2	*9.9	13.5	28	25	18.5	46	17	10.5	12.5	*7.2	8.6
19	7.5	10.5	13	29	24	19.5	40	*15.5	12	12.5	5.6	8.3
20	7.2	10.5	14	*30	23	18.5	42	14.5	12	9.9	6.6	7.8
21	7.5	10	14.5	30	23	18	58	16.5	13.5	d9.2	8.0	7.8
22	7.5	7.8	*14.5	30	23	18	55	19.5	14.5	d7.8	7.5	5.8
23	7.5	9.9	27	30	23	18.5	58	18	14.5	d7.5	8.9	5.8
24	6.3	11	23	30	20	23	58	18.5	13.5	d7.2	10.5	5.6
25	7.2	9.9	19.5	30	18.5	28	56	21	*12	d16	12	5.8
26	7.2	b6.2	19.5	29	21	51	56	21	11	d11	14	5.6
27	7.5	b6.2	19	27	21	33	57	22	11.5	d11	14	5.8
28	7.5	b6.2	18.5	28	21	34	58	22	12	d7.2	13.5	6.3
29	7.8	b6.2	19.5	27	-	36	52	23	13.5	a6.8	13.5	*6.9
30	7.8	b6.4	19	27	-	35	49	26	17.5	a6.5	14.5	5.6
31	7.5	-	18	26	-	36	-	25	-	a6.0	14.5	-
Total	203.5	259.4	515.0	756.5	688.5	678	1,681	628.5	556.5	500.6	251.5	284.5
Mean	6.56	8.65	16.6	24.4	24.6	21.9	56.0	20.3	18.6	16.1	8.11	9.48
Ac-ft	404	515	1,020	1,500	1,370	1,340	3,330	1,250	1,100	993	499	564

Calendar year 1952: Max 744 Min 0.4 Mean 46.9 Ac-ft 34,030
Water year 1952-53: Max 79 Min 3.5 Mean 19.2 Ac-ft 13,880

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

Discharge, in cubic feet per second, 1953

Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.	Day	Oct.	Nov.	Dec.
1	5.4	8.9	12.5	11	9.5	8.0	-	21	7.5	10.5	-
2	5.8	9.2	13	12	9.5	8.3	-	22	8.3	12.5	-
3	6.3	9.2	12.5	13	8.3	8.9	-	23	8.6	14	-
4	6.6	9.2	13.5	14	7.8	9.5	-	24	9.2	13.5	-
5	6.9	9.2	13.5	15	7.8	9.9	-	25	9.5	13	-
6	8.6	9.2	13.5	16	7.2	11	-	26	8.9	12.5	-
7	10	8.9	*13.5	17	6.6	13	-	27	8.9	13.5	-
8	11	*8.6	-	18	6.6	12.5	-	28	9.2	13	-
9	10.5	8.0	-	19	7.5	11	-	29	9.2	13	-
10	8.6	8.0	-	20	7.5	11	-	30	8.9	13	-
								31	8.9	-	-
Total									255.1	320.0	-
Mean									8.23	10.7	-
Acre-feet									506	635	-

* Discharge measurement made on this day.

Measurements of streamflow in the Snake River basin made at points other than gaging stations are given in the following table. Determinations of peak flow at points other than gaging stations are given in a separate table on page 250.

Miscellaneous discharge measurements in Snake River basin during water year October 1952 to September 1953

Henrys Fork basin, Idaho

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
May 27	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	80
June 8	....do.....	....do.....	....do.....	155
July 21	....do.....	....do.....	....do.....	112
Aug. 13	....do.....	....do.....	....do.....	82
18	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.	30.1
26	....do.....	....do.....	....do.....	24.4

Tributaries between Portneuf River and Salmon Falls Creek, Idaho

Apr. 6	Devils Corral Spring (upper outlet).	Snake River.....	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.	41.8
8	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.	8.15
8	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.	2.56
6	....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.	4.48
7	....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.	1.44
7	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.	*238
7	Sunnybrook Spring.	....do.....	SE¼SE¼ sec. 19, T. 9 S., R. 17 E., 3/8 mile above point of entry to river.	*14.2
8	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.	3.24
7, 9	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.	487
9	Niagara Springs...	....do.....	E. ½NE¼ sec. 10, T. 9 S., R. 15 E., 4½ miles above Devils Washboard Falls and 6 miles northeast of Buhl.	*309
9	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.	*541
13	Briggs Creek.....	....do.....	NW¼SE¼ sec. 4, T. 9 S., R. 14 E., 2 miles below Clear Lakes Outlet and 5½ miles northwest of Buhl.	*110
13	Banbury Springs...	....do.....	SE¼NW¼ sec. 33, T. 8 S., R. 14 E., at footbridge over outlet to Snake River, 7 miles northwest of Buhl.	*127
13	Unnamed spring....	....do.....	SE¼SW¼ sec. 28, T. 8 S., R. 14 E., on east side of Snake River, 0.35 mile above Blind Canyon Spring and 7 miles northwest of Buhl.	4.96
13	Blind Canyon Spring.	....do.....	NE¼SW¼ sec. 28, T. 8 S., R. 14 E., just upstream from Box Canyon and 7½ miles northwest of Buhl.	*13.1
Sept.26	Deep Creek.....	....do.....	SW¼ sec. 20, T. 9 S., R. 14 E., 125 ft below U. S. Highway 30 and 4½ miles northwest of Buhl.	172

* Discharge represents actual net spring flow adjusted for diversions and surface flow.

Salmon Falls Creek basin, Idaho

Sept.26	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.	9.60
26	....do.....	....do.....	SE¼ sec. 19, T. 11 S., R. 14 E., at Roseworth Crossing, 5 miles south of Castleford.	11.3
2	....do.....	....do.....	NE¼ sec. 19, T. 10 S., R. 13 E., at Castleford Crossing, 4½ miles northwest of Castleford.	41.8
26	....do.....	....do.....	NE¼ sec. 19, T. 10 S., R. 13 E., at Castleford Crossing, 4½ miles northwest of Castleford.	37.8
Aug. 8	....do.....	....do.....	On line between secs. 19 and 30, T. 8 S., R. 14 E., 125 ft above U. S. Highway 30, 9 miles northwest of Buhl.	163
Sept.26	....do.....	....do.....	....do.....	189

Miscellaneous dicharge measurements in Snake River basin during water year October 1952 to September 1953--Continued

Big Lost River basin, Idaho

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
July 15	Zollinger ditch...	Big Lost River....	Sec. 32, T. 8 N., R. 23 E., 500 ft east of gaging station on Big Lost River (east channel) above Mackay Reservoir, 3 miles upstream from Mackay Dam, and 7½ miles northwest of Mackay.	3.66

Tributaries and diversions between Salmon Falls Creek and Malad River, Idaho

Apr. 10	Thousand Springs..	Snake River.....	Springs enter Snake River between mile 154.05 on river profile near line between secs. 17 and 20, T. 8 S., R. 14 E., and mile 151.15 on river profile about 200 ft upstream from line between sec. 1, T. 8 S., R. 13 E., and sec. 6, T. 8 S., R. 14 E.	†968
11	Riley Creek.....	....do.....	SW¼NE¼ sec. 6, T. 8 S., R. 14 E., at Hagerman Hatchery of U. S. Fish and Wildlife Service, 100 yards below mouth of Lewis Creek, 100 ft below small unnamed spring entering from right, and 5 miles southeast of Hagerman.	*64.5
11	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.	*51.2
11	Birch Creek.....	....do.....	SE¼SE¼ sec. 34, T. 6 S., R. 13 E., on Bud Smith property, ¼ mile south of Malad River and 2½ miles north of Hagerman.	*10.6

* Discharge represents actual net spring flow adjusted for diversions and surface flow.
† Discharge obtained by measuring Snake River above and below spring outlets and adjusting for surface flow.

Malad River basin, Idaho

Apr. 14	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.	*1,230

* Discharge represents actual new spring flow adjusted for diversions and surface flow.

Bruneau River basin, Idaho

May 28	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.	43.2
June 8	....do.....	....do.....	....do.....	117
12	....do.....	....do.....	....do.....	88.1
23	....do.....	....do.....	....do.....	46.1
July 10	....do.....	....do.....	....do.....	10.8
27	....do.....	....do.....	....do.....	5.22
Aug. 25	....do.....	....do.....	....do.....	4.60
Sept. 3	....do.....	....do.....	....do.....	5.13
29	....do.....	....do.....	....do.....	4.20
June 23	....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).	47.7
July 10	....do.....	....do.....	....do.....	12.4
27	....do.....	....do.....	....do.....	4.16
Aug. 25	....do.....	....do.....	....do.....	3.58
Sept. 29	....do.....	....do.....	....do.....	3.22

Owyhee River basin, Oreg.

Oct. 15	Crooked Creek.....	Owyhee River.....	Sec. 6, T. 32 S., R. 41 E., at former gaging station near Rome.	22.0
Dec. 7	....do.....	....do.....	....do.....	25.6
Mar. 5	....do.....	....do.....	....do.....	24.8
June 11	....do.....	....do.....	....do.....	24.8
July 10	....do.....	....do.....	....do.....	22.8

Boise River basin, Idaho

Oct. 17	Boise River.....	Snake River.....	NW¼ sec. 11, T. 2 N., R. 3 E., ½ mile below diversion tunnel for Lucky Peak Dam and 8 miles below Moore Creek.	94.1
Nov. 26	....do.....	....do.....	....do.....	34.7
Jan. 6	....do.....	....do.....	....do.....	105
Feb. 2	....do.....	....do.....	....do.....	308
19	....do.....	....do.....	....do.....	1,290
Mar. 18	....do.....	....do.....	....do.....	2,290
Apr. 25	....do.....	....do.....	....do.....	4,970
May 23	....do.....	....do.....	....do.....	6,630
June 20	....do.....	....do.....	....do.....	11,500
July 15	....do.....	....do.....	....do.....	5,140
Aug. 21	....do.....	....do.....	....do.....	4,170
Sept. 17	....do.....	....do.....	....do.....	3,570

Malheur River basin, Oreg.

Dec. 3	Warm Springs Creek	North Fork Malheur River.	Sec. 1 or 2, T. 19 S., R. 37 E., 2½ miles northeast of Beulah.	5.40
Mar. 3	....do.....	....do.....	....do.....	10.2

Miscellaneous discharge measurements in Snake River basin during water year October 1952 to September 1953--Continued

Burnt River basin, Oreg.

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
Oct. 8	North Fork Burnt River.	Burnt River.....	Sec. 3, T. 11 S., R. 36 E., at road bridge, 9 miles southwest of Sumpter.	a0.8

a Estimated.

Powder River basin, Oreg.

Aug. 16	Eagle Creek.....	Powder River.....	Sec. 20, T. 8 S., R. 45 E., 4 miles northwest of Newbridge.	247

Grande Ronde River basin, Oreg.

Oct. 13	Grande Ronde River	Snake River.....	Sec. 36, T. 3 S., R. 35 E., above Meadow Creek, 2 miles northeast of Starkey.	10.9
Aug. 13	....do.....	....do.....	....do.....	21.0
Oct. 13	Meadow Creek.....	Grande Ronde River	Sec. 36, T. 3 S., R. 35 E., 0.3 mile above mouth.	4.56
Mar. 24	Little Creek.....	Catherine Creek...	SE¼ sec. 14, T. 4 S., R. 40 E., 4 miles east of Union.	11.0
Aug. 19	Lookingglass Creek	....do.....	Mouth, 4 miles west of Rondowa.	68.5
7	Minam River.....	Wallowa River.....	Mouth, at Minam.	373

Clearwater River basin, Idaho

Apr. 30	Jim Ford Creek....	Clearwater River..	NE¼ sec. 28, T. 36 N., R. 2 E., 800 ft above road bridge near mouth and 3½ miles southeast of Orofino.	279
30	Orofino Creek.....	....do.....	SW¼ sec. 11, T. 36 N., R. 2 E., at road bridge 1¼ miles above Whiskey Creek and 3½ miles east of Orofino.	667

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 1952 to September 1953

Date	Stream	Tributary to	Locality	Discharge (cfs)
May 29	Little Creek.....	Catherine Creek...	SE¼ sec. 14, T. 4 S., R. 40 E., 4 miles east of Union, Oreg.	238
June 3	....do.....	....do.....	....do.....	115
Mar. 24	Phillips Creek....	Grande Ronde River	SE¼NW¼ sec. 16, T. 1 N., R. 39 E., 1 mile west of Elgin.	337

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