Surface Water Supply of the United States 1951

Part 10. The Great Basin

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

GEOLOGICAL SURVEY WATER SUPPLY PAPER 1214

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

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1953

UNITED STATES DEPARTMENT OF THE INTERIOR

Douglas McKay, *Secretary*

GEOLOGICAL SURVEY

W. E. Wrather, *Director*

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price 70 cents (paper cover)

PREFACE

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

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SURFACE WATER SUPPLY OF THE GREAT BASIN, 1951

SCOPE OF WORK

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

COOPERATION

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

California: State Department of Public Works, C. H. Purcell, director, succeeded by F. B. Durkee and A. D. Edmonston, State engineer; San Bernardino County.

Idaho: State Department of Reclamation, M. R. Kulp, State reclamation engineer.

Nevada: Office of State Engineer, A. M. Smith, succeeded by H. A. Shamberger.

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

Utah: Office of State Engineer, J. M. Tracy; Utah Water & Power Board, W. R. Wallace, chairman.

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

Work in the Bear River basin (exclusive of Malad Valley) was done under cooperative agreements with the State Department of Reclamation of Idaho, the Office of State Engineer of Utah, the Office of State Engineer of Wyoming, and the Bureau of Reclamation of the United States Department of the Interior.

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 three gaging stations in Utah, two in California, and five in Nevada.

Assistance was also furnished by Fish and Wildlife Service and the Bureau of Reclamation of the United States Department of the Interior.

The following organizations aided in collecting records:

California: Walker River Irrigation District.

Idaho: Bureau of Reclamation of the United States Department of the Interior; Utah Power & Light Co.

Oregon: Fish and Wildlife Service of the United States Department of the Interior; Harney and Lake Counties.

Utah: Bureau of Reclamation of the United States Department of the Interior; Utah Power & Light Co.

DIVISION OF WORK

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

State	District office	Address
California a/	San Francisco	541 Federal Office Building.
Idaho b/	Boise	429 Federal Building.
Nevada	Salt Lake City, Utah	300 Federal Building.
Oregon c/	Portland	606 Post Office Building.
Utah d/	Salt Lake City	300 Federal Building.
Wyoming	Denver, Colo.	Federal Center.

a/ Except for stations in Walker Lake, Carson River, and Truckee River basins.
b/ Except for stations in Bear River basin operated in connection with Federal Power Commission projects.
c/ The work in Oregon was done in collaboration with C. E. Stricklin, State engineer.
d/ Including stations in Walker Lake, Carson River, and Truckee River basins and stations in the Bear River basin in Idaho operated in connection with Federal Power Commission projects.

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

DEFINITION OF TERMS AND ABBREVIATIONS

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

Cubic foot per second (cfs) is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

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

Runoff, in inches is the depth to which an area would be covered if all the water draining from it in a given period were uniformly distributed on its surface. The term is used for comparing runoff with rainfall, which is also usually expressed in inches.

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

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

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

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

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

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

NEW DOWNSTREAM ORDER OF LISTING GAGING STATIONS

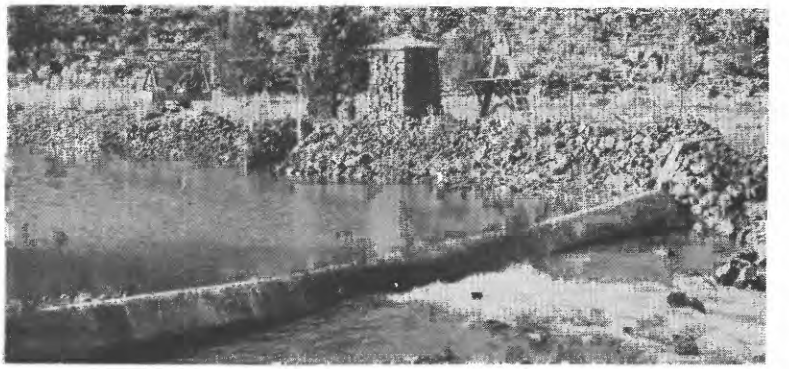
Beginning with the series of reports for the water year ending September 30, 1951, the order of listing gaging-station records has been changed. In this report, in a downstream direction along the main stem all stations on a tributary entering above a main-stem station are listed before that station.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

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

EXPLANATION OF DATA

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

Rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, computation of flow over dams or weirs, and by other methods), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying



A. DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OREG.

B. SEVIER RIVER NEAR JUAB, UTAH.

C. BEAVER RIVER NEAR BEAVER, UTAH.

FIGURE 1.—GAGING-STATION STRUCTURES.

the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is essentially the shifting-control method.

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

At most gaging stations in the northern part of the United States and at some in the mountainous regions of other parts the stage-discharge relation is affected by ice during the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for other stations in the same or nearby basins. If the stage-discharge relation is affected by ice, this information is given in a note to the table. No mention is made of occasional days of ice effect if the degree of accuracy of daily records is not changed.

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

The description of the station gives the location, drainage area, records available, type and history of gages, average discharge, extremes of discharge, general remarks, and notations of revisions of the previously published record. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "Location" for some stations, is that determined and used by the Corps of Engineers unless otherwise noted. Under "Gage" are given the type of gage currently in use and the datum of the present gage above mean sea level, and a condensed history of the types of gages, locations, and datums of previous gages for which discharge records are generally equivalent to those at the present site. Under "Average discharge" is given the average discharge for the number of years indicated. It is not given for stations having fewer than five complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height (unless it is of no importance). Unless otherwise qualified, the maximum discharge corresponds to the crest-stage obtained by use of a water-stage recorder, a crest-stage indicator, or a 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 report number, "W" means water-supply paper. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge are concerned in the revision, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff, in inches, are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff, in inches, resulting from a revision of the drainage area only are usually not published in the annual series of reports.

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

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

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

In the monthly summary below the daily table, the line headed "Total" gives the sum of the daily values; it is the total cfs-days for the month. The line headed "Mean" gives the average flow in cubic feet per second during the month. Runoff for the month may be expressed in cubic feet per second per square mile (line headed "Cfsm"), or in inches (line headed "In."), or in acre-feet (line headed "Ac-ft"). Values for cubic feet per second per

square mile and runoff, in inches, are omitted if the drainage area includes large noncontributing areas, or if the average annual rainfall over the drainage basin is usually less than 20 inches.

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

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

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

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

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

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

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

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

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

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.	
11th A, pt. 2	Monthly discharge and descriptive information.....	1884 to September 1890.
12th A, pt. 2	....do.....	1884 to June 30, 1891.
13th A, pt. 3	....do.....	1884-92.
14th A, pt. 2	Monthly discharge.....	1888-93.
B 131.....	Descriptions, measurements, gage heights, and ratings.....	1893-94.
16th A, pt. 2	Descriptive information only.	
B 140.....	Descriptions, measurements, gage heights, ratings, and monthly discharge.	1895.

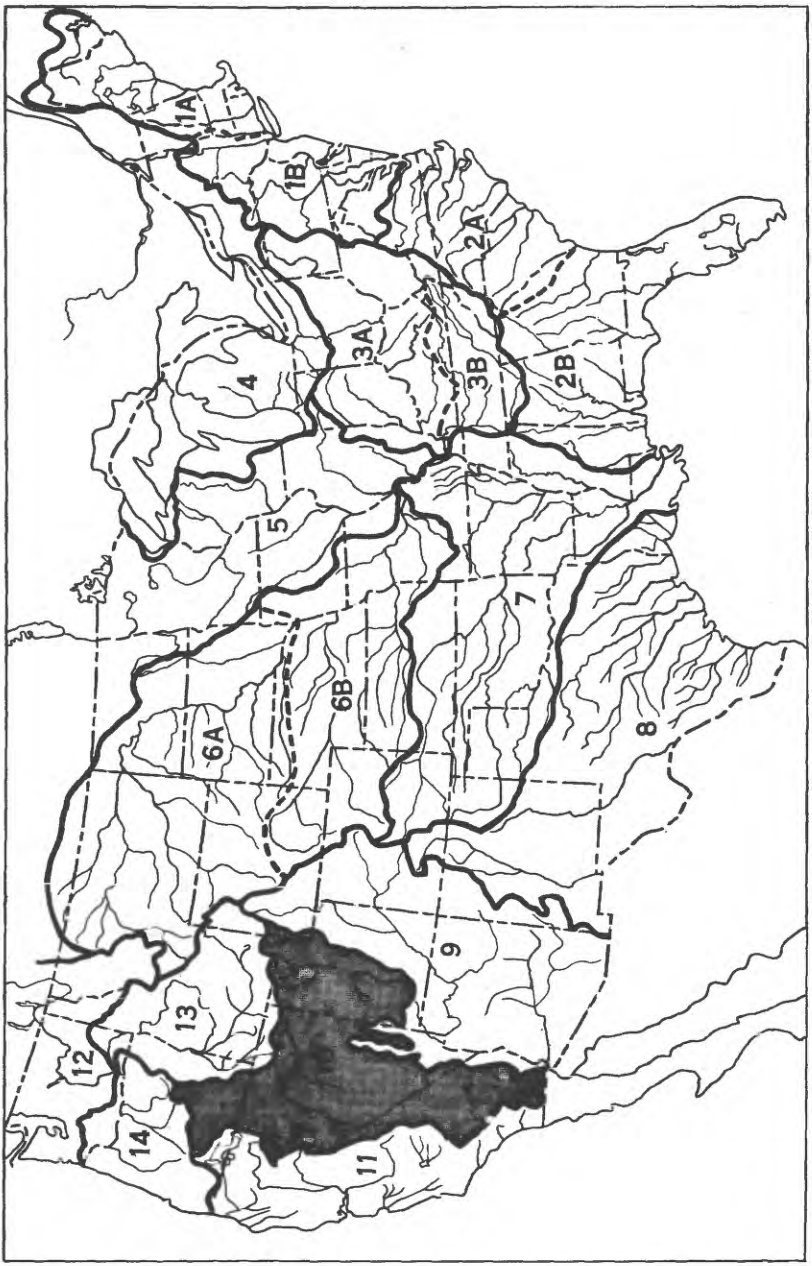


Figure 2.--Map of the United States showing areas covered by the 18 annual volumes on surface water supply. The shaded portion represents the area covered by this volume.

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

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

Report	Character of data	Year
W 11.....	Gage heights.....	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge..	1895-96.
W 15.....	Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights of stream west of the Mississippi River, except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge.	1897.
W 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.
W 28.....	Measurements, ratings, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries.	1898.
20th A, pt. 4	Monthly discharge.....	1898.
W 35 to 39...	Descriptions, measurements, gage heights, and ratings.....	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52...	Descriptions, measurements, gage heights, and ratings.....	1900.
22d A, pt. 4.	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.....	1901.
W 75.....	Monthly discharge.....	1901.

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

Numbers of water-supply papers containing results of stream measurements in the Great Basin, 1899-1951

Year	W.S.P.	Year	W.S.P.	Year	W.S.P.	Year	W.S.P.
1899.....	38, a39	1913.....	360	1927.....	650	1940.....	900
1900.....	51	1914.....	390	1928.....	670	1941.....	930
1901.....	66, 75	1915.....	410	1929.....	690	1942.....	960
1902.....	85	1916.....	440	1930.....	705	1943.....	980
1903.....	100	1917.....	460	1931.....	720	1944.....	1010
1904.....	133, b134	1918.....	480	1932.....	735	1945.....	1040
1905.....	176, b177	1919-20....	510	1933.....	750	1946.....	1060
1906.....	212, b213	1921.....	530	1934.....	765	1947.....	1090
1907-8.....	250, b251	1922.....	550	1935.....	790	1948.....	1120
1909.....	270, b271	1923.....	570	1936.....	810	1949.....	1150
1910.....	290	1924.....	590	1937.....	830	1950.....	1180
1911.....	310	1925.....	610	1938.....	860	1951.....	1214
1912.....	330	1926.....	630	1939.....	880		

a Mojave River only.
b The Great Basin in California, except Truckee and Carson River basins.

The records at most of the stations discussed in these reports extend over many years. Miscellaneous measurements at many points other than regular gaging stations have been made each year and are published under "Miscellaneous discharge measurements" at the end of each report. The streams and points of measurement are listed in the same order as the streams and gaging stations in the body of the report. An index of the records obtained before 1904 has been published in Water-Supply Paper 119.

Each of the reports on the surface-water supply for the year 1939 (Water-Supply Paper 880 for the Great 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 lists reports of this type for the Great Basin.

Reports containing compilations of discharge by States and drainage basins

Water-Supply Paper	Period	Report
300	1891-1912	Water resources of California, part 3, Stream measurements in the Great Basin and Pacific Coast river basins.
370	1878-1910	Surface water supply of Oregon.
517	1889-1920	Water powers of Great Salt Lake basin.
637-A	1895-1927	Surface water supply of minor San Francisco Bay, northern Pacific, and Great basins in California.
920	1889-1937	Utilization of surface water resources of Sevier Lake basin (Utah).

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 compilation 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.

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

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

Water-Supply Paper	Title
771.....	Floods in the United States, magnitude and frequency.
843.....	Floods of December 1937 in northern California.
844.....	Floods of March 1938 in southern California.
847.....	Maximum discharges at stream-measurement stations through September 1938.
994.....	Cloudburst flood in Utah, 1850 to 1938.

RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The table below contains a list of gaging stations for the area covered by this report, at which records of discharge were collected during the water year October 1950 to September 1951 by agencies other than the Geological Survey. The records of these stations are not contained in publications of the Geological Survey, nor have they been published elsewhere except as noted in footnotes to the table. Records for many canals and ditches and occasional records for several natural streams, none of which are here listed, have also been collected, and some of them have been published in the reports of irrigation projects or of the water commissioner of the drainage basin in which the streams are situated.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Collected by
City Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1951a	Salt Lake City.
Cottonwood Creek.	....do.....	1898-1951a	Do.
Donner Creek.....	Above Cold Creek, near Truckee, Calif.....	1929-51	Federal Court Watermaster for Truckee River.
Do.....	Below Cold Creek, near Truckee, Calif.....	1902-15, 1928-51b	Do.
Emigration Creek.	Salt Lake City, Utah, near mouth of canyon.	1898-1951a	Salt Lake City.
Ephraim Creek....	Near Ephraim, Utah.....	1914-51	Intermountain Forest & Range Experiment Station.
Little Cottonwood Creek.	Salt Lake City, Utah, near mouth of canyon.	1898-1951a	Salt Lake City.
Little Truckee River.	Above Boca Reservoir, near Boca, Calif.....	1942-51	Washoe County Water Conservation District.
Do.....	Below Boca Reservoir, near Boca, Calif.....	1942-51	Do.
Mill Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1951a	Salt Lake City.
Otter Creek Outlet.	Antimony, Utah, at former Geological Survey gaging station near Coyoto.	1920-51c	Sevier River water commissioner.
Parleys Creek....	Salt Lake City, Utah, near mouth of canyon.	1898-1951a	Salt Lake City.
Sevier River.....	Delta, Utah, at former Geological Survey gaging station.	1920-51c	Sevier River water commissioner.
Truckee River....	At Derby Dam, Nev.....	1907-10d, 1926-51	Federal Court Watermaster for Truckee River.
Do.....	At Farad, Calif.....	1938-51b	Truckee-Carson Irrigation District.
Do.....	At Pyramid Dam, Nev.....	1928-51	Federal Court Watermaster for Truckee River.
Do.....	At Tahoe, Calif.....	1895-96, 1900-51b	Federal Court Watermaster for Truckee River and Truckee-Carson Irrigation District.
Do.....	At Vista, Nev.....	1899-1907d, 1927-51	Federal Court Watermaster for Truckee River.
Walker River.....	Near Wabuska, Nev.....	1902-8d, 1920-34d, 1940-51	Walker River Irrigation District.
West Walker River	Near Hudson, Nev.....	1921-25d, 1941-51	Do.
Wildhorse Creek..	SE¼ sec. 34, T. 34 S., R. 33 E., in canyon above all diversions, 5½ miles north of Andrews, Oreg.	1950-51	Oregon State engineer.

a Records prior to 1913 are contained in water-supply papers published by the Geological Survey; those for 1913-30, in reports published by Salt Lake City.
b Records prior to 1944 published in water-supply papers by the Geological Survey.
c Published in the annual reports of Sevier River water commissioner.
d Published in water-supply papers by the Geological Survey.

HYDROLOGIC CONDITIONS

Streamflow during the 1951 water year was above normal in most of the Great Basin with exception of southwest Nevada and southern California where drought conditions prevailed. Floods in western Nevada and northwest California in November and December are described in Water-Supply Paper 1137-H, now in preparation. For two key stations in the area covered by this report, a comparison of the monthly and yearly mean discharge during the 1951 water year with the median discharge for the 25-year period 1921-45 is shown in figure 3 on page 13.

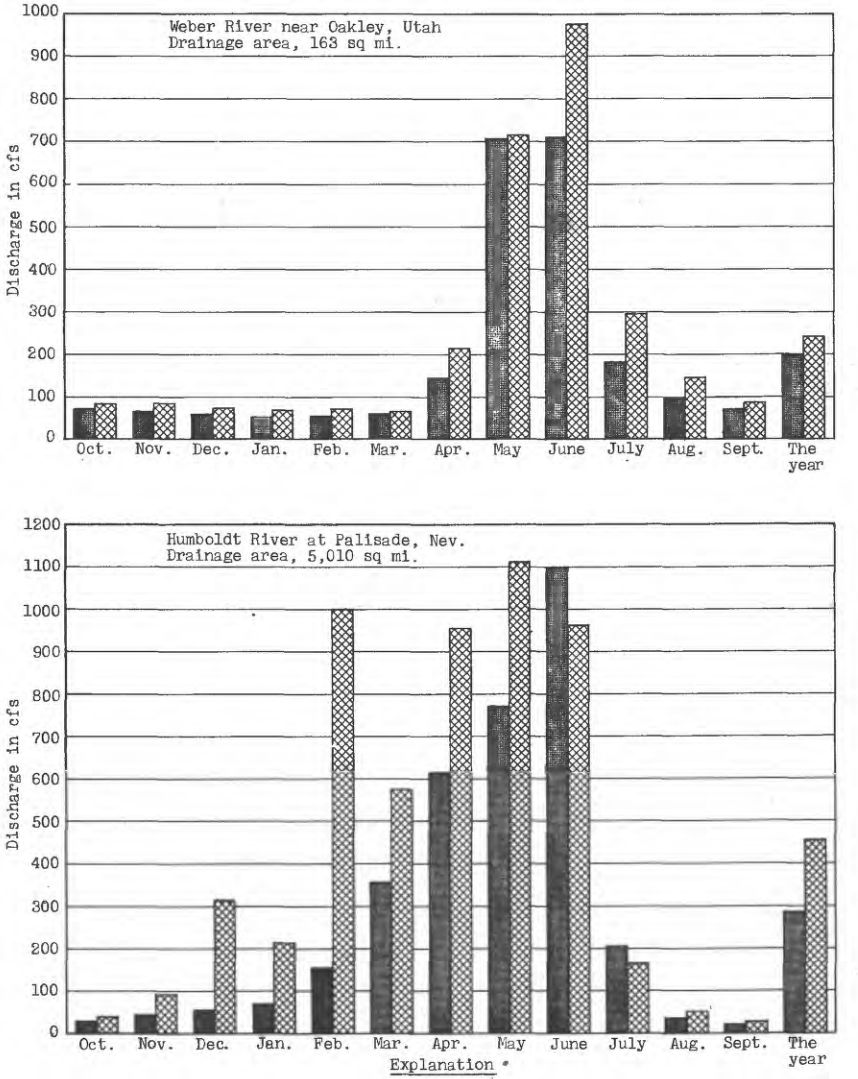

Figure 3.--Comparison of discharge at two key gaging stations during 1951 water year with median discharge for 25-year period.

GREAT SALT LAKE BASIN

Gages on Great Salt Lake, Utah

Location.--Lat 40°44'15", long. 112°12'30", in NW¼ sec. 17, T. 1 S., R. 3 W., at Salt Lake County Boat Harbor on southeast shore of lake, 17 miles west of Salt Lake City; and lat 41°13', long. 112°36', at Midlake, on Lucin cut-off of Southern Pacific Railroad, 30 miles west of Ogden.

Records available.--September 1875 to December 1899, March to July 1904, and October 1912 to September 1951 in reports of Geological Survey. July 1903 to December 1934 in reports of United States Weather Bureau. Diagram showing fluctuations of lake from 1851-1940 is published in Water-Supply Paper 880.

Gage.--Water-stage recorder at Boat Harbor since October 1938 at datum 4,186.9 ft above mean sea level, datum of 1929. Staff gage at Midlake since October 1902 at datum 4,198.1 ft above mean sea level, datum of 1929. Prior to October 1938, staff gages at sites and datums as follows: September 1875 to October 1877, at Black Rock at datum 4,208.4 ft above mean sea level, November 1877 to November 1879 at Farmington Bay at datum 4,206.9 ft above mean sea level, November 1879 to April 1881 near Black Rock at datum 4,203.1 ft above mean sea level, April 1881 to December 1899 at Garfield Landing at datum 4,198.5 ft above mean sea level, and July 1903 to October 1938 at Saltair at datum 4,196.9 ft above mean sea level.

Extremes.--Maximum elevation during year, 4,199.95 ft June 15, July 1 at Midlake gage; minimum, 4,197.55 ft Oct. 1, at Boat Harbor gage.
1851-1951: Maximum elevation, 4,211.6 ft in 1873, computed from traditional data by E. C. LaRue (see Water-Supply Paper 880, p. 125); minimum, 4,193.7 ft Oct. 15 and Nov. 1, 1940, at Boat Harbor gage and Oct. 15, 1940, at Midlake gage.

Remarks.--Apparent inconsistencies in readings are probably due largely to the effect of wind, as the two gages are about 40 miles apart. To compensate for wind effect, elevations given for the Boat Harbor gage are taken from a mean slope line defined by several days' gage-height graph preceding and following 12:01 a.m. for the first and fifteenth of each month. Wind effect may cause substantial changes in elevation which are not shown in the published elevations.

Cooperation.--Records for Midlake gage furnished by Southern Pacific Railroad.

Gage height, in feet, water year 1950-51

Day	Boat Harbor	Midlake
Oct. 1	10.65	-0.5
15	10.7	-.4
Nov. 1	10.7	-.4
15	10.7	-.4
Dec. 1	11.0	-.35
15	11.2	0.0
Jan. 1	11.4	+.15
15	11.45	.4
Feb. 1	11.6	.5
15	11.8	.6
Mar. 1	12.05	.85
15	12.2	1.0
Apr. 1	12.3	1.15
15	12.4	1.25
May 1	12.55	1.35
15	12.85	1.5
June 1	13.0	1.75
15	12.9	1.85
July 1	12.65	1.85
15	12.4	1.6
Aug. 1	12.25	1.25
15	12.1	1.0
Sept. 1	11.95	.85
15	11.75	.6

Hilliard-East Fork Canal near State line, near Evanston, Wyo.

Location.--Lat 40°55', long. 110°49', in NW¼ sec. 16, T. 2 N., R. 10 E., in Utah, on left bank 8 ft upstream from forest road bridge, three-quarters of a mile downstream from head, and 25 miles southeast of Evanston.

Records available.--October 1949 to September 1951 in reports of Geological Survey. April 1944 to September 1949 (irrigation season only) in Bear River Hydrometric Data reports.

Gage.--Water-stage recorder. Altitude of gage is about 8,500 ft (from topographic map).

Extremes.--Maximum daily discharge during year, 31 cfs July 7, 8; no flow Oct. 6 to Apr. 17, Apr. 22-24, Apr. 26 to May 26.
1949-51: Maximum daily discharge, that of July 7, 8, 1951; no flow during winter and at other times each year.

Remarks.--Records good. Canal diverts from East Fork Bear River for irrigation of lands in Hilliard Flat area, Wyoming.

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

0.3	0	1.2	8.8
.4	.7	1.7	15
.5	1.5	2.2	22
.8	4.5	2.8	32

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7						0	0	20	15	22	13
2	2.0						0	0	19	15	23	11
3	1.2						0	0	18	15	26	11
4	.6						0	0	18	15	30	11
5	.2						0	0	*17	23	29	10
6	0						0	0	17	30	29	9.6
7	0						0	0	18	31	*27	9.5
8	0						0	0	18	31	25	9.0
9	0						0	0	18	30	23	8.6
10	*0						0	*0	18	30	22	8.5
11	0						0	0	20	29	20	*8.1
12	0						0	0	26	*30	18	8.1
13	0						0	0	27	26	17	8.0
14	0						0	0	14	17	16	7.7
15	0						0	0	14	17	15	7.0
16	0						0	0	25	17	14	7.2
17	0						0	0	22	16	13	7.2
18	0						.3	0	19	22	13	6.9
19	0						.6	0	19	27	13	6.7
20	0						.6	0	*18	28	17	6.6
21	0						.2	0	18	30	18	6.6
22	0						0	0	17	28	18	6.6
23	0						0	*0	16	27	18	6.5
24	0						0	0	16	25	17	6.3
25	0						.1	0	16	25	14	6.0
26	0						0	0	16	26	13	5.8
27	0						0	12	16	26	13	5.7
28	0						0	27	16	25	12	5.2
29	0						0	22	16	25	13	4.1
30	0						0	*22	16	23	14	5.5
31	0						-	22	-	22	13	-
Total	6.7	0	0	0	0	0	1.8	105	548	746	573	233.0
Mean	0.22	0	0	0	0	0	0.06	3.39	18.3	24.1	18.5	7.77
Ac-ft	13	0	0	0	0	0	4	208	1,090	1,480	1,140	462

Calendar year 1950: Max 28 Min 0 Mean 4.92 Ac-ft 3,560
Water year 1950-51: Max 31 Min 0 Mean 6.07 Ac-ft 4,400

* Discharge measurement made on this day.

Bear River near Utah-Wyoming State line

Location.--Lat 40°58', long. 110°51', in SE¼ sec. 30, T. 3 N., R. 10 E., on left bank just downstream from West Fork and 2.8 miles upstream from Utah-Wyoming State line.

Drainage area.--176 sq mi.

Records available.--July 1942 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 7,965 ft (from river-profile map).

Average discharge.--9 years, 193 cfs.

Extremes.--Maximum discharge during year, 1,970 cfs May 27 (gage height, 4.08 ft); minimum, 16 cfs Apr. 11, but may have been less during periods of ice effect or no gage-height record.

1942-51: Maximum discharge, 2,200 cfs May 19, 1948 (gage height, 4.23 ft); minimum, that of Apr. 11, 1951, but may have been less during period of ice effect.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation of land in drainage basin below station.

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

1.1	23	2.2	400
1.3	49	2.7	750
1.5	92	3.3	1,240
1.8	194	3.8	1,680

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	53					34	131	1,030	705	163	75
2	62	64					38	124	774	698	174	70
3	68	55	a45	b45	a40		42	118	638	682	220	66
4	64	58					44	155	572	630	330	66
5	66	58					49	216	*544	579	341	62
6	64	60	*b45				49	272	572	523	253	58
7	64	*57	b55				53	292	608	496	*216	58
8	66	64	55	b40		b40	58	282	668	470	186	60
9	62	49	55				60	282	712	425	163	60
10	*62	40	58				62	330	630	406	145	60
11	62		57				49	438	579	388	131	*55
12	60		51				62	510	622	*359	118	55
13	58	a50	49	b45			78	413	712	309	104	55
14	57		55				101	353	898	282	92	49
15	57		53				109	325	1,110	262	85	44
16	57		53			a39	115	292	1,280	272	80	42
17	55				a45	a38	*141	314	1,290	272	73	40
18	53	a60	b53			a38	138	425	1,210	248	73	38
19	53					a37	141	490	1,170	229	73	38
20	53		49	b50	(*)	*37	145	630	*1,140	243	90	37
21	53					37	131	682	1,100	353	106	37
22	53					40	112	712	856	262	128	37
23	51	a80		(*)		b39	131	*847	806	220	115	37
24	53			a50		b38	155	932	806	203	115	36
25	53					b37	131	1,100	958	186	87	34
26	51		b50			37	138	1,280	940	212	80	32
27	55					38	138	1,490	890	234	73	32
28	58	a60		a40		b38	163	1,640	864	234	70	34
29	66				-	b38	171	1,660	838	229	73	38
30	64				-	38	141	1,480	766	194	85	34
31	62	-			-	36	-	1,310	-	167	75	-
Total	1,828	1,808	1,569	1,390	1,235	1,205	2,979	19,530	25,583	10,972	4,117	1,439
Mean	59.0	60.3	50.6	44.8	44.1	38.9	99.3	630	853	354	133	48.0
Ac-ft	3,630	3,590	3,110	2,760	2,450	2,390	5,910	38,740	50,740	21,760	8,170	2,850

Calendar year 1950: Max 1,610 Min - Mean 231 Ac-ft 167,000
Water year 1950-51: Max 1,660 Min - Mean 202 Ac-ft 146,100

Peak discharge (base, 1,100 cfs).--May 27 (11 p.m.) 1,970 cfs (4.08 ft); June 17 (1 a.m.) 1,540 cfs (3.85 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Mill Creek at Utah-Wyoming State line

Location.--Lat 40°59'30", long. 110°50'30", in W½ sec. 17, T. 3 N., R. 10 E., on right bank 2,000 ft upstream from State line and 19½ miles southeast of Evanston, Wyo.

Drainage area.--59 sq mi, approximately.

Records available.--October 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 7,860 ft (from river-profile map).

Extremes.--Maximum discharge during year, 483 cfs May 27 (gage height, 3.76 ft); minimum, 4.0 cfs Mar. 29, but may have been less during periods of ice effect or no gage-height record.

1949-51: Maximum discharge, 514 cfs May 30, 1950 (gage height, 3.87 ft); minimum, 2.5 cfs Mar. 16, 1950, but may have been less during periods of ice effect or no gage-height record.

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

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

0.6	6.1	1.6	86
.8	13	2.0	143
1.0	24	2.5	229
1.3	50	3.1	347

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	12	13				12	33	176	48	16	11
2	11	14	11				16	31	158	44	19	9.0
3	12	12		b9	b8		20	30	113	40	24	8.4
4	11	12					24	46	*99	37	39	8.4
5	10	12					24	74	105	32	39	8.1
			b10			b10						
6	11	12	(*)				24	94	110	29	25	7.6
7	12	12					25	87	110	26	*18	7.0
8	12	*14		b8	b10		26	80	113	24	16	6.7
9	11	12					26	74	119	22	14	6.7
10	*11	9.8					24	*85	102	20	12	6.7
11	11	12					23	120	98	*19	12	*6.7
12	10	11					26	126	105	18	11	7.0
13	10	11		b9		b9	34	91	116	16	10	7.0
14	10	11					46	76	134	16	9.4	6.7
15	10	12					46	71	148	15	6.7	6.4
			b11									
16	10	12					48	68	173	16	6.7	5.9
17	10	13					*52	67	178	16	6.7	6.1
18	10	13					46	98	162	15	7.0	6.4
19	10	14			(*)		48	112	138	15	7.6	6.4
20	10	15		b10	b11	*b10	53	149	*114	22	9.8	6.4
21	10	22					39	174	122	46	18	6.4
22	9.8	24	11				30	166	114	28	16	7.0
23	9.8	20	b11	(*)			39	*176	99	19	13	7.3
24	10	21	b11			b11	50	216	89	16	13	7.3
25	10	17	11			12	35	261	102	15	9.8	7.3
				b10								
26	9.8	16	11			13	38	289	87	17	9.0	7.6
27	11	17	11			14	39	323	76	22	8.7	7.3
28	12	18	11			13	50	333	69	24	8.7	7.6
29	15	19			-	12	56	323	61	24	9.0	8.1
30	13	13	b11	b8	-	12	39	*289	52	20	9.4	8.4
31	12	-			-	12	-	237	-	17	9.4	-
Total	336.4	432.8	337	282	288	324	1,058	4,399	3,422	738	432.9	218.9
Mean	10.9	14.4	10.9	9.1	10.3	10.5	35.2	142	114	23.8	14.0	7.30
Ac-ft	667	858	668	559	571	643	2,090	8,730	6,790	1,460	859	434

Calendar year 1950: Max 362 Min - Mean 43.0 Ac-ft 31,150
Water year 1950-51 : Max 333 Min - Mean 33.6 Ac-ft 24,330

Peak discharge (base, 250 cfs).--May 27 (11:30 p.m.) 483 cfs (3.76 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Bear River above Sulphur Creek, near Evanston, Wyo.

Location.--Lat 41°09', long. 110°53', in SW¼SE¼ sec. 31, T. 14 N., R. 119 W., on right bank 1¾ miles upstream from Myers bridge, 5.5 miles upstream from Sulphur Creek, and 9½ miles southeast of Evanston.

Drainage area.--282 sq mi.

Records available.--October 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 7,125 ft (from river-profile map).

Average discharge.--5 years, 219 cfs.

Extremes.--Maximum discharge during year, 2,030 cfs May 29 (gage height, 5.22 ft); minimum, 22 cfs Nov. 10.
1946-51: Maximum discharge, 2,120 cfs May 20, 1948; maximum gage height, 5.30 ft June 2, 1950; minimum, 5.5 cfs Sept 16, 1948.

Remarks.--Records good except those for periods of ice effect, which are fair. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas.

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

1.3	28	2.7	377
1.6	63	3.2	620
1.9	121	4.0	1,130
2.3	234	5.1	1,940

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	71	59	68				120	219	1,310	590	126	69
2	65	54	69				150	204	1,070	555	114	66
3	60	63	90	60	50		189	181	863	535	144	60
4	62	60	98				237	198	686	486	247	58
5	56	59	92				290	253	*620	450	353	53
6	58	58	*87				326	353	626	373	*276	50
7	63	56	92				304	385	638	322	231	48
8	66	*55	85	50			286	385	692	297	198	48
9	66	63	83				250	361	758	273	172	48
10	*63	40	94				210	385	668	250	155	*46
11	54	59	94			50	158	496	584	*237	126	44
12	48	71	85				167	608	584	207	107	46
13	46	60	77	55			195	520	602	169	103	44
14	46	66	74				222	459	782	134	90	45
15	46	62	88				219	411	937	114	85	42
16	51	76	76				204	*381	1,140	105	77	43
17	54	79	77		55		234	345	1,260	105	73	44
18	51	81	85	60			*216	463	1,190	116	68	38
19	53	67	92	(*)			213	520	1,120	107	66	35
20	53	92	77				250	746	*1,090	119	77	31
21	48	192	74		(*)	(*)	234	924	1,020	240	98	31
22	45	*147	85				181	*863	918	244	112	33
23	42	114	81	55		70	187	1,020	788	153	105	32
24	42	92	77				240	1,070	758	119	116	33
25	43	96	77				213	1,230	882	116	90	35
26	42	92	74				210	1,370	906	107	77	36
27	43	83	73				190	1,530	821	129	73	37
28	50	79					213	1,800	776	147	68	38
29	54	79		50	-	100	276	1,870	740	190	69	43
30	54	88	70		-		260	*1,730	662	169	71	43
31	55	-			-		-	1,590	-	139	68	-
Total	1,650	2,362	2,504	1,700	1,515	1,950	6,624	22,870	25,491	7,297	3,835	1,319
Mean	53.2	78.7	80.8	54.8	54.1	62.9	221	738	850	235	124	44.0
Ac-ft	3,270	4,680	4,970	3,370	3,000	3,870	13,140	45,360	50,560	14,470	7,610	2,620

Calendar year 1950: Max 1,840 Min 16 Mean 261 Ac-ft 189,200
Water year 1950-51: Max 1,870 Min - Mean 217 Ac-ft 156,900

Peak discharge (base, 1,100 cfs).--May 29 (12 m.) 2,030 cfs (5.22 ft); June 17 (9:30 a.m.) 1,400 cfs (4.39 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 28 to Apr. 1.

Sulphur Creek near Evanston, Wyo.

Location.--Lat 41°10', long. 110°52', in SE¼ sec. 29, T. 14 N., R. 119 W., on left bank 4.8 miles upstream from mouth and 9 miles southeast of Evanston.

Drainage area.--80.5 sq mi.

Records available.--April 1942 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 7,070 ft (from river-profile map). Prior to June 16, 1948, at datum 1.00 ft higher.

Average discharge.--9 years, 22.8 cfs.

Extremes.--Maximum discharge during year, 534 cfs Apr. 6 (gage height, 3.86 ft); minimum, 0.9 cfs Oct. 6, but may have been less during periods of ice effect.
1942-51: Maximum discharge, 1,070 cfs Apr. 21, 1948 (gage height, 4.01 ft, datum then in use); no flow Sept. 10, 1949.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Natural flow of stream affected by diversions for irrigation ard return flows from irrigated areas.

Revisions (water years).--W 1040: 1943-44.

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

0.6	0.5	1.6	36
.7	1.4	2.0	72
.9	4.6	2.4	125
1.1	9.5	2.9	220
1.3	18	3.2	298

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	3.6	5.2			7.5	53	49	92	22	20	5.8
2	1.3	3.8	5.2		b3.0	7.5	78	46	111	17	15	4.6
3	1.2	3.8	4.6	b3.5		7.2	121	30	92	14	20	4.2
4	1.1	3.8	6.0			7.2	159	*25	53	13	57	4.0
5	1.0	4.0	5.2			6.9	222	28	32	10	71	3.6
6	1.3	4.6	*6.0			7.5	276	40	22	8.3	*46	3.1
7	1.4	4.6	5.2		b7.0	9.2	247	48	24	8.0	26	2.9
8	1.3	*4.8	5.6	b3.0			213	38	22	7.5	17	2.3
9	1.3	4.6	8.0			a9.0	182	35	20	6.2	12	2.0
10	*1.2	3.8	12				*117	*32	21	6.2	7.8	*1.5
11	1.1	4.2	12				a110	36	20	*5.2	5.8	1.5
12	1.2	4.2	13		b10		a104	51	17	5.4	6.4	1.7
13	1.2	5.0	12	b3.5		a7.0	97	39	13	6.4	4.2	1.7
14	1.2	4.6	13				89	30	12	7.8	3.5	1.5
15	1.2	4.0	8.6		b8.0		64	30	12	6.6	3.5	1.4
16	1.4	4.0	8.3				48	*45	12	8.0	2.7	1.4
17	1.3	4.4	9.2				*52	33	15	10	2.0	1.3
18	1.2	5.8	8.0			a8.0	57	40	28	11	1.9	1.4
19	1.2	6.9	6.6	(*)	a8.0		55	51	a35	14	2.3	1.4
20	1.2	8.3	6.2		(*)	(*)	77	107	*a40	28	4.2	1.2
21	1.4	42	7.8		8.3	a10	73	155	46	174	4.8	1.3
22	1.8	19	7.2	b4.0	9.9	a13	46	*90	68	115	4.8	1.5
23	2.0	11	6.2		9.2	a15	37	82	51	55	5.0	1.8
24	2.2	8.6	5.8		9.9	a13	53	80	35	36	4.2	1.4
25	2.0	8.0	6.0		8.0	a15	48	73	37	26	5.8	1.4
26	2.0	7.2	6.4		7.5	*a19	*36	72	40	23	5.8	1.1
27	2.6	6.9	6.0		7.5	26	30	77	26	38	4.8	1.0
28	3.5	6.6	4.4		6.9	19	28	93	17	35	5.2	1.0
29	2.9	6.6	4.0		-	19	52	131	16	51	4.8	1.1
30	2.7	6.0	b4.0	b3.0	-	25	72	*72	20	35	5.4	1.1
31	3.1	-	b4.0		-	39	-	58	-	23	6.6	-
Total	50.9	214.7	221.7	110.0	212.2	368.0	2,896	1,816	1,049	825.6	385.1	61.2
Mean	1.64	7.16	7.15	3.55	7.58	11.9	96.5	58.6	35.0	26.6	12.4	2.04
Ac-ft	101	426	440	218	421	730	5,740	3,600	2,080	1,640	764	121

Calendar year 1950: Max 406 Min - Mean 35.0 Ac-ft 25,360
Water year 1950-51: Max 276 Min - Mean 22.5 Ac-ft 16,280

Peak discharge (base, 300 cfs).--Apr. 6 (9 p.m.) 534 cfs (3.86 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 2 discharge measurements, weather records, and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

Yellow Creek near Evanston, Wyo.

Location.--Lat 41°09', long. 111°03', in SW¼ sec. 21, T. 5 N., R. 8 E., in Utah, on left bank 600 ft downstream from Sage Creek, 1½ miles upstream from Coyote Creek, and 9¾ miles southwest of Evanston.

Drainage area.--80 sq mi, approximately.

Records available.--February 1943 to September 1945, October 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,920 ft (from river-profile map). Prior to September 1945, at site 500 ft upstream at different datum.

Extremes.--Maximum discharge during year, 126 cfs Apr. 8 (gage height, 5.16 ft); maximum gage height, 6.74 ft Mar. 29 (channel full of snow and ice); no flow Aug. 13 to Sept. 30. 1943-45, 1949-51: Maximum discharge, 303 cfs Apr. 20, 1945 (gage height, 7.52 ft, site and datum then in use); no flow at times.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	2.3	4.3				22	37	30	4.3	0.5	
2	1.3	2.4	4.0				30	32	37	3.8	.4	
3	1.2	2.4	3.6	2.0	2.0	5.0	40	28	37	3.6	.5	
4	1.2	2.3	4.3				50	*26	32	3.0	1.0	
5	1.2	2.3	4.3				68	27	26	2.6	1.8	
6	1.4	2.1	5.3				78	36	*24	2.1	*1.3	
7	1.6	2.3	*4.3		4.0		89	41	21	1.8	.5	
8	1.6	*2.4	4.3	1.5		6.0	101	42	20	1.6	.4	
9	*1.5	2.6	5.0				102	40	18	1.6	.4	
10	1.4	1.9	6.5				*91	40	18	1.4	.3	
11	1.4	1.9	6.2				52	*45	20	*1.3	.2	
12	1.4	2.3	5.6		7.0		49	50	20	1.2	.1	
13	1.4	2.4	5.6	2.5		3.5	*58	51	17	1.0	0	
14	1.4	2.4	6.5				70	43	15	.9	0	
15	1.4	2.4	5.0				60	39	14	.8	0	
16	1.5	3.0	5.8				43	42	14	.7	0	
17	1.5	2.8	5.3				40	38	12	.7	0	
18	1.5	4.3	4.8				*39	39	14	.8	0	
19	1.0	5.3	3.8		(*)	4.0	40	47	*12	.8	0	
20	1.4	6.9	3.8				44	54	10	.7	0	
21	1.5	16	3.8	3.0	6.0	(*)	47	74	11	2.4	0	
22	1.4	12	3.3	(*)		6.0	35	*61	9.5	3.8	0	
23	1.5	8.4	3.0			7.5	30	55	10	2.1	0	
24	1.6	6.2	2.8			6.5	37	53	9.5	1.6	0	
25	2.1	5.3	2.8			7.5	41	50	8.4	1.0	0	
26	1.9	5.0	3.0			9.5	32	48	8.8	.7	0	
27	2.1	4.3	2.8			13	*31	46	7.3	.8	0	
28	2.4	4.8	2.3			9.5	30	44	6.2	.9	*0	
29	2.1	4.3	2.1	2.0	-	9.5	38	*48	5.3	1.4	0	
30	1.8	4.3	2.1		-	13	48	42	4.8	1.0	0	
31	1.8	-	2.0		-	17	-	32	-	.8	0	
Total	47.8	127.3	128.3	74.0	147.0	195.5	1,535	1,350	491.8	51.2	7.4	0
Mean	1.54	4.24	4.14	2.39	5.25	6.31	51.2	43.5	16.4	1.65	0.24	0
Ac-ft	95	252	254	147	292	388	3,040	2,680	975	102	15	0

Calendar year 1950: Max 222 Min 0 Mean 25.0 Ac-ft 18,110
Water year 1950-51: Max 102 Min 0 Mean 11.4 Ac-ft 8,240

Peak discharge (base, 100 cfs).--Apr. 8 (11 a.m.) 126 cfs (5.16 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 31 to Apr. 5 (no gage-height record Jan. 12-23, Feb. 2-13, Mar. 2-7, 20; discharge estimated on basis of weather records, gage heights, and records for stations on nearby streams).

Bear River near Evanston, Wyo.

Location.--Lat 41°19', long.111°01', in sec. 1, T. 15 N., R. 121 W., on left bank 300 ft upstream from road bridge and 3½ miles northwest of Evanston.

Drainage area.--715 sq mi.

Records available.--October 1913 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,610 ft (from river-profile map).

Average discharge.--38 years, 234 cfs.

Extremes.--Maximum discharge during year, 2,160 cfs May 30 (gage height, 6.08 ft); minimum, 18 cfs Sept. 26.
1913-51: Maximum discharge, 3,690 cfs June 14, 1921 (gage height, 6.35 ft), from rating curve extended above 2,700 cfs; no flow during some periods in 1924, 1931, 1933, 1934, 1939, 1940, 1942, 1946, 1948.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas.

Revisions (water years).--W 1010: 1942-43. W 1090: Drainage area.

Rating tables, water year 1950-51, except during periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 21, 22)

Oct. 1 to May 22				May 23 to Sept. 30			
1.2	40	2.9	502	1.0	19	3.0	495
1.4	70	3.7	836	1.2	40	4.0	890
1.7	135	4.8	1,360	1.5	86	5.0	1,390
2.2	274			1.9	171	6.0	2,100
				2.4	305		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	60	104				536	431	1,680	555	107	66
2	68	62	76				704	408	1,360	512	101	60
3	60	67	107	80	60		933	363	1,080	481	118	51
4	63	72	116				1,200	323	848	441	197	47
5	58	72	*118				1,310	350	*703	402	363	46
6	56	67	111				1,360	442	655	329	302	44
7	65	67	130				1,330	517	647	270	245	41
8	65	*65	128	60	80		1,130	540	675	237	*190	40
9	68	74	123				984	513	719	216	163	38
10	68	53	121				814	495	687	*183	144	*37
11	*63	46	115			80	572	*580	604	173	122	34
12	50	67	110				473	721	562	162	101	34
13	48	63		65			502	683	559	139	92	34
14	44	74					564	621	655	111	83	33
15	45	67					536	556	827	94	76	33
16	46	62	110				452	*576	1,020	81	69	31
17	49	96					434	506	1,160	74	58	32
18	50	98		*70			434	560	1,240	69	57	31
19	50	118					*424	662	*1,120	54	56	26
20	52	128			*90		442	836	1,080	50	60	22
21	50	250				*123	473	1,120	1,010	141	71	19
22	48	280				152	388	1,060	1,010	311	83	21
23	45	193	100	65		158	335	*1,070	819	176	90	21
24	45	148				133	382	1,040	752	116	86	21
25	45	128				145	431	1,270	797	99	78	21
26	45	138				198	376	1,440	890	86	66	19
27	48	125				244	344	1,590	806	107	57	19
28	50	113	90	60		218	335	1,790	731	120	57	20
29	52	102			-	235	401	*2,080	691	157	54	22
30	55	113			-	274	517	2,040	635	164	57	26
31	58	-			-	395	-	1,880	-	122	71	-
Total	1,674	3,068	3,279	2,060	2,320	3,875	19,116	27,063	26,022	6,232	3,478	989
Mean	54.0	102	106	66.5	82.9	125	637	873	867	201	112	33.0
Ac-ft	3,320	6,090	6,500	4,090	4,600	7,690	37,920	53,680	51,610	12,360	6,900	1,960

Calendar year 1950: Max 2,080 Min 6.6 Mean 345 Ac-ft 249,900
Water year 1950-51: Max 2,080 Min 19 Mean 272 Ac-ft 196,700

Peak discharge (base, 1,200 cfs).--Apr. 7 (3:30 a.m.) 1,750 cfs (5.51 ft); May 30 (1:30 a.m.) 2,160 cfs (6.08 ft); June 17 (8 p.m.) 1,310 cfs (4.88 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 11 to Mar. 20 (no gage-height record Dec. 13 to Jan. 17; discharge estimated on basis of weather records and records for station above Sulphur Creek).

Chapman Canal at State line, near Evanston, Wyo.

Location.--Lat 41°24', long. 111°02', in SE¼ sec. 36, T. 17 N., R. 12 W., on right bank at highway bridge, 6½ miles downstream from head gates and 10 miles northwest of Evanston.

Records available.--October 1945 to September 1951 in reports of Geological Survey. April to September 1942 and May to September 1943 in Upper Bear River Water Commissioner's reports, Utah; April 1944 to September 1948 in Upper Bear River Water Commissioner's reports, Utah, and in Bear River Hydrometric Data reports.

Average discharge.--6 years (1945-51), 15.0 cfs.

Gage.--Water stage recorder. Prior to Oct. 11, 1946, staff gage on opposite bank at same datum.

Extremes.--Maximum daily discharge during year, 83 cfs May 13; no flow about one-third of time.

1942-51: Maximum daily discharge observed, 129 cfs Apr. 14, 1946; no flow at times each year.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Canal diverts water from Bear River in NW¼ sec. 33, T. 16 N., R. 121 W. Many diversions above station for irrigation in Wyoming. Flow at station is for storage in Neponset Reservoir, Utah, and irrigation in Saleratus Basin, Utah.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	3.8	36		0		b23	1.2	24	55	3.3	
2	0	3.8	29		0		b20	.8	25	48	.2	
3	0	3.6	28		0		b15	.6	28	48	0	
4	0	3.8	36		0		9.7	.4	42	52	0	
5	0	4.4	*36		0		8.0	0	48	51	0	
6	0	4.4	26		0		7.0	0	*46	45	0	
7	0	4.0	40		0		6.5	20	49	36	*0	
8	0	4.7	44		0		4.4	47	52	30	0	
9	0	*4.2	42		0		3.8	58	56	29	0	
10	1.4	3.8	41		0		2.9	57	56	*26	0	(*)
11	*2.1	5.1	39		0	b20	5.1	*60	50	30	0	
12	0	4.9	38		0		1.5	73	48	31	0	
13	0	5.5	39		0		*1.1	83	53	26	0	
14	0	5.5	37		0		.5	68	64	20	0	
15	0	5.3	35		0		.6	53	72	16	0	
16	0	4.9	36		0		.4	*38	71	15	0	
17	0	22	36		0		.2	19	70	16	0	
18	0	35	34		0		.2	18	69	12	0	
19	.4	37	37		0		0	17	68	11	0	
20	8.5	32	41		a10		0	17	68	10	0	
21	8.0	44	36				.5	43	*70	15	0	
22	7.8	62	44		b21		.5	69	68	26	0	
23	7.8	51	44			b25	.1	67	66	9.1	0	
24	7.8	43	19				0	68	62	9.4	0	
25	8.5	40	7.2				.6	68	60	7.5	0	
26	4.0	40	3.6		a21		.7	74	61	8.3	0	
27	3.5	38	.9		(*)	(*)	*.6	66	61	11	0	
28	3.3	38	0		b21	b26	.4	2.2	58	13	*0	
29	3.3	36	0		-		.5	2.2	56	9.7	0	
30	2.9	35	0		-		1.2	2.7	56	11	0	
31	3.3	-	0		-		-	*13	-	9.7	0	
Total	72.6	624.7	884.7	0	178	681	115.0	1,106.1	1,677	736.7	3.5	0
Mean	2.34	20.8	28.5	0	6.36	22.0	3.83	35.7	55.9	23.8	0.11	0
Ac-ft	144	1,240	1,750	0	353	1,350	228	2,190	3,330	1,460	7	0

Calendar year 1950: Max 69 Min 0 Mean 138 Ac-ft 10,020
Water year 1950-51: Max 83 Min 0 Mean 16.7 Ac-ft 12,050

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

Bear River near Woodruff, Utah

Location.--Lat 41°31'25", long. 111°01'00", in SW¼ sec. 20, T. 18 N., R. 120 W., in Wyoming, on left bank 2.8 miles upstream from Wyoming-Utah State line and 7.6 miles east of Woodruff.

Drainage area.--870 sq mi, approximately.

Records available.--April 1942 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,360 ft (from river-profile map).

Average discharge.--9 years, 229 cfs.

Extremes.--Maximum discharge during year, 2,090 cfs May 31 (gage height, 4.64 ft); maximum gage height, 5.98 ft Mar. 21 (ice jam); minimum discharge, 16 cfs Sept. 25.
1942-51: Maximum discharge, 2,320 cfs June 4, 1950 (gage height, 4.86 ft); no flow at times each year 1942-49.

Remarks.--Records good except those for periods of ice effect, which are fair. Natural flow of stream affected by diversions for irrigation, including Chapman Canal which carries some water over a low divide for storage in Neponset Reservoir for irrigation in Saleratus Basin, and return flow from irrigated areas.

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

1.0	14	2.6	471
1.2	32	3.0	705
1.5	75	3.5	1,060
1.8	145	4.0	1,480
2.2	283	4.6	2,050

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	58	75				633	499	1,850	544	118	75
2	59	61	73				681	434	1,660	477	111	68
3	63	61	61	85	65		791	403	1,320	439	113	61
4	58	66	75				1,010	346	992	403	134	*55
5	58	70	83				1,130	338	*750	364	248	49
6	58	70	81				1,170	384	645	312	320	46
7	55	66	*77				1,240	482	609	248	270	43
8	59	68	77	65	85		1,180	499	603	198	230	41
9	61	*66	70				1,030	477	633	178	183	40
10	59	72	79				896	*455	651	160	163	36
11	*59	63	75			65	712	466	591	123	142	36
12	58	61	72				550	573	505	*111	118	35
13	50	70	73	70			505	645	488	102	102	34
14	47	70	77				527	573	505	83	91	34
15	46	77	68				539	533	621	64	87	32
16	47	75	89		95		499	550	777	58	77	31
17	47	72	77				444	527	970	50	*63	30
18	49	66	68	75			434	493	*1,140	50	58	30
19	50	73	73				*439	603	1,100	47	56	32
20	49	85	83				450	699	1,040	40	56	25
21	47	111	68		(*)	120	499	940	1,040	34	61	21
22	46	*201	66			*210	444	1,020	992	129	73	20
23	44	157	87	70		226	364	*955	861	192	83	20
24	42	113	104	(*)		190	374	1,030	738	137	87	19
25	41	89	115		75	240	460	1,070	693	104	83	19
26	41	81				275	408	1,200	805	*95	73	18
27	46	85				324	379	1,340	791	87	64	19
28	49	77	100	65		291	346	1,460	699	140	58	19
29	52	75			-	299	379	1,660	651	140	53	20
30	52	64			-	333	533	1,960	621	163	53	20
31	56	-			-	493	-	2,010	-	145	77	-
Total	1,601	2,423	2,546	2,215	2,320	4,301	19,046	24,624	25,341	5,417	3,527	1,028
Mean	51.6	80.8	82.1	71.5	82.9	139	635	794	845	175	114	34.3
Ac-ft	3,180	4,810	5,050	4,390	4,600	8,530	37,780	48,840	50,260	10,740	7,000	2,040

Calendar year 1950 : Max 2,230 Min 5.8 Mean 341 Ac-ft 246,700
Water year 1950-51 : Max 2,010 Min 18 Mean 259 Ac-ft 187,200

Peak discharge (base, 1,300 cfs).--Apr. 7 (10 p.m.) 1,310 cfs (3.81 ft); May 31 (2:30 a.m.) 2,090 cfs (4.64 ft).

* Discharge measurement made on this day.

Note.--Stage discharge relation affected by ice Dec. 25 to Mar. 22, Mar. 24-26 (no gage-height record Jan. 16-23; discharge estimated on basis of weather records and records for station near Evanston, Wyoming and Chapman Canal at State line, near Evanston).

Diversions from Bear River between Woodruff and Randolph gaging stations, Utah

Between Woodruff and Randolph gaging stations, 12 canals divert water from Bear River for irrigation. Records available April to September 1950, 1951 in reports of Geological Survey. Seasonal records available 1944-47, 1949, in Bear River Hydrometric Data report. All canals equipped with water-stage recorders. Prior to 1949, 6 canals equipped with staff gages only, which were read at least three or four times weekly. Records of discharge are combined to show total diverted flow. Records good.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							88	191	1,050	691	69	37
2							108	166	1,020	670	55	35
3							136	153	965	659	42	31
4							168	132	872	612	39	35
5							228	122	739	585	60	55
6							280	128	703	541	77	61
7							316	154	689	495	69	57
8							316	166	701	444	56	52
9							292	170	697	418	47	48
10							255	197	699	416	41	50
11							194	246	712	380	38	50
12							134	398	705	340	34	44
13							95	532	668	294	30	42
14							102	536	661	267	28	39
15							113	527	718	237	29	40
16							104	562	801	213	31	39
17							90	560	897	168	41	39
18							89	518	972	126	36	35
19							90	564	1,010	120	35	33
20							98	681	1,030	104	34	28
21							142	804	1,030	89	35	18
22							138	909	1,030	116	38	15
23							120	909	989	122	40	12
24							134	938	914	131	38	11
25							147	933	808	85	34	11
26							141	959	787	64	32	14
27							132	1,030	788	59	26	14
28							125	1,040	771	70	21	22
29							144	1,040	740	89	17	23
30							188	1,080	715	90	22	25
31							-	1,100	-	88	37	-
Total							4,705	17,445	24,881	8,783	1,231	1,015
Mean							157	563	829	283	39.7	33.8
Ac-ft							9,330	34,600	49,350	17,420	2,440	2,010

Calendar year	: Max	Min	Mean	Ac-ft
The season	: Max -	Min -	Mean -	Ac-ft 115,200

Woodruff Creek near Woodruff, Utah

Location.--Lat 41°29', long. 111°16', in SE¼SE¼ sec. 28, T. 9 N., R. 6 E., on left bank 1¼ miles upstream from Birch Creek and 6 miles southwest of Woodruff.

Drainage area.--65 sq mi, approximately.

Records available.--October 1949 to September 1951 in reports of Geological Survey. October 1937 to September 1943 records for site 1½ miles upstream available in files of Logan project office, Geological Survey, under name South Fork Woodruff Creek near Woodruff.

Gage.--Water-stage recorder. Altitude of gage is about 6,600 ft (from topographic map).

Extremes.--Maximum discharge during year, 365 cfs May 23 (gage height, 5.30 ft); minimum 2.9 cfs Mar. 29 (ice jam upstream).
1949-51: Maximum discharge, 528 cfs May 25, 1950 (gage height, 5.72 ft); minimum, that of Mar. 29, 1951.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-18, Mar. 30 to Apr. 30, Aug. 21 to Sept. 30)

1.3	8.5	1.9	44	3.5	159
1.4	14	2.3	70	4.3	226
1.6	26	2.8	105	5.2	347

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	18	16		b9	b13	24	90	179	38	18	18
2	13	23	13		b10	13	29	80	145	38	18	17
3	13	21	16		13	b11	37	74	123	37	20	16
4	12	18	16		13	10	44	76	108	34	21	15
5	12	17	14		13	10	48	85	97	33	2	*15
6	14	17	b13	b10	13	11	51	104	*106	31	18	15
7	14	17	*18		14	10	54	157	106	30	16	15
8	13	30	15		18	10	57	164	99	29	16	15
9	12	*21	14		19	11	60	*160	92	29	16	15
10	12	21	13		20	b10	61	178	86	28	15	15
11	12	19	14		25	b10	*53	226	80	*28	15	15
12	*12	17	16		25	b10	53	259	76	27	14	15
13	12	16	17	a10	b20	10	54	221	76	27	14	15
14	12	16	16		b18	10	66	178	75	27	14	15
15	14	15	17		b16	11	71	159	72	26	15	16
16	14	b15	16		b16	11	71	*149	71	26	*15	16
17	15	17	14		b18	b10	74	145	68	26	15	16
18	15	18	12	a12	21	b10	78	173	63	26	15	16
19	16	18	16		18	10	92	232	*60	25	15	16
20	16	18	15		b12	11	97	303	57	24	19	15
21	16	38	10		*b15	17	92	334	54	25	20	15
22	16	32	15		b16	24	84	*292	52	24	20	15
23	17	25	15	a14	15	26	87	347	50	22	19	15
24	18	21	15		b15	22	102	347	49	22	18	15
25	17	20	14	*14	b15	20	93	*336	47	22	18	15
26	17	20	10	14	b14	26	87	347	45	22	18	15
27	19	18	17	14	b13	*24	84	340	43	*21	17	15
28	19	16	13	14	b12	21	92	320	42	27	17	15
29	18	15	15	b12	-	21	112	268	41	24	17	16
30	17	18	15	b10	-	21	103	249	40	21	18	15
31	17	-	12	b9	-	22	-	215	-	19	20	-
Total	458	595	452	353	446	456	2,110	6,608	2,302	838	532	462
Mean	14.8	19.8	14.6	11.4	15.9	14.7	70.3	213	76.7	27.0	17.2	15.4
Ac-ft	908	1,180	897	700	885	904	4,190	13,110	4,570	1,660	1,060	916

Calendar year 1950: Max 496 Min 9 Mean 53.8 Ac-ft 38,920
Water year 1950-51: Max 347 Min - Mean 42.8 Ac-ft 30,980

* 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.

Birch Creek near Woodruff, Utah

Location.--Lat 41°30'00", long. 111°17'30", in NE¼ sec. 20, T. 9 N., R. 6 E., on left bank a quarter of a mile downstream from tributary, 2 miles upstream from mouth, and 7 miles southwest of Woodruff.

Drainage area.--17 sq mi, approximately.

Records available.--October 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,670 ft (from topographic map).

Extremes.--Maximum discharge during year, 79 cfs May 12 (gage height, 2.62 ft); minimum, 0.6 cfs Sept. 21, but may have been less during periods of ice effect or no gage-height record.
1949-51: Maximum discharge, 172 cfs May 22, 1950 (gage height, 3.73 ft); minimum, 0.3 cfs Oct. 1, 1949.

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

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

0.7	0.4	1.4	14
.8	.8	1.7	29
.9	2.1	2.1	52
1.1	5.8	2.6	78

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	1.4	2.3	b2.0	b1.5		6.2	48	37	7.1	2.0	1.6
2	1.3	1.7	2.1	b2.0	b1.5		7.6	45	33	6.5	2.1	1.4
3	1.3	1.7	2.1	b2.0	b1.5	b3.0	9.2	42	29	6.2	2.3	1.3
4	1.3	1.6	2.4	2.0	b1.5		10	41	27	5.8	2.3	1.3
5	1.2	1.6	2.0	2.0	b1.5	2.8	11	42	26	5.4	2.1	*1.1
6	1.4	1.6	b2.0	b2.0	b1.7	b3.0	12	47	*24	5.2	1.8	.9
7	1.3	1.6	*2.1	b2.0	b2.0	3.1	14	57	21	4.8	1.7	.9
8	1.3	2.4	2.3	2.1	b2.3	b3.0	15	62	20	4.6	1.6	.8
9	1.3	*2.0	2.3	2.1	2.8	2.8	17	*66	19	4.4	1.7	.8
10	1.3	1.6	2.1	b1.9	3.0	b2.8	17	70	18	4.2	1.6	.8
11	1.3	1.7	2.1	b1.7	3.1	b2.8	*13	72	18	*4.0	1.4	.8
12	*1.3	1.7	2.3	b1.7	3.0	b2.8	13	74	17	4.2	1.4	.8
13	1.3	1.7	2.3	a1.7		3.0	16	70	17	4.0	1.3	.8
14	1.4	1.7	2.1	a1.7		b3.0	20	66	16	3.3	1.1	.8
15	1.4	1.7	2.3	a1.7		3.0	22	62	16	3.5	1.1	.8
16	1.4	1.7	2.1	a1.8		3.1	22	*60	15	3.1	*1.1	.8
17	1.4	1.7	2.0	a1.9		b3.0	24	53	15	3.3	1.2	.8
18	1.3	2.0	2.0	a2.0		b3.0	26	51	15	3.6	1.2	.8
19	1.3	2.1	2.0	a2.0		b3.0	30	52	*14	3.5	1.1	.7
20	1.4	2.1	2.0	a2.0	b3.0	3.3	31	55	14	3.1	1.2	.7
21	1.3	2.8	2.0	a2.0	(*)	4.4	34	55	13	3.3	1.3	.7
22	1.3	2.3	b2.0	a2.0		4.6	35	*53	13	3.1	1.7	.7
23	1.3	2.1	b2.0	a2.0		b3.5	40	50	13	2.8	1.7	.7
24	1.3	2.1	2.1	a2.0		b3.5	48	48	12	2.1	1.6	.7
25	1.3	2.1	2.0	*2.0		b4.5	44	46	12	2.0	1.4	.7
26	1.4	2.1	2.0	b2.0		5.8	45	44	10	2.4	1.3	.7
27	1.4	2.1	b2.0	2.0		*5.8	46	43	8.2	*2.4	1.2	.7
28	1.6	2.1	2.0	2.0		6.2	51	46	8.0	2.4	1.2	.7
29	1.4	2.1	2.0	b2.0	-	5.8	59	54	7.6	2.4	1.2	.7
30	1.4	2.3	2.0	b1.9	-	5.4	53	51	7.3	2.3	1.4	.7
31	1.4	-	2.0	b1.7	-	5.6	-	46	-	2.0	1.6	-
Total	41.6	57.4	65.0	59.9	73.4	114.6	791.0	1,671	515.1	117.0	46.9	25.7
Mean	1.34	1.91	2.10	1.93	2.62	3.70	26.4	53.9	17.2	3.77	1.51	0.86
Ac-ft	83	114	129	119	146	227	1,570	3,310	1,020	232	93	51

Calendar year 1950: Max 139 Min 0.7 Mean 13.3 Ac-ft 9,650
Water year 1950-51: Max 74 Min Mean 9.80 Ac-ft 7,090

* 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.

Big Creek near Randolph, Utah

Location.--Lat 41°37', long. 111°15', in SE¼ (corrected) sec. 10, T. 10 N., R. 6 E., on left bank 3½ miles downstream from main forks and 4¾ miles southwest of Randolph.

Drainage area.--52.2 sq mi.

Records available.--October 1949 to September 1951. March 1939 to September 1944 (fragmentary) at site a quarter of a mile downstream, records not equivalent because of diversions between sites.

Gage.--Water-stage recorder. Altitude of gage is 6,390 ft (from topographic map).

Extremes.--Maximum discharge during year, 131 cfs Mar. 21 (gage height, 2.13 ft); minimum, 1.6 cfs Mar. 12 (ice jam upstream).
1949-51: Maximum discharge, 146 cfs May 18, 1950 (gage height, 2.46 ft); minimum, that of Mar. 12, 1951.

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

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

Oct. 1 to Feb. 21		Feb. 22 to Sept. 30			
0.5	8.3	0.5	8.8	1.3	47
.6	11	.6	12	1.9	100
.8	17	.9	24		
1.1	32				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	23	22		10	b12	21	71	60	40	33	30
2	26	26	b19		12	b12	23	65	56	40	33	29
3	26	23	b20		14	b11	25	60	52	40	33	29
4	26	23	23		14	b10	25	*80	50	41	33	28
5	26	23	b20		14	b10	25	61	*50	39	33	*28
6	27	23	b18	13	14	b10	24	68	50	39	32	28
7	26	23	b20		15	b10	24	83	50	39	32	27
8	26	28	*22		17	b10	25	90	47	39	32	27
9	26	*23	21		18	b10	25	91	46	40	32	27
10	25	b22	21		19	10	27	93	46	*40	31	27
11	25	b22	22		22	9.7	*26	*94	46	39	31	27
12	*25	b22	22		22	b10	26	98	46	39	30	27
13	24	22	21	13	18	b10	28	94	45	38	30	27
14	24	22	21		16	11	32	87	45	37	30	27
15	25	22	21		15	11	34	82	44	37	30	27
16	24	b22	21		15	11	36	79	44	37	*30	27
17	24	22	20		16	10	38	74	44	37	30	27
18	24	25	21	14	19	b10	43	74	43	36	29	27
19	24	24	22		13	b10	51	76	42	36	30	27
20	24	23	20		10	b15	55	78	42	36	30	26
21	24	26	20		12	42	55	79	*44	36	31	26
22	24	23	b20		*b15	20	54	*75	42	36	31	27
23	24	22	b19		14	15	56	74	42	34	30	27
24	24	22	b19		b12	18	70	74	41	34	29	26
25	24	21	b19	*15	b12	22	66	70	41	33	29	26
26	24	21	b19		b12	*23	65	69	40	34	29	26
27	25	21	b18		b11	17	65	69	40	*34	29	26
28	24	21	b17		b11	15	70	67	40	34	29	26
29	23	22	b17	13	-	17	79	64	40	34	29	27
30	23	21	b17	11	-	20	77	62	40	33	29	26
31	23	-	b17	10	-	20	-	60	-	33	30	-
Total	766	683	619	419	412	441.7	1,270	2,341	1,358	1,144	949	812
Mean	24.7	22.8	20.0	13.5	14.7	14.2	42.3	75.5	45.3	36.9	30.6	27.1
Ac-ft	1,520	1,350	1,230	831	817	876	2,520	4,640	2,690	2,270	1,880	1,610

Calendar year 1950: Max 140 Min - Mean 32.1 Ac-ft 23,260
Water year 1950-51: Max 98 Min - Mean 30.7 Ac-ft 22,230

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 11 to Feb. 21; discharge estimated on basis of 1 discharge measurement, weather records, and records for Woodruff Creek near Woodruff.
b Stage-discharge relation affected by ice.

Randolph Creek near Randolph, Utah

Location.--Lat 41°40'30", long. 111°14'00", in SW¼ sec. 23, T. 11 N., R. 6 E., on left bank a quarter of a mile downstream from confluence of Old Canyon and New Canyon, half a mile upstream from Randolph Dam, and 2¾ miles west of Randolph.

Drainage area.--30.3 sq mi.

Gage.--Water-stage recorder. Altitude of gage is 6,370 ft (from topographic map).

Records available.--October 1949 to September 1951.

Extremes.--Maximum discharge during year, 32 cfs Mar. 21 (gage height, 1.44 ft); minimum, 0.8 cfs Aug. 4.
1949-51: Maximum discharge, that of Mar. 21, 1951; minimum, 0.7 cfs Aug. 26, 1950.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.5	6.2	6.2	b5.2	b4.5	5.3	12	5.1	7.8	4.4	2.4	4.8
2	6.0	6.2	5.5	5.1	4.4	5.3	13	4.8	7.5	3.9	2.1	4.8
3	6.0	6.2	5.8	b5.1	b4.3	5.1	13	4.4	7.8	3.9	2.4	4.8
4	6.0	5.8	6.2	5.1	4.3	5.3	11	4.3	7.5	4.4	4.3	4.8
5	6.0	5.3	6.0	5.3	4.4	5.3	10	4.3	7.8	4.4	6.4	4.6
6	6.0	4.8	5.5	5.3	4.4	5.3	9.4	4.1	7.8	4.4	6.0	3.1
7	6.0	5.3	6.0	5.3	5.1	5.3	9.1	4.1	*7.5	4.3	6.0	3.2
8	6.2	6.0	*6.0	b5.0	6.7	5.1	8.1	4.1	7.5	4.6	6.0	2.8
9	6.2	5.1	6.0	4.6	6.7	5.3	8.1	4.1	7.5	5.3	6.0	3.4
10	6.2	*5.1	6.0	4.6	7.5	5.1	7.8	3.4	7.5	*5.5	6.2	4.3
11	6.2	5.5	6.0	4.4	9.7	b5.1	*6.9	*3.1	7.5	4.4	6.2	3.9
12	*6.2	5.5	6.0	4.4	7.2	b5.2	6.2	3.4	7.5	4.4	6.0	4.3
13	6.2	6.0	6.0	4.4	5.8	5.3	6.2	3.4	5.5	4.4	5.8	5.5
14	5.3	6.2	6.0	4.4	5.5	5.3	6.2	3.1	3.6	4.4	3.9	6.0
15	5.1	6.0	6.0	4.4	5.5	5.5	6.2	3.8	4.8	4.3	2.6	6.2
16	5.1	5.8	6.0	4.6	5.5	5.0	6.2	3.4	5.3	4.3	4.3	6.2
17	5.1	6.0	6.0	4.8	5.5	4.8	6.2	3.1	5.5	5.3	*4.6	6.4
18	5.1	6.4	5.8	5.1	5.5	5.1	6.0	2.9	6.2	6.4	3.2	6.9
19	5.1	6.4	6.0	5.1	5.5	5.1	5.5	3.1	6.0	6.7	3.8	6.7
20	4.4	6.4	5.8	b5.1	5.3	6.2	3.8	3.4	*5.1	6.7	5.5	*6.7
21	5.1	6.4	5.8	5.1	5.3	15	3.8	6.0	4.6	6.9	5.5	6.9
22	5.3	6.2	5.5	5.1	*5.3	13	4.3	7.5	4.6	6.7	5.5	6.9
23	5.1	6.2	5.3	5.1	5.3	6.7	4.3	6.7	6.2	6.4	5.5	6.2
24	4.6	6.2	5.3	5.1	5.1	7.5	4.6	*3.8	4.8	6.4	4.6	4.6
25	4.1	6.2	5.3	*5.3	5.1	11	4.4	3.9	4.8	*4.3	3.4	5.1
26	3.9	6.2	5.3	5.3	5.3	13	4.3	4.4	4.6	3.1	3.4	5.1
27	4.6	6.2	5.3	5.3	5.3	*10	4.4	6.4	4.6	3.6	3.6	5.1
28	6.2	6.0	5.3	5.3	5.3	7.5	4.4	7.5	4.4	3.9	3.8	5.3
29	6.2	6.0	5.3	5.3	-	8.4	5.1	6.9	4.4	3.4	5.5	5.3
30	6.2	6.2	5.3	b5.0	-	9.7	5.3	7.2	4.4	3.2	5.5	5.8
31	6.2	-	5.3	b4.5	-	10	-	6.9	-	2.8	5.1	-
Total	171.4	178.0	177.8	153.7	155.3	216.8	205.8	142.6	180.6	147.1	145.1	155.7
Mean	5.53	5.93	5.74	4.96	5.55	6.99	6.86	4.60	6.02	4.75	4.68	5.19
Ac-ft	340	353	353	305	308	430	408	283	358	292	288	309

Calendar year 1950: Max 12 Min 1.6 Mean 5.10 Ac-ft 3,690
Water year 1950-51: Max 15 Min 2.1 Mean 5.56 Ac-ft 4,030

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

B. Q. West Side Canal at Kennedy Ranch, near Randolph, Utah

Location.--Lat 41°48'00", long. 111°05'30", in NW¼SW¼ sec. 7, T. 12 N., R. 8 E., on left bank 800 ft upstream from road bridge, three-quarters of a mile west of Kennedy Ranch, and 10½ miles northeast of Randolph.

Records available.--October 1949 to September 1951 in reports of Geological Survey. April 1944 to September 1949 (irrigation seasons only) in Bear River Hydrometric Data reports.

Gage.--Water-stage recorder.

Extremes.--Maximum daily discharge during year, 116 cfs May 29, 30; no flow many days July to September.
1949-51: Maximum daily discharge, 117 cfs June 5, 1950; no flow at times each year.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Records show flow bypassing Bear River near Randolph, Utah, gaging station. About 3,800 acres of land irrigated from canal below station in Utah and Wyoming.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.1	11	14				30	42	112	65	3.4	0
2	3.7	13	17				30	39	110	58	3.4	0
3	4.3	12	14				35	37	105	54	3.0	0
4	4.6	14	19				40	31	105	53	3.4	0
5	5.0	14		10			45	23	107	51	2.9	0
6	5.8	14					50	17	106	49	1.5	*7.1
7	5.4	14					50	12	104	48	.9	13
8	5.2	15					50	9.7	105	46	*2.5	12
9	5.2	16					55	11	107	40	2.9	13
10	5.0	14				10	55	10	105	*35	0	16
11	5.2	31					50	13	100	35	0	17
12	5.2	38					45	34	93	34	a0	17
13	*6.0	34					35	70	92	36	a0	14
14	5.8	35	(*)				30	74	90	40	a.3	12
15	6.0	40	20				25	*76	86	43	a.6	10
16	4.5	38			10		22	a80	86	44	*.9	9.7
17	.9	32					20	a84	80	45	.3	10
18	3.2	22					18	a88	81	38	0	11
19	4.1	29					19	a92	81	26	0	12
20	4.3	33					20	a96	78	20	0	10
21	5.6	34		5		15	21	a100	*78	13	0	7.0
22	23	*32					20	a104	80	6.2	0	2.2
23	24	29					21	a108	84	2.4	0	.2
24	23	24				20	30	*112	86	0	0	0
25	21	25					*34	106	86	0	0	0
26	5.8	20				25	30	108	82	0	0	0
27	5.6	23				30	27	111	78	0	2.1	0
28	9.0	23				*30	24	112	74	0	0	0
29	9.7	22	15		-	30	26	116	73	0	0	0
30	9.7	15			-	30	39	116	71	1.7	0	0
31	11	-			-	30	-	*112	-	2.9	0	-
Total	240.9	716	579	205	280	475	996	2,143.7	2,725	886.2	28.1	193.2
Mean	7.77	23.9	18.7	6.61	10	15.3	33.2	69.2	90.8	28.6	0.91	6.44
Ac-ft	478	1,420	1,150	407	555	942	1,980	4,250	5,400	1,760	56	383

Calendar year 1950: Max 117 Min 0 Mean 26.1 Ac-ft 18,910
Water year 1950-51: Max 116 Min 0 Mean 25.9 Ac-ft 18,780

* Discharge measurement made on this day.
a No gage-height record; discharge interpolated or estimated on basis of recorded range in stage and records for Bear River near Randolph.
Note.--Stage-discharge relation affected by ice Dec. 5 to Apr. 13 (no gage-height record Dec. 6, 7, Dec. 14 to Mar. 28; discharge estimated on basis of 2 discharge measurements, weather records, and records for stations on nearby streams).

Bear River near Randolph, Utah

Location.--Lat 41°48', long. 111°06', in SE¼NE¼ sec. 7, T. 12 N., R. 8 E., on left bank 4.2 miles upstream from Twin Creek, 5.5 miles upstream from Utah-Wyoming State line, and 11 miles northeast of Randolph.

Drainage area.--1,640 sq mi, approximately.

Records available.--December 1943 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,205 ft (from river-profile map).

Average discharge.--7 years (1944-51), 226 cfs.

Extremes.--Maximum discharge during year, 1,880 cfs June 3 (gage height, 7.92 ft); minimum, 52 cfs Sept. 11.
1943-51: Maximum discharge, 2,100 cfs June 6, 1950 (gage height, 8.30 ft); minimum, 14 cfs July 16, 1948.

Remarks.- Records good except those for periods of ice effect or doubtful or no gage-height record, which are fair. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 1 to May 28, June 6-8, 12-27, July 8 to Aug. 5)

1.9	51	5.8	886
2.5	134	7.0	1,340
3.5	302	8.0	1,870
4.6	541		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	110	150			b130	635	635	1,250	384	163	102
2	95	114	b140				699	682	1,570	354	152	106
3	95	116	b130	b110	b110		791	654	1,840	295	150	106
4	99	120	b160				d900	600	*1,770	261	147	102
5	102	121	158				d1,000	551	1,560	227	148	93
6	106	123	134				d1,100	492	*1,250	205	168	*76
7	108	124	164		(*)		d1,150	461	767	177	244	67
8	109	128	169	b90	b130		d1,200	497	536	148	271	63
9	109	129	168				1,220	548	482	137	261	61
10	102	*116	b150				*1,280	579	478	*128	*244	58
11	97	104	b150			a130	1,210	548	487	112	222	55
12	102	103	147		b150		1,050	492	445	104	205	55
13	*109	108	152	b110			860	427	386	102	187	59
14	110	96	*155				722	443	332	106	164	61
15	106	108	156				677	*454	304	97	150	62
16	106	100	169				668	482	313	93	*142	62
17	103	116	156		a180		663	478	338	89	131	59
18	104	120	166				622	461	405	106	121	59
19	104	124	150				597	416	514	106	115	59
20	110	124	145				592	376	541	97	112	59
21	109	131	145	b120		a200	584	438	*576	108	108	63
22	96	137	b150			a350	574	521	622	97	106	66
23	93	156	b150		a160	a350	587	654	682	93	106	63
24	92	193	b160			a320	582	*711	677	96	108	62
25	90	184	b150	(*)		a400	548	725	646	120	110	59
26	102	171	b140		a150	a500	556	782	589	123	109	58
27	106	158	b130		*b150	a600	*584	828	531	118	109	58
28	106	153	b130	b110	b150	*531	558	873	511	123	106	67
29	108	153	b150		-	544	546	962	475	126	102	58
30	106	150	b150		-	541	584	1,010	425	148	100	59
31	108	-	b150		-	576	-	*1,100	-	156	100	-
Total	3,184	3,890	4,674	3,410	4,130	7,512	23,339	18,880	21,302	4,636	4,661	2,027
Mean	103	130	151	110	148	242	778	609	710	150	150	67.6
Ac-ft	6,320	7,720	9,270	6,760	8,190	14,900	46,290	37,450	42,250	9,200	9,240	4,020

Calendar year 1950: Max 2,080 Min 29 Mean 367 Ac-ft 265,600
Water year 1950-51: Max 1,840 Min 55 Mean 278 Ac-ft 200,600

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for station above Sublette Creek near Cokeville, Wyo.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge estimated on basis of records for station above Sublette Creek near Cokeville, and tributary inflow.

Twin Creek at Sage, Wyo.

Location.--Lat 41°49', long. 110°58', in SE¼ sec. 7, T. 21 N., R. 119 W., on left bank at Sage, 5 miles upstream from mouth.

Drainage area.--246 sq mi.

Records available.--April 1943 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,330 ft (from highway map). Prior to Oct. 1, 1945, staff gage at site 0.6 mile upstream at different datum.

Average discharge.--8 years, 23.8 cfs.

Extremes.--Maximum discharge during year, 477 cfs Mar. 21 (gage height, 5.14 ft); minimum, 3.0 cfs Nov. 27, but may have been less during periods of ice effect or no gage-height record.

1943-51: Maximum discharge, 649 cfs Mar. 18, 1947 (gage height, 6.08 ft); minimum, 1.0 cfs Dec. 17, 1946, Aug. 22, 1949, but may have been less in 1946 during periods of ice effect or no gage-height record.

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

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

1.5	5.5	1.9	26	3.1	140
1.6	9.0	2.2	49	3.8	225
1.7	14	2.6	85	4.3	324

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	12	11				312	69	39	14	8.6	8.0
2	13	14	12				275	61	49	13	9.0	8.3
3	14	14	8.0		7	b13	314	55	44	11	8.6	7.6
4	14	13	12	b9			298	*53	40	9.9	9.0	7.6
5	14	13	9.4				*257	51	38	10	9.4	6.6
6	14	13	8.0			20	236	50	36	11	8.6	*5.8
7	13	12	*11			28	181	56	*36	11	8.6	5.5
8	15	16	13		10	29	156	59	35	11	8.3	5.8
9	15	22	13	7		25	124	54	33	9.9	8.0	5.5
10	15	14	12			18	*129	56	32	10	8.0	5.5
11	14	15	11			19	69	53	34	*12	8.0	5.8
12	*14	14	11			17	58	51	29	12	8.0	6.2
13	13	14	11	8	12	18	68	50	27	11	8.0	6.2
14	13	13	9.0			22	85	47	26	11	7.6	6.6
15	13	13	9.9			25	82	*47	24	11	*7.6	6.2
16	13	11	11			25	62	69	24	11	5.8	6.2
17	12	14	11	(*)		22	59	78	22	11	5.8	6.6
18	12	15	12		10	17	62	60	21	11	5.8	7.2
19	11	17	12			18	*62	54	20	11	5.8	7.6
20	11	17	b12	9		33	69	53	*18	11	7.2	8.0
21	11	52	b11			278	61	54	17	12	8.0	7.6
22	11	*35	b11			287	51	60	17	12	5.5	8.0
23	11	23	b11			108	53	51	18	12	6.2	7.6
24	11	16	b11			98	*63	*48	17	11	7.2	7.6
25	12	17	b11		14	145	68	46	17	*11	7.2	9.0
26	11	14	b10			225	61	44	17	10	6.9	9.9
27	13	13	b10	7	(*)	150	62	43	16	11	6.9	10
28	14	16	b10		b15	*120	56	43	15	13	6.9	11
29	12	16	b10		-	107	61	43	13	16	6.9	11
30	12	14	b10		-	140	80	41	14	11	7.2	11
31	11	-	b10		-	210	-	36	-	9.4	8.0	-
Total	394	502	334.3	248	302	2,249	3,574	1,635	788	351.2	232.6	225.5
Mean	12.7	16.7	10.8	8.0	10.8	72.5	119	52.7	26.3	11.3	7.50	7.52
Ac-ft	781	996	663	492	599	4,460	7,090	3,240	1,560	697	461	447

Calendar year 1950: Max 391 Min - Mean 40.2 Ac-ft 29,130
Water year 1950-51: Max 314 Min - Mean 29.7 Ac-ft 21,490

Peak discharge (base, 200 cfs).--Mar. 21 (7:30 p.m.) 477 cfs (5.14 ft); Mar. 31 (11:30 p.m.) 418 cfs (4.79 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Jan. 7 to Feb. 27, Mar. 13-17, 27; discharge estimated on basis of 1 discharge measurement, weather records, and records for stations on nearby streams.

Bear River above Sublette Creek, near Cokeville, Wyo.

Location.--Lat 42°02'20", long. 110°57'05", in SW¼NE¼ sec. 20, T. 24 N., R. 119 W., on left bank 1,500 ft upstream from Sublette Creek and 3½ miles south of Cokeville.

Drainage area.--2,110 sq mi, approximately.

Records available.--April 1948 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,165 ft (from river-profile map).

Extremes.--Maximum discharge during year, 1,790 cfs June 6 (gage height, 9.22 ft); minimum, 74 cfs Sept. 13.

1948-51: Maximum discharge, 1,820 cfs June 10, 1950 (gage height, 9.40 ft); maximum gage height, 9.50 ft June 8, 9, 1950, affected by backwater from Collett Creek Branch of Smiths Fork; minimum discharge, 35 cfs Aug. 29, 1948, Sept. 17, 1949.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas. No diversions between station and Collett Creek Branch of Smiths Fork.

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

3.1	75	6.9	804
3.6	135	8.2	1,250
4.6	286	9.2	1,780
5.7	506		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a115	134					b1,000	707	967	419	209	132
2	a120	139					b1,100	731	1,120	404	212	123
3	a120	140	a170	b120	a120		1,190	752	1,320	382	214	125
4	a120	144					1,200	726	*1,520	334	230	125
5	a125	145	(*)				*1,240	682	1,670	334	214	121
6	a125	148					1,270	633	1,770	308	206	114
7	a130	147			(*)		1,270	580	1,740	343	225	97
8	a130	154	b180	b100	a140		1,290	573	1,510	307	284	86
9	a130	*162					1,320	599	1,020	289	296	82
10	a125	b155					1,340	628	697	261	281	79
11	a120	149				a150	*1,370	647	625	*266	256	76
12	*123	142					1,380	589	601	267	236	*75
13	125	140		b120	a170		1,340	513	559	239	220	75
14	130	147					1,200	460	511	222	200	77
15	130	b150					1,000	406	434	211	*182	79
16	128	b145	b170				875	*511	380	196	169	78
17	128	158		(*)			816	536	360	192	161	78
18	130	163			a200		782	524	*352	185	154	79
19	130	168					741	508	316	190	145	80
20	131	173					713	466	316	184	139	80
21	134	178		b130			700	442	386	176	132	79
22	132	200				a250	672	449	543	185	131	84
23	131	203			a180	a400	657	469	582	168	127	86
24	132	208				a400	690	543	587	161	125	86
25	131	231				a550	687	640	630	161	126	84
26	131	a220	b160			a700	660	680	628	179	127	82
27	131	a200			a170	a800	654	702	522	182	128	82
28	131	a190		a120		a750	657	*782	484	182	128	82
29	131	a190			-	b750	647	891	473	184	126	83
30	132	a190			-	b750	674	933	432	184	125	85
31	132	-			-	b800	-	904	-	196	130	-
Total	3,963	5,013	5,210	3,720	4,560	9,550	29,135	19,206	23,055	7,491	5,638	2,684
Mean	128	167	168	120	163	308	971	620	768	242	182	89.5
Ac-ft	7,860	9,940	10,330	7,380	9,040	18,940	57,790	38,090	45,730	14,860	11,180	5,320

Calendar year 1950: Max 1,790 Min 55 Mean 434 Ac-ft 314,500
Water year 1950-51: Max 1,770 Min 75 Mean 327 Ac-ft 236,500

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 2 discharge measurements, weather records, and records for station near Randolph, Utah.
b Stage-discharge relation affected by ice.

Smiths Fork near Border, Wyo.

Location (revised).--Lat 42°17', long. 110°52', in NW¼ sec. 33, T. 27 N., R. 118 W., on left bank 4½ miles upstream from Howland Creek, 6 miles downstream from Hobble Creek, and 12 miles northeast of Border.

Drainage area.--165 sq mi.

Records available.--May 1942 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,650 ft (from topographic map).

Average discharge.--9 years, 203 cfs.

Extremes.--Maximum discharge during year, 1,360 cfs May 29 (gage height, 4.56 ft); minimum, 46 cfs Mar. 18, but may have been less during periods of ice effect.
1942-51: Maximum discharge, that of May 29, 1951; minimum, 37 cfs Mar. 11, 1948, but may have been less during periods of ice effect.

Remarks.--Records good except those for periods of ice effect, which are fair. Ore small diversion for irrigation of about 150 acres above station.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 10, 11, Dec. 3-7)

0.6	58	3.0	462
.8	89	3.5	705
2.1	157	4.0	1,000
2.5	278	4.5	1,320

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	116	93	77			b60	68	428	1,070	520	230	152
2	111	99	79		b65	b60	69	397	940	497	240	142
3	109	89	80	b70		b60	74	370	820	493	237	137
4	109	91	68			b65	82	397	*738	475	254	137
5	107	89	*68			69	93	488	683	466	24[illegible]	132
6	109	91	74		b70	62	111	630	640	449	22[illegible]	130
7	107	95	82			62	134	727	615	433	215	127
8	107	118	80			65	152	700	595	416	215	125
9	105	89	77			65	160	678	581	404	212	125
10	103	*74	77			65	163	727	581	393	200	125
11	*101	86	74	b65	72	b64	168	772	586	*381	194	125
12	101	87	75		77	b62	188	802	595	367	18[illegible]	*125
13	101	86	75		75	b60	243	766	630	352	185	123
14	99	84	72		77	62	321	688	678	338	*173	120
15	99	82	74		b74	62	359	650	727	338	179	118
16	99	84	72		b70	59	345	683	802	328	174	116
17	97	86	71	*b70	b70	62	397	*688	856	325	171	114
18	97	87	b70		b70	b60	466	784	844	318	16[illegible]	114
19	95	84	b70		b70	b60	497	844	*808	314	16[illegible]	114
20	95	84	72	b65	b70	62	441	874	772	314	177	111
21	95	87	68		b68	64	416	898	738	314	177	111
22	93	82	b68		*b66	65	389	946	710	301	16[illegible]	114
23	93	84	b70		68	*64	389	1,040	666	285	171	111
24	93	77	b70		65	64	404	1,080	625	278	165	109
25	95	80	b70	b70	66	66	377	1,140	615	265	160	107
26	93	79	b68		66	68	400	1,160	605	262	154	105
27	97	77	b68		b64	68	420	1,200	590	259	150	105
28	97	77	b68		b62	64	480	1,270	576	262	150	105
29	93	75	b70		-	65	552	*1,310	557	256	147	109
30	93	80	71	b65	-	68	484	1,180	543	246	153	105
31	93	-	71		-	68	-	1,090	-	240	160	-
Total	3,102	2,576	2,249	2,085	1,935	1,970	8,842	25,407	20,786	10,889	5,803	3,593
Mean	100	85.9	72.5	67.3	69.1	63.5	295	820	693	351	187	120
Ac-ft	6,150	5,110	4,460	4,140	3,840	3,910	17,540	50,390	41,230	21,600	11,520	7,130

Calendar year 1950: Max 1,150 Min - Mean 247 Ac-ft 179,000
Water year 1950-51: Max 1,310 Min - Mean 244 Ac-ft 177,000

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

Smiths Fork at Cokeville, Wyo.

Location.--Lat 42°06', long. 110°57', in NW¼ sec. 4, T. 24 N., R. 119 W., on right bank 1 mile northeast of Cokeville and 2 miles upstream from mouth.

Drainage area.--275 sq mi.

Records available.--April 1942 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,250 ft (from topographic map). Prior to Aug. 11, 1949, at site 85 ft downstream at different datum.

Average discharge.--9 years, 198 cfs.

Extremes.--Maximum discharge during year, 1,280 cfs May 29 (gage height, 5.77 ft); minimum, 69 cfs Mar. 29.
1942-51: Maximum discharge, that of May 29, 1951; minimum, 25 cfs Aug. 22, 1949.

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

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

2.3	67	3.7	394
2.5	100	4.3	575
2.8	160	5.0	855
3.2	258	5.8	1,300

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	127	106	104		a90	b80	115	565	1,150	400	160	158
2	125	117	100		b90	b80	129	509	1,100	389	160	158
3	123	110	111	a95		b80	a140	473	944	344	176	150
4	119	104	108			88	a150	464	*800	341	210	141
5	119	102	*102			85	a170	528	703	330	205	139
6	123	102	b100		b105	81	a180	654	629	316	174	135
7	121	104	b115			81	a200	815	585	303	141	133
8	119	123	113		(*)	93	a210	865	559	292	133	139
9	115	108	100			95	a220	825	534	284	131	139
10	115	*95	b100		a105	95	a220	855	515	268	129	a133
11	113	119	b100	a90		b90	a240	905	503	*258	127	*a127
12	*111	110	d95		a110	b90	*263	954	491	250	121	121
13	111	104	d95			95	324	960	512	245	117	122
14	110	102	d95			97	417	875	553	232	*113	119
15	110	102	d95			95	458	796	588	224	108	115
16	110	100	d95			90	426	*835	658	214	104	115
17	108	102	d95	*a100	a100	88	464	820	727	205	95	115
18	106	110	d92			88	534	870	*748	202	90	115
19	106	110	d92			b90	585	932	727	195	90	115
20	106	106	d95	a95		95	546	971	696	195	88	115
21	104	113	d92			97	506	1,000	654	210	81	113
22	104	111	d90			100	458	1,020	618	207	80	115
23	102	110	b92			98	438	1,060	605	183	80	113
24	102	104	b95		a90	97	503	1,110	559	169	80	113
25	102	104	b95	a100		98	467	1,150	537	167	83	113
26	104	104	b92			a105	476	1,190	528	165	90	106
27	108	102	b90		a85	a105	500	1,200	509	156	93	104
28	110	102	b90		b80	*100	543	*1,240	491	162	110	104
29	106	100	b92	a90	-	93	669	1,260	458	165	121	108
30	104	104	a95		-	102	658	1,250	420	167	131	106
31	104	-	a95		-	110	-	1,170	-	165	145	-
Total	3,447	3,190	3,020	2,915	2,750	2,881	11,209	28,121	19,101	7,383	3,766	3,699
Mean	111	106	97.4	94.0	98.2	92.9	374	907	637	238	121	123
Ac-ft	6,840	6,330	5,990	5,780	5,450	5,710	22,230	55,780	37,890	14,640	7,470	7,340

Calendar year 1950: Max 1,210 Min 62 Mean 266 Ac-ft 183,000
Water year 1950-51: Max 1,260 Min 80 Mean 251 Ac-ft 181,400

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for station near Border.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge computed on basis of gage heights and records for station near Border.

Bear River at Border, Wyo.

Location.--Lat 42°11', long. 111°03', in NE¼NE¼ sec. 15, T. 14 S., R. 46 E., in Idaho, on left bank a quarter of a mile west of Wyoming-Idaho State line, half a mile west of Border, and 2.1 miles upstream from Thomas Fork.

Drainage area.--2,490 sq mi, approximately.

Records available.--October 1937 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 6,051.63 ft above mean sea level, unadjusted.

Average discharge.--14 years, 411 cfs.

Extremes.--Maximum discharge during year, 2,300 cfs June 7 (gage height, 7.27 ft); minimum daily, 200 cfs Dec. 3.
1937-51: Maximum discharge, 2,900 cfs June 9, 1950 (gage height, 8.77 ft); minimum daily, 30 cfs Aug. 18-22, 1940.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 3-8, Apr. 30 to May 23, June 1-10)

1.8	197	4.5	980
2.5	354	5.5	1,420
3.5	621	7.5	2,320

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	297	278	337	270	230	330	1,350	1,470	2,120	855	393	313
2	294	281	270	210	220	290	1,500	1,420	2,150	820	388	301
3	294	297	200	220	220	290	1,560	1,380	2,180	782	388	301
4	294	292	290	220	220	290	1,560	1,340	2,200	737	441	299
5	294	288	270	220	220	290	1,580	1,290	*2,220	691	449	311
6	304	288	*210	230	220	290	*1,640	1,310	2,260	674	426	304
7	308	288	220	230	230	280	1,680	1,360	2,290	662	418	*290
8	308	292	300	210	*250	290	1,710	1,400	2,210	621	451	272
9	304	*318	350	210	260	290	1,740	1,420	1,990	618	512	267
10	304	330	350	210	270	280	1,730	1,440	1,570	571	491	265
11	*297	297	320	210	270	280	1,710	1,490	1,360	*556	464	260
12	285	292	360	220	300	280	*1,700	1.520	1,260	559	433	249
13	281	290	370	230	300	300	1,720	1,470	1,170	542	408	245
14	283	297	310	230	330	320	1,720	1,420	1,090	504	383	242
15	285	285	350	230	500	330	1,640	*1,290	1,080	475	*354	228
16	283	260	340	*230	450	360	1,510	1,380	1,020	451	335	228
17	281	316	330	230	400	350	1,420	1,420	1,040	436	318	228
18	278	328	310	230	400	350	1,420	1,420	1,060	*423	306	236
19	272	335	290	240	400	310	1,440	1,460	*1,020	423	297	245
20	272	337	310	250	400	320	1,420	1,460	980	431	290	236
21	272	354	300	250	380	350	1,380	1,480	988	436	278	223
22	274	364	280	220	370	380	1,340	1,500	1,090	464	281	232
23	274	366	250	220	360	450	1,270	1,540	1,180	433	292	238
24	265	361	240	230	350	500	1,340	1,610	1,160	410	285	238
25	262	383	240	230	330	650	1,380	1,720	1,140	388	281	234
26	262	376	240	240	320	900	1,340	1,820	1,180	390	283	232
27	265	364	220	240	320	950	1,340	1,880	1,110	386	281	221
28	276	347	220	230	340	1,000	1,360	1,940	1,020	378	285	228
29	278	335	230	240	-	1,050	1,400	2,040	992	396	290	*232
30	278	337	270	230	-	1,200	1,490	2,130	907	390	294	232
31	278	-	270	230	-	1,300	-	2,140	-	390	318	-
Total	8,802	9,576	8,847	7,090	8,860	14,850	45,390	47,960	43,037	16,292	11,113	7,630
Mean	284	319	285	229	316	479	1,513	1,547	1,435	526	358	254
Ac-ft	17,460	18,990	17,550	14,060	17,570	29,450	90,030	95,130	85,360	32,310	22,040	15,130

Calendar year 1950: Max 2,880 Min 135 Mean 741 Ac-ft 536,300
Water year 1950-51: Max 2,290 Min 200 Mean 629 Ac-ft 455,100

Peak discharge (base, 1,000 cfs).--June 7 (1 p.m.) 2,300 cfs (7.27 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 16, Dec. 2 to Apr. 2 (no gage-height record Feb. 14 to Mar. 28; discharge estimated on basis of weather records and combined flow of furnished records of Bear River below Stewart Dam, near Montpelier, Idaho, and Rainbow inlet canal near Dingle, Idaho).

Thomas Fork near Geneva, Idaho

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

Drainage area.--45.3 sq mi.

Records available.--October 1939 to September 1951 (discontinued).

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

Average discharge.--12 years, 16.1 cfs.

Extremes.--Maximum discharge during year, 224 cfs Apr. 29 (gage height, 3.36 ft); minimum daily, 3.1 cfs Mar. 5, 12.
1939-51: Maximum discharge, 418 cfs May 18, 1950 (gage height, 4.25 ft), from rating curve extended above 240 cfs; minimum daily, 1.3 cfs Nov. 13, 23, 1910.

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

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

Oct. 1 to Jan. 15		Jan. 16 to Sept. 30			
1.8	2.5	1.7	3.5	2.5	46
2.0	8.2	1.9	6.3	2.8	93
2.2	16	2.1	13	3.1	155
2.3	23	2.3	24	3.4	226

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	7.2	5.5	b3.9	b4.4	3.2	8.7	150	79	24	11	8.7
2	6.5	10	b5.0	b4.1	b4.5	3.3	12	132	73	23	12	7.4
3	6.5	7.9	b5.2	b3.9	b4.7	3.2	15	122	65	22	13	6.8
4	6.2	6.8	5.5	b4.1	b4.8	3.2	18	135	62	22	14	6.3
5	6.2	6.5	b5.0	b4.0	b4.9	3.1	21	165	*58	20	13	6.1
6	6.5	6.5	*b4.6	b4.0	b5.2	3.4	25	200	56	20	11	5.8
7	6.5	7.9	b5.0	b4.2	b5.2	3.7	28	220	55	19	10	5.8
8	6.2	*18	b5.5	b4.3	5.2	3.7	32	210	54	18	9.4	5.6
9	6.2	11	5.5	b4.4	b5.2	3.5	33	195	51	18	9.8	5.4
10	*5.8	b9.0	b5.3	4.5	b5.2	3.3	35	205	51	*18	9.4	5.4
11	5.8	6.2	b5.2	4.5	b5.2	3.2	40	210	48	18	8.5	5.4
12	5.8	5.8	5.1	4.7	b4.8	3.1	52	180	46	18	8.4	*5.8
13	5.8	5.5	5.1	4.9	b4.2	3.3	62	155	44	17	8.2	5.8
14	5.8	5.5	b4.6	5.0	b4.1	3.2	82	*129	42	16	*8.2	5.6
15	6.2	b5.4	4.8	5.1	b4.2	3.3	90	122	41	16	8.2	5.6
16	6.2	b5.0	4.6	*5.2	b4.4	3.3	88	*127	38	15	7.6	5.4
17	5.8	5.5	b4.3	b4.6	4.4	3.6	104	118	37	15	7.4	5.4
18	5.5	7.5	b4.3	b4.2	4.3	3.8	116	116	*36	15	7.6	5.6
19	5.5	8.2	b4.5	b4.3	3.8	3.9	140	112	35	14	7.6	5.6
20	5.5	7.2	4.6	b4.3	3.8	4.1	*116	108	34	15	9.0	5.4
21	5.5	b8.8	b3.7	b4.4	4.0	5.0	112	106	34	16	9.7	5.4
22	5.5	b8.0	b3.9	b4.4	3.8	5.7	99	102	34	16	8.2	5.4
23	5.5	7.2	b4.1	b4.3	*3.8	6.2	101	102	35	14	9.0	5.4
24	5.5	6.8	b4.0	b4.2	b3.8	6.0	129	*99	32	14	8.2	5.4
25	6.2	6.5	b3.7	b4.3	b3.5	6.2	110	89	31	13	7.6	5.4
26	5.8	5.8	b3.7	b4.3	b3.3	6.4	116	86	29	13	7.1	5.2
27	7.5	b5.4	b3.7	b4.3	b3.3	6.4	131	82	28	13	6.8	5.2
28	7.5	b5.4	b3.8	b4.3	b3.2	6.4	144	82	27	13	6.8	5.4
29	6.8	b5.4	b3.9	b4.1	-	*6.4	197	79	26	14	6.8	6.1
30	6.2	5.5	4.0	b4.2	-	6.6	160	73	24	13	7.9	5.8
31	6.2	-	b4.0	b4.3	-	7.0	-	72	-	12	9.0	-
Total	189.9	217.4	141.7	135.3	121.2	136.7	2,416.7	4,083	1,305	514	280.4	173.6
Mean	6.13	7.25	4.57	4.36	4.33	4.41	80.6	132	43.5	16.6	9.05	5.79
Ac-ft	377	431	281	268	240	271	4,790	8,100	2,590	1,020	556	344

Calendar year 1950: Max 343 Min 3.7 Mean 30.8 Ac-ft 22,280
Water year 1950-51: Max 220 Min 3.1 Mean 26.6 Ac-ft 19,270

Peak discharge (base, 40 cfs).--Apr. 29 (4 p.m.) 224 cfs (3.36 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 10-15, Feb. 17-23, Mar. 1 to Apr. 15, Aug. 7-13; discharge estimated on basis of 2 discharge measurements, weather records, and records for stations on nearby streams.

Salt Creek near Geneva, Idaho

Location.--Lat 42°24'00", long. 110°59'30", in NW¼ sec. 21, T. 28 N., R. 119 W., in Wyoming, on left bank 800 ft upstream from bridge on U. S. Highway 89, 1,000 ft upstream from mouth, 3.0 miles east of Wyoming-Idaho State line, and 4¾ miles northeast of Geneva post office.

Drainage area.--37.6 sq mi.

Records available.--October 1939 to September 1951 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 6,350 ft (from topographic map).

Average discharge.--12 years, 19.0 cfs.

Extremes.--Maximum discharge during year, 243 cfs May 7 (gage height, 3.82 ft); minimum, 2.4 cfs Mar. 27.
1939-51: Maximum discharge, 382 cfs May 18, 1950 (gage height, 5.02 ft); minimum, 0.5 cfs Aug. 18, 1940.

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

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

1.2	1.9	2.5	89
1.4	4.9	3.0	143
1.6	12	3.5	198
2.0	40	4.0	257

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	7.0	5.2	3.9	4.2	3.0	7.6	121	75	23	9.6	8.3
2	7.3	8.8	4.8	3.9	4.3	3.1	10	110	68	21	11	7.6
3	6.7	7.3	5.0	3.8	4.4	3.0	13	102	62	21	13	6.7
4	6.7	6.7	5.2	3.9	4.5	3.0	15	106	58	21	13	6.4
5	7.3	6.4	4.7	3.9	4.7	2.4	18	134	*54	20	12	6.1
6	7.0	6.4	*4.6	4.0	4.8	3.1	21	178	54	19	10	6.1
7	6.7	7.3	4.8	4.0	5.0	3.6	25	209	51	18	9.2	5.8
8	6.4	*14	5.1	4.2	5.1	3.5	29	195	48	18	8.8	5.5
9	6.4	10	5.2	4.3	5.2	3.3	31	185	46	17	9.2	5.5
10	*6.1	8.4	5.1	4.3	5.2	3.0	31	204	44	*16	8.8	5.5
11	6.1	6.0	5.0	4.5	5.2	3.0	33	203	43	18	7.9	5.5
12	6.1	5.6	5.0	4.6	4.5	2.9	*38	196	42	17	7.6	*6.1
13	6.1	5.3	4.8	4.7	3.8	3.1	52	176	40	16	7.3	6.1
14	5.8	5.4	4.4	4.9	3.8	3.0	65	*153	38	15	*7.3	5.8
15	6.1	5.2	4.6	4.9	3.8	3.1	68	141	37	14	7.3	5.5
16	6.1	5.0	4.4	*4.9	4.0	3.1	66	139	35	14	7.0	5.5
17	6.1	5.2	4.2	3.8	4.2	3.3	82	136	34	14	6.7	5.5
18	5.8	6.4	4.2	4.2	4.0	3.6	102	136	*33	14	6.7	5.2
19	5.8	7.6	4.3	4.2	3.6	3.6	111	134	33	13	7.0	5.2
20	5.8	7.0	4.3	4.2	3.6	3.6	100	129	31	15	8.8	4.9
21	6.1	8.0	3.5	4.2	3.8	4.4	98	122	30	17	9.6	5.2
22	6.1	7.4	3.7	4.1	3.6	5.2	88	116	30	16	11	5.2
23	6.1	7.0	3.9	4.1	*3.6	6.0	88	113	30	14	9.6	5.5
24	6.1	6.5	3.7	4.1	3.6	5.8	109	*110	28	13	9.2	5.2
25	6.7	6.2	3.1	4.1	3.3	5.9	94	101	28	12	8.8	5.2
26	6.4	5.6	3.1	4.1	3.1	6.2	99	93	28	12	7.6	5.2
27	7.3	5.2	3.6	4.1	3.1	6.2	104	89	26	12	7.0	5.2
28	7.6	5.2	3.7	4.0	3.0	6.0	122	87	25	12	7.0	5.5
29	6.7	5.2	3.8	3.8		*6.2	158	82	24	11	7.0	6.4
30	6.4	5.2	3.9	4.0	-	6.4	134	77	23	11	8.8	6.1
31	6.7	-	3.9	4.1	-	6.7	-	72	-	10	8.8	-
Total	200.2	202.5	134.8	129.8	115.0	128.3	2,011.6	4,149	1,198	484	272.6	173.5
Mean	6.46	6.75	4.35	4.19	4.11	4.14	67.1	134	39.9	15.6	8.79	5.78
Ac-ft	397	402	267	257	228	254	3,990	8,230	2,380	960	541	344

Calendar year 1950 : Max 353 Min 3.1 Mean 32.1 Ac-ft 23,220
Water year 1950-51 : Max 209 Min 2.4 Mean 25.2 Ac-ft 18,250

Peak discharge (base, 50 cfs).--May 7 (4:00 a.m.) 243 cfs (3.82 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Nov. 10 to Dec. 6, Jan. 15; discharge estimated on basis of 1 discharge measurement, weather records, and records for stations on nearby streams. Stage-discharge relation affected by ice Dec. 7 to Jan. 14, Jan. 16, Jan. 21 to Feb. 10, Mar. 23-29.

Thomas Fork near Wyoming-Idaho State line

Location.--Lat 42°24', long. 111°01', in NW¼SE¼ sec. 19, T. 28 N., R. 119 W., in Wyoming, on left bank 1.3 miles downstream from Giraffe Creek, 1.5 miles upstream from State line, and 3½ miles northeast of Geneva, Idaho.

Drainage area.--113 sq mi.

Records available.--October 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,290 ft (from topographic map). Prior to Sept. 22, 1950, at datum 0.68 ft higher.

Extremes.--Maximum daily discharge during year, 620 cfs May 7; minimum discharge, 6.2 cfs Dec. 14, but may have been less during periods of no gage-height record.
1949-51: Maximum discharge, 869 cfs May 18, 1950 (gage height, 5.55 ft, datum then in use); minimum, 5.1 cfs Nov. 21, 1950, but may have been less during periods of no gage-height record.

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

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

1.9	11	3.0	135
2.1	22	4.0	327
2.4	50	5.0	533

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	23	21	16	a16	16	24	355	194	68	35	30
2	27	28	17	20	a17	17	32	317	181	66	40	26
3	25	24	20	17	a17	17	42	293	166	63	42	24
4	25	22	24	19	a18	17	52	299	157	61	46	24
5	26	22	18	18	a18	15	67	359	*150	60	41	23
6	26	23	*17	17	a19	17	86	a470	145	56	35	23
7	25	25	22	18	a19	17	101	a620	138	55	33	22
8	24	*52	22	19	a20	18	118	a520	135	52	32	21
9	24	28	21	19	a20	18	124	a510	130	52	33	21
10	*24	21	20	19	20	16	119	a570	127	*50	31	21
11	24	22	20	a19	20	17	118	a560	121	51	30	21
12	23	21	21	a19	20	17	*130	a550	121	49	28	*22
13	23	20	20	a18	18	18	174	a470	119	47	26	22
14	24	21	17	a18	19	18	223	*388	113	44	*25	21
15	23	20	21	a17	20	18	211	353	108	43	26	21
16	23	18	20	*a17	19	17	184	343	106	42	24	21
17	22	23	17	17	18	16	223	335	104	42	23	21
18	22	27	17	18	19	18	263	333	*96	41	23	21
19	21	28	20	17	18	20	311	323	96	41	24	22
20	21	24	20	17	17	18	263	313	95	47	32	21
21	21	31	15	16	a17	19	245	301	92	51	35	21
22	21	28	16	17	a17	21	221	281	89	48	34	21
23	21	25	18	17	*17	18	221	275	92	42	33	21
24	21	24	18	17	17	18	293	*267	86	40	31	21
25	23	23	16	17	17	18	247	243	86	38	29	21
26	21	22	16	16	17	20	261	229	79	39	26	20
27	25	20	16	17	17	20	287	219	78	39	24	21
28	24	20	17	17	15	18	327	213	74	*40	24	21
29	23	20	18	14	-	*19	476	201	71	40	26	24
30	21	22	19	16	-	21	423	192	70	41	30	23
31	21	-	18	a16	-	21	-	184	-	37	31	-
Total	722	727	582	539	506	558	5,866	10,886	3,419	1,485	952	662
Mean	23.3	24.2	18.8	17.4	18.1	18.0	196	351	114	47.9	30.7	22.1
Ac-ft	1,430	1,440	1,150	1,070	1,000	1,110	11,640	21,590	6,780	2,950	1,890	1,310

Calendar year 1950: Max 809 Min 14 Mean 92.3 Ac-ft 66,830
Water year 1950-51: Max 620 Min 14 Mean 73.7 Ac-ft 53,360

Peak discharge (base, 150 cfs).--About May 7 (time and discharge unknown).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Salt Creek near Geneva, Idaho.

Thomas Fork near Raymond, Idaho

Location.--Lat 42°16', long. 111°05', in SE¼ sec. 28, T. 13 S., R. 46 E., on left bank at J. W. Mumford Ranch, 1½ miles southwest of Raymond.

Drainage area.--202 sq mi.

Records available.--May 1942 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,080 ft (from topographic map).

Average discharge.--9 years, 59.7 cfs.

Extremes.--Maximum discharge during year, 522 cfs May 9 (gage height, 7.05 ft); minimum, 18 cfs Sept. 30, but may have been less during periods of ice effect or no gage-height record.
1942-51: Maximum discharge, 1,070 cfs May 19, 1950 (gage height, 7.62 ft); minimum daily, 1.6 cfs Oct. 1, 1942.

Remarks.--Records fair. Diversions above station for irrigation of about 10,000 acres above and below station.

Revisions (water years).--W 1180: 1943, 1946-48.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	22	30	23	20	21	25	470	252	38	38	33
2	26	24	29	24	20	21	30	429	257	37	37	33
3	25	24	27	23	21	21	41	398	244	34	37	31
4	25	24	30	24	22	21	55	367	231	35	39	29
5	28	24	32	23	22	21	69	350	*220	37	40	27
6	28	23	*34	23	23	21	89	359	200	36	40	26
7	28	23	30	23	24	21	114	411	194	38	38	*24
8	28	*29	29	24	24	21	151	486	190	36	35	25
9	28	31	28	24	25	21	182	510	185	35	34	24
10	*28	28	28	24	25	20	185	482	178	*36	32	25
11	26	31	26	24	25	20	*178	506	173	36	30	24
12	26	31	28	24	25	21	185	506	153	36	28	24
13	25	31	28	24	25	21	216	498	139	38	26	23
14	24	30	27	23	24	21	236	468	137	34	26	23
15	24	30	25	23	25	20	258	*437	127	33	*26	23
16	23	29	26	*23	24	19	263	420	118	31	25	22
17	22	28	25	22	22	19	254	406	115	31	24	22
18	22	32	24	22	22	21	268	398	*115	32	24	21
19	20	35	24	22	22	22	294	382	101	*30	24	21
20	20	35	25	22	22	22	*333	374	68	30	24	20
21	20	37	25	22	21	22	352	364	57	31	24	20
22	23	39	22	22	21	23	336	358	58	34	24	20
23	22	40	23	22	21	22	309	344	70	40	27	21
24	22	38	23	22	21	22	*317	329	67	37	28	21
25	22	36	23	22	21	22	343	*326	58	37	26	22
26	22	35	22	22	21	22	347	303	57	36	26	21
27	22	34	22	22	21	22	336	291	56	37	27	20
28	22	32	22	21	*20	*22	342	285	56	36	26	20
29	22	31	23	19	-	22	378	272	55	44	26	19
30	22	30	24	19	-	22	445	264	52	42	25	19
31	22	-	24	20	-	24	-	*252	-	39	27	-
Total	744	916	808	697	629	660	6,931	12,045	3,981	1,106	913	703
Mean	24.0	30.5	26.1	22.5	22.5	21.3	231	389	133	35.7	29.5	23.4
Ac-ft	1,480	1,820	1,600	1,380	1,250	1,310	13,750	23,890	7,900	2,190	1,810	1,390

Calendar year 1950: Max 980 Min 14 Mean 112 Ac-ft 80,990
Water year 1950-51: Max 510 Min 19 Mean 82.6 Ac-ft 59,770

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 6, 7, Dec. 18 to Mar. 18 (no gage-height record Feb. 1-28; discharge estimated on basis of 3 discharge measurements, weather records, and records for station near Wyoming-Idaho State line).

Bear River at Harer, Idaho

Location.--Lat 42°11'50", long. 111°10'05", in NW¼ sec. 23, T. 14 S., R. 45 E., on right bank 400 ft downstream from Sheep Creek, three-quarters of a mile north of Harer siding on Union Pacific (Oregon Short Line) Railroad, and 5 miles southeast of Dingle.

Drainage area.--2,780 sq mi, approximately.

Records available.--June 1913 to September 1916, January 1919 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,000 ft (from topographic map). Prior to Aug. 24, 1914, staff gage at site 1,500 ft downstream at different datum.

Average discharge.--35 years, 522 cfs.

Extremes.--Maximum discharge during year, 2,500 cfs June 8 (gage height, 9.05 ft); maximum gage height, 9.17 ft Apr. 2; minimum daily discharge, 224 cfs Jan. 9.
1913-16, 1919-51: Maximum discharge, 3,860 cfs June 2, 1920 (gage height, 10.51 ft); minimum daily, 26 cfs Aug. 21-27, 1934.

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

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. Seven discharge measurements were made by Geological Survey in addition to those made by power company.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 21 to Apr. 2)

3.1	206	6.0	1,320
3.5	328	7.0	1,690
4.0	508	8.0	2,080
5.0	904	9.1	2,520

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	362	335	366	293	230	318	1,930	1,980	2,420	1,070	445	355
2	362	342	348	260	250	306	2,140	1,990	2,420	1,000	448	348
3	362	355	264	260	255	312	1,820	1,960	2,430	946	456	345
4	362	352	342	245	260	*318	1,780	1,910	2,440	900	470	355
5	359	345	338	250	240	355	1,810	1,840	*2,450	812	523	355
6	355	359	285	245	258	355	1,890	1,800	2,450	776	512	384
7	362	366	310	235	270	335	1,980	1,820	2,460	716	493	362
8	362	380	350	230	286	359	2,020	1,890	*2,490	712	*485	335
9	366	*402	390	*224	296	328	2,060	1,990	2,430	676	557	322
10	*362	380	400	240	299	342	2,090	2,050	2,090	664	569	318
11	362	342	380	240	309	325	2,080	2,090	1,690	626	538	312
12	352	376	400	235	360	283	2,060	2,140	1,560	622	504	306
13	345	369	405	235	520	299	2,060	2,160	1,440	633	470	293
14	342	362	365	240	590	325	2,080	2,110	1,350	603	441	286
15	338	366	395	246	610	325	2,060	2,010	1,330	561	*416	283
16	335	342	385	252	600	342	1,940	1,960	1,300	538	398	267
17	*335	345	370	255	512	309	1,800	2,000	1,260	527	380	264
18	335	384	360	252	481	277	1,750	1,970	*1,280	538	359	261
19	328	385	330	267	474	306	*1,770	1,960	1,290	*516	342	267
20	325	385	350	258	441	342	1,800	1,960	1,240	510	338	277
21	322	376	345	246	409	352	1,780	1,940	1,200	510	325	264
22	325	391	330	246	387	376	1,740	1,920	1,220	510	318	*261
23	325	405	290	255	376	474	1,680	1,910	1,360	510	328	267
24	322	409	280	261	402	800	1,690	1,940	1,410	510	331	277
25	315	398	280	267	394	1,050	1,760	2,020	1,380	489	328	277
26	312	412	275	264	373	1,110	1,750	2,110	1,390	466	325	274
27	322	412	255	258	366	1,140	1,740	2,180	1,380	463	325	270
28	328	398	250	270	345	1,150	1,730	2,220	1,290	452	318	264
29	328	376	265	264	-	*1,160	1,770	2,270	1,270	448	322	267
30	331	366	310	290	-	1,630	1,910	2,340	1,180	448	325	270
31	335	-	310	245	-	1,780	-	2,400	-	448	335	-
Total	10,576	11,215	10,323	7,828	10,593	17,483	56,470	62,840	50,900	19,200	12,724	8,986
Mean	341	374	333	253	378	564	1,882	2,027	1,697	619	410	300
Ac-ft	20,980	22,240	20,480	15,530	21,010	34,680	112,000	124,600	101,000	38,080	25,240	17,820

Calendar year 1950: Max 3,760 Min 195 Mean 910 Ac-ft 658,600
Water year 1950-51: Max 2,490 Min 224 Mean 765 Ac-ft 553,700

* Discharge measurement made on this day.

Note.--No gage-height record, Mar. 28, 29, July 20-24; discharge estimated on basis of discharge measurements and daily discharge at Stewart Dam (Rainbow inlet canal at Paris D'ngle Road, Dingle inlet canal at county road, and Bear River below Stewart Dam). Stage-discharge relation affected by ice Nov. 19, 20, Dec. 6-31, Jan. 2-14, Jan. 30 to Feb. 4, Feb. 12-16.

Rainbow inlet canal near Dingle, Idaho

Location.--Lat 42°13'00", long. 111°17'30", in SE¼ sec. 3, T. 14 S., R. 44 E., on left bank 1½ miles west of Dingle and 1¾ miles downstream from head at Stewart Dam.

Records available.--October 1945 to September 1951 in reports of Geological Survey. January 1922 to September 1945 in files of Salt Lake City district office, Geological Survey.

Gage.--Water-stage recorder. Altitude of gage is 5,950 ft (from topographic map). Prior to October 1923, at site 300 ft downstream at different datum.

Average discharge.--29 years, 296 cfs.

Extremes.--Maximum discharge during year, 2,120 cfs Apr. 2 (gage height, 5.54 ft); minimum daily, 142 cfs Sept. 22.
1945-51: Maximum discharge, 3,070 cfs June 12, 1950; minimum daily, 16 cfs Sept. 13, 1948.

Remarks.--Records good except those for periods of ice effect, which are fair. Discharge measurements generally made several times a week. Canal diverts from Bear River at Stewart Dam in NE¼ sec. 34, T. 13 S., R. 44 E. for storage in Bear Lake. At times flow in canal is augmented by surplus water from Black Otter Slough about half a mile above station and by seepage and wastage from irrigated lands on both sides of canal.

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. One discharge measurement made by Geological Survey in addition to those made by the power company.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 6 to Feb. 23, Apr. 3-9, Apr. 22 to May 8, May 16 to Aug. 6)

0.6	125	4.0	1,340
1.0	231	5.0	1,820
2.0	535	5.5	2,070
3.0	905		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	312	309	309	250	198	318	1,550	1,860	1,960	606	357	292
2	318	315	304	223	209	283	1,920	1,900	1,980	548	366	292
3	318	321	198	220	220	304	1,920	1,870	2,000	592	369	277
4	330	309	295	211	225	295	1,740	1,860	2,030	623	403	286
5	339	301	269	217	217	298	1,740	1,800	2,020	592	449	292
6	327	301	220	214	225	280	1,820	1,740	2,020	538	449	306
7	333	312	228	200	237	263	1,870	1,740	1,920	490	428	292
8	327	324	306	176	246	263	1,900	1,780	1,960	481	428	272
9	304	339	351	181	260	269	1,910	1,860	1,980	446	474	251
10	301	330	354	203	260	270	1,920	1,940	1,800	437	506	240
11	304	286	318	206	272	270	1,940	1,960	1,360	440	493	223
12	301	301	357	209	283	270	1,940	2,000	1,100	487	459	220
13	292	321	366	206	378	269	1,940	2,020	1,030	462	431	200
14	286	315	301	209	516	298	1,940	1,980	938	459	406	200
15	280	312	348	214	529	292	1,960	1,960	860	431	369	202
16	283	272	339	220	477	290	1,920	1,880	828	397	351	192
17	286	315	327	228	446	290	1,740	1,840	808	372	339	190
18	289	336	312	231	387	280	1,680	1,830	801	372	321	173
19	292	348	283	243	381	280	1,710	1,800	770	369	306	148
20	283	345	306	230	397	324	1,740	1,740	695	378	312	155
21	280	339	298	220	360	348	1,730	1,740	677	375	301	150
22	277	348	277	217	339	351	1,680	1,690	626	384	289	142
23	274	351	234	220	321	381	1,620	1,640	695	412	289	150
24	274	360	234	225	315	525	1,620	1,640	755	418	286	158
25	274	351	234	228	354	751	1,660	1,640	762	415	283	158
26	269	360	231	228	318	884	1,700	1,670	793	390	292	158
27	263	360	209	220	339	909	1,600	1,740	808	381	304	168
28	274	345	206	230	340	950	1,650	1,780	736	378	286	163
29	289	327	223	230	-	1,060	1,680	1,800	714	354	286	171
30	301	318	266	260	-	1,230	1,760	1,860	673	345	292	187
31	301	-	266	209	-	1,420	-	1,900	-	351	286	-
Total	9,181	9,771	8,769	6,778	9,049	14,515	53,500	56,460	36,099	13,723	11,210	6,309
Mean	296	326	283	219	323	468	1,783	1,821	1,203	443	362	210
Ac-ft	18,210	19,380	17,390	13,440	17,950	28,790	106,100	112,000	71,600	27,220	22,230	12,510

Calendar year 1950: Max 2,950 Min 99 Mean 783 Ac-ft 566,800
Water year 1950-51: Max 2,030 Min 142 Mean 645 Ac-ft 466,800

Note.--Stage-discharge relation affected by ice, Jan. 1, 3, 20, 21, 28, Feb. 28, Mar. 6, 10-12, 16-18.

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Bear River below Stewart Dam, near Montpelier, Idaho

Location.--Lat 42°15'30", long. 111°17'30", in NE¼ sec. 34, T. 13 S., R. 44 E., on right bank 300 ft downstream from Stewart Dam and 4½ miles south of Montpelier.

Records available.--October 1945 to September 1951 in reports of Geological Survey. January 1922 to September 1945 available in files of Salt Lake City District office, Geological Survey.

Gage.--Water-stage recorder. Altitude of gage is 5,950 ft (from topographic map).

Average discharge.--29 years, 78.6 cfs (unadjusted).

Extremes.--Maximum daily discharge during year, 42 cfs June 26-28; minimum daily, 16 cfs on Sept. 25-27, 29, 30.
1923-51: Maximum daily discharge, 3,050 cfs June 3, 1923; minimum daily, 1 cfs on several days in 1931, 1934, 1940, 1948.

Remarks.--Records good. Water diverted at Stewart Dam for storage and regulation in Bear Lake. Many diversions above station for irrigation.

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. One discharge measurement made by Geological Survey in addition to those made by the power company.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 10-23, June 11-24, July 7 to Aug. 5)

1.2	14
1.4	22
1.6	33
1.8	48

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	24	25	24	25	26	24	22	37	39	19	20
2	24	24	25	24	24	26	26	22	34	37	18	19
3	*24	24	23	24	23	26	24	22	34	32	19	18
4	24	24	25	24	22	26	22	22	*34	26	19	18
5	24	24	22	24	21	26	23	22	34	*25	19	*19
6	24	*24	a22	24	*20	26	23	22	34	24	20	19
7	24	24	23	24	21	*25	23	*22	34	24	20	19
8	24	24	23	23	21	24	24	22	*34	23	21	19
9	24	25	24	23	21	24	24	22	34	22	*21	18
10	*24	24	24	23	22	25	24	23	31	22	22	18
11	23	23	*24	*22	22	25	a24	24	*28	22	21	*18
12	23	22	24	22	24	26	a24	24	29	21	21	18
13	23	22	24	22	24	25	a24	25	31	*21	21	18
14	22	22	23	22	26	23	a23	*26	29	20	*20	18
15	23	22	24	22	27	*24	a23	26	30	20	20	18
16	23	*22	24	22	27	26	*a23	26	31	20	20	17
17	23	22	24	22	26	24	24	26	29	19	19	17
18	23	22	21	22	26	22	24	25	29	18	18	18
19	23	22	23	22	26	22	a24	26	29	*18	19	*18
20	23	22	24	22	26	21	a23	26	35	19	18	18
21	23	23	20	22	26	21	a23	*26	*34	18	18	18
22	23	23	22	22	26	24	a22	26	35	18	*19	18
23	*23	23	24	22	26	21	*a22	29	36	18	19	17
24	23	24	24	22	26	18	22	31	39	19	19	17
25	23	24	24	*22	26	23	22	32	40	*20	19	16
26	24	24	24	22	26	24	22	34	42	19	18	16
27	24	24	*24	22	26	23	22	35	42	19	19	*16
28	24	24	23	22	*26	*22	22	*37	*42	19	19	17
29	24	24	23	23	-	22	22	36	41	19	*20	16
30	24	24	24	23	-	25	*22	35	39	19	21	16
31	24	-	24	24	-	22	-	37	-	*18	20	-
Total	728	699	727	703	682	737	694	833	1,030	678	606	532
Mean	23.5	23.3	23.5	22.7	24.4	23.8	23.1	26.9	34.3	21.9	19.5	17.7
Ac-ft	1,440	1,390	1,440	1,390	1,350	1,460	1,380	1,650	2,040	1,340	1,200	1,060

Calendar year 1950: Max 701 Min 9 Mean 34.1 Ac-ft 24,690
Water year 1950-51: Max 42 Min 16 Mean 23.7 Ac-ft 17,140

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of discharge measurements, weather records, and records for nearby stations.

Montpelier Creek at irrigators weir, near Montpelier, Idaho

Location.--Lat 42°20', long. 111°14', in SE¼ sec. 31, T. 12 S., R. 45 E., on right bank 3 miles east of Montpelier and 3½ miles downstream from South Fork.

Drainage area.--50.9 sq mi.

Records available.--December 1942 to September 1951.

Gage.--Water-stage recorder and sharp-crested weir. Altitude of gage is 6,210 ft (from topographic map).

Average discharge.--8 years (1943-51), 24.7 cfs.

Extremes.--Maximum discharge during year, 134 cfs Apr. 29 (gage height, 1.98 ft); minimum, 1.4 cfs Feb. 22 (caused by ice jam upstream).
1942-51: Maximum discharge, 224 cfs May 18, 1950 (gage height, 2.91 ft); minimum, that of Feb. 22, 1951.

Remarks.--Records good except those for periods of no gage-height record, which are fair. One small diversion above station for irrigation.

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

Oct. 1 to Dec. 13, Mar. 29 to Aug. 24				Dec. 14 to Mar. 28, Aug. 25 to Sept. 30	
0.3	9.0	1.3	77	0.8	8.3
.5	19	1.6	101	1.0	12
.7	32	2.0	135	1.2	15
1.0	55			1.5	21

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	14	14	10	9.7	10	15	114	91	42	25	20
2	17	22	13	13	14	11	17	107	85	41	26	19
3	17	16	14	12	13	10	22	101	80	40	27	18
4	17	15	15	12	12	10	28	99	76	38	31	18
5	17	14	13	12	12	11	35	103	73	38	28	18
6	17	14	13	10	11	10	*46	107	69	36	25	17
7	17	15	*14	9.6	13	10	50	112	68	35	24	17
8	17	*31	14	11	15	10	58	112	64	35	25	16
9	17	17	14	12	14	10	61	110	62	34	25	16
10	*16	15	14	12	13	10	58	110	62	*34	24	17
11	16	14	14	12	14	9.7	*62	111	61	36	22	16
12	15	14	14	12	14	10	68	112	58	34	22	17
13	15	14	14	11	12	11	80	108	*58	33	21	*17
14	15	13	13	11	11	11	96	*101	58	31	*21	16
15	15	13	14	11	11	10	103	97	56	31	21	16
16	15	13	13	*11	12	10	98	98	56	29	20	16
17	15	13	13	12	12	10	106	96	54	30	20	16
18	14	14	13	12	12	10	113	94	54	30	19	16
19	14	16	13	11	12	10	128	95	53	28	19	16
20	14	15	13	10	11	10	121	95	52	32	20	16
21	14	17	13	11	11	11	114	96	52	32	21	16
22	14	16	12	12	11	13	105	95	52	31	21	16
23	15	16	12	11	11	12	101	95	51	28	21	16
24	14	15	12	11	11	12	116	*95	49	28	21	16
25	15	15	12	11	11	12	107	93	48	27	21	16
26	14	15	11	11	11	13	107	92	46	27	20	15
27	16	15	11	11	11	13	115	95	46	26	19	15
28	16	14	12	11	10	13	120	97	45	26	19	16
29	15	14	12	9.3	-	*13	128	95	44	26	20	17
30	14	14	12	9.1	-	12	120	93	43	25	21	16
31	14	-	12	10	-	12	-	91	-	24	21	-
Total	479	463	403	344.0	334.7	339.7	2,498	3,119	1,766	987	690	497
Mean	15.5	15.4	13.0	11.1	12.0	11.0	83.3	101	58.9	31.8	22.3	16.6
Ac-ft	950	918	799	682	664	674	4,950	6,190	3,500	1,960	1,370	986

Calendar year 1950: Max 212 Min 2.1 Mean 40.8 Ac-ft 29,520
Water year 1950-51: Max 128 Min 9.1 Mean 32.7 Ac-ft 23,640

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 10 to Dec. 6, Mar. 31 to Apr. 11; discharge estimated on basis of 2 discharge measurements, weather records, and records for stations on nearby streams.

Bear Lake at Lifton, near St. Charles, Idaho

Location.--Lat 42°07'20", long. 111°19'20", in NE¼ sec. 16, T. 15 S., R. 44 E., in Lifton pumping plant of Utah Power & Light Co., 3½ miles east of St. Charles.

Records available.--October 1945 to September 1951. January 1921 to September 1945 (elevations only) in files of Salt Lake City district office, Geological Survey. October 1903 to June 1906 (gage heights only) at different site and datum, published as Bear Lake at Fish Haven, Idaho.

Gage.--Water-stage recorder. Datum of gage is 5,900 ft above mean sea level, unadjusted (levels by Utah Power & Light Co.).

Extremes.--Maximum contents during the year, 1,341,000 acre-ft June 14-17 (gage height, 22.51 ft); minimum, 1,041,000 acre-ft Mar. 25-28 (gage height, 18.22 ft).
1921-51: Maximum contents, 1,423,000 acre-ft June 10, 1923 (gage height, 23.68 ft); minimum, no contents Nov. 9-19, 1935 (gage height, 2.00 ft).

Remarks.--Outflow regulated by gates and pumps at Bear Lake and by gates in dike at north end of Mud Lake. Inflow to lake augmented by water diverted from Bear River through Rainbow inlet canal and Dingle inlet Canal, which empty into Mud Lake (see p. 41). Water from Mud Lake reaches Bear Lake by a sluice at pumping plant or by gates in causeway at south end of Mud Lake. Capacity, 1,421,000 acre-ft between gage height, 2.00 ft (lower limit of pumps) and 23.65 ft (present feasible upper limit of storage with existing facilities). Storage water used for irrigation and power development.

Cooperation.--Gage heights furnished by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. Contents computed by Geological Survey from capacity table based on data furnished by Utah Power & Light Co.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,220	1,178	1,159	1,123	1,075	1,060	1,045	1,151	1,299	1,327	1,266	1,192
2	1,217	1,176	1,159	1,122	1,074	1,060	1,049	1,155	1,305	1,325	1,264	1,189
3	1,215	1,175	1,159	1,120	1,072	1,059	1,051	1,159	1,310	1,324	1,262	1,186
4	1,212	1,174	1,158	1,119	1,069	1,058	1,055	1,164	1,314	1,323	1,261	1,182
5	1,210	1,174	1,157	1,118	1,069	1,058	1,059	1,167	1,318	1,320	1,259	1,179
6	1,209	1,174	1,154	1,118	1,069	1,058	1,062	1,170	1,321	1,318	1,259	1,177
7	1,208	1,173	1,152	1,116	1,068	1,058	1,066	1,174	1,325	1,316	1,256	1,174
8	1,206	1,173	1,151	1,115	1,067	1,058	1,069	1,178	1,328	1,313	1,253	1,172
9	1,205	1,172	1,150	1,113	1,067	1,058	1,072	1,181	1,332	1,311	1,252	1,169
10	1,203	1,170	1,149	1,110	1,066	1,057	1,074	1,184	1,335	1,308	1,250	1,166
11	1,202	1,169	1,148	1,108	1,065	1,056	1,076	1,189	1,337	1,305	1,248	1,162
12	1,201	1,168	1,145	1,106	1,065	1,056	1,078	1,194	1,339	1,303	1,245	1,158
13	1,198	1,168	1,145	1,104	1,064	1,055	1,083	1,199	1,340	1,300	1,243	1,154
14	1,198	1,188	1,145	1,102	1,064	1,054	1,084	1,205	1,341	1,297	1,240	1,151
15	1,196	1,168	1,144	1,099	1,064	1,054	1,085	1,212	1,341	1,295	1,238	1,149
16	1,196	1,168	1,143	1,097	1,064	1,053	1,085	1,220	1,341	1,293	1,234	1,146
17	1,196	1,166	1,142	1,096	1,064	1,051	1,088	1,227	1,341	1,291	1,232	1,144
18	1,194	1,165	1,141	1,094	1,064	1,049	1,090	1,234	1,340	1,289	1,230	1,142
19	1,192	1,165	1,140	1,094	1,064	1,048	1,095	1,240	1,339	1,287	1,227	1,140
20	1,191	1,165	1,138	1,092	1,064	1,046	1,100	1,245	1,339	1,287	1,225	1,138
21	1,190	1,165	1,137	1,091	1,063	1,044	1,104	1,250	1,338	1,285	1,222	1,135
22	1,189	1,165	1,136	1,090	1,063	1,044	1,108	1,254	1,337	1,282	1,220	1,132
23	1,188	1,164	1,134	1,088	1,062	1,042	1,111	1,259	1,337	1,282	1,217	1,129
24	1,187	1,164	1,132	1,087	1,062	1,042	1,115	1,264	1,335	1,279	1,215	1,127
25	1,185	1,162	1,131	1,085	1,062	1,041	1,121	1,268	1,334	1,278	1,212	1,124
26	1,184	1,162	1,129	1,084	1,061	1,041	1,127	1,272	1,333	1,276	1,209	1,122
27	1,184	1,162	1,128	1,083	1,060	1,041	1,133	1,277	1,332	1,274	1,206	1,118
28	1,183	1,161	1,127	1,082	1,060	1,041	1,138	1,282	1,330	1,272	1,203	1,112
29	1,182	1,161	1,127	1,081	-	1,042	1,141	1,287	1,329	1,271	1,200	1,109
30	1,182	1,160	1,126	1,079	-	1,042	1,148	1,291	1,328	1,270	1,197	1,106
31	1,180	-	1,124	1,077	-	1,043	-	1,295	-	1,268	1,195	-

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

Date	Elevation (feet)†	Contents (thousands of acre-feet)	Change in contents during month (thousands of acre-feet)
Sept.30.....	5,920.82	1,222	-
Oct. 31.....	5,920.22	1,180	-42.0
Nov. 30.....	5,919.93	1,160	-20.0
Dec. 31.....	5,919.42	1,124	-36.0
Calendar year 1950..	5,919.42	1,124	+166.5
Jan. 31.....	5,918.74	1,077	-47.0
Feb. 28.....	5,918.50	1,060	-17.0
Mar. 31.....	5,918.25	1,043	-17.0
Apr. 30.....	5,919.75	1,148	+105.0
May 31.....	5,921.86	1,295	+147.0
June 30.....	5,922.32	1,328	+33.0
July 31.....	5,921.47	1,268	-60.0
Aug. 31.....	5,920.43	1,195	-73.0
Sept.30.....	5,919.16	1,106	-89.0
Water year 1950-51..	-	-	-116.0

† Mean daily elevation.

Bear Lake outlet canal near Paris, Idaho

Location.--Lat 42°13'00", long. 111°20'30", in SW¼ sec. 8, T. 14 S., R. 44 E., on right bank 2,000 ft downstream from head (at dike) and 3 miles southeast of Paris.

Records available.--October 1945 to September 1951 in reports of Geological Survey. January 1922 to September 1945 available in files of Salt Lake City district office, Geological Survey.

Gage.--Water-stage recorder. Altitude of gage is 5,920 ft (from topographic map).

Average discharge.--29 years, 331 cfs.

Extremes.--Maximum daily discharge during year, 1,550 cfs July 21; maximum gage height, 19.34 ft July 8; minimum daily discharge, 27 cfs Apr. 3 to June 3.
1922-51: Maximum daily discharge, 1,870 cfs Aug. 8, 1924; minimum daily, 1 cfs May 1 to June 6, 1937.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Discharge measurements generally made six times a week during period of release from Bear Lake.

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. Two discharge measurements made by Geological Survey in addition to those made by the power company.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,190	1,140	698	1,100	1,120	899	1,030	27	27	1,420	1,500	1,270
2	1,190	1,020	280	1,090	1,120	905	702	27	27	1,410	1,520	1,270
3	1,190	766	247	1,070	1,110	b910	27	27	27	1,490	1,500	1,270
4	1,180	625	952	1,090	1,110	b910	27	27	155	1,460	1,510	1,260
5	1,120	614	1,450	1,120	1,120	b910	27	27	477	1,430	1,510	1,260
6	1,030	694	1,440	b1,120	b1,150	b910	27	27	712	1,440	1,510	1,300
7	1,030	829	1,310	b1,120	b1,180	b910	27	27	706	1,510	1,510	1,300
8	1,040	817	1,030	b1,160	1,020	918	27	27	747	1,500	1,510	1,290
9	1,040	799	976	1,200	704	921	27	27	730	1,460	1,510	1,280
10	1,070	814	988	1,250	664	883	27	27	741	1,470	1,490	1,290
11	1,180	805	985	1,250	653	856	27	27	744	1,470	1,480	1,250
12	1,260	796	991	1,250	644	846	27	27	853	1,490	1,470	1,260
13	1,260	733	991	1,260	b630	868	27	27	1,120	1,490	1,470	1,290
14	1,240	633	982	1,240	b750	896	27	27	1,220	1,500	1,500	1,300
15	1,230	568	982	1,220	880	b900	27	27	1,330	1,490	1,500	1,290
16	1,160	496	988	1,190	862	b900	27	27	1,380	1,500	1,500	1,280
17	1,040	580	982	1,160	849	b1,030	27	27	1,370	1,520	1,510	1,270
18	833	729	994	1,130	843	b1,150	27	27	1,390	1,510	1,510	1,260
19	286	718	1,050	1,130	849	1,150	27	27	1,450	1,510	1,510	1,260
20	566	706	1,080	b1,120	930	1,080	27	27	1,440	1,510	1,510	1,210
21	1,240	738	1,090	b1,120	1,080	1,010	27	27	1,410	1,550	1,510	1,170
22	1,240	778	1,090	b1,120	1,070	978	27	27	1,420	1,530	1,500	1,170
23	1,240	778	1,090	1,110	1,060	896	27	27	1,450	1,510	1,510	1,170
24	1,250	838	1,080	1,110	1,080	b890	27	27	1,480	1,490	1,510	1,170
25	1,250	895	1,080	1,060	1,080	b890	27	27	1,470	1,490	1,520	1,160
26	1,250	892	1,080	936	1,020	b890	27	27	1,450	1,510	1,520	930
27	816	910	931	859	911	b710	27	27	1,410	1,530	1,500	771
28	189	964	770	b860	905	b420	27	27	1,430	1,530	1,490	1,220
29	211	997	869	b900	-	b420	27	27	1,430	1,510	1,330	1,260
30	334	994	1,090	b1,020	-	558	27	27	1,450	1,490	1,190	1,330
31	1,080	-	1,100	1,110	-	862	-	27	-	1,490	1,260	-
Total	31,235	23,666	30,646	34,475	26,394	27,276	2,488	837	31,046	46,210	45,880	36,811
Mean	1,008	789	989	1,112	943	880	82.9	27.0	1,035	1,491	1,480	1,227
Ac-ft	61,950	46,940	60,790	68,380	52,350	54,100	4,930	1,660	61,580	91,660	91,000	73,010

Calendar year 1950: Max 1,800 Min 10 Mean 767 Ac-ft 555,100
Water year 1950-51: Max 1,550 Min 27 Mean 923 Ac-ft 668,400

b Stage-discharge relation affected by ice.

Note.--No gage-height record Apr. 3 to June 3; discharge computed on basis of discharge measurement and record of gate changes.

Bear River at Pescadero, Idaho

Location.--Lat 42°24'30", long. 111°21'30", in SE¼ sec. 6, T. 12 S., R. 44 E., on left bank at Pescadero, 400 ft downstream from road bridge, 2 miles downstream from Bennington Creek, and 6½ miles northwest of Montpelier.

Records available.--October 1945 to September 1951 in reports of Geological Survey. January 1922 to September 1945 available in files of Salt Lake City District office, Geological Survey.

Gage.--Water-stage recorder. Altitude of gage is 5,950 ft (from topographic map).

Average discharge.--29 years, 528 cfs.

Extremes.--Maximum discharge during year, 1,740 cfs July 9 (gage height, 5.38 ft); maximum gage height, 5.69 ft Jan. 31; minimum discharge, 294 cfs May 20.
1922-51: Maximum daily discharge, 3,840 cfs June 10, 1923; minimum daily, 23 cfs Mar. 14-17, 1936.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Flow regulated by Bear Lake.

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. Two discharge measurements were obtained by Geological Survey in addition to those obtained by power company.

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

Oct. 1 to Dec. 31		Jan. 1 to Sept. 30	
2.9	361	2.7	297
3.5	594	3.0	396
4.0	826	4.0	826
5.0	1,430	5.0	1,450
5.3	1,640	5.4	1,760

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,310	1,160	a980	a1,220	b1,260	a1,070	a1,230	569	523	1,680	1,550	1,350
2	1,310	1,200	a605	a1,230	b1,250	a1,060	a1,580	552	523	1,660	1,570	1,360
3	1,310	1,010	a390	a1,220	b1,250	a1,070	a1,310	523	532	1,660	1,570	1,340
4	1,310	816	a700	a1,200	b1,240	a1,080	a955	479	519	1,680	1,580	1,320
5	1,290	763	a1,300	a1,220	b1,260	a1,080	a825	452	777	1,670	1,580	1,320
6	1,200	758	a1,580	a1,250	b1,290	a1,080	a705	437	1,030	a1,670	1,570	1,360
7	1,160	893	a1,500	a1,250	b1,320	a1,080	a580	422	*1,100	a1,670	*1,570	1,370
8	1,150	951	a1,300	a1,250	b1,160	a1,080	a580	426	1,100	a1,710	1,580	1,340
9	*1,150	919	a1,140	a1,290	b850	1,000	a570	441	1,110	*a1,740	1,570	1,320
10	1,150	924	a1,120	a1,330	b805	970	a560	448	1,090	1,710	1,560	1,310
11	1,220	929	a1,120	a1,380	b795	1,050	a555	448	1,090	1,700	1,560	1,320
12	1,340	924	a1,120	b1,380	a790	981	a550	452	*1,080	1,680	1,560	1,320
13	1,360	908	a1,130	b1,380	a775	1,000	544	467	1,300	1,690	*1,540	*1,340
14	1,350	802	a1,120	1,370	a895	964	527	471	1,390	1,690	1,550	1,360
15	1,340	a730	a1,120	1,340	a1,030	970	540	463	1,490	1,680	1,550	1,360
16	1,320	a665	a1,120	1,320	a1,010	964	548	460	1,580	1,650	1,550	1,340
17	1,210	a670	a1,120	1,280	a985	1,010	536	444	1,580	1,650	1,560	1,330
18	1,150	a785	a1,120	1,270	a990	1,200	*527	414	*1,570	1,640	1,560	*1,320
19	*683	a855	a1,160	1,320	a995	1,230	540	396	1,610	1,620	1,560	1,290
20	460	a845	a1,200	1,230	a1,080	1,220	569	316	1,620	1,620	1,550	1,250
21	1,050	a855	*a1,220	b1,250	a1,230	1,130	590	303	1,620	1,620	1,550	1,220
22	1,310	a890	1,220	1,290	a1,220	1,130	581	312	1,620	1,610	1,540	1,230
23	1,330	a910	1,220	b1,240	a1,210	1,050	552	322	1,640	1,600	1,540	1,250
24	1,350	a935	1,210	1,220	a1,230	1,020	581	351	1,680	1,580	1,550	1,230
25	1,370	a995	1,210	1,170	a1,230	1,040	620	372	1,700	1,560	1,540	1,230
26	1,360	a1,030	1,210	1,040	a1,180	1,100	616	456	1,700	1,540	1,550	1,180
27	1,310	a1,040	1,180	987	a1,060	1,160	590	511	1,700	1,570	1,550	811
28	629	a1,070	956	976	a1,050	919	565	536	1,700	1,570	1,550	1,070
29	382	a1,110	a935	893	-	*816	548	548	1,700	1,560	1,480	1,280
30	418	a1,130	a1,090	b1,150	-	831	565	548	1,700	1,540	1,300	1,350
31	743	-	a1,220	b1,240	-	a735	-	532	-	1,540	1,300	-
Total	35,025	27,472	34,616	38,186	30,440	32,090	20,139	13,871	39,374	50,760	47,690	38,471
Mean	1,130	916	1,117	1,232	1,087	1,035	671	447	1,312	1,637	1,538	1,282
Ac-ft	69,470	54,490	68,660	75,740	60,380	63,650	39,950	27,510	78,100	100,700	94,590	76,310

Calendar year 1950: Max 2,580 Min 205 Mean 1,032 Ac-ft 746,900
Water year 1950-51: Max 1,740 Min 303 Mean 1,117 Ac-ft 809,600

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

Georgetown Creek near Georgetown, Idaho

Location.--Lat 42°30', long. 111°19', in NE¼ sec 4, T. 11 S., R. 44 E., on left bank 150 ft downstream from Little Right Hand Fork and 3 miles northeast of Georgetown.

Drainage area.--22.2 sq mi.

Records available.--October 1911 to September 1914 (fragmentary), November 1939 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,350 ft (from topographic map). October 1911 to September 1914, staff gage at site 0.7 mile downstream at different datum.

Average discharge.--11 years (1940-51), 31.2 cfs.

Extremes.--Maximum discharge during year, 75 cfs May 28 (gage height, 2.35 ft); minimum, 28 cfs Mar. 3-21, Mar. 23 to Apr. 1, Apr. 11-13.
1911-14, 1939-51: Maximum discharge observed, 162 cfs June 8, 1912; minimum daily, 18 cfs on many days February to May 1941.

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

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

1.8	25
2.1	50
2.35	75

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	39	36	33	31	29	28	34	67	47	42	40
2	42	39	36	33	31	29	29	35	84	47	42	40
3	41	38	36	33	31	28	29	35	62	46	45	40
4	40	38	36	33	31	28	29	35	58	46	46	40
5	40	38	35	33	31	28	29	35	57	46	44	40
6	40	38	35	33	31	28	29	39	56	46	44	40
7	40	*38	*35	33	31	28	29	42	56	45	44	40
8	40	39	35	33	31	28	29	45	55	45	43	40
9	*40	38	35	32	31	28	29	47	53	*45	43	40
10	40	38	35	32	31	28	29	49	53	45	43	40
11	39	38	35	32	31	28	28	53	53	45	42	40
12	39	38	35	32	30	28	28	57	52	44	42	40
13	39	39	35	32	30	28	28	57	*52	44	*42	*39
14	40	39	35	32	30	28	29	55	51	44	42	39
15	40	39	35	32	29	28	29	*54	51	44	42	39
16	40	39	35	*32	29	28	29	54	51	44	42	39
17	40	38	35	32	29	28	29	55	51	44	42	39
18	40	38	35	32	29	28	29	57	50	44	42	39
19	40	38	35	32	29	28	30	58	50	45	42	39
20	40	38	35	32	29	28	30	61	50	44	42	39
21	39	38	35	32	29	28	30	63	50	44	42	39
22	40	38	35	32	29	29	31	64	50	44	42	39
23	40	38	35	32	*29	28	*31	67	50	44	42	39
24	40	38	35	32	30	28	32	70	50	44	42	39
25	39	37	35	32	30	28	31	*72	50	43	41	39
26	39	37	34	32	30	28	32	72	49	43	41	39
27	40	36	34	32	30	28	32	70	48	43	41	39
28	39	36	34	32	30	28	33	73	48	43	42	40
29	39	36	34	32	-	*28	33	72	47	43	40	39
30	39	36	34	31	-	28	33	68	47	42	41	39
31	39	-	34	31	-	28	-	67	-	42	41	-
Total	1,235	1,137	1,083	998	842	871	896	1,715	1,581	1,375	1,311	1,183
Mean	39.8	37.9	34.9	32.2	30.1	28.1	29.9	55.3	52.7	44.4	42.3	39.4
Ac-ft	2,450	2,260	2,150	1,980	1,670	1,730	1,780	3,400	3,140	2,730	2,600	2,350

Calendar year 1950: Max 104 Min 24 Mean 41.4 Ac-ft 29,960
Water year 1950-51: Max 73 Min 28 Mean 39.0 Ac-ft 28,240

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 6, Jan. 1-15, Mar. 25-28; discharge estimated on basis of steady flow pattern of this spring-fed stream.

Bear River at Alexander, Idaho

Location.--Lat 42°39', long. 111°42', in NW¼ sec. 17, T. 9 S., R. 41 E., on right bank 600 ft downstream from Soda hydroelectric plant of Utah Power & Light Co., half a mile southeast of Alexander, and 5 miles downstream from Soda Creek.

Drainage area.--3,840 sq mi, approximately.

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

Gage.--Water-stage recorder.

Average discharge.--36 years (1911-16, 1919-20, 1921-51), 758 cfs.

Extremes.--Maximum daily discharge during year, 1,810 cfs June 16; minimum daily, 356 cfs May 6.
1911-16, 1919-51: Maximum discharge, 4,590 cfs May 9, 1922; maximum gage height, 15.95 ft Dec. 11, 1919; minimum discharge, 28 cfs at times when reservoir gates are closed.

Remarks.--Records good. Many diversions above station for irrigation. Flow regulated by Bear Lake Reservoir and Soda hydroelectric plant.

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. Two discharge measurements made by Geological Survey in addition to those made by power company.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-30, July 4 to Sept. 28)

1.1	356
1.5	579
2.0	945
2.5	1,400
3.0	1,900

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,510	1,080	a1,390	1,380	1,280	1,380	1,350	930	1,130	1,640	1,530	1,560
2	1,510	1,050	a1,380	1,380	1,350	1,350	1,280	989	892	1,660	1,610	1,530
3	1,520	1,010	a1,390	1,380	1,370	1,300	1,270	887	675	1,660	1,600	1,520
4	1,470	1,010	a1,350	1,380	1,170	1,290	1,330	832	948	1,650	1,590	1,520
5	1,460	1,020	a1,370	1,390	1,350	1,330	1,300	489	960	1,660	1,610	1,520
6	1,390	1,000	a1,390	1,390	1,350	1,350	1,300	356	898	1,650	1,600	1,530
7	1,460	1,000	a1,350	1,400	1,360	*1,350	1,270	921	1,170	1,660	1,580	1,520
8	1,440	1,040	a1,400	1,400	1,170	1,330	1,290	928	*1,250	1,600	1,530	1,520
9	1,410	1,010	a1,390	1,380	1,240	1,360	1,300	860	1,230	1,680	*1,600	1,560
10	1,450	1,010	1,420	1,230	1,220	1,370	1,190	868	1,020	1,660	1,560	1,550
11	1,450	1,020	1,360	1,390	1,130	1,360	1,260	970	1,480	1,630	1,580	1,550
12	1,440	1,000	1,360	1,390	1,210	1,360	1,300	982	1,530	1,640	1,570	1,560
13	1,430	1,010	1,330	1,360	1,340	1,370	1,300	427	*1,530	1,690	1,530	1,560
14	1,440	1,040	1,400	1,390	1,290	1,350	1,260	959	1,570	1,690	1,610	1,390
15	1,440	1,040	1,420	1,390	1,310	1,340	1,220	919	1,790	1,580	1,570	1,160
16	1,430	1,020	1,430	1,390	1,300	1,420	1,250	997	1,810	1,620	1,560	1,040
17	1,420	1,060	1,440	1,360	1,290	1,350	1,230	897	1,710	1,650	1,570	1,380
18	1,440	1,210	1,390	1,390	1,220	1,330	1,320	902	1,700	1,660	1,570	1,460
19	1,410	1,250	*1,440	1,370	1,320	1,370	1,320	618	*1,570	1,770	1,590	1,450
20	1,500	1,350	1,410	1,370	1,330	1,360	*1,130	639	1,610	1,900	1,700	1,470
21	1,360	1,420	1,410	1,390	1,310	1,320	857	1,020	1,630	1,740	1,620	1,470
22	1,320	1,440	1,390	1,400	1,290	1,350	479	1,080	1,680	1,540	1,660	1,440
23	1,350	1,380	1,390	1,380	1,310	1,340	1,010	1,140	1,680	1,520	1,720	1,260
24	1,310	1,370	1,420	1,350	1,250	1,330	1,070	1,110	1,690	1,380	1,690	*1,410
25	*1,390	1,440	1,330	1,370	1,260	1,330	1,030	1,190	1,700	1,630	1,650	1,400
26	1,390	1,380	1,270	1,370	1,310	1,240	1,000	957	1,690	1,560	1,660	1,380
27	1,360	1,410	1,380	1,320	1,340	1,300	1,000	1,290	1,670	1,580	1,640	1,360
28	1,320	1,360	1,110	1,390	1,320	1,330	945	1,390	1,690	1,580	1,080	1,450
29	1,250	a1,330	1,390	1,380	-	1,290	513	1,370	1,670	1,580	1,480	1,290
30	1,180	a1,320	1,360	1,390	-	1,320	954	928	1,660	1,610	1,550	1,190
31	1,070	-	1,320	1,400	-	1,330	-	1,410	-	1,570	1,500	-
Total	43,320	35,080	42,580	42,650	35,990	41,500	34,328	29,055	43,031	50,720	48,910	42,980
Mean	1,397	1,169	1,374	1,360	1,285	1,339	1,144	937	1,434	1,636	1,578	1,433
Ac-ft	85,920	69,540	84,460	84,600	71,390	82,310	68,090	57,630	85,350	100,600	97,010	85,250

Calendar year 1950: Max 2,580 Min 68 Mean 1,295 Ac-ft 937,900
Water year 1950-51: Max 1,810 Min 356 Mean 1,343 Ac-ft 972,200

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of Soda Plant output record.

Bear River below Utah Power & Light Co.'s tailrace, at Oneida, Idaho

Location.--Lat 42°16', long. 111°45', in sec. 26, T. 13 S., R 40 E., on right bank 200 ft below tailrace of Oneida plant and 6 miles south of Cleveland, Idaho.

Records available.--October 1945 to September 1951 in reports of Geological Survey. January 1922 to September 1945 available in files of Salt Lake City district office, Geological Survey.

Average discharge.--29 years, 768 cfs.

Gage.--Water-stage recorder. Altitude of gage is 4,800 ft (from topographic map).

Extremes.--Maximum daily discharge during year, 2,350 cfs June 30; minimum daily, 145 cfs June 3.
1922-51: Maximum daily discharge, 5,480 cfs May 8, 1922; minimum daily, 15 cfs May 3, 4, 1925.

Remarks.--Records excellent. Many diversions above station. Flow regulated by Bear Lake and Soda, Grace, and Oneida hydroelectric plants.

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. One discharge measurement was made by Geological Survey in addition to those made by power company.

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

1.4	132	4.0	1,220
2.0	290	5.0	1,930
3.0	676	5.6	2,400

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,750	1,450	1,570	1,520	1,400	1,510	1,760	1,060	1,060	562	1,430	1,460
2	1,740	1,360	1,960	1,510	1,290	1,690	1,840	1,310	628	1,530	1,790	1,390
3	1,680	1,290	1,820	1,710	873	1,680	2,100	1,210	145	1,360	*1,390	1,630
4	1,740	1,220	1,640	1,560	1,570	1,580	1,790	1,220	749	587	1,130	1,790
5	1,780	1,290	1,560	1,560	2,140	1,650	2,050	1,170	583	1,410	1,570	1,600
6	1,760	1,310	1,530	1,700	2,070	1,710	2,020	808	728	1,940	1,330	1,690
7	1,880	1,200	1,640	1,660	1,760	1,390	2,020	1,090	777	1,760	1,530	2,250
8	1,690	1,270	2,060	1,440	1,930	1,830	1,710	1,110	625	789	1,470	1,690
9	1,770	1,290	1,780	*1,870	1,940	1,740	1,610	1,430	855	1,690	1,620	825
10	1,710	1,310	1,460	1,580	1,540	1,780	2,030	1,000	996	1,680	1,710	1,540
11	1,650	1,310	1,600	1,510	1,590	1,600	2,030	*1,550	1,160	1,420	1,320	1,600
12	1,830	1,310	1,410	1,990	1,530	1,580	1,700	1,330	1,510	1,220	1,290	1,660
13	1,570	1,310	1,730	1,780	1,170	1,420	1,950	998	953	1,790	1,510	1,400
14	1,710	1,300	1,640	1,460	1,490	1,060	1,890	1,290	1,600	1,520	1,580	1,660
15	1,620	1,290	1,730	1,420	1,740	1,970	1,750	1,120	1,700	1,490	1,170	1,440
16	1,820	1,370	1,820	1,610	1,630	1,750	1,810	1,440	1,060	1,440	1,880	1,370
17	1,700	1,510	1,750	1,840	1,610	1,700	2,020	1,410	961	1,290	1,630	1,390
18	1,650	1,350	1,750	1,660	1,570	1,530	1,890	1,480	1,560	1,280	1,230	1,340
19	1,810	1,400	1,790	1,540	1,500	1,710	1,870	1,040	1,360	1,620	907	1,650
20	1,630	1,540	1,470	1,750	1,540	1,670	1,690	1,030	1,740	1,600	1,880	1,830
21	1,820	1,810	1,680	1,500	1,770	1,730	1,960	1,380	1,730	1,590	1,550	1,290
22	1,390	1,740	1,530	1,870	1,620	1,770	1,040	1,210	1,450	1,110	1,120	1,550
23	1,580	1,670	1,770	1,720	1,270	1,810	1,490	1,110	1,090	1,550	1,680	1,160
24	1,660	1,780	1,680	1,700	2,030	1,730	1,480	1,330	1,070	1,870	1,840	1,680
25	1,550	1,520	1,490	1,570	1,550	1,310	1,510	1,510	1,630	1,080	1,520	1,360
26	1,520	1,830	1,360	1,680	1,290	1,660	1,550	1,380	*1,960	1,200	1,090	1,770
27	1,670	1,630	1,500	1,640	*1,640	1,680	1,500	647	1,500	1,440	1,730	1,730
28	1,690	1,500	1,840	1,630	1,680	1,770	1,490	1,000	1,140	1,600	1,600	1,310
29	1,650	1,450	1,730	1,700	-	1,810	1,330	1,120	2,110	953	1,400	1,260
30	1,570	1,750	1,470	1,540	-	1,780	1,550	1,030	2,350	1,440	1,820	1,330
31	1,590	-	1,620	1,360	-	1,650	-	1,600	-	1,410	1,700	-
Total	52,160	43,360	51,380	50,580	44,733	51,250	52,430	37,413	36,780	43,221	46,557	45,645
Mean	1,683	1,445	1,657	1,632	1,598	1,653	1,748	1,207	1,226	1,394	1,502	1,522
Ac-ft	103,500	86,000	101,900	100,300	88,730	101,700	104,000	74,210	72,950	85,730	92,340	90,540

Calendar year 1950: Max 3,240 Min 69 Mean 1,499 Ac-ft 1,085,000
Water year 1950-51: Max 2,350 Min 145 Mean 1,522 Ac-ft 1,102,000

* Discharge measurement made on this day.

Cottonwood Creek near Cleveland, Idaho

Location.--Lat 42°20', long. 111°46', in SW¼ sec. 34, T. 12 S., R. 40 E., on right bank 500 ft upstream from Cleveland irrigation canal, 2½ miles west of Cleveland, and 4 miles downstream from proposed Cottonwood Dam.

Drainage area.--61.7 sq mi.

Records available.--November 1938 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,150 ft (from topographic map). Prior to Dec. 29, 1944, staff gage at same site and datum.

Average discharge.--12 years (1939-51) 32.5 cfs.

Extremes.--Maximum discharge during year, 346 cfs Apr. 8 (gage height, 2.88 ft); minimum, 3.2 cfs Sept. 10.
1938-51: Maximum discharge, 680 cfs Apr. 21, 1948 (gage height, 3.60 ft); minimum observed, 0.5 cfs Aug. 17, 1940.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. A few small diversions for irrigation of meadow land in Cottonwood Valley above station. Treasureton Canal diverts from Cottonwood Creek above station in SE¼ sec. 8, T. 12 S., R. 39 E., for irrigation in Battle Creek basin in vicinity of Treasureton.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	15	14	b8	b7	b14	68	140	32	6.1	5.6	5.6
2	12	25	11	9.5	b7	17	84	133	29	5.6	8.1	5.1
3	12	18	12	*b9	b8	17	109	*131	26	5.1	7.0	4.7
4	10	15	14	10	b9	16	140	124	24	5.1	14	4.4
5	9.8	14	12	11	b10	14	199	127	21	7.5	9.5	4.2
6	10	*14	b11		b12	b14	222	142	19	7.3	7.5	4.0
7	10	14	14		18	15	254	169	18	6.8	7.0	3.7
8	10	22	15	b8	18	16	257	*148	*17	6.1	7.0	3.5
9	9.8	16	13		19	16	257	133	16	6.1	6.8	3.3
10	*9.8	b12	12		19	b14	216	127	16	7.0	6.5	3.3
11	9.5	14	15		19	b13	194	126	15	9.8	6.1	3.3
12	9.8	14	*15		a18	b13	204	135	14	9.5	5.8	3.5
13	11	13	15		a17	18	232	119	14	*7.5	5.8	3.7
14	11	13	14		a15	19	249	*102	12	6.5	5.8	3.7
15	12	12	15	b10	a13	18	227	91	11	6.1	5.6	3.5
16	13	b11	15		*b13	17	*196	90	9.5	5.8	*5.3	3.5
17	11	14	14		b15	19	196	92	10	6.5	4.9	3.3
18	12	15	13		17	21	196	83	12	6.5	5.1	3.3
19	11	18	14		15	17	222	81	11	6.5	5.6	*3.3
20	11	17	14		b13	18	199	82	9.8	6.8	15	3.5
21	10	26	12		b13	22	162	77	9.5	7.5	15	3.7
22	10	21	11		b14	26	140	74	9.5	6.1	12	3.8
23	10	18	12		15	26	127	71	9.5	5.6	12	4.0
24	11	15	11	b9	16	30	144	70	9.5	4.9	11	3.7
25	9.8	15	12		b14	36	122	*64	9.0	4.4	11	3.5
26	9.8	15	9.2		15	39	126	60	7.5	4.4	9.8	3.5
27	14	14	8.4		b14	a35	127	56	7.0	4.4	8.7	3.8
28	17	14	9.6	b8	b14	a30	129	52	6.8	5.8	5.8	4.0
29	15	13	10		-	a32	214	41	6.5	9.2	13	4.6
30	14	15	12	b7	-	*39	160	33	6.3	7.8	10	3.7
31	14	-	10		-	44	-	33	-	*7.0	6.1	-
Total	352.3	472	389.4	278.5	397	685	5,372	3,006	417.4	201.3	258.4	114.7
Mean	11.4	15.7	12.6	8.98	14.2	22.1	179	97.0	13.9	6.49	8.34	3.82
Ac-ft	699	936	772	552	787	1,360	10,660	5,960	828	399	513	228

Calendar year 1950: Max 451 Min 4.9 Mean 53.4 Ac-ft 38,620
Water year 1950-51: Max 257 Min 3.3 Mean 32.7 Ac-ft 23,690

Peak discharge (base, 150 cfs).--Apr. 8 (9:45 a.m.) 345 cfs (2.88 ft); Apr. 23 (10 a.m.) 260 cfs (2.82 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.

Mink Creek Canal near Mink Creek, Idaho

Location.--Lat 42°15'30", long. 111°40'00", in SE¼ sec. 28, T. 13 S., R. 41 E., on left bank 600 ft downstream from head gates and 3½ miles northeast of town of Mink Creek.

Records available.--October 1949 to September 1951.

Gage.--Water-stage recorder and Parshall flume.

Extremes.--Maximum daily discharge during year, 32 cfs June 20-22; no flow Oct. 2 to May 22.

1949-51: Maximum daily discharge, that of June 20-22, 1951; no flow during nonirrigation season each year.

Remarks.--Records excellent. Canal diverts for irrigation of same lands in vicinity of Preston as from former Preston, Riverdale, and Mink Creek Canal. Land slides in vicinity of Riverdale on latter canal made its continued use too costly and hazardcus. Water now routed through Glendale Reservoir.

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

0.4	3.8	1.0	16
.6	7.2	1.3	24
.8	11	1.6	34

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.2							0	28	29	30	27
2	0							0	28	30	30	27
3	0							*0	29	29	30	27
4	0							0	28	29	30	27
5	0							0	30	29	30	27
6	0							0	30	*30	30	27
7	0							0	*30	30	30	27
8	0							0	30	30	30	27
9	0							*0	30	30	30	26
10	0							0	30	29	30	26
11	0							0	31	30	30	25
12	0							0	31	30	30	24
13	0							0	31	30	30	24
14	0							*0	30	30	30	24
15	0							0	30	30	29	23
16	0							0	30	30	28	*24
17	0							0	30	30	27	24
18	0							0	31	30	27	24
19	0							0	30	30	27	24
20	0							0	32	30	27	23
21	0							0	*32	30	28	23
22	0							0	32	30	27	23
23	0							*5.1	31	30	27	22
24	0							9.3	31	30	27	23
25	0							15	30	29	27	23
26	0							21	30	29	27	23
27	0							24	30	30	27	23
28	0							*26	30	30	27	23
29	0							27	30	29	*27	23
30	0							28	30	*30	27	23
31	0							28	-	30	27	-
Total	5.2	0	0	0	0	0	0	183.4	905	922	883	736
Mean	0.17	0	0	0	0	0	0	5.92	30.2	29.7	28.5	24.5
Ac-ft	10	0	0	0	0	0	0	364	1,800	1,830	1,750	1,460

Calendar year 1950: Max 30 Min 0 Mean 7.54 Ac-ft 5,450
Water year 1950-51: Max 32 Min 0 Mean 9.96 Ac-ft 7,210

* Discharge measurement made on this day.

Mink Creek below Dry Fork, near Mink Creek, Idaho

Location.--Lat 42°15'30", long. 111°40'30", in NE¼NW¼ sec. 33, T. 13 S., R. 41 E., on right bank 500 ft downstream from Dry Fork and 3 miles northeast of town of Mink Creek.

Drainage area.--19.3 sq mi.

Records available.--April 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,300 ft (from topographic map).

Extremes.--Maximum discharge during year, 461 cfs May 27 (gage height, 3.68 ft); minimum daily, 22 cfs Sept. 9, 10.
1947-51: Maximum discharge, 600 cfs May 29, 1948 (gage height, 3.65 ft); minimum, 26 cfs Feb. 12-16, 1948.

Remarks.--Records good except those for period of no gage-height record, which are fair. Three diversions above station for irrigation, one of which first diverted water Sept. 24, 1949, for irrigation in vicinity of Preston, being routed through Glendale Reservoir in Worm Creek basin.

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

Oct. 1 to Apr. 2		Apr. 3 to Sept. 30			
1.9	32	1.7	19	2.8	164
2.1	46	2.0	38	3.2	287
2.3	68	2.4	87	3.7	468

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	44	40	37	35	40	55	146	362	105	38	28
2	51	44	40	37	35	40	65	139	318	101	39	27
3	53	44	40	37	35	39	76	*133	277	98	39	27
4	53	46	40	36	35	39	84	135	240	92	39	27
5	53	46	*40	*36	37	39	90	141	224	90	38	26
6	*53	*45	40	36	37	38	95	167	218	*89	37	25
7	52	46	40	36	40	38	100	231	*212	84	35	23
8	52	46	40	36	42	38	101	234	209	81	36	23
9	52	45	40	36	43	38	103	*218	200	80	34	22
10	50	44	39	36	43	38	100	224	197	78	33	22
11	50	44	39	36	45	37	98	243	191	72	32	23
12	51	43	40	36	47	37	97	277	191	69	32	26
13	52	43	40	36	*45	37	*100	263	194	67	31	26
14	52	43	40	36	44	37	107	237	197	66	30	24
15	53	42	40	36	43	38	110	218	194	66	28	24
16	53	42	40	36	43	38	116	200	197	62	30	24
17	53	42	40	36	43	38	125	221	197	59	*31	25
18	51	43	40	36	43	38	133	253	191	57	31	25
19	50	43	39	36	42	38	141	298	178	52	29	*25
20	49	42	39	35	42	38	146	318	172	54	32	25
21	49	43	39	35	42	38	146	*333	*164	54	30	25
22	48	42	38	35	42	39	146	365	157	51	31	24
23	47	41	38	35	42	40	146	409	150	51	30	23
24	46	41	38	35	42	40	152	424	143	51	29	23
25	46	41	38	35	41	42	150	424	139	50	29	24
26	46	41	38	36	41	45	146	431	133	49	29	24
27	46	41	38	36	41	44	143	*438	129	49	29	23
28	45	41	38	36	40	44	150	*438	121	48	29	24
29	45	40	38	36	-	43	155	427	114	47	29	24
30	45	40	38	35	-	43	155	412	110	*45	28	24
31	45	-	38	35	-	45	-	387	-	40	28	-
Total	1,536	1,288	1,215	1,111	1,150	1,226	3,531	8,784	5,719	2,057	995	735
Mean	49.5	42.9	39.2	35.8	41.1	39.5	118	283	191	66.4	32.1	24.5
Ac-ft	3,050	2,550	2,410	2,200	2,280	2,430	7,000	17,420	11,340	4,080	1,970	1,460

Calendar year 1950: Max 528 Min 31 Mean 106 Ac-ft 76,630
Water year 1950-51: Max 438 Min 22 Mean 80.4 Ac-ft 58,190

* Discharge measurement made on this day.
Note.--No gage-height record Mar. 17 to Apr. 2; discharge estimated on basis of weather records and records for station near Mink Creek and Cub River near Preston.

Twin Lakes Canal near Mink Creek, Idaho

Location.--Lat 42°14', long. 111°44', in SE¼ sec. 1, T. 14 S., R. 40 E., on right bank 200 ft downstream from head gates and 1 mile west of town of Mink Creek.

Records available.--April 1943 to September 1951.

Gage.--Water-stage recorder and Parshall flume.

Average discharge.--8 years, 45.8 cfs.

Extremes.--Maximum daily discharge during year, 163 cfs June 7; no flow Nov. 2 to Feb. 14.
1943-51: Maximum daily discharge, that of June 7, 1951; no flow at times in each year.

Remarks.--Records good except those for period of no gage-height record, which are fair. Canal diverts from west side of Mink Creek for storage in Twin Lakes Reservoir and irrigation on west side of Bear River in vicinity of Preston.

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

0	0	0.3	5.6	1.3	60
.1	.5	.5	13	1.9	110
.2	2.5	.8	28	2.5	171

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	20			0	44	70	45	155	105	38	26
2	61	0			0	44	100	45	154	101	36	26
3	61	0			0	43	104	44	155	100	38	25
4	61	0			0	42	101	43	156	98	45	26
5	61	0	(*)		0	41	96	44	160	92	42	25
6	*61	*0			0	42	93	44	162	*89	42	25
7	60	0			0	42	88	33	*163	83	43	23
8	61	0			0	41	89	29	161	81	41	22
9	61	0			0	42	88	*28	161	78	40	19
10	61	0			0	41	88	28	158	77	38	19
11	60	0			0	41	88	29	157	73	41	20
12	58	0			0	39	88	28	159	73	36	23
13	59	0			*0	39	*88	22	158	71	32	23
14	60	0			0	39	90	34	157	69	35	23
15	61	0			6.7	40	90	68	155	61	33	23
16	60	0			13	41	90	75	152	59	29	22
17	59	0			19	41	90	80	154	58	29	23
18	59	0			22	41	91	*81	157	54	29	24
19	59	0			21	41	92	84	156	51	28	*23
20	58	0			21	41	92	84	158	59	30	22
21	58	0			21	41	92	84	151	60	30	22
22	58	0			20	41	92	105	150	53	30	23
23	56	0			20	42	92	120	146	48	30	24
24	56	0			20	44	83	132	147	47	30	22
25	57	0			20	44	75	137	147	47	28	24
26	56	0			20	40	75	140	144	49	28	24
27	59	0			38	31	75	140	137	47	29	23
28	57	0			45	31	75	*141	126	47	26	25
29	58	0			-	35	76	151	116	47	*27	25
30	56	0			-	35	57	152	111	*45	27	24
31	57	-			-	40	-	156	-	41	27	-
Total	1,824	20	0	0	306.7	1,249	2,608	2,426	4,523	2,063	1,037	698
Mean	58.8	0.7	0	0	11.0	40.3	86.9	78.3	151	66.5	33.5	23.3
Ac-ft	3,620	40	0	0	608	2,480	5,170	4,810	8,970	4,090	2,060	1,380

Calendar year 1950: Max 151 Min 0 Mean 55.5 Ac-ft 40,210
Water year 1950-51: Max 163 Min 0 Mean 45.9 Ac-ft 33,230

* Discharge measurement made on this day.
Note.--No gage-height record Mar. 15 to Apr. 2; discharge estimated on basis of records for Mink Creek near Mink Creek and Preston-Riverdale and Mink Creek Canal near Mink Creek.

Preston-Riverdale & Mink Creek Canal near Mink Creek, Idaho

Location.--Lat 42°12', long. 111°44', in NW¼ sec. 12, T. 14 S., R. 40 E., on left bank half a mile downstream from head gates and 1 mile southwest of towr of Mink Creek.

Records available.--April 1943 to September 1951.

Gage.--Water-stage recorder.

Extremes.--Maximum daily discharge during year, 24 cfs June 21; no flow Nov. 9 to May 8.
1943-51: Maximum daily discharge, 46 cfs June 28-30, July 2, 1943; no flow at times in each year.

Remarks.--Records good except those for period of no gage-height record, which are fair. Canal diverts from east side of Mink Creek for irrigation in vicinity of Mink Creek and Riverdale. Since June 1950, Mink Creek Canal serves lands in vicinity of Preston formerly served by this canal. Total annual diversion is thereby reduced about half.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	1.0						0	16	11	10	9.7
2	3.5	.8						0	14	10	10	10
3	*2.9	1.0						*0	10	10	10	11
4	2.7	.9						0	11	10	11	8.6
5	2.7	.8	(*)					0	11	9.0	9.4	7.7
6	2.7	.8						0	13	*9.4	9.2	7.7
7	2.6	*.7						0	*14	10	8.4	8.0
8	2.4	.8						0	17	10	8.8	8.2
9	2.3	0						*2.5	16	10	12	7.7
10	2.2	0						3.8	14	11	9.9	7.7
11	2.1	0						4.3	14	11	5.9	9.0
12	2.0	0						4.7	20	10	7.7	10
13	1.8	0						4.4	22	8.0	9.9	9.9
14	1.9	0						3.8	23	10	9.0	9.4
15	2.0	0						7.3	22	11	5.7	9.0
16	1.9	0						9.4	23	11	7.9	9.0
17	1.7	0						9.0	23	10	13	8.8
18	1.7	0						*12	21	8.6	12	8.6
19	1.6	0						15	16	9.0	10	*8.4
20	1.5	0						15	20	11	12	7.5
21	1.4	0						15	*24	11	11	7.9
22	1.4	0						15	23	9.9	12	7.9
23	1.3	0						16	20	11	a12	8.0
24	1.3	0						15	12	14	a12	7.5
25	1.2	0						15	8.4	13	a12	7.9
26	1.2	0						14	10	9.7	a11	7.7
27	1.3	0						16	8.6	9.9	a11	7.7
28	1.1	0						*17	8.4	9.0	a11	8.2
29	1.1	0						18	11	9.0	*11	8.6
30	1.0	0						18	11	*8.8	11	6.9
31	1.0	-						18	-	9.7	11	-
Total	59.3	6.8	0	0	0	0	0	268.2	476.4	315.0	316.8	254.2
Mean	1.91	0.23	0	0	0	0	0	8.65	15.9	10.2	10.2	8.47
Ac-ft	118	13	0	0	0	0	0	532	945	625	628	504

Calendar year 1950: Max 32 Min 0 Mean 5.32 Ac-ft 3,850
Water year 1950-51: Max 24 Min 0 Mean 4.65 Ac-ft 3,360

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

Mink Creek near Mink Creek, Idaho

Location.--Lat 42°12', long. 111°46', in SE¼ sec. 15, T. 14 S., R. 40 E., on left bank 1,000 ft upstream from Bear Hollow, 1¼ miles upstream from mouth, and 3 miles southwest of town of Mink Creek.

Drainage area.--58.7 sq mi.

Records available.--April 1943 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,750 ft (from topographic map). Prior to Apr. 2, 1948, at site 700 ft downstream at different datum. Apr. 2 to June 6, 1948, at site half a mile downstream at different datum. June 7 to Sept. 7, 1948, staff gage at site 400 ft downstream at different datum.

Average discharge.--8 years, 50.6 cfs.

Extremes.--Maximum discharge during year, 331 cfs May 12 (gage height, 2.68 ft); minimum daily, 1.7 cfs Sept. 24.
1943-51: Maximum daily discharge, 427 cfs June 2, 1950; minimum daily, 0.7 cfs on many days in August and September 1944.

Remarks.--Records good except those for periods of ice effect, which are fair. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas. Mink Creek Canal diverts water from creek above station for irrigation below station. Twin Lakes Canal and Preston-Riverdale & Mink Creek Canal divert water from creek above station for irrigation above and below station.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 7-11, 26-31)

0.4	1.1	0.7	12	1.6	117
.5	3.0	.9	28	2.1	220
.6	6.3	1.2	58	2.5	312

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	23	51	53	b42	3.0	20	177	233	6.0	3.0	2.4
2	5.6	59	51	50	b45	2.8	17	169	200	4.6	3.3	2.2
3	*5.6	57	52	48	b48	2.6	30	158	166	5.0	3.3	2.0
4	5.6	57	59	50	b55	2.6	41	156	125	4.6	5.6	2.4
5	5.6	56	*52	*48	61	2.8	53	164	103	4.6	4.0	2.2
6	5.6	*56	50	47	56	2.8	62	192	96	*4.3	3.3	2.2
7	5.3	54	53	b45	82	2.8	71	270	*88	4.3	3.3	2.6
8	5.0	56	52	b45	82	2.8	77	*267	82	4.6	4.0	2.4
9	4.6	56	52	b46	77	3.0	75	242	75	4.0	4.6	2.6
10	4.6	54	52	47	75	2.6	66	242	70	4.0	4.0	4.3
11	4.3	54	52	48	88	2.4	61	263	64	5.0	3.0	2.4
12	4.3	53	53	47	91	2.6	58	305	54	4.0	2.8	2.6
13	4.6	53	53	47	*79	2.6	*64	293	57	3.7	2.8	2.8
14	4.6	56	52	46	71	2.8	81	258	58	3.3	2.8	2.8
15	5.0	54	53	47	61	3.3	86	196	57	3.3	4.6	2.6
16	5.0	53	53	47	50	4.3	86	164	61	4.0	4.6	2.4
17	5.0	54	53	47	43	3.0	91	173	63	4.3	3.0	2.2
18	5.3	63	53	47	38	2.6	103	*202	56	4.6	2.8	2.8
19	5.3	59	52	46	36	2.8	125	233	43	3.7	2.6	*2.6
20	5.3	58	52	45	37	4.0	134	254	28	4.3	2.6	2.2
21	5.0	59	51	b45	34	6.3	123	265	*21	5.6	2.8	2.0
22	5.0	56	51	45	34	8.6	119	267	18	4.6	3.3	2.0
23	5.0	56	51	45	35	5.6	115	290	16	4.3	3.0	1.9
24	5.0	54	51	46	35	6.0	150	302	12	3.7	2.4	1.7
25	5.0	53	51	47	34	10	144	*310	11	3.7	2.4	1.9
26	5.0	53	50	47	34	16	138	295	8.0	2.8	2.2	2.0
27	5.6	52	50	47	13	8.6	138	293	7.4	2.8	2.0	1.9
28	5.3	52	50	46	3.7	5.3	146	*288	6.9	2.8	1.2	2.0
29	5.0	52	50	b44	-	5.6	160	279	6.9	2.8	*2.6	2.6
30	5.0	52	52	b43	-	7.4	179	256	6.0	*3.0	2.6	2.4
31	5.3	-	51	b42	-	16	-	249	-	3.0	2.4	-
Total	158.0	1,624	1,608	1,443	1,439.7	153.6	2,813	7,472	1,892.2	125.3	97.9	71.1
Mean	5.10	54.1	51.9	46.5	51.4	4.95	93.8	241	63.1	4.04	3.16	2.37
Ac-ft	313	3,220	3,190	2,860	2,860	305	5,580	14,820	3,750	249	194	141

Calendar year 1950: Max 427 Min 2.8 Mean 77.2 Ac-ft 55,900
Water year 1950-51: Max 310 Min 1.7 Mean 51.8 Ac-ft 37,480

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

Bear River near Preston, Idaho

Location.--Lat 42°10', long. 111°51', in NW¼ sec. 36, T. 14 S., R. 39 E., on left bank 600 ft downstream from head gates of West Cache Canal, 5 miles downstream from Mink Creek, 5 miles north of Preston, and 5½ miles upstream from Battle Creek.

Drainage area.--4,500 sq mi, approximately.

Records available.--October 1889 to September 1917 (gage heights only January to September 1917), January 1944 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,540 ft (from topographic map). Prior to September 1917, staff gage at site 5 miles downstream at different datum.

Average discharge.--7 years (1944-51), 968 cfs.

Extremes.--Maximum discharge during year, 3,130 cfs Dec. 28 (gage height, 4.96 ft); minimum, 7.4 cfs July 2 (gage height, 0.76 ft); minimum daily, 218 cfs June 3.
1889-1917, 1944-51: Maximum discharge, about 8,500 cfs June 9, 10, 1907, estimated on basis of records for station near Collinston, Utah; maximum gage height observed, 9.04 ft Jan. 17, 18, 1917 (backwater from ice), site and datum then in use; minimum, 0.6 cfs June 14, 1949; minimum daily, 14 cfs July 4, 1944, July 4, 1945, July 5, 1947.

Remarks.--Records good. Station is below all irrigation diversions from Bear River in Idaho except Cub River pumps in SE¼ sec. 20, T. 16 S., R. 39 E. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,660	1,600	1,570	1,660	1,520	1,550	1,620	1,400	1,150	570	1,250	1,330
2	1,630	1,540	2,000	1,540	1,330	1,710	1,880	1,400	680	1,270	1,540	1,290
3	1,630	1,460	1,960	1,710	967	1,670	2,110	1,380	218	1,240	1,280	1,480
4	1,630	1,380	1,760	1,630	1,410	1,660	1,840	1,260	820	365	1,080	1,500
5	1,700	1,420	1,710	1,630	2,160	1,630	2,060	1,290	495	1,190	1,240	1,510
6	1,660	1,440	1,500	1,800	*2,160	1,760	2,120	1,010	552	1,720	1,150	1,460
7	1,760	*1,320	1,620	1,660	1,830	1,400	2,110	1,250	720	1,600	1,440	2,060
8	1,630	1,410	2,230	1,320	2,020	1,840	1,810	1,330	491	594	1,280	1,660
9	1,720	1,420	1,850	2,140	2,010	1,740	1,670	1,580	677	1,460	1,380	708
10	*1,670	1,430	1,690	1,690	1,680	1,810	2,080	1,200	784	1,530	1,590	1,340
11	1,580	1,430	1,600	1,520	1,690	1,730	2,070	1,700	924	1,060	1,170	1,430
12	1,800	1,430	1,610	2,040	1,770	1,560	1,750	1,490	1,310	1,020	1,100	1,490
13	1,570	1,450	1,630	1,650	1,180	1,480	1,990	1,180	840	*1,500	1,370	1,240
14	1,690	1,460	1,720	1,460	1,460	1,170	1,960	1,580	1,280	1,370	1,450	1,610
15	1,600	1,420	1,750	1,640	1,780	1,880	1,840	1,160	1,530	1,390	1,070	1,260
16	1,800	1,470	1,880	1,520	1,770	1,770	1,880	1,540	962	1,190	1,570	1,150
17	1,710	1,600	1,870	1,710	1,660	1,690	2,080	1,480	807	1,160	1,620	1,290
18	1,640	1,540	1,840	1,760	1,630	1,640	1,910	1,630	1,210	1,040	1,150	1,200
19	1,800	1,540	1,810	1,540	1,580	1,640	1,920	1,240	1,240	1,260	667	1,510
20	1,590	1,650	1,530	1,730	1,520	1,650	1,810	1,240	1,420	1,440	1,670	1,620
21	1,830	1,900	1,710	1,490	1,790	1,740	1,980	1,520	1,540	1,420	1,410	1,260
22	1,470	1,910	1,620	2,040	1,680	1,780	1,090	1,490	1,310	758	985	1,190
23	1,530	1,780	1,770	1,640	1,400	1,820	1,520	*1,250	955	1,330	1,640	1,170
24	1,670	1,860	1,700	1,680	2,130	1,720	1,580	1,500	962	1,600	1,640	1,530
25	1,570	1,770	1,620	1,600	1,690	1,420	1,600	1,710	1,330	1,060	1,460	1,180
26	1,550	1,860	1,500	1,720	1,410	1,610	1,640	1,550	*1,650	828	943	1,440
27	1,720	1,740	1,430	1,670	1,600	1,650	1,580	971	1,380	1,360	1,620	1,690
28	1,750	1,640	1,900	1,710	*1,700	1,750	1,550	1,110	1,030	1,260	1,460	1,310
29	1,680	1,540	1,750	1,790	-	1,770	1,470	1,190	1,730	857	1,220	1,020
30	1,640	1,820	1,680	1,630	-	*1,770	1,630	1,170	2,130	1,270	1,610	1,290
31	1,660	-	1,420	1,350	-	1,650	-	1,560	-	1,220	1,470	-
Total	51,540	47,230	53,230	51,670	46,527	51,660	54,150	42,361	31,927	36,932	41,525	41,218
Mean	1,663	1,574	1,717	1,667	1,662	1,666	1,805	1,366	1,064	1,191	1,340	1,374
Ac-ft	102,200	93,680	105,600	102,500	92,280	102,500	107,400	84,020	63,330	73,250	82,360	81,750

Calendar year 1950: Max 3,410 Min 269 Mean 1,525 Ac-ft 1,104,000
Water year 1950-51: Max 2,230 Min 218 Mean 1,507 Ac-ft 1,091,000

* Discharge measurement made on this day.

Cub River near Preston, Idaho

Location.--Lat 42°08', long. 111°41', in SW¼ sec. 5, T. 15 S., R. 41 E., on right bank 0.2 mile upstream from head gates of Cub River-Worm Creek Canal, 0.7 mile upstream from forest boundary, and 10 miles east of Preston.

Drainage area.--19.4 sq mi.

Records available.--March 1940 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,320 ft (from topographic map).

Average discharge.--11 years, 86.9 cfs.

Extremes.--Maximum discharge during year, 633 cfs May 26 (gage height, 3.32 ft); minimum, 11 cfs Jan. 22 (result of freeze-up).
1940-51: Maximum discharge, 705 cfs June 2, 1943 (gage height, 3.83 ft); minimum, that of Jan. 22, 1951.

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

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

Oct. 1 to May 31				June 1 to July 18		July 19 to Sept. 30	
*1.1	18	2.1	175	1.7	72	1.2	28
1.2	27	2.6	321	2.0	133	1.3	38
1.4	50	3.3	615	2.4	246	1.5	58
1.7	95			2.8	389	1.7	83
				3.1	521		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	32	26	27	b25	24	53	159	498	154	63	42
2	40	34	26	26	a25	23	61	146	427	149	63	42
3	39	31	26	*26	a25	24	70	*137	353	141	61	40
4	38	31	*28	26	a25	24	78	137	319	136	62	40
5	38	30	26	26	a27	24	82	157	309	*128	60	40
6	39	30	25	26	a27	23	87	192	302	122	57	40
7	38	31	26	b26	a30	23	92	264	302	115	56	38
8	38	32	25	26	a33	22	95	260	*302	110	56	38
9	37	*31	25	26	a35	23	95	237	288	106	55	38
10	36	30	25	26	a35	22	92	251	285	102	54	38
11	36	30	26	26	38	26	89	300	*285	96	54	38
12	*35	30	27	26	37	24	90	348	295	96	53	38
13	35	30	28	26	34	22	98	304	309	90	52	38
14	35	31	28	26	31	22	116	254	319	88	50	37
15	36	30	28	26	30	*22	135	225	319	86	50	36
16	35	29	28	26	*29	22	144	204	327	83	49	36
17	34	28	28	26	28	22	157	*220	334	79	49	36
18	32	35	28	26	28	22	173	280	327	*79	a49	*36
19	32	35	29	26	28	22	180	379	312	80	a49	36
20	32	34	28	25	27	22	*182	433	292	79	a47	36
21	32	35	28	25	27	24	173	450	272	79	a47	36
22	31	31	27	27	27	31	166	501	256	77	a45	36
23	31	29	27	26	27	30	166	527	237	76	*45	36
24	31	28	27	25	27	32	180	536	219	74	45	36
25	31	27	26	25	27	39	180	562	*210	73	45	35
26	32	27	26	26	27	43	166	597	204	72	44	35
27	35	26	27	26	26	39	164	589	193	70	44	35
28	32	26	27	26	25	35	175	575	181	69	44	35
29	31	26	26	b26	-	35	180	*615	173	68	44	36
30	31	26	26	b25	-	37	177	602	165	67	44	35
31	32	-	26	b25	-	44		*567	-	64	42	-
Total	1,076	905	829	802	810	847	3,896	11,008	8,614	2,908	1,573	1,118
Mean	34.7	30.2	26.7	25.9	28.9	27.3	130	355	287	93.8	50.9	37.2
Ac-ft	2,130	1,800	1,640	1,590	1,610	1,680	7,730	21,830	17,090	5,770	3,130	2,220

Calendar year 1950: Max 656 Min 20 Mean 117 Ac-ft 85,010
Water year 1950-51: Max 615 Min 22 Mean 94.2 Ac-ft 68,220

Peak discharge (base, 440 cfs).--May 26 (1:30 a.m.) 633 cfs (3.32 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for station above Maple Creek near Franklin and Mink Creek below Dry Fork, near Mink Creek.
b Stage-discharge relation affected by ice.

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Cub River-Worm Creek Canal near Preston, Idaho

Location.--Lat 42°08', long. 111°45', in NW¼ sec. 14, T. 15 S., R. 40 E., on left bank a quarter of a mile upstream from divide between Cub River and Worm Creek basins, 5 miles downstream from head gates, and 7 miles northeast of Preston.

Records available.--April 1943 to September 1951.

Gage.--Water-stage recorder.

Average discharge.--8 years, 16.5 cfs.

Extremes.--Maximum daily discharge during year, 81 cfs June 21; no flow at times. 1943-51: Maximum daily discharge, 85 cfs June 7, 1950; no flow at times each year.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Several diversions between gage and head of canal for irrigation in Cub River basin. Records show diversion to Worm Creek basin from Cub River except for one small diversion below gage. Canal diverts from Cub River in NW¼ sec. 8, T. 15 S., R. 41 E.

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

Oct. 1 to Nov. 8		Nov. 9 to Sept. 30					
0.2	0	0	0	0.5	3.9	1.5	42
.3	.1	.1	.2	.7	8.5	1.8	58
.4	1.1	.2	.8	.9	15	2.1	82
.5	2.2	.3	1.5	1.2	27		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	0	19			0	31	1.8	62	66	17	
2	1.3	0	18			0	28	2.2	42	61	16	
3	1.3	0	19			0	24	*2.3	72	56	14	
4	1.2	0	20			0	24	1.3	74	53	15	
5	1.3	0	18			a3	22	4.5	76	*53	15	
6	1.3	0	b19			a3	*22	28	76	53	16	
7	1.2	0	19			a3	21	29	77	53	16	
8	1.3	0	18			a3	20	22	76	52	14	
9	1.3	7.5	18			a3	20	4.7	77	48	12	
10	1.3	8.8	18			a3	20	4.1	79	47	12	
11	1.2	8.5	14			a3	22	3.9	*80	46	12	
12	*1.2	7.7	*.1			a3	22	4.3	74	44	11	
13	1.1	5.1	0			a3	27	3.8	61	40	11	
14	1.0	5.5	0			a3	27	3.5	66	39	11	
15	1.1	8.5	0			a3	26	3.3	70	37	11	
16	.9	12	0			a6	26	3.3	74	36	8.8	
17	.8	12	0			a6	30	3.1	77	34	7.5	
18	.6	12	0			a6	30	7.9	76	*31	7.7	
19	.5	12	0			a6	31	32	74	30	7.7	
20	.5	12	0			*18	31	33	79	30	6.4	
21	.1	12	0			19	30	31	81	29	a5.8	
22	0	12	0			22	30	34	80	30	a5.1	
23	0	12	0			22	32	35	75	31	*4.5	
24	0	14	0			24	34	40	77	30	4.5	
25	0	18	0			26	33	38	*77	28	4.5	
26	0	18	0			27	33	46	78	26	4.5	
27	0	18	0			24	34	50	77	25	4.9	
28	0	18	0			23	34	48	76	22	3.8	
29	0	18	0			24	35	*33	70	21	.5	
30	0	18	0			25	20	55	68	20	0	
31	0	-	0			28	-	60	-	19	0	
Total	21.9	269.6	200.1	0	0	339	819	668.0	2,201	1,190	279.2	0
Mean	0.71	6.99	6.45	0	0	10.9	27.3	21.5	73.4	38.4	9.01	0
Ac-ft	43	535	397	0	0	672	1,620	1,320	4,370	2,360	554	0

Calendar year 1950: Max 85 Min 0 Mean 20.4 Ac-ft 14,780
Water year 1950-51: Max 81 Min 0 Mean 16.4 Ac-ft 11,870

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of water-master notes giving estimates of flow and time of gate changes at head of canal.
b Stage-discharge relation affected by ice.

Preston-Whitney Canal near Preston, Idaho

Location.--Lat 42°06', long. 111°44', in NE¼ sec. 24, T. 15 S., R. 40 E., on right bank 500 ft downstream from head gates and 7½ miles east of Preston.

Records available.--April 1946 to September 1951 in reports of Geological Survey. April 1944 to September 1948 (irrigation seasons only) in Bear River Hydrometric Data reports.

Gage.--Water-stage recorder and sharp-crested weir. Prior to May 25, 1949, staff gage at same site and datum.

Average discharge.--5 years (1946-51), 5.36 cfs.

Extremes.--Maximum daily discharge during year, 48 cfs June 6, 7; minimum daily, 0.3 cfs Feb. 24-28.
1946-51: Maximum daily discharge, 60 cfs June 20, 1948; no flow during winter months and at other times in 1947, 1948, 1949.

Remarks.--Records good except those for periods of ice effect and doubtful or no gage-height record, which are fair. Canal diverts from west side of Cub River for irrigation in vicinity of Preston.

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

0	0	0.5	10
.1	1.0	.7	18
.2	2.8	1.0	31
.3	4.9	1.4	51

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.4	0.9	0.7	0.7	b0.5	0.4	0.6	1.0	22	23	8.9	5.4
2	4.5	.9	.8	.7	.7	.4	.6	.9	21	23	8.9	5.4
3	2.8	.9	.8	.7	.7	.4	.6	*1.0	23	22	8.9	5.4
4	2.8	.9	*.8	.7	.8	.4	.6	1.0	31	22	8.9	5.4
5	2.8	.9	.8	.6	.8	.4	.6	1.0	40	*19	8.9	5.4
6	2.8	.9	.8	.6	.9	.4	.6	1.0	48	20	8.9	5.4
7	2.4	*.8	.8	.5	.9	.4	.6	.8	48	20	8.9	5.2
8	2.4	.8	.8	.5	.9	.4	.6	.8	46	19	6.9	4.9
9	2.4	*.6	.8	.5	1.0	.4	.6	.8	40	18	5.2	4.9
10	2.2	.5	.8	.5	1.0	.4	.6	.8	40	18	5.2	4.9
11	2.2	.5	.9	.5	1.0	.4	.6	1.0	*40	18	5.2	4.9
12	*2.1	.5	.9	.5	1.0	.4	.6	1.2	40	18	5.2	1.6
13	1.9	.5	.9	.5	1.0	.4	.6	1.0	*40	18	5.2	.5
14	1.9	.4	.9	.5	1.0	.4	.6	.7	40	18	5.2	.5
15	1.9	.5	.9	.5	.8	.4	.6	.6	40	18	5.2	.6
16	1.4	.4	.8	.5	.5	.5	.6	.5	40	16	5.2	.6
17	1.4	.4	.8	.5	.4	.5	.6	.6	41	15	5.2	.7
18	1.2	.5	.8	.5	.5	.5	.6	3.8	40	*15	5.2	.7
19	1.2	.5	.8	.5	.5	.5	.6	4.9	40	14	5.2	.7
20	1.2	.5	.8	.5	.5	.5	.6	4.0	40	13	5.2	.7
21	1.2	.6	.8	.5	.5	.5	.6	3.0	38	12	5.2	.6
22	1.0	.5	.8	.5	.3	.5	.6	2.1	38	9.8	5.2	.6
23	1.0	.6	.8	.5	.4	.5	.6	1.9	34	8.9	*5.2	.6
24	1.0	.6	.8	.5	.3	.5	.6	14	30	8.9	5.2	.5
25	.9	.7	.8	.5	.3	.5	.6	21	*30	8.9	5.2	.5
26	.9	.7	.8	.5	.3	.5	.6	13	30	8.9	5.4	.5
27	.9	.8	.8	.5	.3	.5	.6	13	29	8.9	5.4	.5
28	.9	.8	.8	.5	.3	.5	.7	14	28	8.9	5.4	.5
29	.9	.7	.8	b.5	-	.5	1.2	*15	28	8.9	5.4	.5
30	.9	.7	.8	b.5	-	.5	1.2	14	25	8.9	5.4	.5
31	.9	-	.8	b.5	-	.5	-	14	-	8.9	5.4	-
Total	58.4	19.5	25.2	16.5	18.1	14.0	19.3	152.4	1,070	468.9	190.0	69.1
Mean	1.88	0.65	0.81	0.53	0.65	0.45	0.64	4.92	35.7	15.1	6.13	2.30
Ac-ft	116	39	50	33	36	28	38	302	2,120	930	377	137

Calendar year 1950: Max 43 Min 0.4 Mean 7.53 Ac-ft 5,450
Water year 1950-51: Max 48 Min 0.3 Mean 5.81 Ac-ft 4,210

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Doubtful gage-height record Jan. 9-24; discharge estimated on basis of gage heights and no change at head gates. No gage-height record Feb. 26 to Apr. 9; discharge estimated on basis of gage heights and no change at head gates.

Cub River Canal near Preston, Idaho

Location.--Lat 42°04', long. 111°47', in SE¼ sec. 4, T. 16 S., R. 40 E., on right bank 1¼ miles downstream from head and 5½ miles southeast of Preston.

Records available.--April 1946 to September 1951 in reports of Geological Survey. April 1944 to September 1948 (irrigation seasons only 1944-46) in Bear River Hydrometric Data reports. Irrigation seasons for 1927-43 (fragmentary) available in files of Cub River Irrigation Co., Lewiston, Utah.

Gage.--Water-stage recorder in flume. Prior to Oct. 4, 1946, staff gage at same site and datum.

Average discharge.--5 years (1946-51), 25.2 cfs.

Extremes.--Maximum daily discharge during year, 163 cfs June 15; no flow Nov. 29 to Apr. 23.

1946-51: Maximum daily discharge, that of June 15, 1951; no flow during winter months and at other times each year.

Remarks.--Records good except those for periods of no gage-height record, which are fair. No diversion above station. Canal diverts from Cub River in SW¼ sec. 3, T. 16 S., R. 40 E., for irrigation in vicinity of Preston, Idaho, and Lewiston, Utah.

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

0.3	0	0.8	11	2.2	85
.4	1.1	1.0	19	2.7	126
.5	2.9	1.3	32	3.2	172
.6	5.2	1.7	53		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	23					0	22	74	67	39	40
2	4.8	26					0	13	85	65	39	40
3	23	23					0	*8.8	91	63	40	38
4	20	26	(*)				0	9.8	105	60	48	38
5	20	25					0	11	130	*57	37	38
6	22	23					0	13	*145	54	8.8	36
7	20	21					0	17	148	51	30	36
8	20	20					0	16	151	49	42	36
9	22	*21					0	17	154	51	45	36
10	20	34					0	18	*157	49	43	35
11	26	28					0	21	*160	47	43	36
12	*30	20					0	10	121	45	41	39
13	30	20					0	8.8	90	a43	40	40
14	30	20					0	*8.1	158	a43	40	40
15	32	20					0	10	*163	a42	40	39
16	29	18					0	11	161	a41	39	38
17	28	18					0	12	161	a40	40	34
18	30	19					0	12	160	42	40	*38
19	30	18					0	13	158	*44	40	38
20	29	19					0	13	156	49	39	38
21	29	20					0	11	131	46	a40	38
22	29	20					0	14	143	a46	a42	38
23	29	20					0	16	a132	a45	*41	36
24	29	*17					13	15	a121	a45	40	36
25	29	16					27	*24	*111	a44	39	38
26	29	18					22	31	105	a43	36	38
27	31	16					19	44	95	a43	34	38
28	28	9.5					20	*53	85	a42	38	38
29	31	0					23	52	79	a41	42	44
30	29	0					26	45	73	a40	41	30
31	27	-					-	*60	-	a40	42	-
Total	789.4	578.5	0	0	0	0	150	629.5	3,803	1,477	1,208.8	1,127
Mean	25.5	19.3	0	0	0	0	5.0	20.3	127	47.6	39.0	37.6
Ac-ft	1,570	1,150	0	0	0	0	298	1,250	7,540	2,930	2,400	2,240

Calendar year 1950: Max 155 Min 0 Mean 28.0 Ac-ft 20,250
Water year 1950-51: Max 163 Min 0 Mean 26.7 Ac-ft 19,380

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of recorded range in stage and records for Cub River above Maple Creek, near Franklin.

Cub River above Maple Creek, near Franklin, Idaho

Location.--Lat 42°03', long. 111°47', in SW¼ sec. 9, T. 16 S., R. 40 E., on left bank 1½ miles upstream from Maple Creek and 2½ miles north of Franklin.

Drainage area.--53.7 sq mi.

Records available.--March 1940 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,500 ft (from topographic map). Prior to June 13, 1951, at datum 1.0 ft higher.

Average discharge.--11 years, 63.4 cfs.

Extremes.--Maximum discharge during year, 629 cfs May 26 (gage height, 3.13 ft); minimum daily, 3.2 cfs Aug. 26.
1940-51: Maximum discharge, 740 cfs May 25, 1950 (gage height, 3.80 ft); minimum daily, 0.6 cfs Sept. 16, 1948.

Remarks.--Records good except those for period of no gage-height record, which are fair. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas. Franklin-Cub River pumping station is the only diversion between station and mouth of Cub River.

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 22 to June 12)

Oct. 1 to June 12				June 13 to Sept. 30			
0	9	1.2	117	0.6	2.4	1.3	44
.2	16	1.5	168	.7	5.2	1.6	81
.4	28	1.9	250	.9	14	1.9	126
.6	45	2.5	396	1.1	26		
.9	76	3.1	569				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	21	22	34	24	42	84	211	370	6.3	3.8	4.1
2	45	21	21	38	35	42	98	199	289	6.0	3.8	a4.0
3	27	20	22	37	42	40	116	*195	189	4.9	3.8	a4.0
4	28	19	*28	36	44	38	130	199	130	4.9	5.2	a4.0
5	28	19	27	*36	54	38	145	205	73	*4.6	6.7	a3.5
6	28	20	23	34	*49	37	*155	213	*37	4.6	34	a3.5
7	28	23	25	26	57	37	168	248	30	4.6	16	a4.5
8	28	23	24	28	67	36	168	284	28	5.2	6.3	a4.5
9	25	*16	23	36	62	36	163	289	25	4.4	5.2	a4.5
10	26	15	23	39	58	36	150	287	14	4.4	4.6	a5.5
11	21	17	25	38	70	33	133	301	*9.5	4.1	4.4	a4.5
12	*16	16	40	36	77	32	125	350	47	4.1	4.1	a4.0
13	15	15	42	35	68	32	128	368	*123	4.1	4.4	a3.5
14	15	17	42	35	61	32	142	*313	63	3.8	4.1	a3.5
15	16	16	43	35	56	32	168	275	48	3.8	3.8	3.5
16	16	10	44	35	55	30	183	252	50	3.8	3.8	3.8
17	15	11	43	36	52	24	179	259	54	3.5	3.8	6.0
18	13	17	42	36	53	23	187	303	49	4.1	3.5	*5.6
19	12	21	42	36	51	23	205	368	38	*3.5	3.5	4.1
20	15	17	41	34	48	22	220	412	25	4.1	4.4	3.8
21	15	20	40	34	47	28	218	440	32	4.4	4.1	3.8
22	15	15	39	38	47	44	209	471	7.9	4.4	3.8	3.8
23	15	14	38	36	47	42	199	518	7.5	4.4	*3.8	4.1
24	15	13	37	36	49	43	205	533	7.1	3.8	3.8	4.9
25	15	9.5	37	36	47	55	205	*536	*6.7	4.1	3.8	4.1
26	15	8.2	36	36	47	68	*191	560	6.7	3.8	3.2	3.8
27	17	8.0	36	36	45	60	199	533	6.3	3.8	3.8	3.8
28	18	12	36	35	42	50	201	*524	6.0	3.8	3.8	3.8
29	15	22	37	28	-	48	207	530	5.6	3.8	3.8	4.6
30	15	22	37	27	-	55	209	509	5.2	4.4	3.5	11
31	18	-	38	22	-	68	-	*454	-	3.8	3.5	-
Total	633	497.7	1,053	1,064	1,454	1,226	5,090	11,139	1,782.5	133.3	170.1	132.1
Mean	20.4	16.6	34.0	34.3	51.9	39.5	170	359	59.4	4.30	5.49	4.40
Ac-ft	1,260	987	2,090	2,110	2,880	2,430	10,100	22,090	3,540	264	337	262

Calendar year 1950: Max 717 Min 4.3 Mean 95.7 Ac-ft 69,320
Water year 1950-51: Max 560 Min 3.2 Mean 66.8 Ac-ft 48,350

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, records for station near Preston and Cub River Canal near Preston.

Maple Creek near Franklin, Idaho

Location.--Lat 42°02'30", 111°45'00", in NW¼ sec. 14, T. 16 S., R. 40 E., on left bank 30 ft downstream from Deep Creek and 3 miles east of Franklin.

Drainage area.--21.2 sq mi.

Records available.--April 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,850 ft (from topographic map). Prior to Sept. 27, 1946, staff gage at same site and datum.

Average discharge.--5 years, 22.2 cfs.

Extremes.--Maximum discharge during year, 179 cfs May 7 (gage height, 2.06 ft); minimum daily, 1.2 cfs Sept. 17.
1946-51: Maximum discharge, 315 cfs May 18, 1950 (gage height, 2.15 ft); minimum daily, 1.0 cfs Sept. 26-30, 1948.

Remarks.--Records good. A few small diversions for irrigation above station.

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

0.0	0.7	0.6	17
.1	1.7	1.0	44
.2	3.3	1.4	88
.4	9.0	1.9	168

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	2.2	3.3	1.9	2.8	7.7	28	79	*54	12	3.1	2.0
2	2.3	2.7	3.1	2.8	3.0	7.4	39	74	45	11	3.1	1.9
3	2.3	2.5	3.3	3.0	3.0	7.0	52	65	38	9.8	3.3	1.7
4	2.3	2.0	*4.0	3.0	3.3	7.7	59	79	35	9.0	6.4	1.6
5	2.2	2.0	3.5	*3.0	5.2	7.4	65	94	32	8.3	4.5	1.5
6	2.3	1.9	2.2	2.5	5.7	7.4	*71	117	28	*8.0	3.5	1.4
7	2.3	1.9	3.3	1.9	9.8	7.0	78	157	28	8.0	3.3	1.4
8	2.2	2.0	3.3	2.2	12	5.5	79	*121	28	7.7	3.3	1.3
9	2.2	*1.9	3.3	2.5	11	5.5	76	102	27	7.4	3.1	1.4
10	2.2	1.6	3.5	2.8	11	6.7	70	98	25	7.0	3.0	1.4
11	2.2	1.9	3.8	2.8	23	6.0	62	108	25	7.0	2.8	1.4
12	*2.2	1.9	4.0	2.7	24	5.7	60	117	*24	6.7	2.7	1.4
13	2.0	1.9	4.7	2.7	*20	6.7	68	95	25	6.4	2.7	1.4
14	2.0	2.0	5.0	2.7	17	7.0	83	*80	25	6.0	2.5	1.4
15	2.5	2.0	5.0	2.7	15	7.0	87	68	27	5.7	2.5	1.3
16	2.3	2.0	4.7	2.8	14	7.7	78	67	26	5.2	*2.3	1.3
17	2.2	2.0	4.7	2.8	14	8.0	75	80	25	5.2	2.2	1.2
18	2.2	3.1	4.7	3.0	13	8.0	82	85	23	5.0	2.2	*1.3
19	2.2	4.0	4.7	3.0	13	6.7	87	91	20	*5.2	2.2	1.3
20	2.2	3.8	4.5	2.7	12	8.0	*91	92	19	5.2	2.3	1.3
21	2.2	5.2	4.3	2.8	11	12	78	88	19	5.7	2.2	1.4
22	2.0	4.3	4.3	3.0	11	16	73	88	18	5.0	2.2	1.4
23	2.0	3.3	4.0	3.0	11	16	67	88	17	4.5	2.3	1.5
24	2.0	3.1	3.8	3.1	10	18	89	84	16	4.3	2.2	1.4
25	2.0	3.1	3.5	3.3	9.4	22	76	*84	*16	4.0	2.2	1.4
26	2.0	3.3	3.0	3.3	8.3	26	69	87	15	4.0	2.0	1.3
27	2.5	3.3	3.1	3.5	8.7	23	75	87	14	4.0	1.9	1.4
28	2.2	3.5	3.0	3.3	8.3	20	89	89	13	4.0	2.0	1.5
29	2.0	3.5	3.3	2.8	-	20	91	82	12	3.8	2.0	2.0
30	1.9	3.5	3.3	3.0	-	21	93	69	12	3.8	2.0	1.6
31	2.2	-	3.0	2.8	-	22	-	63	-	3.3	2.0	-
Total	67.8	81.4	117.2	87.4	309.5	356.1	2,190	2,778	732	192.2	84.0	43.8
Mean	2.19	2.71	3.78	2.82	11.1	11.5	73.0	89.6	24.4	6.20	2.71	1.46
Ac-ft	134	161	232	173	614	706	4,340	5,510	1,450	381	167	87

Calendar year 1950: Max 290 Min 1.6 Mean 31.7 Ac-ft 22,950
Water year 1950-51: Max 157 Min 1.2 Mean 19.3 Ac-ft 13,960

Peak discharge (base, 150 cfs).--May 7 (3:00 a.m.) 179 cfs (2.06 ft).
* Discharge measurement made on this day.

High Creek near Richmond, Utah

Location.--Lat 41°59', long. 111°45', in SW¼SE¼ sec. 5, T. 14 N., R. 2 E., on right bank at Forest Boundary, 2 miles downstream from North Fork and 5 miles northeast of Richmond.

Drainage area.--16.2 sq mi.

Records available.--April 1946 to September 1951 in reports of Geological Survey. April 1944 to September 1948 (irrigation seasons only) in Bear River Hydrometric Data reports.

Gage.--Water-stage recorder. Altitude of gage is 5,250 ft (from topographic map).

Average discharge.--5 years (1946-51), 33.4 cfs.

Extremes.--Maximum discharge during year, 211 cfs May 28 (gage height, 2.20 ft); minimum daily, 6.0 cfs Jan. 31, Feb. 1, 2.
1946-51: Maximum discharge, 250 cfs May 24, 1950 (gage height, 2.31 ft); minimum observed, 2.6 cfs Jan. 5, 1950, from discharge measurement (caused by ice jams upstream); minimum daily, 5.0 cfs Feb. 8-14, 1948.

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

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

0.5	6.5	1.3	60
.6	10	1.7	112
.8	20	2.2	211
1.0	34		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	10	10	b8.0	b6.0	b10	18	57	*128	48	20	12
2	12	12	9.8	8.4	b6.0	10	24	54	102	48	20	12
3	11	11	10	8.4	b7.0	9.8	33	55	87	44	20	12
4	11	9.8	11	8.4	b7.5	9.8	38	66	80	44	24	12
5	11	9.8	9.8	*8.0	b8.0	10	40	74	77	41	22	11
6	12	9.5	9.5	b7.5	8.4	9.8	44	85	73	*40	20	11
7	11	9.5	9.8	b6.5	9.8	9.1	47	97	74	40	20	11
8	11	9.8	9.8	b6.5	12	8.7	48	*92	72	38	19	11
9	11	9.5	9.5	b6.5	14	8.7	48	87	71	37	19	11
10	10	*8.7	9.8	b6.8	*15	b8.7	46	91	69	36	19	11
11	10	8.7	10	b7.0	21	b8.5	43	98	71	35	18	11
12	*10	8.7	*12	b7.0	24	b8.5	44	104	*73	34	18	12
13	10	8.4	12	b7.0	20	8.7	49	91	76	32	18	11
14	10	9.1	12	b7.0	16	8.7	56	87	77	31	18	11
15	11	8.7	12	b7.0	14	*8.7	59	76	79	30	*17	11
16	10	8.4	11	7.2	13	8.7	58	30	85	30	16	10
17	9.8	8.7	10	7.2	13	8.7	59	*89	87	29	16	10
18	9.8	10	10	7.6	13	9.1	61	100	85	28	15	10
19	9.8	10	9.8	7.6	12	8.7	63	110	80	*28	15	10
20	9.8	12	9.5	7.6	12	8.7	*64	130	77	27	15	*10
21	9.8	14	9.1	b7.0	11	9.8	60	138	73	28	14	10
22	9.8	*13	9.1	6.9	11	14	58	153	73	26	15	10
23	9.8	12	8.7	8.0	11	14	58	171	69	24	15	10
24	9.8	11	8.7	8.4	11	14	63	177	65	24	14	9.5
25	9.8	11	8.7	8.0	11	15	58	177	66	23	13	9.5
26	9.8	11	8.4	8.4	11	19	57	175	*63	23	13	9.5
27	11	12	8.4	8.7	11	18	59	190	60	23	*13	9.1
28	10	11	8.4	9.1	11	16	62	*203	57	22	13	9.5
29	10	10	8.4	b8.0	-	15	65	185	54	22	13	9.5
30	9.8	10	8.7	b7.0	-	15	61	169	50	21	12	9.1
31	10	-	8.4	b6.0	-	15	-	155	-	21	12	-
Total	321.8	307.3	302.3	232.7	339.7	346.4	1,543	3,619	2,253	977	516	315.7
Mean	10.4	10.2	9.75	7.51	12.1	11.2	51.4	117	75.1	31.5	16.6	10.5
Ac-ft	638	610	600	462	674	687	3,060	7,180	4,470	1,940	1,020	626

Calendar year 1950: Max 236 Min 7.0 Mean 43.2 Ac-ft 31,260
Water year 1950-51: Max 203 Min 6.0 Mean 30.3 Ac-ft 21,970

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

Little Bear River near Paradise, Utah

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

Drainage area.--203 sq mi.

Records available.--October 1938 to September 1951 in reports of Geological Survey. January 1936 to October 1939 (fragmentary) in reports of Little Bear River water commissioner.

Gage.--Water-stage recorder. Altitude of gage is 4,680 ft (from topographic map). Prior to Nov. 27, 1945, at site 150 ft upstream at different datum.

Average discharge.--13 years (1938-51), 86.6 cfs.

Extremes.--Maximum discharge during year, 647 cfs Apr. 29 (gage height, 2.77 ft); minimum, 23 cfs Aug. 23.
1938-51: Maximum discharge, 926 cfs Apr. 19, 1946 (gage height, 5.15 ft); minimum, 4 cfs Aug. 14, 1940.

Remarks.--Records good except those for periods of ice effect, which are fair. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas. No diversion between station and Hyrum Reservoir.

Rating table, water year 1950-51, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 29 to May 15)

0.0	20	1.0	133
.1	25	1.3	190
.3	40	1.6	256
.5	60	2.1	386
.7	85	2.7	570

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	67	76	67	b58	75	194	457	203	35	26	24
2	57	71	75	71	b60	76	226	445	176	35	28	26
3	54	68	86	*73	b68	75	256	418	155	33	29	26
4	53	65	140	73	76	75	273	406	138	31	44	28
5	53	64	92	72	105	75	*300	353	128	*31	58	27
6	58	64	84	67	108	76	326	372	121	30	50	26
7	56	64	102	b62	116	77	339	424	114	31	35	26
8	58	71	108	b64	157	77	353	*395	103	32	34	26
9	58	70	92	b65	147	82	364	369	*88	31	29	26
10	67	61	88	67	174	80	372	372	77	31	28	27
11	*68	62	*85	70	295	73	318	389	77	30	27	26
12	61	62	86	67	198	73	313	403	76	30	26	26
13	61	62	86	67	*151	75	361	372	73	30	25	26
14	60	67	84	67	123	72	424	321	71	29	26	26
15	62	*71	82	68	114	82	415	292	62	30	26	26
16	64	68	81	70	108	103	386	302	59	28	25	26
17	62	70	80	70	105	86	392	282	60	26	24	26
18	62	86	78	71	103	86	*406	290	56	26	25	27
19	62	103	77	70	98	84	436	295	52	28	27	30
20	62	110	76	66	88	94	409	328	45	28	28	29
21	61	159	75	66	90	137	353	*342	44	30	28	31
22	61	111	73	76	88	168	302	321	41	29	28	34
23	66	91	73	71	88	130	313	339	41	28	26	36
24	68	85	73	73	86	135	415	342	39	26	26	*35
25	68	78	72	75	84	157	353	339	40	26	26	34
26	67	77	71	75	84	174	328	310	40	*27	25	34
27	75	76	68	73	81	160	300	290	38	27	25	35
28	71	75	68	72	78	135	313	*270	35	26	*25	36
29	68	73	73	67	-	133	557	247	35	26	24	38
30	64	75	72	b64	-	147	497	233	36	25	24	36
31	70	-	75	b60	-	182	-	226	-	26	24	-
Total	1,935	2,326	2,551	2,139	3,131	3,254	10,594	10,544	2,323	901	901	879
Mean	62.4	77.5	82.3	69.0	112	105	353	340	77.4	29.1	29.1	29.3
Ac-ft	3,840	4,610	5,060	4,240	6,210	6,450	21,010	20,910	4,610	1,790	1,790	1,740

Calendar year 1950: Max 696 Min 22 Mean 135 Ac-ft 97,550
Water year 1950-51: Max 557 Min 24 Mean 114 Ac-ft 82,260

Peak discharge (base, 400 cfs).--Apr. 14 (4:30 p.m.) 525 cfs (2.54 ft); Apr. 24 (7 p.m.) 448 cfs (2.28 ft); Apr. 29 (12 m.) 647 cfs (2.77 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Hyrum Reservoir near Hyrum, Utah

Location.--Lat 41°37'30", long. 111°52'30", in SE¼NE¼ sec. 7, T. 10 N., R. 1 E., at Hyrum Dam on Little Bear River, 1 mile southwest of Hyrum.

Drainage area.--220 sq mi.

Records available.--October 1938 to September 1951.

Gage.--Mercury indicating gage. Datum of gage is at mean sea level.

Extremes.--Maximum contents observed during year, 15,380 acre-ft several days in May and June (elevation, 4,672.2 ft); minimum observed, 5,540 acre-ft Sept. 30 (elevation, 4,649.1 ft).
1938-51: Maximum contents observed, 15,660 acre-ft May 17, 1950 (elevation, 4,672.8 ft); minimum, 1,130 acre-ft Oct. 5, 1940 (elevation, 4,634.7 ft).

Remarks.--Reservoir is formed by earth-fill dam; storage began in 1935. Usable capacity, 15,280 acre-ft between elevations 4,629.6 ft (sill of outlet canal) and 4,672 ft (top of spillway gates). Dead storage, 3,405 acre-ft (below elevation 4,629.6 ft, sill of outlet canal). Figures given herein represent usable contents. Elevation of spillway crest, 4,660 ft. Water used for irrigation on Hyrum project.

Cooperation.--Capacity table furnished by Bureau of Reclamation.

Revisions (water years).--W 1060: 1946(m).

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

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	a6,840	-
Oct. 31	-	a10,160	+3,320
Nov. 30	-	a10,350	+190
Dec. 31	4,661.0	10,260	-90
Calendar year 1950	-	-	-50
Jan. 31	4,661.0	10,260	0
Feb. 28	4,661.0	10,260	0
Mar. 31	4,661.0	10,260	0
Apr. 30	4,662.5	10,920	+660
May 31	4,672.2	15,380	+4,460
June 30	4,665.4	12,210	-3,170
July 31	4,657.0	8,580	-3,630
Aug. 31	4,652.2	6,680	-1,900
Sept.30	4,649.1	5,540	-1,140
Water year 1950-51	-	-	-1,300

a No gage-height record; contents interpolated.

Little Bear River near Hyrum, Utah

Location.--Lat 41°38'00", long. 111°53'00", in NE¼ sec. 6, T. 10 N., R. 1 E., on left bank 2,000 ft upstream from road bridge, 1½ miles downstream from Hyrum Dam, and 1½ miles west of Hyrum.

Drainage area.--222 sq mi.

Records available.--October 1938 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,520 ft (from topographic map). Prior to Nov. 9, 1949, at site 1,200 ft downstream at different datum.

Average discharge.--13 years, 63.4 cfs.

Extremes.--Maximum discharge during year, 524 cfs May 13 (gage height, 3.35 ft); minimum daily, 1.4 cfs July 14, 15.
1938-51: Maximum discharge, 885 cfs Apr. 20, 1946 (gage height, 4.55 ft, site and datum then in use); minimum daily, 0.6 cfs Nov. 23-25, 1943.

Remarks.--Records good. Flow regulated by Hyrum Reservoir (see preceding page).

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

Oct. 1 to Apr. 15				Apr. 16 to Sept. 30			
0.3	1.0	1.2	45	0.3	0.4	1.2	48
.4	2.5	1.6	93	.4	1.6	1.6	101
.5	5	2.1	168	.5	4.3	2.1	186
.7	12	2.6	275	.7	11	2.7	327
.9	21	3.2	444	.9	22	3.3	507

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.3	46	78	69	57	98	179	478	122	6.4	5.8	6.7
2	3.0	53	75	68	60	98	204	468	127	5.2	6.1	6.7
3	4.0	58	80	*70	68	97	232	435	116	5.5	6.7	6.7
4	4.0	62	110	72	76	96	260	270	101	4.6	9.5	7.0
5	4.2	63	109	73	88	97	*288	167	83	*4.6	13	7.0
6	4.8	63	*96	69	100	101	312	7.3	63	3.2	12	*11
7	3.5	68	93	64	105	101	331	5.5	50	2.1	12	8.8
8	2.5	72	98	62	122	100	359	*6.7	36	2.1	12	8.8
9	*2.4	72	97	64	140	100	370	6.1	22	1.6	12	9.5
10	2.2	68	93	66	149	109	385	5.5	16	2.1	12	9.9
11	2.2	66	89	67	214	100	345	32	*11	2.7	12	10
12	2.0	64	86	67	248	96	320	308	11	2.1	6.1	11
13	2.0	64	85	67	*206	97	339	466	11	2.4	6.1	9.9
14	2.0	68	84	66	170	97	397	432	12	1.4	5.8	11
15	2.4	*70	83	67	148	98	438	390	11	1.4	4.3	11
16	2.8	68	81	69	134	109	423	381	11	2.4	3.8	6.7
17	3.0	67	80	70	126	113	408	375	11	2.1	5.5	7.7
18	3.0	72	78	72	122	109	*414	364	11	3.2	5.2	8.8
19	3.0	86	76	74	120	107	435	361	11	3.0	8.4	7.7
20	2.8	93	75	70	113	107	450	322	9.9	3.0	8.0	6.7
21	2.8	123	73	69	109	126	382	163	9.5	2.7	7.3	7.0
22	2.5	119	4.2	75	106	168	257	*167	8.8	3.5	7.0	7.0
23	2.5	84	35	76	106	163	384	186	8.8	3.2	6.7	8.0
24	2.4	4.0	112	75	105	153	414	249	11	3.0	6.1	8.4
25	2.4	113	90	74	102	156	420	349	11	3.5	5.2	7.0
26	2.2	98	80	74	106	179	378	364	10	6.4	8.8	6.1
27	2.8	65	73	74	105	182	347	341	7.7	*6.7	12	6.1
28	2.5	97	69	73	102	163	333	314	8.0	5.5	11	6.4
29	7.4	84	68	72	-	151	402	192	7.7	3.5	12	6.7
30	17	79	69	67	-	149	491	85	6.4	3.2	12	7.0
31	32	-	72	62	-	166	-	86	-	2.7	12	-
Total	137.6	2,209.0	2,491.2	2,157	3,407	3,786	10,697	7,774.1	934.8	105.0	266.4	242.3
Mean	4.44	73.6	80.4	69.6	122	122	357	251	31.2	3.39	8.59	8.08
Ac-ft	273	4,380	4,940	4,280	6,760	7,510	21,220	15,420	1,850	208	528	481

Calendar year 1950: Max 721 Min 2.0 Mean 112 Ac-ft 81,370
Water year 1950-51: Max 491 Min 1.4 Mean 93.7 Ac-ft 67,850

* Discharge measurement made on this day.

Logan River above State dam, near Logan, Utah

Location.--Lat 41°44'40", long. 111°47'00", in NE¼ sec. 36 T. 12 N., R. 1 E., on right bank at Logan plant of Utah Power & Light Co., 125 ft upstream from tailrace, half a mile upstream from State dam, and 2½ miles east of Logan.

Drainage area.--218 sq mi.

Records available.--June 1896 to September 1951. Records since May 1913 equivalent to earlier records if records for Utah Power & Light Co.'s tailrace near Logan are added.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 4,680 ft (from topographic map). Prior to May 7, 1913, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.--38 years (1913-51), 111 cfs.

Extremes.--Maximum discharge during year, 1,210 cfs May 31 (gage height, 3.84 ft); minimum daily, 8 cfs Jan. 24, Feb. 3.
1913-51: Maximum discharge, 2,000 cfs Mar. 21, 1916 (gage height, 5.6 ft, datum then in use), from rating curve extended above 1,000 cfs; minimum daily, 6 cfs Nov. 7, 1940.

Remarks.--Records excellent above 100 cfs and fair below. Water diverted from river and springs above station for power, irrigation, and municipal supply. Flow regulated by power plants above station.

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. Twelve discharge measurements were made by Geological Survey in addition to those made by power company.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 29 to May 28)

0.8	5	1.5	106
.9	11	2.0	257
1.0	20	3.0	697
1.2	46	4.0	1,370

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	15	10	10	9	39	g25	351	802	250	39	15
2	21	32	11	13	10	40	g20	566	713	228	38	15
3	25	25	10	10	8	40	36	538	622	221	45	15
4	16	17	12	10	g30	39	*77	459	543	204	90	15
5	16	16	10	10	g40	40	114	327	516	185	18	15
6	19	16	12	10	g20	39	198	410	*494	*173	67	*15
7	16	16	*10	10	g20	42	299	525	489	161	53	16
8	15	49	11	10	g20	38	319	467	476	164	53	15
9	15	25	11	10	g25	36	347	450	454	147	54	16
10	15	16	11	9	g25	27	406	*485	445	131	46	15
11	*14	16	10	*9	g25	19	339	525	441	128	39	15
12	14	16	10	9	g60	18	315	584	459	121	33	15
13	14	16	10	10	g60	24	311	516	498	121	22	15
14	16	16	10	10	g60	28	295	445	503	104	21	15
15	16	15	12	10	g60	26	319	406	498	99	21	14
16	17	*14	10	10	g60	25	402	445	512	88	18	14
17	16	14	10	10	g60	26	343	*415	525	75	16	14
18	15	16	10	9	g60	25	335	520	512	79	15	14
19	15	16	11	9	g55	24	356	g600	498	67	16	15
20	14	15	10	9	g50	26	372	g680	472	*65	16	15
21	13	21	10	9	g45	31	315	735	459	73	16	14
22	13	21	12	9	g45	48	276	*774	423	g80	16	14
23	13	16	10	9	g45	40	*276	*850	415	g70	16	14
24	13	13	11	8	g45	43	398	*938	393	71	16	14
25	13	13	12	9	g45	45	323	1,020	368	60	16	14
26	12	13	10	9	*g45	53	315	1,060	*351	53	16	14
27	11	10	11	9	42	58	291	1,070	319	46	16	14
28	g13	10	11	9	40	48	291	1,110	303	43	16	15
29	g13	10	13	9	-	45	315	*1,070	287	51	16	16
30	16	10	10	9	-	24	315	951	265	46	16	14
31	16	-	10	9	-	24	-	931	-	*40	15	-
Total	479	518	331	295	1,109	1,095	8,343	20,223	14,055	3,444	965	441
Mean	15.5	17.3	10.7	9.5	39.6	35.3	278	652	468	111	31.1	14.7
Ac-ft	950	1,030	657	585	2,200	2,170	16,550	40,110	27,880	6,830	1,910	875

Calendar year 1950: Max 1,180 Min 10 Mean 185 Ac-ft 133,600
Water year 1950-51: Max 1,110 Min 8 Mean 141 Ac-ft 101,700

* Discharge measurement made on this day.
g Discharge computed from twice-daily gage readings.

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

Location.--Lat 41°44'40", long. 111°47'00", in NE¼ sec. 36, T. 12 N., R. 1 E., on right bank 100 ft downstream from power house of Utah Power & Light Co. and 2½ miles east of Logan.

Records available.--May 1913 to September 1951.

Gage.--Water-stage recorder and timber control. Altitude of gage is 4,680 ft (from topographic map).

Average discharge.--38 years, 108 cfs.

Extremes.--Maximum discharge during year, 206 cfs May 26 (gage height, 2.73 ft); no flow May 2, 3.
1913-51: Maximum discharge, that of May 26, 1951; no flow for periods during several years.

Remarks.--Records good. Flow regulated by power plant above gage. Power canal diverts water from right bank of Logan River in SE¼SW¼ sec. 29, T. 12 N., R. 2 E., water returned to river 125 ft below gaging station on Logan River above State dam.

Cooperation.--Records collected by Utah Power & Light Co, under general supervision of Geological Survey, in connection with the Federal Power Commission project. Six discharge measurements made by Geological Survey in addition to those made by power company.

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

0.7	0	1.7	67
.8	4	2.6	184
1.2	25	2.8	219

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	194	170	153	127	102	98	153	93	199	187	187	166
2	194	173	154	124	103	98	174	0	196	187	187	165
3	182	171	148	139	113	98	189	0	192	187	187	164
4	194	170	164	134	95	98	192	59	192	187	187	162
5	196	166	149	134	100	98	192	189	192	187	187	160
6	194	165	144	130	122	98	194	194	*191	187	187	158
7	196	166	156	123	122	98	194	194	191	187	187	153
8	194	156	153	*124	126	98	196	191	191	187	187	152
9	189	170	149	131	127	98	70	192	192	187	187	150
10	189	160	149	126	118	104	2	*192	192	187	187	152
11	189	160	144	126	113	108	32	192	192	187	187	152
12	187	160	153	123	110	106	63	192	192	186	187	152
13	184	160	145	118	103	107	90	191	192	186	187	152
14	184	162	152	124	98	108	198	191	189	189	187	153
15	184	164	137	124	98	107	196	191	189	189	187	152
16	184	*153	139	127	98	107	116	191	189	187	187	152
17	179	160	141	127	98	107	194	*191	189	189	186	153
18	179	166	141	127	98	107	196	192	189	189	181	152
19	178	184	141	127	98	107	194	192	189	189	181	152
20	178	165	141	123	98	107	194	192	189	189	184	149
21	178	178	140	118	98	107	194	194	189	189	181	150
22	178	168	137	127	98	108	194	196	189	189	182	153
23	176	166	131	124	98	108	*194	198	187	189	179	152
24	174	162	134	124	98	108	194	*199	187	189	178	152
25	176	154	137	124	98	108	194	203	187	189	174	150
26	173	158	135	124	*98	108	194	201	187	189	173	150
27	174	158	135	122	98	107	194	194	187	189	171	150
28	176	153	132	122	98	108	194	192	187	189	168	150
29	174	153	134	113	-	118	194	*192	187	189	170	153
30	174	156	140	106	-	141	194	186	187	189	171	152
31	171	-	137	102	-	144	-	157	-	*187	168	-
Total	5,672	4,910	4,445	3,844	2,924	3,322	4,969	5,331	5,701	5,827	5,639	4,613
Mean	183	164	143	124	104	107	166	172	190	188	182	154
Ac-ft	11,250	9,740	8,820	7,620	5,800	6,590	9,860	10,570	11,310	11,560	11,180	9,150

Calendar year 1950: Max 196 Min 1 Mean 157 Ac-ft 114,000
Water year 1950-51: Max 203 Min 0 Mean 157 Ac-ft 113,400

* Discharge measurement made on this day.

Logan, Hyde Park & Smithfield Canal near Logan, Utah

Location.--Lat 41°44'45", long. 111°47'05", in SE¼ sec. 25, T. 12 N., R. 1 E., on right bank 1¼ miles downstream from head of canal and 2½ miles east of Logan.

Records available.--June 1904 to December 1907, January 1909 to September 1951 (fragmentary prior to May 1924).

Gage.--Water-stage recorder in flume. Prior to May 29, 1924, at site half a mile upstream at different datum.

Average discharge.--28 years (1923-51), 29.0 cfs.

Extremes.--Maximum daily discharge during year, 130 cfs June 8, 9; no flow many days March to May.
1906, 1924-51: Maximum daily discharge, 136 cfs May 30, 31, 1930; no flow at times in most years.

Remarks.--Records good except those below 10 cfs, which are fair. No diversion above station. Canal diverts from Logan River in NE¼NE¼ sec. 31, T. 12 N., R. 2 E., for irrigation and domestic supply north of Logan.

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

0	0.2	0.3	9.0	1.2	62
.1	2.0	.5	22	1.7	90
.2	4.9	.8	42	2.4	132

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.5	5.3	6.5	5.3	5.7	1.3	0	1.3	103	121	72	47
2	6.5	5.3	6.1	5.7	6.5	1.1	0	0	106	125	69	46
3	6.5	4.9	6.1	5.7	6.5	1.1	0	0	106	124	60	46
4	6.5	4.6	7.4	5.7	2.9	.2	0	0	113	123	35	46
5	5.7	4.3	7.8	5.7	.9	.9	0	0	109	124	24	45
6	6.1	4.0	*7.2	5.7	.9	1.3	0	0	124	*125	32	*45
7	5.7	4.0	7.8	*5.7	.9	1.1	0	0	128	126	43	48
8	5.3	4.0	7.4	6.1	.9	1.1	0	0	130	118	40	48
9	4.9	3.7	7.0	6.5	.9	1.1	0	0	130	119	35	46
10	4.6	*3.4	7.0	6.5	.9	1.3	0	4.8	125	122	41	45
11	*4.6	3.4	7.0	6.5	.9	1.6	0	31	125	116	45	45
12	4.6	3.4	7.0	6.5	.9	1.3	0	17	*118	116	50	45
13	4.6	3.4	6.5	5.7	.9	1.1	0	16	118	106	53	45
14	4.9	3.4	7.0	5.7	*1.1	1.1	0	15	119	109	50	42
15	4.9	3.4	7.8	5.7	1.3	1.1	0	14	116	104	49	39
16	4.9	3.4	7.4	5.7	1.3	1.1	0	14	116	106	*50	39
17	4.9	3.4	7.0	5.7	1.3	1.1	0	*14	115	110	54	39
18	4.9	3.4	7.0	5.7	1.1	.9	28	14	119	104	53	39
19	5.3	3.4	6.5	5.7	1.1	.9	50	13	122	*108	52	39
20	5.7	4.3	6.5	5.7	1.3	.4	48	3.4	118	110	52	37
21	6.1	7.0	6.1	5.7	1.1	0	48	1.1	115	101	52	*35
22	6.1	7.0	7.0	5.7	1.3	0	52	.1	112	89	53	35
23	6.1	6.5	6.5	5.7	1.1	0	*58	0	106	87	54	34
24	6.5	5.7	6.1	5.7	1.1	0	48	4.0	101	79	*54	33
25	6.5	4.9	5.7	5.3	1.1	0	35	22	108	84	54	32
26	6.5	5.3	5.7	5.3	1.3	0	3.2	39	*118	87	53	31
27	6.5	7.0	5.3	5.3	1.1	0	2.6	43	122	*86	52	30
28	5.7	6.5	5.3	4.9	1.1	0	24	*48	122	83	52	29
29	5.7	6.5	5.7	4.9	-	0	32	54	123	72	52	32
30	5.7	6.5	5.7	5.3	-	0	4.0	71	125	71	50	28
31	5.7	-	5.7	5.7	-	0	-	94	-	70	48	-
Total	174.7	141.3	204.8	176.7	47.4	21.1	432.8	533.7	3,512	3,225	1,531	1,190
Mean	5.64	4.71	6.61	5.70	1.69	0.68	14.4	17.2	117	104	49.4	39.7
Ac-ft	347	280	406	350	94	42	858	1,060	6,970	6,400	3,040	2,360

Calendar year 1950: Max 124 Min 0 Mean 31.3 Ac-ft 22,680
Water year 1950-51: Max 130 Min 0 Mean 30.7 Ac-ft 22,210

* Discharge measurement made on this day.

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

Location.--Lat 41°37'20", long. 111°44'25", in NE¼ sec. 8, T. 10 N., R. 2 E., on right bank three-quarters of a mile upstream from diversion dam, 3½ miles upstream from power plant of Utah Power & Light Co., and 6 miles east of Hyrum.

Drainage area.--260 sq mi.

Records available.--July 1900 to December 1902, November 1913 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,000 ft (from topographic map).

Average discharge.--37 years (1914-51), 124 cfs.

Extremes.--Maximum discharge during year, 622 cfs Apr. 20 (gage height, 4.23 ft); minimum daily, 82 cfs Feb. 1.
1913-51: Maximum discharge, 1,620 cfs May 15, 1917 (gage height, 6.5 ft, site and datum then in use), from rating curve extended above 600 cfs; minimum daily, 29 cfs Jan. 3, 1935.

Remarks.--Records good. Some diversions for irrigation of meadow lands above station. Low water flow may be regulated by power plant above station.

Cooperation.--Water-stage recorder graph furnished by Utah Power & Light Co.

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

1.9	82	2.9	276
2.2	124	3.4	401
2.5	183	4.0	560

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	148	128	122	110	b82	100	175	432	345	192	166	150
2	146	135	121	113	b85	100	200	409	328	190	168	150
3	144	129	124	113	b95	100	225	411	308	185	170	148
4	144	128	137	*113	105	100	250	380	293	187	179	148
5	144	126	128	111	114	100	*265	396	276	185	177	144
6	143	126	*122	110	111	100	288	445	264	183	170	144
7	141	124	128	104	114	100	310	506	259	181	166	142
8	139	138	129	108	124	102	325	*479	252	181	166	142
9	*137	129	129	110	133	105	340	458	247	181	164	142
10	137	*124	128	110	138	105	338	461	245	181	164	142
11	137	126	126	110	168	98	315	469	*242	179	162	142
12	135	126	126	110	170	98	330	484	235	179	162	142
13	135	124	128	108	152	98	391	445	233	179	160	142
14	135	126	126	108	138	98	482	398	228	179	160	140
15	137	124	124	108	135	100	492	383	223	177	160	140
16	135	122	124	105	129	115	461	411	221	177	158	140
17	133	122	122	102	126	105	487	385	219	177	156	140
18	133	135	121	102	124	100	525	396	214	177	156	138
19	131	146	119	104	121	100	560	409	212	175	156	138
20	131	140	119	101	118	110	555	435	210	177	156	137
21	131	156	118	101	119	120	495	*445	212	177	156	137
22	129	138	118	107	118	140	453	432	210	175	154	138
23	129	133	116	102	116	125	*461	432	205	170	152	138
24	129	129	114	102	114	125	557	435	201	168	152	*138
25	129	128	114	102	112	140	474	430	201	170	152	138
26	129	126	113	101	110	160	445	422	198	170	152	137
27	137	124	113	101	108	150	437	419	196	*170	150	137
28	131	122	114	101	103	130	448	411	194	172	*150	138
29	129	122	114	101	-	130	525	*393	192	172	150	140
30	129	122	113	95	-	140	498	372	192	170	152	137
31	129	-	113	84	-	160	-	355	-	168	152	-
Total	4,196	3,878	3,763	3,257	3,382	3,554	12,107	13,138	7,055	5,504	4,948	4,229
Mean	135	129	121	105	121	115	404	424	235	178	160	141
Ac-ft	8,320	7,690	7,460	6,460	6,710	7,050	24,010	26,060	13,990	10,920	9,810	8,390

Calendar year 1950: Max 807 Min 72 Mean 201 Ac-ft 145,600
Water year 1950-51: Max 560 Min 82 Mean 189 Ac-ft 136,900

Peak discharge (base, 140 cfs).--Apr. 20 (1 a.m.) 622 cfs (4.23 ft); May 7 (8:15 a.m.) 522 cfs (3.86 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Oct. 6-8, Feb. 25 to Apr. 5; discharge estimated on basis of weather records and records for Little Bear River near Paradise.

Hammond (East Side) Canal near Collinston, Utah

Location.--Lat 41°50', long. 112°03', in SE¼ sec. 27, T. 13 N., R. 2 W., on right bank 3,600 ft downstream from Cutler Dam and 4 miles north of Collinston.

Records available.--June 1912 to September 1951.

Gage.--Water-stage recorder.

Average discharge.--34 years (1917-51), 51.0 cfs.

Extremes.--Maximum daily discharge during year, 163 cfs June 24, 25; no flow Nov. 2 to Apr. 22, May 1-3.
1912-51: Maximum daily discharge, 182 cfs June 28, July 1, 1932, June 27, 28, 1933; no flow for periods during each year.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Canal diverts from east side of Bear River in NW¼SW¼ sec. 26, T. 13 N., R 2 W., at dam at which West Side Canal and intake of Cutler power plant also divert. Water used for irrigation in eastern Box Elder County.

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

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

1.3	0	1.9	9.5	3.4	70
1.4	.5	2.1	15	4.0	107
1.5	2.0	2.4	24	5.0	170
1.7	5.0	2.8	40		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	6.0					0	0	131	157	131	124
2	31	0					0	0	134	154	131	121
3	a35	0					0	0	*134	155	129	120
4	39	0					0	*a3	134	157	102	120
5	38	0					0	a15	*140	155	99	118
6	38	0					0	a25	149	152	109	116
7	38	0					0	a30	155	149	111	116
8	38	0					0	a30	153	148	111	116
9	38	0					0	30	153	149	111	115
10	31	0					0	*37	153	149	112	115
11	24	0					0	55	153	149	112	114
12	24	0					0	49	149	149	118	113
13	a25	0					0	48	144	151	126	109
14	a26	0					0	49	141	150	134	109
15	27	0					0	50	146	151	144	105
16	27	0					0	50	154	150	149	101
17	28	0					0	49	156	152	150	99
18	28	0					0	49	154	154	140	99
19	27	0					0	49	155	*152	150	98
20	27	0					0	50	155	*144	149	92
21	26	0					0	50	156	143	149	93
22	26	0					0	*50	159	139	150	93
23	26	0					a62	50	114	134	150	93
24	26	0					a75	*50	163	133	*149	92
25	*26	0					a75	46	163	132	146	92
26	26	0					a63	74	159	131	148	92
27	17	0					a50	83	*152	131	147	92
28	10	0					a50	71	152	131	141	88
29	8.2	0					a50	93	154	129	140	74
30	11	0					a19	116	154	129	135	70
31	14	-					-	123	-	130	125	-
Total	838.2	6.0	0	0	0	0	444	1,476	4,469	4,489	4,108	3,099
Mean	27.0	0.20	0	0	0	0	14.8	47.6	149	145	133	103
Ac-ft	1,660	12	0	0	0	0	881	2,930	8,860	8,900	8,150	6,150

Calendar year 1950: Max 176 Min 0 Mean 51.5 Ac-ft 37,260
Water year 1950-51: Max 163 Min 0 Mean 51.9 Ac-ft 37,540

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement and notes of gage changes by employee of Utah Power & Light Co.

West Side Canal near Collinston, Utah

Location.--Lat 41°50', long. 112°04', in SW¼ sec. 27, T. 13 N., R. 2 W., on left bank 4,200 ft downstream from Cutler Dam and 4 miles north of Collinston.

Records available.--June 1912 to September 1951.

Gage.--Water-stage recorder.

Average discharge.--39 years, 226 cfs.

Extremes.--Maximum daily discharge during year, 717 cfs June 7; no flow Mar. 9 to Apr. 22, May 1-3.
1912-51: Maximum daily discharge, 729 cfs May 19, 1946; no flow during periods in every year except 1914.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Canal diverts from west side of Bear River in NW¼SW¼ sec. 26, T. 13 N., R. 2 W., at dam at which Hammond (East Side) Canal and intake of Cutler power plant also divert. Water used for irrigation in eastern Box Elder County.

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

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

0.5	3.0	2.1	73	5.0	446
.9	13	2.7	125	5.8	591
1.1	20	3.4	203	6.5	727
1.6	43	4.2	314		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	148						0	0	627	693	527	511
2	144		a42				0	0	644	691	525	514
3	159					(*)	0	0	642	691	509	512
4	171						0	*15	689	695	446	514
5	171					a5	0	14	*677	693	398	514
6	a174						0	16	694	687	398	536
7	176						0	44	717	683	401	542
8	186	a77	a35				0	93	715	681	401	544
9	188						0	*124	713	683	412	545
10	156			(*)			0	176	715	683	451	542
11	139			(*)			0	260	713	679	468	544
12	135						0	275	689	663	507	520
13	134						0	180	*671	661	512	507
14	a144						0	132	656	642	566	505
15	153			a6	*a5		0	132	638	633	608	493
16	154						0	a233	638	631	610	477
17	155		a20				0	233	638	631	625	478
18	154						0	232	659	631	640	477
19	154						0	233	675	*623	638	466
20	153					0	0	233	677	*597	638	453
21	153						0	232	675	597	635	454
22	152						0	*232	673	568	625	454
23	151	a42					193	233	673	525	616	453
24	150						239	*235	673	525	*604	454
25	*149						a269	272	671	525	589	453
26	a149						a254	404	673	523	587	439
27	a143		a10				a203	449	683	527	589	427
28	a119						203	429	689	525	587	414
29	a119				-		203	470	693	525	587	374
30	a119	(*)			-		76	489	687	527	580	352
31	a119				-		-	548	-	525	547	-
Total	4,671	1,'35	731	186	140	40	1,640	6,618	20,277	19,163	16,826	14,468
Mean	151	59.5	23.6	6.0	5.0	1.3	54.7	213	676	618	543	482
Ac-ft	9,260	3,540	1,450	369	278	79	3,250	13,130	40,220	38,010	33,370	28,700

Calendar year 1950: Max 727 Min 0 Mean 231 Ac-ft 167,300
Water year 1950-51: Max 717 Min 0 Mean 237 Ac-ft 171,700

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 5 discharge measurements and notes of gate changes by employee of Utah Power & Light Co.

Bear River near Collinston, Utah

Location.--Lat 41°50', long. 112°03', in NW¼SE¼ sec. 27, T. 13 N., R. 2 W., on right bank 800 ft downstream from Cutler plant of Utah Power & Light Co., 2,000 ft downstream from Cutler Dam, and 5½ miles north of Collinston.

Drainage area.--6,000 sq mi, approximately.

Records available.--July 1889 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,276.13 ft above mean sea level (levels by Bureau of Reclamation). Prior to Sept. 10, 1938, at site three-quarters of a mile downstream at different datum.

Extremes.--Maximum discharge during year, 5,410 cfs Feb. 11 (gage height, 5.94 ft); minimum daily, 41 cfs July 4.
1889-1951: Maximum discharge observed, 11,600 cfs June 7-10, 1909 (gage height, 7.70 ft, site and datum then in use); practically no flow at 12 p.m. Aug. 5, 1920.

Remarks.--Records excellent except those for periods of no gage-height record, which are good. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation and return flow from irrigated areas.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,600	2,530	2,320	2,440	a1,820	2,830	3,140	4,040	3,420	300	945	1,850
2	2,250	2,940	2,290	2,600	a1,710	*2,840	3,240	4,290	2,920	1,160	1,180	808
3	2,250	2,810	2,310	2,790	993	2,730	3,030	4,480	2,930	992	862	688
4	3,020	2,500	2,890	2,900	1,030	2,710	3,160	*4,280	*2,930	41	1,450	1,190
5	2,890	2,350	3,520	2,810	2,190	2,740	3,500	3,930	1,860	321	2,020	1,430
6	2,610	2,310	3,200	a2,900	1,820	2,720	3,510	3,730	1,320	371	2,010	1,960
7	2,310	2,630	*a3,350	a2,670	2,600	2,830	2,880	3,510	912	123	1,920	1,550
8	2,310	2,820	a2,420	a2,710	3,590	2,820	3,110	3,200	753	74	1,340	1,730
9	2,310	2,240	2,720	a1,660	4,350	2,860	2,620	3,110	927	794	2,420	302
10	2,300	2,160	2,820	*1,910	4,950	2,750	3,650	3,020	700	519	2,400	1,520
11	2,180	1,640	3,090	1,780	5,220	2,720	3,630	3,020	1,070	746	2,000	1,200
12	2,450	1,860	3,160	2,320	4,780	2,720	3,630	3,160	1,280	1,030	772	1,150
13	2,250	1,750	3,300	2,630	3,970	2,770	4,050	3,600	330	1,020	1,850	1,220
14	2,910	2,290	2,570	2,210	*3,730	2,810	3,860	3,620	1,710	1,030	1,690	1,120
15	2,810	2,090	2,690	2,220	3,590	2,660	3,800	3,630	1,990	285	1,300	1,140
16	2,050	2,510	2,690	2,620	3,480	2,410	3,930	3,660	1,650	632	a1,400	931
17	1,810	2,100	2,490	2,900	3,240	2,760	3,910	3,660	773	865	a1,170	1,770
18	1,640	1,690	2,670	2,740	2,900	2,740	3,900	3,660	1,420	799	829	1,500
19	2,100	1,860	2,660	2,800	2,970	2,820	3,900	3,630	1,340	427	257	1,120
20	2,950	1,890	2,840	2,800	2,930	3,360	3,900	3,660	1,090	768	1,230	1,700
21	2,510	1,990	2,670	2,100	3,000	3,240	4,050	3,660	837	a1,020	1,040	1,530
22	2,360	2,790	2,780	2,470	3,010	3,230	4,290	3,660	1,440	a650	974	1,280
23	2,200	3,150	2,700	2,770	2,920	2,920	3,910	3,650	1,080	a1,140	1,140	720
24	2,120	2,760	2,440	2,780	2,950	2,910	3,840	*3,660	1,090	a1,470	898	1,570
25	2,130	3,100	2,400	2,950	2,830	2,600	3,720	3,670	1,850	a1,060	1,200	964
26	2,050	2,270	949	3,060	2,560	3,020	3,580	3,690	1,560	a1,270	289	1,600
27	1,750	2,360	1,770	3,340	2,470	3,280	3,530	3,690	738	a1,270	1,150	1,670
28	1,950	2,540	2,660	2,020	2,830	2,890	3,550	3,690	1,830	1,200	1,450	1,320
29	1,960	2,710	2,380	2,280	-	3,160	3,530	3,980	2,130	433	1,230	1,370
30	2,060	2,300	2,420	1,940	-	3,370	3,670	4,160	1,940	1,300	1,390	1,560
31	2,310	-	2,040	a1,730	-	3,010	-	3,830	-	1,310	935	-
Total	71,400	70,930	81,209	77,850	84,433	89,230	108,020	114,230	45,820	24,420	40,742	39,463
Mean	2,303	2,364	2,620	2,511	3,015	2,878	3,601	3,685	1,527	788	1,314	1,315
Ac-ft	141,600	140,700	161,100	154,400	167,500	177,000	214,300	226,600	90,880	48,440	80,817	78,270

Calendar year 1950: Max 5,700 Min 192 Mean 2,513 Ac-ft 1,819,000
Water year 1950-51: Max 5,220 Min 41 Mean 2,323 Ac-ft 1,682,000

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

Little Malad River above Elkhorn Reservoir, near Malad City, Idaho

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

Drainage area.--120 sq mi, approximately.

Records available.--August 1911 to August 1913 (published as "near Malad"), October 1931 to September 1932, November 1940 to September 1951.

Gage.--Water-stage recorder and Cipolletti weir. Prior to Dec. 5, 1940, staff gages at different datums.

Average discharge.--12 years (1911-12, 1931-32, 1941-51), 17.8 cfs.

Extremes.--Maximum discharge during year, 78 cfs Aug. 4 (gage height, 1.65 ft); minimum, 6.8 cfs Jan. 3 (gage height, 0.33 ft).
1911-13, 1931-32, 1940-51: Maximum discharge, 270 cfs Feb. 22, 1948 (gage height, 3.26 ft), from rating curve extended above 50 cfs on basis of computation of flood flow by weir formula; minimum, 6.8 cfs Aug. 19, 1948, Jan. 3, 1951; minimum gage height, 0.31 ft Aug. 19, 1948.

Remarks.--Records good. Diversions above station for irrigation of about 400 acres.

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

0.5	14
.6	18
.7	23
.8	28
.9	33

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	17	18	16	15	18	29	24	21	17	17	15
2	18	18	18	16	15	19	31	24	20	17	17	15
3	18	17	18	14	*15	18	32	24	20	18	17	15
4	17	17	19	15	16	18	32	23	20	18	28	15
5	17	17	18	16	17	18	32	23	20	18	19	15
6	17	17	17	15	18	18	32	21	20	18	18	14
7	17	17	18	15	20	19	31	24	20	17	17	15
8	17	17	18	15	21	18	30	25	20	18	17	14
9	17	16	18	16	21	19	28	24	20	18	17	14
10	17	15	*18	16	22	18	28	24	20	18	17	15
11	17	*17	18	16	22	17	26	24	19	18	17	15
12	17	18	18	17	21	17	25	25	19	18	17	15
13	17	18	18	17	20	19	26	26	19	18	17	15
14	17	18	18	17	18	19	26	25	19	17	17	15
15	17	17	18	18	19	20	26	24	19	17	17	15
16	17	17	18	18	19	19	26	24	*18	17	16	15
17	17	18	18	18	19	18	26	25	18	17	16	15
18	17	19	18	18	19	18	25	25	18	17	16	15
19	17	19	18	18	19	19	*25	25	18	17	16	15
20	17	18	18	17	17	21	25	25	18	*18	18	15
21	17	18	18	17	19	28	24	*25	18	19	17	15
22	17	18	18	17	19	25	23	24	17	18	17	15
23	17	18	18	18	19	22	24	24	18	18	17	15
24	17	18	18	18	19	25	24	24	18	17	17	15
25	17	18	18	18	19	27	24	24	17	17	*16	15
26	17	18	16	18	19	27	24	23	17	17	16	15
27	18	18	18	18	19	25	24	23	17	18	16	15
28	17	18	17	17	18	23	22	23	17	19	15	15
29	17	18	18	15	-	23	26	22	17	20	15	15
30	17	18	18	15	-	23	25	22	17	18	15	15
31	17	-	17	15	-	24	-	22	-	17	15	-
Total	531	527	554	514	524	642	801	740	559	549	527	447
Mean	17.1	17.6	17.9	16.6	18.7	20.7	26.7	23.9	18.6	17.7	17.0	14.9
Ac-ft	1,050	1,050	1,100	1,020	1,040	1,270	1,590	1,470	1,110	1,090	1,050	887

Calendar year 1950: Max 45 Min 14 Mean 20.4 Ac-ft 14,790
Water year 1950-51: Max 32 Min 14 Mean 18.9 Ac-ft 13,730

* Discharge measurement made on this day.

Elkhorn Reservoir near Malad City, Idaho

Location.--Lat 42°18', long. 112°25', in sec. 7, T. 13 S., R. 35 E., at partly completed dam on Little Malad River, 4½ miles downstream from Wright Creek and 11½ miles northwest of Malad City.

Drainage area.--153 sq mi.

Records available.--December 1940 to September 1951.

Gage.--Staff gages read about once weekly.

Extremes.--Maximum gage height observed during year, 15.9 ft Apr. 14; minimum observed, 3.2 ft Oct. 21.

1940-51: Maximum gage height observed, 17.0 ft Feb. 22 or 23, 1948; minimum gage height, below -3.3 ft in July 1944, for long periods in 1947, in June 1948, and for long periods in 1949 and 1950.

Remarks.--Reservoir is formed by partly completed multiple-arch concrete dam (capacity, about 7,600 acre-ft. Large seepage losses from reservoir limit storage to a small range.

Gage height, in feet, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.00	-	-	11.8	-	-	14.5	-	-	4.14	-	-
2	-	-	-	-	-	-	-	-	6.9	-	-	-
3	-	-	-	-	11.8	-	-	-	-	-	-	-
4	-	10.7	-	-	11.6	12.4	-	-	-	-	-	-
5	-	-	-	-	-	-	-	11.4	-	-	3.90	-
6	-	-	-	-	-	-	-	-	-	-	-	-
7	5.82	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	11.8	-	12.4	15.0	-	-	4.86	-	-
9	-	-	-	-	-	-	-	-	-	-	-	5.44
10	-	-	11.7	-	-	-	-	-	-	-	-	-
11	-	10.8	-	-	-	12.4	-	-	-	-	-	-
12	-	-	-	-	12.1	-	-	9.9	-	-	4.18	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	5.00	-	-	11.6	-	-	15.9	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	4.18	-	-
16	-	-	-	-	-	-	-	-	3.98	-	-	5.84
17	-	-	-	-	12.2	-	-	-	-	-	-	-
18	-	10.95	-	-	12.4	12.4	-	-	-	-	-	-
19	-	-	-	-	-	-	15.5	8.9	-	-	3.84	-
20	-	-	-	-	-	-	-	-	-	4.42	-	-
21	3.20	-	-	-	-	-	15.2	8.8	-	-	-	-
22	-	-	-	-	-	-	-	-	-	4.64	-	-
23	-	-	11.8	-	-	-	-	-	3.90	-	-	5.50
24	-	-	-	-	12.3	-	-	-	-	-	-	-
25	-	11.2	-	-	-	12.7	-	-	-	-	7.70	-
26	-	-	-	-	-	-	-	8.6	-	-	-	-
27	-	-	-	11.8	-	-	-	-	-	-	-	-
28	9.3	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	13.1	-	-	4.26	-	7.18
30	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-

Little Malad River below Elkhorn Reservoir, near Malad City, Idaho

Location.--Lat 42°18', long. 112°25', in sec. 7, T. 13 S., R. 35 E., on left bank just downstream from Elkhorn Dam, 4½ miles downstream from Wright Creek and 11½ miles northwest of Malad City.

Drainage area.--153 sq mi.

Records available.--December 1940 to September 1951.

Gage.--Water-stage recorder. Prior to Sept. 6, 1941, at site 50 ft upstream at datum 4.36 ft higher.

Average discharge.--10 years (1941-51), 13.1 cfs.

Extremes.--Maximum discharge during year, 106 cfs Oct. 21 (gage height, 3.34 ft); minimum, 0.1 cfs Apr. 17 (gage height, 0.55 ft).
1940-51: Maximum discharge, 113 cfs Aug. 23, 1946, from computation of flow over weir 50 ft upstream; maximum gage height, 3.63 ft Jan. 24, 1949 (ice jam); no flow at times during most years.

Remarks.--Records good except those below 5 cfs and those for period of no gage-height record, which are fair. Flow regulated by Elkhorn Reservoir (see preceding page). Diversions above station for irrigation of about 400 acres.

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

Oct. 1 to May 4				May 5 to Sept. 30	
0.6	0.2	1.0	6.2	1.9	12
.7	.8	1.2	12	2.1	15
.8	1.9	1.4	19	2.3	18
.9	3.7	1.7	30	2.5	22
				2.9	30

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	3.7	1.6	1.5	3.3	1.9	3.3	27	22	16	16	15
2	15	3.7	1.5	1.5	3.3	1.9	2.6	27	22	17	16	15
3	15	3.7	1.5	1.5	*3.2	1.9	1.7	26	22	17	16	14
4	15	3.7	1.5	1.5	3.2	1.9	.7	25	22	18	29	14
5	15	3.7	1.5	1.5	3.2	1.9	.7	23	18	17	19	15
6	15	3.7	1.5	1.6	3.2	1.9	.7	22	21	17	18	14
7	16	3.7	1.5	1.4	3.2	*1.9	.7	22	20	17	17	14
8	15	3.7	1.5	1.4	2.4	1.9	.7	21	19	17	16	14
9	15	3.7	1.4	1.4	1.7	1.9	.8	20	19	16	16	14
10	15	3.7	*1.4	1.4	1.7	1.9	.8	20	19	17	16	14
11	15	*3.7	1.2	1.5	1.7	1.9	.7	19	19	17	16	14
12	15	3.7	1.2	1.5	1.7	2.1	.7	18	19	17	16	14
13	15	3.7	1.2	1.4	1.8	2.1	.7	18	19	16	16	15
14	15	3.7	1.2	1.4	1.8	1.9	.7	20	19	16	16	15
15	15	3.7	1.2	1.4	1.8	1.9	.7	23	18	16	16	15
16	15	3.7	1.2	1.4	1.8	1.9	4.4	23	*18	16	16	15
17	15	3.7	1.2	1.5	1.8	1.9	8.3	23	18	16	16	15
18	15	3.7	1.2	1.5	1.8	2.8	12	22	18	16	16	15
19	15	3.7	1.2	1.5	1.8	3.5	*13	23	18	16	16	15
20	15	3.7	1.2	1.5	1.8	3.5	17	22	18	*16	12	15
21	11	3.7	1.2	1.5	1.8	3.5	20	*22	18	18	13	15
22	3.4	3.7	1.2	1.5	1.8	3.5	20	22	18	17	a13	15
23	7.1	3.7	1.2	1.5	1.8	3.5	23	23	18	16	a13	15
24	5.2	3.7	1.4	1.5	1.8	3.5	25	23	18	16	a16	15
25	3.7	3.5	1.2	1.4	1.9	3.5	25	22	18	16	18	15
26	3.7	3.5	1.4	1.5	1.9	3.5	24	23	17	16	*18	15
27	3.7	3.5	1.4	1.5	1.9	3.5	24	23	17	17	17	15
28	3.7	3.5	1.4	1.5	1.9	3.5	24	23	16	19	15	15
29	3.7	2.8	1.4	1.5	-	3.5	22	23	16	19	15	15
30	3.7	1.6	1.5	1.5	-	3.5	24	23	16	18	15	15
31	3.7	-	1.5	2.2	-	3.5	-	23	-	16	15	-
Total	354.6	107.2	41.7	46.4	61.0	81.0	301.9	694	560	519	503	441
Mean	11.4	3.57	1.35	1.50	2.18	2.61	10.1	22.4	18.7	16.7	16.2	14.7
Ac-ft	703	213	83	92	121	161	599	1,380	1,110	1,030	998	875

Calendar year 1950: Max 27 Min 0.2 Mean 10.3 Ac-ft 7,420
Water year 1950-51: Max 29 Min 0.7 Mean 10.2 Ac-ft 7,360

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for Elkhorn Reservoir and station above Elkhorn Reservoir.

Little Malad River below Sand Ridge dam site, near Malad City, Idaho

Location.--Lat 42°12', long. 112°20', in SE¼ sec. 14, T. 14 S., R. 35 E., on right bank 0.6 mile below proposed Sand Ridge dam site, 1¼ miles below unnamed tributary, 3½ miles west of Malad City, and 9 miles downstream from Elkhorn Reservoir.

Drainage area.--223 sq mi.

Records available.--October 1945 to June 1951 (discontinued).

Gage.--Water-stage recorder.

Average discharge.--5 years (1945-50), 5.08 cfs.

Extremes.--Maximum daily discharge during period October 1950 to June 1951, 8.0 cfs Feb. 10; maximum gage height, 3.06 ft Feb. 7 (ice effect); minimum daily discharge, 0.1 cfs Oct. 17-23.
1945-51: Maximum discharge, 240 cfs Feb. 22, 1948 (gage height, 9.6 ft from flood-mark), by submerged orifice method; minimum discharge recorded, 0.1 cfs Sept. 7, 1947, Oct. 17-23, 1950; minimum gage height observed, 1.48 ft Dec. 22, 1950, Jan. 1, 1951.

Remarks.--Records poor. Diversions above station for irrigation of about 4,000 acres.

Discharge, in cubic feet per second, October 1950 to June 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a0.2	a0.2	0.4			1.3	3.4	4.7	1.6			
2	a.2	a.2	.3			1.4	3.2	5.6	1.4			
3	a.2	g.2	.4		0.2	1.3	3.0	4.2	1.4			
4	a.2	a.2	.5			1.3	2.6	2.2	1.3			
5	a.2	a.2	.4			.8	2.2	2.0	1.2			
6	a.2	a.2	.4		.5	.9	2.1	2.0	1.1			
7	g.2	a.2	.4		2.5	*.8	2.0	2.0	1.0			
8	a.2	a.2	g.3		5.0	.9	2.0	2.0	.9			
9	a.2	a.2	a.3		7.0	.9	2.2	2.1	.8			
10	a.2	.2	*g.3		8.0	.9	2.8	2.1	.8			
11	a.2	*.3	a.3		7.0	1.4	2.8	2.2	.7			
12	a.2	.3	a.3		5.5	1.3	2.8	2.4	.6			
13	g.2	.4	a.2		4.0	1.2	2.8	2.6	.6			
14	a.2	.7	a.2		2.5	1.0	2.8	2.2	.5			
15	a.2	.7	g.2		2.0	1.0	2.8	2.2	.4			
16	a.2	.7	a.2	0.2	1.5	1.1	2.9	2.2	*.4			
17	a.1	1.0	a.2		1.3	1.1	3.0	2.2	-			
18	a.1	1.0	a.2		1.2	1.0	*3.1	2.2	-			
19	a.1	.8	a.2		1.1	1.0	2.0	2.2	-			
20	g.1	.8	a.2		1.0	1.1	1.8	*3.5	-			
21	a.1	.8	a.2		1.0	1.2	1.8	3.8	-			
22	a.1	.8	g.2		.9	1.4	1.8	4.1	-			
23	a.1	.9	a.2		.8	1.3	1.8	2.2	-			
24	a.2	1.0	a.2		.8	1.4	1.9	2.0	-			
25	a.2	1.0	a.2		.8	1.6	1.8	1.9	-			
26	a.2	1.0	a.2		.8	1.8	1.8	1.8	-			
27	g.2	1.0	a.2		.9	2.2	1.8	1.7	-			
28	a.2	1.0	a.2		1.0	2.0	1.8	1.7	-			
29	a.2	1.0	a.2		-	1.9	2.5	1.6	-			
30	a.2	.9	a.2		-	2.0	2.2	1.6	-			
31	a.2	-	a.2		-	2.7	-	1.6	-			
Total	5.5	18.1	8.1	6.2	58.1	41.2	71.5	76.8	-			
Mean	0.18	0.60	0.26	0.20	2.08	1.33	2.38	2.48	-			
Ac-ft	11	36	16	12	115	82	142	152	-			

Calendar year 1950: Max 5.6 Min 0.1 Mean 1.11 Ac-ft 804
Water year : Max - Min - Mean - Ac-ft -

* Discharge measurement made on this day.
a No gage-height record; discharge computed on basis of weather records and records for station below Elkhorn Reservoir and Malad River at Woodruff.
g Computed from once-daily staff-gage reading.
Note.--Stage-discharge relation affected by ice Jan. 1 to Feb. 21.

Devil Creek above Campbell Creek, near Malad City, Idaho

Location.--Lat 42°18', long. 112°12', in sec. 12, T. 13 S., R. 36 E., on right bank 0.6 mile upstream from proposed dam, 1.3 miles upstream from highway crossing of Campbell Creek, 4.5 miles upstream from Evans dividers, and 7½ miles northeast of Malad City.

Drainage area.--13 sq mi, approximately.

Records available.--November 1938 to September 1951.

Gage.--Water-stage recorder. Prior to Dec. 16, 1943, staff gage at same site and datum.

Average discharge.--12 years (1939-51), 10.6 cfs.

Extremes.--Maximum discharge during year, 81 cfs Apr. 5 (gage height, 1.65 ft); minimum, 3.7 cfs Jan. 3 (gage height, 0.56 ft); minimum daily, 6.8 cfs Jan. 17.
1938-51: Maximum discharge observed, 202 cfs Apr. 2, 1943 (gage height, 2.10 ft), from rating curve extended above 47 cfs; minimum recorded, 1.6 cfs Jan. 13, 1950 (gage height, 0.43 ft); minimum daily, 1.8 cfs Nov. 3-5, 1949.

Remarks.--Records fair. Diversions above station for irrigation of 20 to 30 acres. Stream receives part of flow of Birch Creek above station. Malad power plant and its small reservoir on Birch Creek cause slight diurnal fluctuations.

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

0.6	4.4	0.9	17
.7	7.4	1.1	30
.8	12	1.3	46

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	11	10	9.9	7.4	9.5	21	24	14	10	9.5	8.7
2	10	11	9.9	9.5	7.8	9.5	26	23	14	9.9	9.9	7.8
3	10	*10	10	8.7	8.2	9.5	34	21	14	9.9	11	8.2
4	10	10	11	11	9.1	8.7	43	20	13	9.9	12	8.2
5	9.9	10	11	10	9.5	9.1	46	20	13	9.5	9.1	8.2
6	11	10	10	9.9	*7.8	10	46	19	12	9.5	8.7	8.7
7	10	10	11	9.9	9.5	9.5	42	22	12	9.1	8.7	8.7
8	10	12	10	9.5	9.1	*9.5	40	21	12	9.1	8.7	8.7
9	10	10	9.9	9.5	8.7	9.5	38	19	12	9.5	8.7	9.1
10	10	10	9.9	9.1	9.1	9.5	30	18	12	9.1	8.7	9.1
11	10	10	*9.9	8.7	9.5	9.5	29	18	11	10	8.7	9.1
12	10	10	9.9	9.1	9.9	9.5	28	18	11	9.9	8.7	9.1
13	9.9	*10	9.9	8.7	9.5	9.5	27	18	11	9.5	8.7	9.1
14	11	10	9.9	9.1	9.1	9.5	26	18	11	9.9	8.7	9.5
15	11	9.9	9.9	8.7	8.7	9.9	24	20	10	10	8.7	9.5
16	12	9.9	9.5	8.7	8.7	9.9	24	19	*10	10	8.7	9.5
17	11	9.9	9.5	6.8	8.7	9.5	23	19	10	10	8.7	9.1
18	10	10	9.9	9.1	9.5	9.1	22	19	9.9	10	8.7	9.5
19	9.5	8.2	9.9	9.1	9.1	9.1	*22	19	9.9	9.9	8.7	9.5
20	9.5	8.7	9.9	8.7	9.1	9.5	21	19	9.9	*9.5	9.1	9.1
21	9.5	8.7	9.9	6.8	9.1	10	19	*19	9.9	9.5	11	9.5
22	9.9	8.2	9.9	8.2	8.7	12	a18	18	9.9	10	8.7	9.5
23	9.5	8.2	9.9	9.5	9.1	11	a18	18	9.9	9.5	8.7	8.7
24	10	7.8	9.9	9.9	9.5	12	a24	18	10	9.1	*8.7	8.7
25	11	8.7	9.9	9.1	9.1	14	a23	18	10	8.7	8.2	9.1
26	11	8.2	10	8.7	9.1	15	a23	16	9.9	8.7	8.2	8.7
27	12	8.2	9.9	8.2	9.5	15	a22	16	9.9	9.1	8.2	9.1
28	11	8.7	10	b8.0	9.5	13	22	16	10	9,1	9.9	9.1
29	11	9.9	9.9	b7.9	-	13	29	16	10	9.1	9.9	9.5
30	10	10	9.9	b7.7	-	13	26	15	10	9.1	9.5	9.5
31	11	-	10	b7.5	-	15	-	15	-	8.7	9.1	-
Total	320.7	287.2	310.1	275.2	251.6	332.3	836	579	331.2	294.8	282.5	269.8
Mean	10.3	9.57	10.0	8.88	8.99	10.7	27.9	18.7	11.0	9.51	9.11	8.99
Ac-ft	636	570	615	546	499	659	1,660	1,150	657	585	560	535

Calendar year 1950: Max 50 Min 4.6 Mean 13.2 Ac-ft 9,560
Water year 1950-51: Max 46 Min 6.8 Mean 12.0 Ac-ft 8,670

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

Devil Creek above Evans dividers, near Malad City, Idaho

Location.--Lat 42°15', long. 112°13', in sec. 35, T. 13 S., R. 36 E., on right bank at Evans Ranch, 900 ft upstream from Evans dividers, 3.1 miles downstream from Campbell Creek, and 3.6 miles northeast of Malad City.

Drainage area.-- 36 sq mi, approximately.

Records available.--December 1940 to December 1943, April 1946 to September 1951.

Gage.--Water-stage recorder. Prior to June 11, 1942, at site 400 ft downstream at different datum. June 11, 1942, to December 1943, at present site at different datum. Apr. 23 to Dec. 12, 1946, at site 200 ft downstream at present datum.

Average discharge.--7 years (1941-43, 1946-51), 14.3 cfs.

Extremes.--Maximum discharge during year, 112 cfs probably Apr. 5, when recorder was stopped (gage height, 4.18 ft); minimum, 3.7 cfs Jan. 3 (gage height, 1.35 ft).
1940-43, 1946-51: Maximum discharge, 254 cfs Mar. 30, 1943 (gage height, 5.29 ft, present site, datum then in use), from rating curve extended above 60 cfs; minimum, 0.9 cfs Nov. 7, 1949 (gage height, 1.18 ft).

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of 600 to 800 acres above station. Stream receives part of flow of Birch Creek above station. Malad power plant and its small reservoir on Birch Creek cause slight diurnal fluctuations.

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

Oct. 1 to July 19				July 20 to Sept. 30	
1.5	7.0	2.5	35	1.2	5.8
1.7	12	3.0	52	1.4	8.2
2.0	20	3.6	84	1.6	12
				1.8	16

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	13	12	13	10	14	35	31	20	12	9.5	8.8
2	12	14	12	13	11	13	45	30	20	12	9.8	8.7
3	12	13	13	12	12	14	60	28	19	12	9.6	8.7
4	12	13	14	15	13	13	70	27	19	12	15	7.8
5	12	13	13	14	*13	13	80	25	18	9.0	11	7.2
6	11	13	12	14	14	14	75	25	17	9.0	8.7	7.3
7	12	13	14	13	15	14	70	28	17	9.0	8.4	7.2
8	12	15	14	13	16	*14	65	28	16	8.8	8.1	7.0
9	12	13	13	13	17	14	55	23	16	8.8	8.1	7.8
10	12	12	13	13	18	14	50	20	16	8.5	7.0	8.7
11	12	13	*14	13	18	13	48	20	15	8.5	7.0	8.5
12	12	*13	13	13	17	13	46	20	14	7.8	6.6	9.2
13	12	13	13	14	16	14	44	22	12	7.5	7.6	9.2
14	12	14	13	14	15	14	42	25	11	9.2	8.8	8.8
15	12	13	13	14	14	14	39	29	10	8.5	8.8	8.4
16	13	13	13	14	13	14	38	28	*11	8.2	8.7	6.1
17	12	13	13	9.2	12	14	37	28	13	8.5	8.5	6.2
18	12	15	13	13	13	13	36	28	13	8.0	8.2	7.9
19	10	12	14	12	13	14	*34	28	13	7.2	7.6	7.7
20	10	11	14	12	13	14	32	28	13	*8.5	6.4	7.3
21	9.8	12	13	9.6	13	16	29	*28	13	8.1	7.3	7.6
22	9.8	11	13	12	12	20	27	27	13	8.1	8.2	7.7
23	9.8	11	13	13	13	19	27	26	13	7.7	6.9	6.9
24	11	10	13	14	14	20	30	25	13	7.4	6.9	6.4
25	11	10	13	13	13	23	29	25	13	7.4	6.7	7.3
26	11	10	13	12	13	26	29	24	13	7.4	6.5	7.4
27	12	10	13	12	14	26	28	23	12	7.7	7.9	7.3
28	12	10	13	11	14	24	26	23	10	7.7	9.2	8.8
29	12	12	13	11	-	22	36	22	12	10	12	9.6
30	11	12	14	10	-	22	33	19	12	9.8	9.0	9.0
31	12	-	13	10	-	25	-	18	-	9.5	8.8	-
Total	357.4	370	407	388.8	389	517	1,295	781	427	273.8	262.8	236.5
Mean	11.5	12.3	13.1	12.5	13.9	16.7	43.2	25.2	14.2	8.83	8.48	7.88
Ac-ft	709	734	807	771	772	1,030	2,570	1,550	847	543	521	469

Calendar year 1950: Max 70 Min 2.4 Mean 17.8 Ac-ft 12,910
Water year 1950-51: Max 80 Min 6.1 Mean 15.6 Ac-ft 11,320

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 21 to Feb. 4, Feb. 6 to Mar. 7, Mar. 21 to Apr. 18, May 14-20; discharge estimated on basis of recorded range in stage, weather records, and records for nearby streams. Stage-discharge relation affected by ice Nov. 10, 11, Jan. 1-14, 18-20, Feb. 5, Mar. 11-12 and much of period of no gage-height record in winter.

Malad River at Woodruff, Idaho

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

Drainage area.--485 sq mi.

Records available.--November 1938 to September 1951.

Gage.--Staff gage read once daily. Prior to Mar. 6, 1951, staff gage 300 ft downstream at datum 0.27 ft lower.

Extremes.--Maximum discharge during year, 490 cfs Feb. 10 (gage height, 7.0 ft, from flood-mark); minimum observed, 23 cfs Aug. 14, 15, 18; minimum gage height observed, 2.10 ft June 28 to July 11.

1938-51: Maximum discharge, 650 cfs Jan. 22 or 23, 1943 (gage height, 8 ft, from information by observer), from rating curve extended above 370 cfs by logarithmic plotting; minimum observed, 15 cfs July 15, 16, 1940; minimum gage height observed, 1.92 ft Aug. 7, 1947.

Remarks.--Records good except those below about 30 cfs, which are fair. Flow regulated by several small reservoirs above station. Diversions above station for irrigation of 25,000 to 30,000 acres.

Revisions (water years).--W 1060: 1943(M).

Rating tables, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(*Shifting-control method* used Oct. 1-29, June 6 to Sept. 30)

Oct. 1 to Mar. 5				Mar. 6 to Sept. 30			
2.0	28	5.0	228	1.9	21	3.0	79
2.5	50	6.0	348	2.0	25	4.0	148
3.0	77	7.0	492	2.5	50	5.3	256
4.0	139						

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	70	91	73	63	114	128	203	36	24	28	30
2	31	73	88	77	60	124	124	202	36	24	27	30
3	30	73	89	52	62	*119	119	152	34	24	27	30
4	30	72	115	70	66	114	122	133	34	24	32	30
5	30	70	169	75	*69	113	129	114	34	24	26	30
6	36	70	176	78	99	106	135	106	33	24	30	30
7	39	69	132	69	145	119	141	97	32	24	31	28
8	41	69	146	64	187	142	144	112	32	24	28	29
9	43	70	153	64	330	150	142	126	32	24	28	28
10	46	58	*140	62	462	159	142	110	30	24	26	28
11	46	61	128	68	348	151	136	106	30	24	25	28
12	46	*69	119	69	297	138	136	92	29	26	25	28
13	48	75	114	72	250	138	131	105	28	26	25	28
14	49	83	111	77	228	150	128	116	28	28	23	27
15	52	85	108	78	215	175	124	104	28	28	23	28
16	56	90	108	82	163	201	122	89	*28	26	24	30
17	59	89	109	83	145	210	116	84	26	25	24	28
18	56	109	109	87	145	192	116	88	26	26	23	28
19	53	112	106	84	129	184	*114	88	25	28	25	28
20	51	112	103	66	115	193	115	*93	26	28	24	28
21	52	112	105	81	115	212	111	94	26	*28	24	28
22	51	113	105	77	119	252	103	86	26	42	27	28
23	53	109	103	83	126	253	100	74	26	47	26	29
24	54	103	102	83	139	216	107	67	26	43	26	29
25	54	89	102	84	152	190	110	57	25	35	26	29
26	54	85	100	85	156	172	116	57	25	31	28	30
27	58	85	94	88	149	156	110	51	25	29	*29	30
28	66	84	89	83	139	141	106	43	24	28	28	31
29	56	84	83	53	-	135	112	42	24	30	28	34
30	56	88	85	83	-	135	167	38	24	30	28	35
31	61	-	103	71	-	140	-	36	-	30	29	-
Total	1,491	2,531	3,485	2,321	4,673	4,994	3,706	2,965	858	878	823	877
Mean	48.1	84.4	11.2	74.9	167	161	124	95.6	28.6	28.3	26.5	29.2
Ac-ft	2,960	5,020	6,910	4,600	9,270	9,910	7,350	5,880	1,700	1,740	1,630	1,740

Calendar year 1950: Max 340 Min 23 Mean 81.6 Ac-ft 59,110
Water year 1950-51: Max 462 Min 23 Mean 81.1 Ac-ft 58,710

* Discharge measurement made on this day.

Bear River near Corinne, Utah

Location.--Lat 41°34'30", long. 112°06'00", in SW¼NW¼ sec. 29, T. 10 N., R. 2 W., on right bank 1.1 miles downstream from Salt Creek, 2.0 miles northeast of Corinne, and 2.6 miles downstream from Malad River.

Records available.--October 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,220 ft (from bench mark at Corinne). Since July 27, 1950, auxiliary staff gage 7,800 ft downstream.

Extremes.--Maximum discharge during year, 7,180 cfs Feb. 11 (gage height, 14.83 ft); minimum, 134 cfs July 6; minimum daily, 172 cfs July 9.
1949-51: Maximum discharge, that of Feb. 11, 1951; minimum, that of July 6, 1951; minimum daily, that of July 9, 1951.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas. Records are equivalent to flow at Bear River Bird Refuge diversion works.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,520	2,460	2,570	2,330	1,900	3,020	3,190	4,030	3,960	1,880	1,400	1,330
2	*2,710	3,210	2,310	2,520	1,920	3,030	3,290	4,340	3,440	551	1,040	1,780
3	2,480	3,040	2,280	2,640	1,820	3,040	3,380	4,580	3,030	1,100	1,130	*916
4	2,500	2,900	2,610	2,780	1,220	3,010	3,230	4,760	*2,940	976	1,120	746
5	2,950	2,610	3,230	2,940	1,740	3,000	3,280	4,540	2,580	243	1,530	1,220
6	2,880	2,380	3,620	2,930	2,250	2,940	3,520	4,160	1,870	251	*2,190	1,560
7	2,660	2,650	3,260	2,940	2,130	2,960	3,420	3,970	1,300	405	2,120	2,030
8	2,340	2,780	*3,140	2,830	4,400	2,980	3,140	3,680	948	209	2,030	1,710
9	2,460	2,880	2,480	2,740	5,400	3,000	*3,170	3,510	666	172	1,820	1,740
10	2,620	2,390	2,660	1,840	6,340	2,980	3,620	3,200	948	647	2,520	621
11	2,030	2,250	2,930	2,000	6,850	2,950	3,790	3,260	769	557	2,460	1,500
12	2,240	1,720	3,120	2,220	*6,070	2,880	3,830	3,400	1,020	661	2,110	1,300
13	2,490	1,940	3,120	2,450	5,090	2,980	3,860	3,670	1,180	1,070	983	1,250
14	2,450	2,160	2,910	2,680	*4,330	2,980	4,260	3,830	456	1,110	1,870	1,330
15	2,880	2,180	2,670	2,500	4,130	2,940	4,030	3,880	1,610	1,140	1,800	1,310
16	2,880	2,470	a2,700	2,340	3,910	2,780	*4,060	4,000	1,850	*525	1,520	1,240
17	2,050	2,620	a2,700	2,720	3,700	2,760	4,120	4,000	1,610	651	1,630	*1,090
18	1,840	2,160	a2,620	2,960	3,480	2,860	4,140	3,980	971	919	1,350	*1,760
19	1,750	1,770	a2,690	2,860	3,290	2,890	4,150	3,960	1,240	852	963	1,710
20	2,350	*2,020	a2,780	2,860	3,240	3,330	4,150	3,940	1,250	614	382	*1,320
21	2,900	2,200	a2,840	2,860	3,210	3,440	4,160	*3,960	1,060	873	*1,210	1,820
22	2,590	2,220	a2,800	2,500	3,210	3,400	4,290	3,960	1,030	1,130	1,230	1,680
23	2,430	3,120	a2,840	2,660	3,260	3,350	4,400	3,960	1,290	876	1,080	1,450
24	2,360	3,140	a2,780	2,820	3,190	3,180	4,190	3,940	962	1,220	1,230	996
25	2,160	3,160	a2,660	2,850	3,200	2,960	*4,120	3,930	1,100	*1,560	993	1,580
26	2,190	3,050	a2,500	3,020	3,120	2,880	4,010	3,920	1,660	1,230	1,230	1,260
27	2,160	2,490	2,000	3,150	2,970	3,320	3,890	3,920	*1,510	1,310	*565	1,660
28	1,800	2,520	1,860	3,420	2,820	3,370	3,840	3,910	865	1,380	1,180	1,920
29	1,980	2,710	2,380	2,850	-	3,090	3,880	3,910	1,600	1,320	1,510	1,660
30	2,110	2,500	2,450	2,300	-	3,360	3,870	4,220	2,040	735	1,360	1,670
31	2,260	-	2,450	2,240	-	3,260	-	4,270	-	1,310	1,530	-
Total	74,020	75,720	83,960	82,750	98,190	94,920	114,280	122,590	46,755	27,477	45,097	43,159
Mean	2,388	2,524	2,708	2,669	3,507	3,062	3,809	3,955	1,558	886	1,455	1,439
Ac-ft	146,800	150,200	166,500	164,100	194,800	188,300	226,700	243,200	92,740	54,500	89,450	85,600

Calendar year 1950: Max 5,820 Min 601 Mean 2,705 Ac-ft 1,958,000
Water year 1950-51: Max 6,850 Min 172 Mean 2,490 Ac-ft 1,803,000

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 16-26, Dec. 31 to Feb. 7, Feb. 25 to Mar. 1; discharge estimated on basis of record for station near Collinston.

Weber River near Oakley, Utah

Location.--Lat 40°44'10", long. 111°14'45", in SE¼NE¼ sec. 15, T. 1 S., R. 6 E., on right bank 1.4 miles downstream from South Fork, 2.6 miles upstream from Weber-Provo diversion canal, and 3¼ miles northeast of Oakley.

Drainage area.--163 sq mi.

Records available.--October 1904 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,600 ft (from topographic map). Prior to Oct. 25, 1934, staff gage at site about a quarter of a mile downstream at different datum.

Average discharge.--45 years (1906-51), 230 cfs.

Extremes.--Maximum discharge during year, 2,510 cfs May 29 (gage height, 4.24 ft); minimum not determined, occurred during period of ice effect.
1904-51: Maximum discharge observed, 4,010 cfs July 6, 1907, June 5-7, 1909; minimum recorded, 16 cfs Mar. 12, 1941.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Several small diversions above station for irrigation. Flow slightly regulated by several small lakes on headwaters and a small reservoir on Smith and Morehouse Creek. Total capacity of all reservoirs, about 3,200 acre-ft.

Revisions (water years).--W 790: 1934.

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

0.7	46	2.5	602
1.0	86	3.0	957
1.5	191	4.2	2,540
2.0	356		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	94	82	83	b62	55	76	71	258	*1,430	645	164	103
2	91	93	b80	b70	60	72	*77	245	1,030	608	161	98
3	*91	88	b75	b70	70	b70	89	239	844	574	171	96
4	91	82	*b70	b70	70	b65	101	258	715	534	196	94
5	89	78	b70	b70	70	*b66	105	303	657	492	224	91
6	91	*78	b65	b62	72	66	116	369	689	453	194	88
7	91	82	b70	b55	74	70	132	402	813	373	*176	86
8	89	89	b74	*b58	74	72	139	394	891	352	164	84
9	89	84	b78	b62	*72	70	152	398	932	336	152	93
10	88	b70	b80	b66	74	67	159	425	821	313	143	93
11	86	b72	b80	b66	77	62	154	472	*708	292	139	91
12	83	b74	80	b68	74	b58	166	524	784	268	130	88
13	82	76	80	b70	74	b60	194	487	883	255	124	91
14	82	78	78	b72	b70	61	230	*458	1,070	239	118	89
15	80	b75	82	b74	b70	61	248	420	1,210	230	128	88
16	80	b70	78	b74	b70	62	268	394	1,490	*224	137	84
17	78	77	78	b74	b70	63	285	390	1,510	224	132	83
18	77	80	86	74	76	b60	285	420	1,350	207	148	82
19	77	84	82	74	74	64	292	443	1,310	194	148	82
20	76	84	78	b68	b65	64	306	540	1,190	199	150	80
21	76	137	b70	b60	b68	64	281	670	1,100	255	152	78
22	76	116	b70	b70	70	67	261	722	916	213	152	82
23	76	98	b70	74	68	66	278	791	900	188	148	86
24	76	93	b70	74	76	67	303	852	908	181	143	86
25	76	91	b70	74	78	67	278	1,020	985	176	130	88
26	74	88	b68	70	76	71	274	1,180	*941	191	124	84
27	80	86	b65	74	76	70	268	1,440	860	186	116	86
28	83	84	b68	70	74	68	285	*2,020	836	186	*112	*86
29	83	83	b70	65	-	68	321	2,100	777	202	107	86
30	82	84	b70	60	-	71	*285	1,780	702	176	107	84
31	84	-	b70	50	-	71	-	1,710	-	168	105	-
Total	2,571	2,556	2,308	2,100	1,997	2,059	6,403	22,124	29,252	9,134	4,495	2,630
Mean	82.9	85.2	74.5	67.7	71.3	66.4	213	714	975	295	145	87.7
Ac-ft	5,100	5,070	4,580	4,170	3,960	4,080	12,700	43,880	58,020	18,120	8,920	5,220

Calendar year 1950: Max 1,830 Min - Mean 277 Ac-ft 200,800
Water year 1950-51: Max 2,100 Min 50 Mean 240 Ac-ft 173,800

Peak discharge (base, 1,200 cfs).--May 29 (6:00 a.m.) 2,510 cfs (4.24 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 18, 19, Jan. 23 to Feb. 8; discharge estimated on basis of weather records and records for stations near Wanship and Coalville.

Weber River near Wanship, Utah

Location.--Lat 40°47'30", long. 111°24'15", in center sec. 29, T. 1 N., R. 5 E., on left bank 1.2 miles south of Wanship and 1¼ miles upstream from Silver Creek.

Records available.--October 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is about 5,900 ft (from topographic map).

Extremes.--1950-51: Maximum discharge during year, 2,340 cfs May 30 (gage height, 4.73 ft); minimum, 70 cfs Sept. 13, 27, 28, but may have been less during period of ice effect.

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

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

Oct. 1 to May 29				May 30 to Sept. 30			
2.0	84	3.5	867	1.5	75	3.5	1,000
2.3	162	4.0	1,380	1.9	160	4.0	1,460
2.6	277	4.6	2,160	2.5	370	4.5	2,040
3.0	492			3.0	640		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*		144	105	86	96	176	399	*1,490	435	124	115
2	130	120	135	118	92	102	*194	367	1,210	385	122	111
3			138	129	97	96	225	347	960	326	145	107
4			*201	126	122	91	213	357	798	199	196	101
5			190	127	121	*91	209	410	682	182	262	97
6	120	110	150	110	127	107	217	480	652	176	214	91
7			180	95	135	112	225	550	694	170	*187	89
8			194	*105	170	117	229	550	735	158	175	86
9		130	217	111	*172	138	233	544	784	156	155	86
10		110	183	108	180	124	237	578	707	144	150	84
11	110	120	166	110	221	100	225	620	*640	145	140	86
12			169	108	209	100	233	694	622	137	131	89
13			166	118	172	130	269	627	670	137	117	88
14		130	150	120	130	135	357	*585	840	127	107	80
15	100		169	123	130	186	382	550	944	125	101	80
16			162	125	124	176	382	512	1,160	*128	95	82
17		*147	147	124	117	124	388	480	1,280	126	91	80
18		172	135	122	114	110	388	518	1,160	122	91	79
19		317	141	128	110	117	404	544	1,100	113	97	84
20		213	141	118	105	150	557	657	1,050	115	107	77
21	90	287	127	105	114	277	486	833	1,130	220	111	79
22		213	122	114	114	273	352	885	1,090	150	126	82
23		172	122	109	114	176	362	976	928	128	126	82
24		156	130	128	107	194	462	1,020	928	124	124	82
25		150	132	126	100	217	377	1,220	1,020	115	122	80
26		147	124	108	105	237	357	1,460	*952	128	122	77
27	100	141	117	113	105	186	352	1,650	784	152	117	75
28	120	138	110	123	98	147	347	*2,010	616	128	*111	77
29	110	*135	127	115	-	144	474	2,060	562	172	111	79
30	100	144	135	104	-	166	*450	1,940	495	142	117	77
31	100	-	127	85	-	172	-	1,840	-	133	124	-
Total	3,280	4,482	4,651	3,560	3,591	4,591	9,762	26,263	26,663	5,198	4,122	2,582
Mean	106	149	150	115	128	148	325	847	889	168	133	86.1
Ac-ft	6,510	8,890	9,230	7,060	7,120	9,110	19,360	52,090	52,920	10,310	8,180	5,120

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 2,060 Min 75 Mean 271 Ac-ft 195,900

Peak discharge (base, 1,200 cfs).--May 30 (11:30 a.m.) 2,340 cfs (4.73 ft); June 17 (10:15 a.m.) 1,550 cfs (4.07 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 1 to Feb. 10. No gage-height record Oct. 1 to Nov. 16, Jan. 17-20, 25-31, Feb. 1, 7, July 5-15; discharge estimated on basis of weather records and records for stations near Oakley and Coalville.

Weber River near Coalville, Utah

Location.--Lat 40°53'40", long. 111°24'00", in SE¼NE¼ sec. 20, T. 2 N., R. 5 E., on right bank 1½ miles upstream from high water contour for Echo Reservoir, 1½ miles south of Coalville, and 6 miles downstream from Silver Creek.

Drainage area.--438 sq mi.

Records available.--April 1927 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is about 5,600 ft (from topographic map). Prior to Mar. 22, 1931, staff gage at same site and datum.

Average discharge.--24 years, 208 cfs.

Extremes.--Maximum discharge during year, 2,110 cfs May 29 (gage height, 4.08 ft); minimum, 67 cfs Sept. 18, 19 (gage height, -0.08 ft).
1927-51: Maximum discharge, that of May 29, 1951; minimum, 6 cfs Sept. 20, 1934 (gage height, -0.23 ft).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. No diversion between station and Echo Reservoir. Records do not include water diverted from Weber River basin through Weber-Provo diversion canal. Flow slightly regulated by several small reservoirs above station.

Rating table, water year 1950-51, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 10 to July 11)

-0.1	65	2.0	610
.2	107	3.0	1,070
.5	166	4.0	1,700
1.0	289	4.6	2,120

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	160	133	177	120	99	112	240	445	1,640	439	143	112
2	153	139	162	135	106	131	*284	*413	1,350	379	133	105
3	149	147	164	143	111	116	318	388	1,020	331	141	104
4	*149	135	*237	140	139	105	328	403	825	234	193	97
5	143	131	232	142	138	*112	312	445	686	179	281	93
6	139	*131	175	125	142	127	312	503	626	151	245	85
7	139	131	217	110	150	137	328	561	666	147	*214	80
8	143	143	227	*120	185	141	328	561	699	133	202	80
9	141	168	245	125	*220	164	339	554	748	129	181	77
10	139	133	220	122	222	151	337	572	690	118	170	73
11	139	151	198	123	268	114	307	606	*654	120	164	76
12	131	151	198	120	271	131	315	662	610	112	149	78
13	121	151	193	130	224	151	353	642	654	112	139	80
14	120	162	175	135	164	151	403	*606	794	104	118	73
15	120	164	193	138	158	200	435	587	930	102	112	71
16	114	160	190	140	156	220	445	561	1,160	*105	102	71
17	109	173	168	138	147	149	465	524	1,300	121	97	72
18	104	207	158	136	149	133	475	550	1,240	123	91	71
19	104	339	162	143	137	141	503	572	1,150	120	87	70
20	105	271	162	138	116	162	583	622	1,080	105	96	70
21	104	331	145	120	137	295	546	798	1,140	195	101	70
22	97	263	137	130	143	356	462	900	1,090	170	114	73
23	99	224	133	125	145	237	465	980	856	147	116	76
24	101	195	145	142	127	245	531	1,120	843	137	121	76
25	101	188	147	140	121	286	489	1,300	900	129	116	73
26	99	184	139	125	131	331	462	1,510	*900	129	112	73
27	116	177	127	130	129	305	452	1,750	784	160	109	71
28	145	170	120	141	120	205	462	*1,920	600	141	*105	72
29	131	168	141	129	-	195	535	2,060	542	158	104	73
30	123	175	153	121	-	217	503	1,920	479	168	107	73
31	121	-	141	99	-	253	-	*1,800	-	158	116	-
Total	3,859	5,395	5,381	4,025	4,355	5,773	12,317	26,835	26,656	5,056	4,279	2,368
Mean	124	180	174	130	156	186	411	866	889	163	138	78.9
Ac-ft	7,650	10,700	10,670	7,980	8,640	11,450	24,430	53,230	52,870	10,030	8,490	4,700

Calendar year 1950: Max 1,640 Min 71 Mean 350 Ac-ft 253,100
Water year 1950-51: Max 2,060 Min 70 Mean 291 Ac-ft 210,800

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice, Jan. 1 to Feb. 8 (no gage-height record most of period; discharge estimated on basis of weather records and records for stations near Oakley and Wanship).

Chalk Creek at Coalville, Utah

Location.--Lat 40°55'10", long. 111°24'00", in NE¼SE¼ sec. 8, T. 2 N., R. 5 E., on left bank 100 ft downstream from bridge on U. S. Highway 189 in Coalville and a third of a mile upstream from mouth.

Drainage area.--253 sq mi.

Records available.--October 1904 to December 1905 (gage heights only), April 1927 to September 1951.

Gage.--Water-stage recorder and concrete control. Datum of gage is 5,560.6 ft above mean sea level, datum of 1929. Prior to February 1931, staff gage 100 ft upstream at different datum. February 1931 to October 1941, water-stage recorder 300 ft upstream at different datum.

Average discharge.--24 years (1927-51), 59.8 cfs.

Extremes.--Maximum discharge during year, 568 cfs May 29 (gage height, 2.38 ft); minimum, 4.5 cfs Mar. 12 (gage height, 0.23 ft).
1927-51: Maximum discharge, 923 cfs May 25, 1950 (gage height, 3.14 ft); minimum, less than 1 cfs for several days during June to November 1934.

Remarks.--Records good. Several diversions above station for irrigation, none below. Flow slightly affected by Chalk Creek Reservoir (capacity, 1,200 acre-ft).

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 11-16)

0.2	4.5	0.6	41	1.5	268
.3	9.0	.9	97	2.0	443
.4	17	1.2	175	2.2	520

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	28	28	15	25	22	46	167	335	74	51	25
2	38	27	24	19	25	26	*55	*155	315	72	47	26
3	37	28	24	24	25	22	89	134	271	66	43	26
4	*36	27	*40	24	25	22	175	142	236	65	46	22
5	36	26	34	24	28	*26	211	167	224	63	68	20
6	36	*26	17	17	33	24	249	230	210	59	54	18
7	37	27	36	15	33	27	236	275	190	49	*49	17
8	36	31	34	*17	54	25	187	239	180	44	43	18
9	33	32	34	21	*47	32	178	230	170	43	41	18
10	32	20	33	21	59	25	178	242	160	44	40	15
11	31	25	29	22	82	14	95	288	*150	43	38	15
12	31	25	32	24	61	16	91	338	144	41	36	14
13	28	25	31	22	44	28	107	304	147	41	34	15
14	28	26	28	22	33	25	139	*258	140	40	33	15
15	27	27	31	24	37	34	131	227	134	40	33	14
16	28	21	29	25	38	34	111	227	126	*38	31	13
17	28	29	25	26	37	21	119	211	129	40	28	12
18	28	32	22	26	36	22	121	271	129	37	29	11
19	28	41	27	26	32	27	126	308	114	40	29	12
20	22	37	29	26	21	36	150	402	109	46	33	12
21	18	52	20	25	33	74	167	500	119	65	33	11
22	24	49	16	26	32	63	124	413	131	65	34	9.0
23	22	38	19	27	32	33	107	447	111	52	33	8.1
24	21	32	24	28	24	36	167	424	104	44	33	8.1
25	24	32	24	27	22	44	153	473	104	44	32	8.1
26	25	31	20	26	27	51	126	481	*99	51	28	7.6
27	28	28	16	26	27	44	119	481	95	54	26	7.6
28	29	27	18	32	24	33	139	*497	84	52	25	7.2
29	27	26	25	25	-	34	211	500	78	68	*26	8.1
30	27	29	26	24	-	38	217	428	78	59	27	8.1
31	27	-	21	28	-	49	-	*366	-	54	26	-
Total	910	904	816	734	996	1,007	4,324	9,825	4,616	1,593	1,129	420.9
Mean	29.4	30.1	26.3	23.7	35.6	32.5	144	317	154	51.4	36.4	14.0
Ac-ft	1,800	1,790	1,620	1,460	1,980	2,000	8,580	19,490	9,160	3,160	2,240	835

Calendar year 1950: Max 861 Min 16 Mean 123 Ac-ft 89,160
Water year 1950-51: Max 500 Min 7.2 Mean 74.7 Ac-ft 54,100

Peak discharge (base, 400 cfs).--May 29 (7 a.m.) 568 cfs (2.38 ft).
* Discharge measurement made on this day.
Note.--No gage-height record June 6-11, 14; discharge estimated on basis of weather records and records for nearby streams.

Echo Reservoir at Echo, Utah

Location.--Lat 40°57'50", long. 111°26'00", in NW¼SW¼ sec. 30, T. 3 N., R. 5 E., near outlet works at left end of Echo Dam, 1 mile southeast of Echo.

Drainage area.--732 sq mi.

Records available.--October 1930 to September 1951.

Gage.--Staff gage read to half-tenths about 6 a.m. daily. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to 1932, elevations obtained from mercury gage in valve house.

Extremes.--Maximum contents during year, 74,330 acre-ft June 29 (elevation, 5,560.26 ft); minimum contents, 38,400 acre-ft Sept. 30 (elevation, 5,532.2 ft).
1930-51: Maximum contents, 74,460 acre-ft May 31, 1937 (elevation, 5,560.35 ft); no storage Sept. 12 to Dec. 3, 1931, Sept. 24 to Nov. 2, 1934, Oct. 12 to Nov. 21, 1944.

Remarks.--Reservoir is formed by earth-fill, rock-faced dam. Storage began in October 1930. Dam completed in 1931. Capacity, 73,940 acre-ft between elevation 5,450 ft (bottom of outlet tunnel) and 5,560 ft (top of radial gates in spillway) above mean sea level. Dead storage negligible. Water is used for irrigation on the Echo project.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39,580	38,450	42,670	44,730	43,690	45,190	48,280	55,670	69,440	74,240	58,020	49,620
2	39,630	38,500	42,780	44,610	43,690	45,080	48,400	55,670	69,580	74,240	57,760	49,250
3	39,680	38,500	42,780	44,610	43,460	45,080	48,770	55,410	69,870	74,090	57,360	49,010
4	39,680	38,610	43,010	44,610	43,350	44,960	49,250	55,280	70,300	73,650	57,100	48,770
5	39,740	38,610	43,240	44,610	43,350	44,960	49,620	55,150	70,730	73,210	57,360	48,400
6	39,740	38,610	43,350	44,610	43,350	44,960	50,240	55,280	71,020	72,470	57,890	47,920
7	39,740	38,610	43,460	44,500	43,580	44,960	50,730	55,540	71,460	71,890	58,280	47,560
8	39,740	38,720	43,350	44,380	43,690	44,960	51,100	55,920	72,180	71,310	58,550	47,080
9	39,740	38,820	43,810	44,270	43,920	44,960	51,350	56,450	73,060	70,590	58,550	46,610
10	39,740	38,820	44,040	44,270	44,150	45,080	51,480	56,710	73,360	70,010	58,410	46,010
11	39,740	38,820	44,150	44,270	44,500	45,080	51,480	57,100	73,650	69,290	58,410	45,430
12	39,740	38,930	44,380	44,150	44,960	44,960	51,480	57,760	73,720	68,720	58,410	44,840
13	39,680	38,930	44,500	44,150	45,080	44,960	51,480	58,410	73,800	68,010	58,150	44,380
14	39,630	39,040	44,610	44,040	45,080	44,960	51,600	58,680	73,650	67,440	58,020	43,920
15	39,580	39,140	44,610	44,040	45,190	45,080	51,970	58,680	73,940	66,740	57,620	43,580
16	39,520	39,140	44,730	44,040	45,310	45,310	52,100	58,810	74,020	65,900	57,230	43,350
17	39,470	39,250	44,840	43,920	45,430	45,430	52,480	58,940	74,240	65,200	56,580	43,120
18	39,360	39,360	44,840	43,920	45,430	45,430	52,730	58,940	74,240	64,510	55,920	42,780
19	39,250	39,680	44,840	43,920	45,430	45,430	53,230	59,210	74,090	63,820	55,280	42,440
20	39,140	40,120	44,960	43,920	45,430	45,430	53,740	59,610	74,140	62,990	54,640	42,220
21	39,040	40,560	44,960	43,810	45,310	45,540	54,380	60,820	74,240	62,310	54,000	41,880
22	38,930	41,220	44,960	43,810	45,310	46,370	54,510	61,900	74,240	62,040	53,620	41,550
23	38,820	41,660	44,960	43,810	45,310	46,720	54,510	62,720	74,150	61,630	53,230	41,330
24	38,720	41,880	44,960	43,920	45,310	46,840	54,640	63,680	74,300	60,950	52,860	41,000
25	38,660	42,110	44,960	43,920	45,310	47,080	54,890	64,780	74,300	60,280	52,480	40,560
26	38,560	42,330	44,960	43,920	45,310	47,440	54,890	65,620	74,240	59,740	52,100	40,010
27	38,450	42,440	44,840	43,810	45,190	47,920	54,890	66,460	74,300	59,340	51,720	39,580
28	38,450	42,440	44,840	43,810	45,190	48,040	54,890	67,300	74,300	58,940	51,100	39,140
29	38,450	42,550	44,730	43,810	-	48,040	55,020	68,440	74,330	58,550	50,730	38,720
30	38,450	42,670	44,730	43,810	-	48,040	55,410	69,150	74,240	58,410	50,360	38,400
31	38,450	-	44,730	43,690	-	48,160	-	69,290	-	58,280	49,990	-

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

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	5,533.25	39,520	-
Oct. 31	5,532.25	38,450	-1,070
Nov. 30	5,536.10	42,670	+4,220
Dec. 31	5,537.90	44,730	+2,060
Calendar year 1950	-	-	+20,600
Jan. 31	5,537.00	43,690	-1,040
Feb. 28	5,538.30	45,190	+1,500
Mar. 31	5,540.80	48,160	+2,970
Apr. 30	5,546.60	55,410	+7,250
May 31	5,556.80	69,290	+13,880
June 30	5,560.20	74,240	+4,950
July 31	5,548.80	58,280	-15,960
Aug. 31	5,542.30	49,990	-8,290
Sept.30	5,532.20	38,400	-11,590
Water year 1950-51	-	-	-1,120

Weber River at Echo, Utah

Location.--Lat 40°57'55", long. 111°26'10", in SE¼NE¼ sec. 25, T. 3 N., R. 4 E., on right bank a quarter of a mile downstream from Echo Dam, half a mile upstream from Echo Creek, and three-quarters of a mile southeast of Echo.

Drainage area.--732 sq mi.

Records available.--April 1927 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,440 ft (from Echo Reservoir elevations). Prior to Apr. 18, 1931, staff gage a quarter of a mile downstream at different datum. Apr. 18, 1931, to Mar. 23, 1950, water-stage recorder 0.3 mile downstream at different datum.

Average discharge.--24 years, 275 cfs.

Extremes.--Maximum discharge during year, 2,220 cfs May 30 (gage height, 6.54 ft); minimum daily, 27 cfs Nov. 22.
1927-51: Maximum discharge, 2,580 cfs May 26, 1950 (gage height, 6.96 ft); minimum daily, 2 cfs Feb. 27 to Mar. 2, Mar. 31, Apr. 3-13, 1940.

Remarks.--Records good. Many diversions above and below station for irrigation. Flow regulated by Echo Reservoir (see preceding page).

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

1.8	25	3.5	341
2.0	38	4.0	541
2.3	65	5.0	1,060
2.6	107	6.0	1,770
3.0	191	6.6	2,270

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	184	149	169	172	174	179	248	640	1,870	514	324	281
2	184	149	169	172	174	181	248	*640	1,550	532	352	269
3	184	147	169	172	174	181	*251	635	1,080	528	327	272
4	*184	147	169	172	174	181	263	630	860	532	234	294
5	184	147	*169	174	174	181	278	635	810	514	137	310
6	184	*147	169	174	174	*181	304	635	655	506	105	317
7	184	147	169	174	174	181	324	635	519	519	*112	317
8	181	147	169	*174	*174	181	363	635	476	497	214	317
9	181	154	169	174	174	181	439	635	710	484	251	327
10	181	158	169	174	174	184	443	635	790	484	231	348
11	181	158	169	174	174	184	447	635	715	489	214	352
12	179	158	169	174	177	184	447	670	*695	489	231	348
13	179	158	169	174	177	184	447	775	870	493	263	331
14	179	158	169	174	177	184	451	810	815	519	294	281
15	179	163	169	174	177	184	451	*780	1,040	528	341	254
16	179	169	169	174	177	184	455	745	1,160	*528	396	237
17	177	169	169	174	179	184	451	720	1,390	514	415	228
18	177	169	169	174	179	184	451	680	1,470	528	423	228
19	177	174	169	174	179	184	451	655	1,260	569	423	228
20	177	181	169	174	179	186	510	670	1,140	569	404	245
21	174	155	172	174	179	186	587	720	1,200	489	377	242
22	174	27	172	174	179	186	640	805	1,380	463	366	231
23	174	86	172	174	179	204	640	885	970	519	345	288
24	174	139	172	174	179	220	640	1,030	982	506	327	304
25	172	139	172	174	179	220	640	1,130	1,070	476	327	301
26	172	154	172	174	179	220	640	1,330	*994	443	327	304
27	172	169	172	174	179	237	640	1,580	907	431	332	304
28	172	169	172	174	179	248	640	1,750	670	400	327	301
29	172	169	172	174	-	248	640	*2,030	675	355	*321	275
30	158	169	172	174	-	248	640	2,190	559	331	324	234
31	149	-	172	174	-	248	-	2,040	-	324	314	-
Total	5,478	4,525	5,272	5,386	4,947	6,118	14,069	28,985	29,282	15,073	9,438	8,568
Mean	177	150	170	174	177	197	469	935	976	486	304	286
Ac-ft	10,870	8,980	10,460	10,680	9,810	12,140	27,900	57,490	58,080	29,900	18,720	16,990

Calendar year 1950: Max 2,520 Min 5.2 Mean 471 Ac-ft 341,200
Water year 1950-51: Max 2,190 Min 27 Mean 376 Ac-ft 272,000

* Discharge measurement made on this day.

Lost Creek near Croydon, Utah

Location.--Lat 41°10'35", long. 111°24'20", in SW¼SE¼ sec. 8, T. 5 N., R. 5 E., on right bank 0.8 mile downstream from Francis Fork, 1.6 miles upstream from Hell Canyon, and 9½ miles northeast of Croydon.

Drainage area.--133 sq mi.

Records available.--February 1921 to December 1923, April 1941 to September 1951.

Gage.--Water-stage recorder. Prior to Dec. 5, 1923, at site 40 ft downstream at different datum. Apr. 8, 1941, to July 27, 1949, at site 40 ft downstream at present datum.

Average discharge.--12 years, 38.6 cfs.

Extremes.--Maximum discharge during year, 350 cfs May 21 (gage height, 5.68 ft); minimum, 13 cfs Nov. 16, but may have been less during periods of ice effect or no gage-height record.

1921-23, 1941-51: Maximum discharge, 770 cfs May 10, 11, 18, 1923 (gage height, 4.20 ft, site and datum then in use), from rating curve extended above 200 cfs; minimum, 3 cfs for several days in August and September 1941, 1942.

Remarks.--Records fair prior to Dec. 21, poor Dec. 21 to May 28, fair thereafter.

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

Oct. 1 to Apr. 1		Apr. 2 to May 28, June 21 to Sept. 30				May 29 to June 20	
1.9	14	2.8	9.7	4.0	102	2.0	43
2.1	24	3.0	18	5.0	226	2.5	88
2.3	37	3.3	35	5.8	337	3.0	141
2.5	56	3.6	59			3.5	196

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	17	20				a45	214	151	32	18	17
2	17	20	18				*65	200	136	30	18	16
3	*16	20	b18		a22		77	192	*118	29	19	14
4	16	18	22				89	*206	105	27	22	14
5	16	17	*20				99	232	97	27	22	15
6	16	17	b17				*106	267	92	26	19	14
7	17	*17	22	b18			130	327	87	25	18	14
8	17	24	21		(*)		112	308	83	24	17	14
9	16	22	20	(*)			86	302	78	24	*18	14
10	16	b15	20				79	310	77	23	17	14
11	16	17	20			a20	57	326	73	23	17	15
12	16	16	20				41	323	*67	24	16	15
13	16	16	20		a25		44	275	64	23	15	15
14	16	17	20				88	250	63	22	15	16
15	16	17	20				131	*238	60	22	15	15
16	16	b15	20				136	234	56	22	14	15
17	16	17	19				160	227	54	*23	14	14
18	16	22	b17				183	240	53	22	14	14
19	16	24	19				218	264	50	22	14	14
20	16	23	18				239	317	50	23	16	14
21	16	56					218	329	49	25	16	13
22	16	36		a20			184	294	46	23	18	14
23	16	27					197	*291	44	21	16	14
24	16	22					240	274	42	21	16	14
25	16	22	b17		a20		218	259	41	21	16	14
26	16	21				a30	214	247	38	20	16	13
27	17	20					213	229	*36	21	15	14
28	17	20					239	209	34	26	16	*14
29	17	19	18		-		275	194	33	27	16	15
30	16	20	18		-		246	174	32	21	16	15
31	16	-	18		-		-	154	-	19	*21	-
Total	503	634	581	594	645	730	4,429	7,906	2,009	738	520	433
Mean	16.2	21.1	18.7	19.2	23.0	23.5	148	255	67.0	23.8	16.8	14.4
Ac-ft	998	1,260	1,150	1,180	1,280	1,450	8,780	15,680	3,980	1,460	1,030	859

Calendar year 1950: Max 532 Min - Mean 65.2 Ac-ft 47,210
Water year 1950-51: Max 329 Min - Mean 54.0 Ac-ft 39,120

Peak discharge (base, 130 cfs).--May 21 (1:30 a.m.) 350 cfs (5.68 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Weber River at Devils Slide, Utah

Location.--Lat 41°03'40", long. 111°34'25", in SE¼SE¼ sec. 23, T. 4 N., R. 3 E., on right bank 350 ft downstream from highway underpass on U. S. Highway 30S, 1½ miles west of Devils Slide, and 1¾ miles downstream from Lost Creek.

Drainage area.--1,100 sq mi, approximately.

Records available.--February 1905 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,300 ft. Prior to Sept. 30, 1934, staff gage 1½ miles upstream at different datum.

Average discharge.--46 years, 443 cfs.

Extremes.--Maximum discharge during year, 2,450 cfs May 30 (gage height, 5.99 ft); minimum, 84 cfs Nov. 23 (gage height, 1.44 ft).
1905-51: Maximum discharge observed, 6,000 cfs May 22, 1920 (gage height, 8.0 ft, site and datum then in use); minimum, 18 cfs Sept. 23, 1934, Mar. 6, 1948.

Remarks.--Records good. Many diversions above station for irrigation. Flow regulated by Echo Reservoir (see p. 86).

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

1.5	98	3.0	540
1.7	129	4.0	1,060
2.0	191	5.0	1,710
2.5	336	6.0	2,460

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	230	191	235	227	b218	252	517	1,160	2,080	570	395	358
2	230	196	232	232	b221	252	545	1,110	1,860	590	422	340
3	230	196	235	238	238	246	*600	*1,080	1,360	600	426	333
4	*230	196	291	235	249	243	650	1,100	1,080	580	340	340
5	230	196	*272	238	269	249	690	1,160	1,010	560	232	365
6	227	194	243	b226	278	*243	735	1,240	860	560	149	368
7	227	*194	260	b200	272	258	795	1,350	715	580	177	368
8	227	201	263	b210	*291	258	835	1,350	625	545	263	365
9	227	208	255	*b226	303	266	925	1,330	785	512	*323	372
10	224	211	255	b226	310	260	940	1,330	925	512	306	380
11	221	214	249	235	354	252	875	1,350	835	503	272	387
12	221	211	249	b232	368	249	845	1,370	*810	499	281	391
13	219	214	252	232	333	266	870	1,380	982	499	310	383
14	216	219	249	235	291	269	946	1,360	910	526	340	329
15	219	219	252	232	284	291	988	*1,290	1,110	545	380	297
16	219	221	249	235	278	320	994	1,240	1,230	540	451	278
17	211	227	246	238	278	272	1,000	1,210	1,420	*531	472	266
18	208	246	243	240	281	269	1,010	1,200	1,580	531	481	266
19	208	275	240	240	266	275	1,050	1,190	1,370	575	481	263
20	211	272	240	238	260	300	1,120	1,250	1,230	595	477	269
21	208	299	240	b228	266	361	1,160	1,290	1,270	550	460	281
22	208	111	238	246	266	499	1,150	1,320	1,460	494	444	269
23	211	116	235	240	266	358	1,160	1,370	1,100	550	430	303
24	211	206	240	246	260	376	1,250	1,480	1,070	565	359	347
25	208	204	238	249	258	399	1,180	1,510	1,150	535	359	347
26	208	208	238	246	260	464	1,150	1,640	1,080	512	395	347
27	216	235	235	246	255	468	1,130	1,880	*1,020	499	410	343
28	219	235	235	252	255	422	1,160	2,020	750	508	406	333
29	216	232	238	246	-	418	1,230	*2,250	750	451	383	326
30	206	235	240	b224	-	444	1,210	*2,430	665	414	399	284
31	191	-	238	b224	-	503	-	2,320	-	402	*391	-
Total	6,737	6,381	7,625	7,262	7,728	10,002	28,710	44,560	33,092	16,433	11,494	9,898
Mean	217	213	246	234	276	323	957	1,437	1,103	530	371	330
Ac-ft	13,360	12,660	15,120	14,400	15,330	19,840	56,950	88,380	65,640	32,590	22,800	19,630

Calendar year 1950: Max 3,450 Min 94 Mean 651 Ac-ft 471,500
Water year 1950-51: Max 2,430 Min 111 Mean 520 Ac-ft 376,700

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

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East Canyon Reservoir near Morgan, Utah

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

Drainage area.--144 sq mi.

Records available.--October 1937 to September 1951 in reports of Geological Survey. November 1931 to September 1951 in reports of Weber River water commissioner.

Gage.--Staff gage. Altitude of gage is 5,550 ft.

Extremes.--Maximum contents observed during year, 28,950 acre-ft May 22, 29, 30 (gage height, 141.9 ft); minimum observed, 12,150 acre-ft Nov. 5.
1931-51: Maximum contents, 29,170 acre-ft June 2, 1943 (gage height, 141.67 ft); no contents Nov. 1, 1931, Sept. 2 to Nov. 1, 1934, Sept. 11 to Oct. 18, 1937, Sept. 11-28, 1946.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,500	-	-	-	-	-	19,030	-	28,610	28,660	-	-
2	-	-	-	-	-	-	19,090	-	28,460	-	-	17,030
3	-	-	13,410	-	-	-	-	-	28,590	28,690	-	-
4	-	-	-	-	16,230	17,370	-	-	28,590	28,690	21,830	-
5	-	12,150	-	-	-	-	-	-	28,340	28,710	-	-
6	-	-	-	-	-	-	-	27,420	28,340	28,430	-	-
7	-	-	-	15,220	-	-	-	-	28,340	-	-	-
8	13,910	-	-	-	-	-	20,660	-	28,340	27,940	-	-
9	-	-	-	-	-	-	-	-	28,340	-	-	15,640
10	-	-	-	-	-	-	-	-	28,720	-	-	-
11	-	-	-	-	16,780	17,760	-	28,400	-	-	-	-
12	-	12,260	-	-	-	-	-	28,460	28,720	-	21,280	-
13	-	-	-	-	-	-	-	28,460	28,740	-	-	-
14	-	-	-	15,400	-	-	-	28,460	28,720	-	-	-
15	13,330	-	-	-	-	-	21,410	28,460	28,720	26,300	-	-
16	-	-	-	-	-	-	21,550	28,460	28,720	-	-	14,160
17	-	-	-	-	-	-	-	28,380	28,660	-	-	-
18	-	-	-	-	17,080	18,150	-	28,480	28,740	-	-	-
19	-	12,450	14,460	-	-	-	-	28,480	28,740	-	19,720	-
20	-	-	-	-	-	-	-	28,460	28,740	-	-	-
21	-	-	-	15,700	-	-	-	28,820	28,740	-	-	-
22	-	-	-	-	-	-	23,680	28,950	28,770	24,720	-	-
23	-	-	-	-	-	-	-	28,900	28,790	-	-	12,720
24	-	-	14,680	-	-	-	-	28,870	28,660	-	-	-
25	-	-	-	-	-	18,860	-	28,820	28,720	-	-	-
26	-	13,030	-	-	17,140	-	-	28,820	28,720	-	18,380	-
27	-	-	-	-	-	-	-	28,610	28,720	-	-	-
28	-	-	-	15,970	17,140	-	-	28,820	28,720	-	-	-
29	12,180	-	-	-	-	-	26,320	28,950	28,720	23,210	-	-
30	-	a13,160	-	-	-	-	a26,480	28,950	28,690	-	-	12,720
31	a12,170	-	15,010	a16,080	-	a19,000	-	28,920	-	a22,740	a17,420	-

a No gage-height record; contents interpolated.

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

Date	Gage Height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	a14,590	-
Oct. 31	-	a12,170	-2,420
Nov. 30	-	a13,160	+990
Dec. 31	107.10	15,010	+1,850
Calendar year 1950	-	-	+1,990
Jan. 31	-	a16,080	+1,070
Feb. 28	113.90	17,140	+1,060
Mar. 31	-	a19,000	+1,860
Apr. 30	-	a26,480	+7,480
May 31	141.20	28,920	+2,440
June 30	140.75	28,690	-230
July 31	-	a22,740	-5,950
Aug. 31	-	a17,420	-5,320
Sept.30	99.00	12,720	-4,700
Water year 1950-51	-	-	-1,870

a No gage-height record; contents interpolated.

East Canyon Creek near Morgan, Utah

Location.--Lat 40°55'20", long. 111°36'20", in NW¼ sec. 10, T. 2 N., R. 3 E., on right bank 2,500 ft downstream from East Canyon Dam, 2½ miles upstream from Sheep Canyon, and 9 miles southeast of Morgan.

Drainage area.--145 sq mi.

Records available.--October 1937 to September 1951 in reports of Geological Survey. October 1931 to September 1951 in reports of Weber River water commissioner.

Gage.--Water-stage recorder and Lyman rectangular weir. Altitude of gage is 5,460 ft (from river-profile map).

Average discharge.--20 years (1931-51), 52.3 cfs.

Extremes.--Maximum daily discharge during year, 188 cfs May 22; minimum daily, 4.2 cfs Mar. 5.

1931-51: Maximum daily discharge, 412 cfs Apr. 23, 1936; minimum daily, 3.2 cfs Nov. 20, 22, 23, 1948.

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

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

0.1	3.6	0.6	53
.2	9.7	1.0	117
.3	18	1.4	198

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	24	9.0	7.8	9.7	5.3	97	84	158	39	121	115
2	66	24	9.0	7.8	9.7	5.3	103	84	146	38	121	119
3	*66	24	8.4	7.1	10	5.3	*108	*82	134	36	119	123
4	64	25	7.8	7.1	11	4.7	110	84	*112	32	67	119
5	63	23	7.8	7.1	11	4.2	112	84	106	92	35	119
6	64	22	*7.8	7.1	12	4.7	113	76	87	121	35	115
7	63	*21	7.8	7.8	*12	*4.4	115	72	82	121	35	115
8	64	22	8.4	8.4	12	5.3	115	72	85	121	*34	112
9	66	23	8.4	*8.1	12	4.7	117	73	89	123	29	117
10	66	22	8.4	7.8	12	4.7	119	84	87	121	86	123
11	64	22	9.0	7.8	24	4.7	117	136	76	121	123	121
12	64	20	8.4	7.8	35	4.7	117	152	74	121	123	123
13	63	19	9.0	7.8	35	5.3	119	154	*74	119	123	121
14	63	20	9.0	7.1	35	5.3	119	156	73	119	121	119
15	64	19	9.0	7.8	34	5.9	119	158	72	121	121	119
16	66	20	9.0	7.8	34	5.9	87	*158	63	123	119	121
17	64	21	9.0	7.8	34	5.9	16	154	61	*121	119	123
18	63	22	9.0	7.8	34	5.9	16	142	64	123	117	121
19	63	21	8.4	9.0	33	5.9	17	113	64	121	119	121
20	60	20	8.4	9.0	33	5.9	17	99	61	121	121	119
21	60	21	8.4	9.0	33	7.1	17	138	61	121	121	121
22	61	23	9.0	9.0	33	7.1	14	188	68	123	119	119
23	63	24	8.4	9.0	33	7.1	12	179	78	123	119	58
24	61	25	7.8	9.7	32	13	12	*173	76	123	117	21
25	61	26	7.1	9.7	32	54	13	162	61	121	115	19
26	61	16	7.1	9.7	32	92	12	138	54	121	121	18
27	61	4.7	7.1	9.7	32	96	12	128	*53	119	121	18
28	61	7.8	7.1	9.7	21	96	12	130	52	121	119	*18
29	35	7.8	7.1	9.7	-	96	52	146	52	121	119	18
30	22	9.0	7.8	9.7	-	97	84	164	48	123	*117	19
31	23	-	7.8	9.7	-	97	-	162	-	121	115	-
Total	1,851	598.3	255.7	260.4	690.4	766.3	2,093	3,925	2,371	3,391	3,191	2,814
Mean	59.7	19.9	8.25	8.40	24.7	24.7	69.8	127	79.0	109	103	93.8
Ac-ft	3,670	1,190	507	516	1,370	1,520	4,150	7,790	4,700	6,730	6,330	5,580

Calendar year 1950: Max 243 Min 4.7 Mean 76.7 Ac-ft 55,530
Water year 1950-51: Max 188 Min 4.2 Mean 60.8 Ac-ft 44,050

* Discharge measurement made on this day.

Hardscrabble Creek near Porterville, Utah

Location.--Lat 40°57'10", long. 111°43'00", in SW¼NW¼ sec. 34, T. 3 N., R. 2 E., on right bank two-thirds of a mile upstream from Tucker Hollow and 2¾ miles southwest of Porterville.

Drainage area.--24.9 sq mi.

Records available.--October 1941 to September 1951 in reports of Geological Survey. December 1937 to August 1940 (fragmentary) on file in State engineer's office.

Gage.--Water-stage recorder. Altitude of gage is 5,500 ft (from topographic map).

Average discharge.--10 years (1941-51), 33.5 cfs.

Extremes.--Maximum discharge during year, 439 cfs July 28 (gage height, 3.53 ft); minimum, 6.4 cfs Sept. 25.

1941-51: Maximum discharge, 631 cfs Aug. 20, 1945 (gage height, 3.60 ft), from rating curve extended above 180 cfs; minimum recorded, 3.0 cfs Feb. 11, 1944, 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 fair. A small trans-basin canal diverts water from Arthurs Fork, a tributary of Hardscrabble Creek, to Farmington Creek for irrigation in vicinity of Farmington.

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

Oct. 1 to July 28				July 28 to Sept. 30	
1.5	7.8	2.2	58	1.2	3.5
1.6	12	2.5	105	1.4	8.8
1.9	30	3.0	236	1.6	17
				1.8	30

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	9.8	9.8	b8	a8	b13	32	96	128	27	a14	9.2
2	9.8	12	9.0	b9	a8	b13	38	92	103	26	a13	8.8
3	*9.4	a10	14	11	a9	b11	*49	90	85	25	a15	8.5
4	9.8	a9	24	b10	a10	b11	58	*103	*79	24	a20	8.5
5	9.8	a9	16	8.6	a10	b11	60	131	77	23	a20	8.2
6	9.8	a8.6	*16	b8	a11	11	64	148	73	22	a15	7.9
7	9.8	*8.6	16	b8	*15	*12	68	158	71	22	a14	7.9
8	9.8	14	15	a8	18	12	73	153	67	21	*13	7.9
9	9.8	11	15	*a8	20	13	76	145	62	20	13	7.9
10	9.4	12	14	a8	21	13	74	145	57	20	12	7.6
11	9.4	8.6	14	a8	30	b10	68	158	53	20	12	7.6
12	9.4	7.8	13	a8	29	b10	67	160	*50	19	12	7.9
13	9.8	7.8	13	a8	24	b11	73	136	50	18	11	7.9
14	9.8	8.2	12	a9	b20	b11	82	118	49	17	11	7.3
15	10	8.6	12	a10	b15	12	87	105	48	17	10	7.3
16	11	b8	12	a10	b15	15	87	*98	47	16	10	7.3
17	11	8.6	12	a10	b18	b11	87	98	46	*16	10	7.0
18	11	17	12	a10	a18	b10	87	118	44	15	9.9	7.0
19	11	20	11	a9	a15	b13	92	143	41	15	11	7.0
20	11	20	11	a8	a12	b17	100	182	40	15	14	6.7
21	10	41	11	a8	a15	21	92	199	39	19	12	7.0
22	9.8	22	b11	a9	16	26	87	182	37	15	11	7.3
23	9.4	16	b11	a10	15	24	88	190	36	14	11	7.3
24	9.0	12	b11	a10	15	25	100	*199	34	14	7.9	7.3
25	9.0	12	b10	a10	b14	27	92	208	33	14	8.8	7.3
26	8.6	11	b10	a9	14	30	87	208	32	14	9.6	7.3
27	12	11	b10	a9	14	31	92	205	*31	14	a9.6	7.3
28	11	10	9.8	a9	14	30	96	193	29	60	a9.6	*7.3
29	11	9.8	9.8	a9	-	29	113	171	28	a25	a9.4	7.3
30	9.4	9.8	9.0	a8	-	29	105	160	27	a18	*10	7.3
31	11	-	9.0	a8	-	29	-	148	-	a15	11	-
Total	311.0	373.2	382.4	275.6	443	541	2,374	4,640	1,596	620	369.8	228.1
Mean	10.0	12.4	12.3	8.89	15.8	17.5	79.1	150	53.2	20.0	11.9	7.60
Ac-ft	617	740	758	547	879	1,070	4,710	9,200	3,170	1,230	733	452

Calendar year 1950: Max 321 Min - Mean 42.6 Ac-ft 30,830
Water year 1950-51: Max 208 Min 6.7 Mean 33.3 Ac-ft 24,110

Peak discharge (base, 220 cfs).--May 27 (7 p.m.) 220 cfs (2.88 ft); July 28 (1 a.m.) 439 cfs (3.53 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Chalk Creek near Coalville and South Fork Ogden River near Huntsville.

b Stage-discharge relation affected by ice.

East Canyon Creek below diversions, near Morgan, Utah

Location.--Lat 41°02'10", long. 111°41'30", in SW¼ sec. 35, T. 4 N., R. 2 E., on left bank 1 mile southwest of Morgan and 3 miles upstream from mouth.

Records available.--November 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,050 ft (from river-profile map).

Extremes.--Maximum discharge during period, 382 cfs May 22 (gage height, 6.18 ft); minimum daily, 2.2 cfs July 4.

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

Rating table, Nov. 1, 1950, to Sept. 30, 1951, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 11 to Apr. 10, Apr. 24 to May 11, May 19 to June 3)

1.0	1.9	1.6	28
1.1	2.4	2.0	59
1.2	4.9	4.0	219
1.3	8.8	6.0	389
1.4	14		

Discharge, in cubic feet per second, November 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		34	16	14	13	26	147	241	217	7.6	129	88
2		37	15	15	13	23	153	229	189	4.9	126	91
3		34	16	16	14	23	170	226	163	2.4	154	93
4		33	45	15	15	19	185	*235	*125	2.2	128	91
5		33	28	15	16	19	*196	255	93	20	73	91
6		32	*20	15	16	*21	201	271	81	69	57	88
7		32	26	14	16	21	208	285	65	76	49	84
8		39	27	13	*16	19	214	280	55	81	*46	77
9		36	26	14	42	26	216	266	42	82	42	77
10		37	24	*15	43	27	218	266	41	85	72	81
11		34	21	15	99	23	204	332	34	86	129	76
12		31	21	15	103	24	200	371	34	87	122	87
13		29	20	15	84	19	206	341	*32	87	112	97
14		30	19	15	79	17	222	312	34	83	105	89
15		32	19	16	79	21	237	297	33	83	98	89
16		29	18	16	72	29	229	*284	28	89	92	92
17		*25	18	16	66	21	150	277	30	89	85	100
18		33	17	16	64	24	145	285	46	*85	77	95
19		45	16	15	62	22	153	289	34	86	81	89
20		35	17	15	67	31	164	297	43	85	93	88
21		77	16	15	60	52	158	344	53	97	90	92
22		48	15	15	59	59	145	371	53	105	91	95
23		38	14	16	58	41	146	362	73	113	89	70
24		35	15	16	57	42	167	*355	85	116	86	23
25		32	15	16	56	82	158	335	69	112	93	18
26		31	15	16	57	145	148	309	48	104	91	14
27		16	14	15	56	142	150	285	*45	101	88	12
28		17	15	15	53	139	156	276	25	153	90	10
29		16	15	14	-	136	209	267	18	147	88	11
30		16	14	14	-	137	256	261	14	137	*81	10
31		-	14	13	-	146	-	244	-	133	88	-
Total		996	591	465	1,435	1,576	5,511	9,048	1,902	2,608.1	2,843	2,118
Mean		33.2	19.1	15.0	51.2	50.8	184	292	63.4	84.1	91.7	70.6
Ac-ft		1,980	1,170	922	2,850	3,130	10,930	17,950	3,770	5,170	5,640	4,200

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

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 1 to Feb. 8. No gage-height record Nov. 1-15; discharge computed on the basis of weather records and records for East Canyon Creek near Morgan and Hardscrabble Creek near Porterville.

Weber River near Morgan, Utah

Location.--Lat 41°03'50", long. 111°43'25", in SE¼ sec. 21, T. 4 N., R. 2 E., on left bank a quarter of a mile upstream from Line Creek and 2½ miles northwest of Morgan.

Records available.--October 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,100 ft.

Extremes.--Maximum discharge during year, 2,640 cfs May 30 (gage height, 4.94 ft); minimum recorded, 192 cfs Feb. 1, but may have been less during period of nc gage-height record.

Remarks.--Records good except those for period of no gage-height record, which are fair. Many diversions above and below station for irrigation. Flow regulated by Echo and East Canyon Reservoirs (see pp. 86, 90).

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 30 to Apr. 14, Apr. 23 to May 20, May 30 to June 21)

1.0	213	3.0	1,200
1.5	402	5.0	2,610
2.0	640		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				250	233	309	730	1,490	2,230	590	506	469
2			300	257	236	309	755	1,420	2,070	610	516	446
3				268	264	297	825	1,370	1,560	610	575	442
4				264	271	290	912	*1,390	1,230	575	511	*433
5			380	268	344	297	*960	1,460	1,120	575	389	460
6				253	368	297	1,030	1,570	972	620	286	464
7				226	*336	*324	1,120	1,710	825	645	278	460
8			381	236	385	328	1,160	1,690	720	620	*332	455
9			368	253	415	348	1,270	1,660	800	595	377	460
10		250	*344	*253	415	348	1,300	1,650	966	595	377	487
11			320	260	590	309	1,190	1,740	888	*585	398	506
12			316	257	560	301	1,150	1,800	852	580	394	521
13			213	250	474	328	1,190	1,770	*1,000	575	415	526
14			305	253	406	328	1,300	1,710	966	585	428	464
15			316	257	385	360	1,360	1,620	1,170	605	437	433
16	280		309	257	377	424	1,330	*1,540	1,300	610	506	415
17			301	257	368	340	1,260	1,520	1,460	600	521	406
18			293	260	377	328	*1,260	1,550	1,740	*575	521	398
19			290	264	360	340	1,320	1,540	1,500	615	526	385
20			286	253	340	385	1,400	1,640	1,340	650	545	381
21		335	282	246	348	506	1,410	1,760	1,360	650	526	411
22			275	268	356	660	1,390	1,800	1,540	590	516	411
23			271	260	352	464	1,360	*1,870	1,260	625	511	406
24			275	271	352	483	1,480	1,980	1,190	655	474	389
25			275	275	344	550	1,420	1,990	1,220	625	483	385
26			268	268	348	670	1,370	2,080	1,150	600	483	381
27		300	264	264	340	670	1,360	2,290	*1,080	575	487	377
28			268	271	336	610	1,380	2,400	805	635	502	373
29			268	260	-	600	1,540	2,460	755	605	474	368
30			268	239	-	625	1,570	2,590	690	555	487	328
31		-	268	239	-	705	-	*2,490	-	526	487	-
Total	8,680	8,275	9,543	7,957	10,280	13,133	37,102	55,550	35,759	18,656	14,268	12,840
Mean	280	276	308	257	367	424	1,237	1,792	1,192	602	460	428
Ac-ft	17,220	16,410	18,930	15,780	20,390	26,050	73,590	110,200	70,930	37,000	28,300	25,470

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 2,590 Min - Mean 636 Ac-ft 460,300

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 1 to Dec. 7; discharge estimated on the basis of comparison with other Weber River stations.

Weber River at Gateway, Utah

Location.--Lat 41°08', long. 111°50', in NW¼SW¼ sec. 27, T. 5 N., R. 1 E., on right bank 800 ft downstream from Union Pacific Railroad bridge, 2,500 ft downstream from Strawberry Creek, and 2,500 ft east of section house at Gateway.

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

Records available.--October 1889 to July 1903 (gage heights only), June 1919 to September 1951. Published as "near Uinta" 1889-1903.

Gage.--Water-stage recorder. Altitude of gage is 4,790 ft. October 1889 to July 1903 at site 1 mile downstream at different datum. June 22, 1919, to Oct. 22, 1929, at site 2,200 ft upstream at different datum. Oct. 22, 1929, to Oct. 30, 1947, at site 50 ft downstream at present datum.

Average discharge.--31 years (1920-51), 593 cfs.

Extremes.--Maximum discharge during year, 2,940 cfs May 30 (gage height, 5.32 ft); minimum daily, 280 cfs Jan. 7, Feb. 1.
1889-1903, 1919-51: Maximum discharge observed, 7,980 cfs May 31, 1896; minimum, 45 cfs Sept. 24, 1934.

Remarks.--Records good except those for periods of ice effect, which are fair. Many diversions above and below station for irrigation. Flow regulated by Echo and East Canyon Reservoirs (see pp.

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

1.1	270	3.0	1,220
1.5	408	4.0	1,910
2.0	635	6.0	3,500

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	358	292	347	312	b280	381	977	2,020	2,540	719	585	519
2	362	312	339	322	b300	381	1,010	1,920	2,310	725	580	501
3	362	305	339	332	b310	385	1,120	*1,840	1,820	714	651	496
4	*358	298	745	325	b330	362	1,220	1,820	1,430	677	640	483
5	350	295	566	329	452	369	*1,300	1,940	1,300	671	519	*501
6	350	292	*433	315	510	369	1,390	2,100	1,190	687	381	514
7	350	290	523	b280	*445	433	1,490	2,290	1,030	692	354	510
8	350	*301	556	*290	556	*433	1,540	2,260	889	682	400	492
9	354	308	514	b300	585	462	1,660	2,180	814	661	*449	492
10	354	301	466	*b305	556	462	1,690	2,170	1,120	661	445	506
11	350	308	433	b302	780	396	1,550	2,280	1,040	645	462	524
12	347	305	416	298	775	385	1,480	2,340	1,000	640	453	524
13	339	305	408	298	640	408	1,540	2,200	*1,080	635	462	532
14	336	315	388	398	532	408	1,670	2,100	1,090	630	475	506
15	336	233	433	301	496	458	1,750	2,000	1,170	651	483	462
16	347	322	416	305	475	537	1,750	*1,920	1,350	645	542	445
17	343	332	388	305	462	445	1,700	1,900	1,470	656	556	437
18	336	408	377	308	466	408	1,690	2,000	1,720	*635	561	433
19	336	514	365	315	441	420	1,780	2,020	1,600	661	561	420
20	336	595	358	301	420	475	1,890	2,140	1,450	703	590	412
21	325	947	347	301	433	645	1,840	2,220	1,450	709	585	433
22	318	491	343	318	437	831	1,770	2,200	1,590	651	571	433
23	332	322	343	308	437	635	1,760	2,230	1,410	677	571	428
24	339	358	339	315	433	645	2,000	2,290	1,270	703	542	412
25	343	354	343	325	416	703	1,860	2,280	1,300	682	537	404
26	336	339	332	315	424	843	1,770	2,320	1,290	656	524	404
27	354	347	329	312	416	831	1,760	2,460	1,210	635	524	*400
28	350	343	332	322	404	752	1,780	2,620	*965	692	547	392
29	347	343	332	308	-	741	2,140	*2,680	889	682	514	396
30	315	343	336	b300	-	775	2,160	2,900	826	635	537	369
31	295	-	336	b290	-	895	-	2,860	-	600	542	-
Total	10,608	10,907	12,522	9,555	13,211	16,653	49,037	68,500	39,613	20,712	16,143	13,780
Mean	342	364	404	308	472	537	1,635	2,210	1,320	668	521	459
Ac-ft	21,040	21,630	24,840	18,950	26,200	33,030	97,260	135,900	78,570	41,080	32,020	27,330

Calendar year 1950: Max 4,730 Min - Mean 922 Ac-ft 667,600
Water year 1950-51: Max 2,900 Min 280 Mean 771 Ac-ft 557,800

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

Weber River at Ogden, Utah

Location.--Lat 41°13'40", long. 111°59'15", in sec. 30, T. 6 N., R. 1 W., on right bank 200 ft southeast of intersection of 21st Street and Middleton Road in Ogden and 1 mile upstream from Ogden River.

Records available.--December 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,250 ft.

Extremes.--Maximum discharge during period, 2,340 cfs May 7 (gage height, 6.44 ft); minimum, 7.8 cfs Sept. 20.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Many diversions above and below station for irrigation. Flow regulated by Echo and East Canyon Reservoirs (see pp.

Rating table, Dec. 1, 1950 to Sept. 30, 1951 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 21 to Jan. 31, Feb. 7 to Apr. 6)

2.0	10	2.5	88	5.0	1,130
2.1	20	3.0	208	6.0	1,870
2.2	34	4.0	585	6.6	2,390

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				350		414	1,020	2,170	2,110	94	46	64
2				358		414	1,050	1,870	1,890	62	65	48
3				365		399	1,170	1,770	1,390	62	103	39
4				354	370	395	1,300	1,690	892	55	454	28
5				369		395	1,380	*1,890	675	48	454	*24
			500									
6				346	(*)	403	*1,450	2,090	576	51	346	34
7				311	505	446	1,540	2,310	434	71	287	41
8				325	540	*458	1,590	2,210	297	71	197	36
9				343	608	483	1,670	1,990	273	64	154	28
10				*343	572	505	1,690	1,850	438	58	*80	30
11				361	715	438	1,560	1,810	438	51	51	46
12				339	814	422	1,470	2,020	418	49	27	56
13				346	675	442	1,470	1,930	438	41	20	73
14				346	562	442	1,570	1,730	*492	41	24	75
15				350	522	471	1,650	1,590	488	46	19	51
			400									
16				358	496	554	1,650	1,530	661	42	33	39
17				361	488	492	1,610	*1,730	746	51	30	27
18				361	454	446	1,540	1,840	1,070	*34	46	24
19				372	467	458	1,590	1,860	998	39	51	17
20				358	442	471	1,710	1,950	809	74	100	15
21			361	339	450	613	1,700	2,030	944	126	65	30
22			365	376	450	847	1,610	2,010	904	98	48	49
23			361	369	462	685	1,560	2,030	864	80	53	48
24			358	380	450	656	1,810	2,070	627	96	36	48
25			361	391	442	705	1,740	*2,020	642	90	42	39
26			365	387	454	847	1,610	1,980	666	71	34	31
27			358	380	442	886	1,580	2,000	585	49	27	*41
28			358	380	430	787	1,530	2,100	*406	102	64	37
29			365	369	-	766	1,920	*2,120	270	123	58	53
30			369	369	-	787	2,280	2,260	241	98	69	42
31			376	376	-	886	-	2,280	-	67	82	-
Total			12,997	11,132	13,660	17,413	47,020	60,730	21,682	2,104	3,165	1,213
Mean			419	359	488	562	1,570	1,960	723	67.9	102	40.4
Ac-ft			25,780	22,080	27,090	34,540	93,260	120,500	43,010	4,170	6,280	2,410

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

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 1-20, Feb. 1-6; discharge estimated on basis of weather records and records for stations at Gateway and near Plain City.

South Fork Ogden River near Huntsville, Utah

Location.--Lat 41°16', long. 111°40', in SE¼ sec. 12, T. 6 N., R. 2 E., on right bank half a mile downstream from Magpie Creek, 1 mile upstream from Huntsville Mountain Canal, and 5½ miles east of Huntsville.

Drainage area.--148 sq mi.

Records available.--March 1921 to September 1951.

Gage.--Water-stage recorder. Prior to Aug. 14, 1934, at site 300 ft upstream at different datum.

Average discharge.--30 years, 109 cfs.

Extremes.--Maximum discharge during year, 1,000 cfs May 12 (gage height, 4.45 ft); minimum, 31 cfs Jan. 1.
1921-51: Maximum discharge, 1,780 cfs May 4, 1936 (gage height, 5.45 ft), from rating curve extended above 900 cfs; minimum observed, 20 cfs Nov. 25, 1931, July 28, 1934.

Remarks.--Records good.

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

1.2	44	3.0	413
1.5	77	4.0	800
2.0	160	4.5	1,030

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	49	54	54	56	80	217	577	363	96	62	52
2	50	55	50	52	60	80	282	536	328	93	62	51
3	50	51	52	51	64	77	320	504	304	92	65	51
4	49	50	71	52	69	75	355	539	280	92	70	50
5	*48	49	65	50	81	72	383	*640	262	89	70	49
6	51	48	63	52	*78	73	*419	804	255	86	65	*49
7	49	48	*63	50	75	72	452	953	245	84	63	48
8	48	*54	70	51	81	*75	465	872	231	81	62	47
9	48	52	71	51	90	75	486	818	219	80	61	46
10	48	47	72	52	94	72	479	840	210	80	*60	46
11	48	47	71	*53	126	76	416	912	196	75	57	46
12	48	48	71	52	138	77	395	926	185	73	55	47
13	48	47	77	52	126	73	452	733	177	73	54	48
14	48	48	76	52	114	72	546	612	*168	71	53	47
15	48	47	76	53	108	80	604	554	162	70	53	47
16	49	45	73	53	105	89	592	532	158	69	53	48
17	48	46	70	54	100	87	596	*536	154	67	52	48
18	48	60	66	55	99	84	640	616	144	67	53	48
19	48	61	64	55	96	87	782	698	136	*66	53	51
20	49	70	62	54	90	92	800	832	131	69	54	49
21	49	108	60	54	89	115	686	818	127	67	56	48
22	48	82	56	56	87	154	600	737	122	67	57	49
23	47	69	54	57	87	140	636	729	120	*66	55	48
24	47	62	54	61	86	146	764	*694	117	65	54	48
25	47	58	54	63	87	166	632	669	115	63	54	47
26	47	57	53	63	86	190	577	636	108	65	53	47
27	51	55	52	64	85	185	588	588	107	64	52	*47
28	49	54	51	65	82	168	657	*536	*102	72	52	48
29	48	52	52	60	-	162	804	469	99	70	51	49
30	48	53	52	55	-	166	694	429	98	66	52	48
31	49	-	52	52	-	185	-	389	-	64	56	-
Total	1,504	1,672	1,927	1,698	2,539	3,345	16,299	20,728	5,423	2,302	1,769	1,447
Mean	48.5	55.7	62.2	54.8	90.7	108	543	669	181	74.3	57.1	48.2
Ac-ft	2,980	3,320	3,820	3,370	5,040	6,630	32,330	41,110	10,760	4,570	3,510	2,870

Calendar year 1950: Max 1,220 Min 39 Mean 168 Ac-ft 121,300
Water year 1950-51: Max 953 Min 45 Mean 166 Ac-ft 120,300

Peak discharge (base, 400 cfs).--May 12 (1:15 a.m.) 1,000 cfs (4.45 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 5-10, 20, 21, Jan. 30 to Feb. 3.

Pine View Reservoir near Ogden, Utah

Location.--Lat 41°15'20", long. 111°50'25", in NW¼SE¼ sec. 16, T. 6 N., R. 1 E. at trash rack at Pine View Dam on Ogden River, 7 miles northeast of Ogden.

Drainage area.--310 sq mi, approximately.

Records available.--November 1936 to September 1951.

Gage.--Staff gage read daily at 8 a.m. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

Extremes.--Maximum contents during year, 43,580 acre-ft June 4-12 (elevation, 4,872.00 ft); minimum, 10,410 acre-ft Apr. 1 (elevation, 4,845.61 ft).
1936-51: Maximum contents, 45,370 acre-ft May 17, 1938 (elevation, 4,873.00 ft); minimum, 80 acre-ft Feb. 19, 1937 (elevation, 4,818.99 ft).

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

Cooperation.--Capacity table furnished by Bureau of Reclamation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15,280	14,200	17,960	21,060	17,850	17,030	10,410	27,610	43,330	39,560	28,400	21,050
2	15,200	14,170	18,180	21,020	17,790	16,880	10,430	28,350	43,440	39,260	28,100	20,760
3	15,070	14,150	18,350	20,900	17,700	16,840	10,620	28,620	43,510	38,930	27,800	20,450
4	14,950	14,190	18,760	20,830	17,620	16,730	10,980	28,970	43,580	38,610	27,460	20,170
5	14,840	14,240	18,930	20,790	17,510	16,590	11,460	28,800	43,580	38,250	27,290	19,900
6	14,840	14,260	19,140	20,600	17,450	16,590	12,030	29,020	43,580	37,900	26,890	19,570
7	14,840	14,280	19,380	20,420	17,410	16,650	12,600	29,810	43,580	37,550	26,800	19,240
8	14,720	14,340	19,740	20,280	17,360	16,330	13,230	30,600	43,580	37,190	26,700	18,910
9	14,570	14,380	20,040	20,150	17,320	15,790	14,010	32,120	43,580	36,800	26,620	18,620
10	14,450	14,420	20,470	19,950	17,320	15,240	15,100	33,220	43,580	36,450	26,480	18,340
11	14,350	14,440	20,880	19,770	17,580	14,780	16,380	34,520	43,580	36,000	26,270	18,030
12	14,270	14,480	20,990	19,570	17,870	14,280	16,810	35,670	43,580	35,520	26,060	17,680
13	14,150	14,530	21,090	19,400	18,280	13,730	17,170	36,160	43,330	35,130	25,820	17,370
14	14,050	14,570	21,130	19,270	18,450	13,160	18,320	36,060	43,330	34,720	25,580	17,070
15	13,920	14,610	21,270	19,140	18,330	12,600	19,320	36,840	43,230	34,310	25,310	16,810
16	13,810	14,650	21,390	18,990	18,300	12,210	20,220	37,870	42,990	33,930	24,980	16,500
17	13,690	14,670	21,500	18,890	18,280	11,780	20,810	38,840	42,710	33,560	24,660	16,240
18	13,610	14,710	21,620	18,930	18,240	11,320	21,390	39,660	42,570	33,130	24,300	15,970
19	13,570	15,070	21,690	18,840	18,180	10,910	22,030	40,200	42,360	32,700	23,980	15,760
20	13,670	15,320	21,600	18,740	18,090	10,620	22,710	40,620	42,220	32,330	23,710	15,540
21	13,720	16,170	21,530	18,630	18,160	10,620	23,010	40,890	42,120	32,020	23,390	15,310
22	13,760	16,690	21,500	18,530	18,090	10,900	22,940	41,030	41,980	31,640	23,140	15,090
23	13,800	16,900	21,480	18,480	18,050	11,170	22,840	41,090	41,770	31,470	22,860	14,850
24	13,840	17,070	21,430	18,400	18,030	11,120	23,250	41,160	41,570	31,300	22,620	14,630
25	13,880	17,220	21,390	18,340	18,140	11,100	23,980	41,090	41,400	31,070	22,480	14,470
26	13,940	17,340	21,360	18,270	18,260	11,130	24,680	41,350	41,130	30,720	22,350	14,290
27	14,050	17,450	21,290	18,190	18,090	11,260	25,010	41,990	40,860	30,340	22,210	14,120
28	14,130	17,530	21,270	18,120	17,520	11,390	24,910	42,570	40,500	29,960	22,090	13,930
29	14,190	17,600	21,230	18,060	-	11,090	25,560	42,570	40,150	29,530	21,850	13,780
30	14,220	17,700	21,180	17,980	-	10,790	26,670	42,780	39,850	29,180	21,550	13,650
31	14,220	-	21,110	17,910	-	10,490	-	43,160	-	28,750	21,260	

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

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,851.21	15,410	-
Oct. 31	4,850.02	14,220	-1,190
Nov. 30	4,853.42	17,700	+3,480
Dec. 31	4,856.54	21,110	+3,410
Calendar year 1950	-	-	+11,950
Jan. 31	4,853.62	17,910	-3,200
Feb. 28	4,853.25	17,520	-390
Mar. 31	4,845.71	10,490	-7,030
Apr. 30	4,860.94	26,670	+16,180
May 31	4,871.76	43,160	+16,490
June 30	4,869.82	39,850	-3,310
July 31	4,862.46	28,750	-11,100
Aug. 31	4,856.67	21,260	-7,490
Sept.30	4,849.41	13,650	-7,610
Oct. 31	-	-	-
Water year 1950-51	-	-	-1,760

Ogden River below Pine View Dam, near Ogden, Utah

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

Drainage area.--321 sq mi.

Records available.--October 1937 to September 1951, not including flow of Pine View pipe line. January 1904 to October 1912, October 1931 to September 1937 at same site, including flow of Pine View pipe line, published as Ogden River near Ogden, records not equivalent.

Gage.--Water-stage recorder. Datum of gage is 4,798.30 ft above mean sea level (levels by Bureau of Reclamation).

Average discharge.--14 years (1937-51) 90.3 cfs.

Extremes.--Maximum discharge during year, 1,190 cfs May 24 (gage height, 5.40 ft); minimum daily, 1.5 cfs Oct. 16, 17.
1937-51: Maximum discharge, 2,290 cfs June 7, 1945 (gage height, 6.73 ft); minimum, 0.3 cfs at times when reservoir gates were closed.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by Pine View Reservoir (see p. 98). Pine View pipe line diverts water above station for use in irrigation and power development. Diversions for irrigation and municipal supply above Pine View Reservoir.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	21	3.0	a2.4	4.0	218	558	880	334	30	21	25
2	20	2.0	2.6		3.2	37	562	1,010	303	37	20	21
3	20	1.8	2.4		2.9	6.8	562	1,070	133	43	21	21
4	7.1	1.8	14		3.4	6.5	574	1,060	34	42	16	21
5	*3.4	1.8	6.0		6.2	6.5	590	*1,050	*116	40	14	21
6	6.0	1.9	4.9		*14	6.5	*598	980	220	43	12	*21
7	6.5	1.9	*6.8		11	205	610	985	136	43	10	20
8	8.6	*2.8	8.0		20	*344	614	1,160	32	45	7.7	19
9	10	2.4	8.3		20	344	622	901	32	48	7.7	18
10	11	1.9	7.4		16	344	618	654	29	50	*7.4	17
11	13	1.8	6.2	*2.4	27	340	614	706	28	49	6.8	17
12	14	1.8	5.8	2.4	22	337	618	1,000	27	49	7.1	16
13	16	1.8	5.5	2.4	101	328	618	1,130	27	47	13	16
14	18	2.1	4.7	2.4	230	325	626	806	*27	22	20	15
15	12	2.0	5.5	2.4	218	325	642	390	25	36	21	15
16	1.5	1.9	5.3	2.5	205	322	726	312	25	38	23	14
17	1.5	1.9	4.5	2.4	205	318	753	*392	24	40	23	15
18	1.8	4.0	4.2	2.5	202	315	890	815	23	38	23	15
19	6.2	4.7	3.8	2.5	181	312	975	742	24	*36	25	11
20	17	26	3.7	2.6	97	218	1,150	965	24	41	23	5.5
21	21	59	3.2	2.6	61	123	1,120	1,160	23	34	23	10
22	28	16	2.9	2.8	61	173	1,060	1,190	21	24	22	6.0
23	28	7.4	3.0	2.8	61	280	980	1,180	20	25	22	3.8
24	28	4.9	2.8	3.0	61	325	940	1,190	21	26	21	3.7
25	29	4.0	2.9	3.0	60	328	945	949	20	24	21	3.2
26	30	3.4	2.6	3.2	172	337	875	653	17	23	21	2.4
27	31	3.2	2.6	2.9	340	334	835	495	25	26	21	*2.4
28	31	2.9	2.8	2.9	*340	469	720	624	*21	34	21	2.5
29	32	2.6	2.8	2.8	-	538	674	535	24	34	21	3.4
30	32	2.9	2.6	2.9	-	538	724	340	26	22	21	3.4
31	33	-	2.5	3.8	-	546	-	340	-	25	23	-
Total	535.6	193.6	145.3	81.2	2,744.7	8,649.3	22,393	25,664	1,841	1,114	580.7	384.3
Mean	17.3	6.45	4.69	2.62	98.0	279	746	828	61.4	35.9	18.7	12.8
Ac-ft	1,060	384	288	161	5,440	17,160	44,420	50,900	3,650	2,210	1,150	762

Calendar year 1950: Max 1,400 Min 1.3 Mean 160 Ac-ft 115,600
Water year 1950-51: Max 1,190 Min 1.5 Mean 176 Ac-ft 127,600

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and weather records.

Weber River near Plain City, Utah

Location.--Lat 41°16'42", long. 112°05'30", in NW¼NE¼ sec. 8, T. 6 N., R. 2 W., on right bank at county highway bridge, 1 mile downstream from Fourmile Creek, 1½ miles south of Plain City, and 6 miles above mouth.

Drainage area.--2,060 sq mi, approximately.

Records available.--May 1905 to September 1951 in reports of Geological Survey. January 1904 to May 1905 in reports of State engineer. Prior to 1909, gage heights only.

Gage.--Water-stage recorder. Altitude of gage is 4,210 ft (from topographic map). Prior to Nov. 12, 1914, staff gage and Nov. 12, 1914, to Aug. 29, 1949, chain gage at same site and datum.

Extremes.--Maximum discharge during year, 3,860 cfs May 8 (gage height, 14.09 ft); minimum, 31 cfs July 20 (gage height, 2.08 ft).
1904-51: Maximum discharge observed, 7,580 cfs June 6, 1909 (gage height, 19.1 ft); practically no flow during latter part of several summers since 1915.

Remarks.--Records good except those for period of no gage-height record, which are fair. During summer months practically entire flow is diverted above station for irrigation. Flow is partly regulated by Echo, East Canyon, and Pine View Reservoirs (see pp. 86, 90, 98).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	224	345	476	611	544	962	1,760	*3,480	2,530	155	87	114
2	*208	318	468	603	523	749	1,800	3,380	2,310	97	76	88
3	245	323	528	622	575	663	1,890	3,430	1,850	66	87	78
4	271	312	842	617	633	652	*2,030	3,360	1,260	70	624	58
5	299	318	896	620	*726	652	2,140	3,400	980	66	824	*49
6	316	323	687	611	908	660	2,240	3,490	1,010	69	663	48
7	318	318	644	554	857	806	2,350	3,580	821	69	492	59
8	316	325	*797	546	890	1,080	2,440	3,800	554	68	379	71
9	309	*362	723	590	1,030	*1,110	2,530	3,660	447	66	307	60
10	297	367	679	585	968	1,110	2,650	3,090	567	57	*220	56
11	294	355	676	*614	1,060	1,040	2,550	3,030	609	49	152	70
12	301	325	721	585	1,210	1,010	2,440	3,350	536	42	106	98
13	336	357	712	577	1,060	1,010	2,430	3,680	538	37	79	124
14	329	416	695	577	1,070	1,010	2,530	3,400	*603	40	48	118
15	307	437	718	583	1,040	1,020	2,630	2,740	510	39	44	114
16	307	412	729	590	986	1,110	2,690	2,520	707	41	43	98
17	309	414	693	596	965	1,070	2,750	*2,410	803	42	43	84
18	284	442	671	596	974	1,000	2,770	2,670	1,110	38	44	64
19	239	684	655	601	929	1,010	2,930	2,830	1,130	*39	45	62
20	232	644	636	596	842	977	3,140	3,040	935	45	78	56
21	217	1,190	625	567	780	956	3,270	3,360	1,030	114	110	56
22	197	875	622	606	774	1,210	3,140	3,460	950	155	63	79
23	192	554	611	606	783	1,240	3,000	3,460	959	113	69	114
24	208	463	601	614	777	1,220	3,020	3,440	674	107	51	118
25	211	489	603	636	763	1,250	3,100	*3,340	674	107	60	102
26	208	468	606	636	788	1,380	3,010	2,890	737	105	54	113
27	255	460	601	620	1,020	1,450	2,910	2,620	630	91	47	*84
28	297	455	596	614	1,010	1,420	2,850	*2,700	*494	104	87	78
29	292	453	617	606	-	1,500	2,980	2,840	309	166	79	96
30	276	447	617	533	-	1,530	3,350	2,680	265	166	100	82
31	271	-	633	541	-	1,610	-	2,690	-	147	124	-
Total	8,365	13,651	20,378	18,453	24,485	33,467	79,320	97,820	26,532	2,570	5,285	2,491
Mean	270	455	657	595	874	1,080	2,644	3,155	884	82.9	170	83.0
Ac-ft	16,590	27,080	40,420	36,600	48,570	66,380	157,300	194,000	52,630	5,100	10,480	4,940

Calendar year 1950: Max 5,440 Min 34 Mean 1,017 Ac-ft 735,900
Water year 1950-51: Max 3,800 Min 37 Mean 912 Ac-ft 660,100

* Discharge measurement made on this day.
Note.--No gage-height record Aug. 21 to Sept. 4; discharge estimated on the basis of records for station at Ogden, and Ogden River below Pine View Dam.

Holmes Creek near Kaysville, Utah

Location.--Lat 41°03'18", long. 111°53'40", in NE¼ sec. 25, T. 4 N., R. 1 W., on left bank 2 miles northeast of Kaysville.
Records available.--May 1950 to September 1951.
Gage.--Water-stage recorder and concrete control.
Extremes.--1950: Maximum discharge during period May to September, 20 cfs May 17 (gage height, 1.06 ft); minimum, 1.8 cfs Sept. 27, 28.
1950-51: Maximum discharge during water year, 22 cfs May 23 (gage height, 1.02 ft); no flow part of each day Jan. 1, 7, 30, Feb. 19, Mar. 11, 17, 18, result of freeze-ups.
Remarks.--Records good. No diversions above station.

Rating tables, May 1, 1950, to Sept. 30, 1951, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

May 1 to Sept. 30, 1950

0.5	1.8	0.8	8.3
.6	3.0	.9	12
.7	5.1	1.1	22

Oct. 1, 1950, to Sept. 30, 1951

0.3	0.2	0.7	6.0
.4	.8	.8	9.3
.5	1.8	.9	14
.6	3.4	1.1	24

Discharge, in cubic feet per second, 1950-51

1950

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	5.1	*14	4.2	2.7	*2.2	16	18	7.2	3.6	2.2	2.2
2	5.1	14	4.2	2.7	2.2	17	19	7.2	3.6	2.2	2.2
3	5.1	12	4.4	2.7	2.2	18	19	6.9	3.6	*2.2	2.2
4	5.1	11	4.2	2.7	2.2	19	17	6.9	3.4	2.2	2.2
5	4.6	11	4.2	2.7	2.2	20	16	*6.6	*3.2	2.2	2.2
6	4.6	10	4.0	2.6	2.2	21	15	6.3	3.2	2.2	2.1
7	4.6	11	4.2	2.6	2.2	22	16	6.3	3.2	2.2	2.1
8	*5.1	11	4.2	2.6	2.4	23	17	6.3	3.2	2.2	2.1
9	5.4	9.5	4.0	2.4	2.3	24	*18	5.7	3.2	2.2	2.0
10	6.6	8.3	3.8	2.4	2.3	25	17	5.4	3.0	2.3	2.0
11	9.5	7.6	3.8	2.4	2.4	26	16	5.1	3.0	2.3	2.0
12	12	7.9	3.6	2.3	2.3	27	15	*4.9	2.9	2.3	1.8
13	15	*7.6	3.6	2.3	2.2	28	15	4.6	2.9	2.3	*2.0
14	16	7.6	3.4	2.3	2.2	29	15	4.6	2.9	2.3	2.2
15	*18	7.6	3.6	2.3	2.3	30	14	4.4	2.9	2.2	2.3
						31	14	-	2.9	2.2	-
Total							382.8	238.5	110.1	73.4	65.4
Mean							12.3	7.95	3.55	2.37	2.18
Ac-ft							759	473	218	146	130

Peak discharge (base, 10 cfs).--May 17 (11:30 p.m.) 20 cfs (1.06 ft).
* Discharge measurement made on this day.

1950-51

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	2.3	2.4	1.5	b0.5	2.0	3.6	9.7	14	4.3	2.8	2.3
2	2.3	2.4	2.3	2.4	b1.0	2.3	4.1	9.0	12	4.3	2.8	2.3
3	2.1	2.3	2.8	2.0	1.9	1.8	5.1	10	11	4.1	3.4	2.3
4	2.1	2.3	3.0	2.0	1.9	1.9	6.3	*14	10	4.1	3.8	2.1
5	2.1	2.1	2.6	1.9	2.0	2.1	6.7	18	*9.3	3.8	3.4	2.1
6	2.1	2.1	2.3	1.1	2.0	1.9	6.7	19	9.3	3.8	*3.0	2.1
7	2.1	2.1	2.6	.7	2.3	2.1	7.3	20	9.3	3.8	2.8	2.1
8	2.0	2.3	2.4	2.0	2.6	2.1	7.6	18	9.0	3.8	2.8	2.1
9	2.0	*2.0	2.4	1.9	2.8	2.3	7.6	17	8.6	3.8	2.6	2.1
10	2.0	1.8	2.4	1.9	3.4	2.3	7.6	16	8.3	3.8	2.6	2.0
11	2.0	1.9	2.4	*1.9	4.6	1.6	7.0	16	8.0	3.8	2.6	2.1
12	*2.1	2.1	2.6	1.9	4.3	1.8	6.7	16	7.6	*3.6	2.6	2.1
13	2.1	2.1	2.4	1.9	*3.6	2.3	7.0	15	7.3	3.6	2.4	2.1
14	2.1	2.1	2.3	1.9	3.2	2.3	7.3	14	7.3	3.4	2.4	2.1
15	2.1	2.1	2.4	1.9	3.0	*2.4	7.3	14	7.0	3.4	2.4	2.0
16	2.1	2.1	2.3	1.9	3.0	2.6	7.3	14	7.0	3.4	2.4	2.0
17	2.0	2.1	2.1	1.9	2.8	2.0	7.3	14	7.0	3.4	2.4	2.0
18	2.0	2.6	2.1	1.8	2.8	1.6	7.6	14	6.7	3.4	2.3	2.0
19	2.0	2.8	2.1	1.6	2.0	2.3	7.6	16	6.3	3.4	2.6	2.0
20	2.1	3.6	*2.1	1.6	2.4	2.4	8.0	18	6.0	3.6	2.6	*2.0
21	2.1	4.3	2.1	1.9	2.6	2.6	7.6	19	6.0	3.6	2.6	2.0
22	2.1	3.0	2.0	1.9	2.6	2.8	7.0	*20	6.0	3.4	2.6	2.0
23	2.1	2.6	2.0	1.8	2.6	2.8	*7.0	21	5.7	3.2	2.4	2.0
24	2.1	2.4	2.0	1.9	2.6	2.8	7.6	22	5.4	3.2	2.4	2.0
25	2.1	2.4	2.0	*2.0	2.4	3.2	7.0	20	5.4	3.0	2.3	2.0
26	*2.1	2.6	2.0	2.0	2.6	3.6	7.6	20	5.1	3.0	2.3	2.0
27	2.6	2.6	2.0	2.0	2.4	3.6	8.3	20	5.1	2.8	2.3	2.0
28	2.4	*2.6	2.0	2.0	*2.3	3.6	8.6	19	*4.9	3.8	*2.3	2.1
29	2.3	2.4	2.0	1.6	-	*3.6	9.7	17	4.6	3.4	2.3	2.1
30	2.1	2.4	1.9	.8	-	3.6	11	16	4.6	3.0	2.4	2.1
31	2.3	-	1.9	b.5	-	3.6	-	15	-	2.8	2.6	-
Total	66.1	72.5	69.9	54.1	72.2	77.9	217.1	510.7	223.8	109.8	81.2	62.2
Mean	2.13	2.42	2.25	1.75	2.58	2.51	7.24	16.5	7.46	3.54	2.62	2.07
Ac-ft	131	144	139	107	143	155	431	1,010	444	218	161	123

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 22 Min 0.5 Mean 4.45 Ac-ft 3,210

Peak discharge (base, 10 cfs).--May 23 (7:30 p.m.) 22 cfs (1.02 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Farmington Creek above diversions, near Farmington, Utah

Location.--Lat 41°00'05", long. 111°52'25", in NE¼ sec. 18, T. 3 N., R. 1 E., on right bank 1.0 mile northeast of Farmington, Utah.

Drainage area.--9.9 sq mi, approximately.

Records available.--November 1949 to September 1951.

Gage.--Water-stage recorder and masonry flume. Altitude of gage is 5,100 ft (from Forest Service topographic map).

Extremes.--1949-50: Maximum discharge during period November to September, 254 cfs May 22 (gage height, 1.74 ft); minimum, 2.5 cfs Sept. 5.
1950-51: Maximum discharge during water year, 126 cfs May 20 (gage height, 1.22 ft); minimum, 1.7 cfs Jan. 19.

Remarks.--Records fair.

Rating tables, Nov. 9, 1949, to Sept. 30, 1951, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 9 to Dec. 13, 1949, Apr. 17-20, May 20 to June 6, Nov. 22 to Dec. 2, 1950, Apr. 17-26, 1951

Nov. 9, 1949, to Sept. 30, 1950				Oct. 1, 1950, to Sept. 30, 1951			
0.2	1.9	0.8	28	0.2	1.9	0.6	22
.3	3.3	1.0	48	.3	3.9	.8	46
.4	5.6	1.3	88	.4	7.7	1.0	79
.5	9.1	1.7	168	.5	14	1.2	121
.6	14						

Discharge, in cubic feet per second, 1949-51

1949-50

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	5.6	3.3	5.0	9.1	11	19	84	19	5.3	3.2
2		-	5.3	3.3	4.5	8.7	12	19	78	19	4.8	3.2
3		-	5.3	3.5	*4.3	8.7	12	19	66	18	4.5	3.2
4		-	5.0	3.3	5.0	8.7	11	20	63	17	4.5	3.2
5		-	4.8	3.3	5.6	10	11	21	64	16	4.3	3.0
6		-	4.8	3.2	5.8	10	*12	19	*68		4.1	3.0
7		-	4.8	3.3	6.5	9.1	17	18	70		3.9	3.2
8		-	4.5	3.5	5.8	*7.9	24	19	53			3.5
9		5.6	4.5	3.5	5.6	7.5	22	*19	47			3.5
10		5.6	4.5	3.7	5.6	7.5	20	23	43	a14		3.3
11		5.3	4.3	3.5	5.6	6.8	18	34	39			3.5
12		5.3	4.3	*3.5	5.0	6.2	21	46	39			3.5
13		5.0	4.3	3.5	5.0	5.8	25	60	*40		a3.9	3.3
14		*5.0	4.1	3.2	4.8	5.8	27	72	41	13		3.3
15		5.0	4.1	3.5	5.0	5.6	25	*85	40	12		3.3
16		5.0	4.1	3.5	5.0	5.6	27	84	40	12		3.2
17		5.0	4.1	3.7	5.3	6.2	31	81	39	11		3.3
18		5.0	4.1	4.3	5.8	7.2	31	98	38	11		3.2
19		5.3	4.1	4.1	6.5	6.8	32	*71	36	10	3.9	3.2
20		5.3	3.9	*4.1	*7.2	6.8	*42	85	35	*10	3.7	3.2
21		5.3	3.9	4.5	6.8	6.5	49	107	34	9.5	3.5	3.3
22		5.3	3.9	5.0	6.2	6.5	*56	137	32	9.1	3.5	3.5
23		5.3	3.7	5.8	6.2	6.5	60	*146	30	8.7	3.5	3.5
24		5.6	3.5	5.8	6.5	*6.5	51	144	29	7.9	3.5	3.3
25		5.6	3.7	5.0	7.2	6.8	34	106	27	7.9	3.3	3.2
26		5.6	3.5	5.3	9.1	6.8	35	96	24	7.2	3.2	3.2
27		5.6	3.5	5.3	10	6.5	27	93	*22	7.2	3.2	3.3
28		6.2	3.5	5.0	10	6.8	17	88	22	7.2	3.2	*3.3
29		5.8	*3.3	5.0	-	6.5	16	82	21	7.2	3.2	3.5
30		*5.6	3.5	4.8	-	7.2	17	85	20	5.8	3.0	3.7
31		-	3.3	5.0	-	8.3	-	84	-	5.6	*3.0	-
Total		-	129.8	127.3	170.9	224.9	793	2,080	1,284	363.3	118.0	99.1
Mean		-	4.19	4.11	6.10	7.25	26.4	67.1	42.8	11.7	3.81	3.30
Ac-ft		-	257	252	339	446	1,570	4,130	2,550	721	234	197

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

Peak discharge (base, 80 cfs).--May 22 (4:30 p.m.) 254 cfs (1.74 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for nearby streams.

Discharge, in cubic feet per second, of Farmington Creek above diversions, near Farmington, Utah, 1949-51--Continued

1950-51

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.7	3.7	5.8	4.3	a3.5	5.3	8.3	25	*61	14	6.2	a5.2
2	3.7	6.0	5.8	4.7	a4.0	5.4	11	27	52	12	6.2	a4.7
3	4.3	4.3	5.8	4.7	4.3	5.0	14	28	43	12	a7.0	a4.7
4	3.9	4.3	6.0	4.7	5.0	5.0	19	*41	36	12	a8.0	4.7
5	3.5	4.3	4.7	4.7	5.4	4.7	23	62	*38	12	a7.0	4.7
6	3.3	4.3	4.7	4.3	4.3	5.0	27	75	40	12	*6.9	4.3
7	3.5	4.3	4.7	4.3	4.7	4.8	28	81	43	12	6.2	4.3
8	3.7	5.0	4.7	b4.0	6.6	4.7	29	75	44	12	5.8	4.3
9	3.5	*4.7	4.7	3.9	7.3	5.0	28	70	46	12	5.8	4.3
10	3.5	4.3	4.7	3.9	8.9	4.3	26	*71	49	11	5.4	4.3
11	3.5	5.0	4.7	*4.3	11	4.3	23	86	46	11	5.4	3.9
12	*3.5	5.0	4.7	4.3	11	4.4	25	83	47	*11	5.4	3.9
13	3.5	4.7	4.7	4.3	*9.5	4.3	30	60	47	10	5.4	3.9
14	3.3	3.9	4.7	4.7	8.3	4.7	35	a60	49	10	5.4	3.7
15	3.1	4.3	5.0	4.7	7.7	*5.0	36	a60	49	10	5.4	3.5
16	3.1	4.3	4.7	4.3	7.7	5.8	36	a60	49	9.5	5.4	3.5
17	3.1	4.3	4.7	4.3	7.7	5.4	*39	70	49	10	5.4	a3.5
18	3.3	5.7	4.7	4.3	7.7	5.0	45	95	46	9.5	5.8	a3.5
19	3.3	5.4	4.7	3.9	6.9	5.0	47	104	43	8.9	6.2	a3.5
20	3.3	7.2	*4.7	4.3	6.8	5.4	47	106	42	10	a6.2	a3.5
21	3.5	19	5.0	4.3	6.6	6.9	36	93	40	10	a6.2	a3.5
22	3.5	8.6	5.0	3.9	6.2	8.3	37	*99	38	8.9	a6.2	a3.4
23	3.5	8.3	5.0	3.9	6.2	7.7	45	99	35	7.7	a5.8	a3.3
24	3.7	6.6	4.7	*4.3	6.2	7.7	47	*97	31	6.9	a5.6	a3.3
25	3.7	5.8	5.0	4.7	6.2	8.9	39	97	30	6.6	a5.4	*a3.3
26	*3.7	5.8	5.0	4.7	6.2	11	42	93	26	6.9	a5.2	a3.3
27	3.7	5.4	5.0	4.7	5.8	10	54	91	21	7.3	a5.0	a3.3
28	3.7	*5.4	4.7	4.7	*5.8	8.9	62	*87	*19	8.9	*a5.0	a3.4
29	3.7	5.4	4.7	b4.0	-	*8.3	66	85	16	9.5	a5.2	a3.4
30	3.7	5.4	4.7	b3.5	-	8.3	33	81	15	7.7	a5.5	a3.4
31	3.7	-	4.7	b3.5	-	8.3	-	77	-	6.6	a5.0	-
Total	109.7	170.7	152.4	133.1	187.3	192.8	1,037.3	2,338	1,190	307.9	180.6	115.5
Mean	3.54	5.69	4.92	4.29	6.69	6.22	34.6	75.4	39.7	9.93	5.83	3.85
Ac-ft	218	339	302	264	372	382	2,060	4,640	2,360	611	358	229

Calendar year 1950: Max 146 Min 3.0 Mean 15.6 Ac-ft 11,300
Water year 1950-51: Max 106 Min 3.1 Mean 16.8 Ac-ft 12,140

Peak discharge (base, 80 cfs).--May 20 (3:30 p.m.) 126 cfs (1.22 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for stations on Holmes Creek and Centerville Creek.
b Stage-discharge relation affected by ice.

Ricks Creek above diversions, near Centerville, Utah

Location.--Lat 40°56'24", long. 111°52'10", in NW¼ sec. 5, T. 2 N., R. 1 E., on left bank half a mile east of alternate U. S. Highway 91 and 1.2 miles north of Centerville.

Records available.--April 1950 to September 1951.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 4,900 ft (from Forest Service topographic map).

Extremes.--1950: Maximum discharge during period April to September, 27 cfs May 23 (gage height, 1.27 ft); minimum, 0.9 cfs part of each day Aug. 29 to Sept. 6.
1950-51: Maximum discharge during water year, 20 cfs May 22 (gage height, 1.11 ft); minimum, 0.4 cfs Jan. 19.

Remarks.--Records good.

Rating table, Apr. 21, 1950, to Sept. 30, 1951, except periods of ice effect
(gage height, in feet, and discharge, in cubic feet per second)

0.5	0.4	0.9	8.2
.6	1.1	1.0	13
.7	2.5	1.2	24
.8	4.8		

Discharge, in cubic feet per second, of Ricks Creek above diversions, near Centerville, Utah, 1950-51

1950

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	4.5	*14	3.5	1.8	*1.0
2							-	4.5	12	3.2	1.7	1.0
3							-	4.5	11	3.2	1.7	1.0
4							-	4.5	9.9	3.0	1.7	1.0
5							-	4.2	9.5	3.0	1.7	1.0
6							-	4.0	9.1	3.0	1.7	1.0
7							-	4.0	9.1	3.0	1.5	1.1
8							-	4.0	8.6	3.0	1.5	1.2
9							-	*4.2	7.4	2.8	1.5	1.1
10							-	4.2	6.7	3.0	1.5	1.0
11							-	5.7	6.7	2.8	1.5	1.2
12							-	7.8	6.7	2.5	1.5	1.1
13							-	9.5	*6.7	2.5	1.4	1.0
14							-	12	6.0	2.3	1.4	1.1
15							-	14	5.7	2.1	1.4	1.2
16							-	14	5.4	2.1	1.4	1.2
17							-	*14	5.4	2.1	1.3	1.1
18							-	15	5.1	2.1	*1.2	1.0
19							-	14	4.8	2.0	1.3	1.0
20							-	14	4.5	*2.0	1.3	1.1
21							5.1	15	*4.5	2.0	1.3	1.2
22							*5.4	19	4.2	2.0	1.3	1.2
23							5.7	22	4.2	2.0	1.2	1.1
24							5.7	18	4.0	2.0	1.2	1.0
25							5.4	17	4.0	1.8	1.2	1.0
26							5.1	16	3.7	2.0	1.1	1.0
27							5.4	13	3.7	2.0	1.1	1.0
28							5.4	14	*3.7	2.1	1.1	*1.1
29							5.1	14	3.7	2.1	1.0	1.2
30							4.8	15	3.5	2.0	1.0	1.3
31							-	15	-	2.0	1.0	-
Total							-	340.6	193.5	75.2	42.5	32.5
Mean							-	11.0	6.45	2.43	1.37	1.08
Ac-ft							-	676	384	149	84	64

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

Peak discharge (base, 10 cfs).--May 23 (7:45 p.m.) 27 cfs (1.27 ft).
* Discharge measurement made on this day.

1950-51

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	1.3	1.0	0.9	b1.0	1.7	1.8	5.1	9.5	2.6	1.5	1.1
2	1.2	1.7	.9	1.0	1.0	1.7	2.1	5.1	8.2	2.5	1.4	1.1
3	1.2	1.4	1.2	1.0	1.0	1.7	2.5	5.4	7.8	2.5	1.7	1.1
4	1.2	1.3	1.2	1.0	1.2	1.7	2.6	*6.4	7.4	2.3	2.3	1.1
5	1.2	1.3	1.0	1.1	1.3	1.7	2.8	8.6	6.7	2.5	1.8	1.0
6	1.3	1.3	.9	1.0	1.3	1.5	3.0	10	6.4	2.3	*1.5	1.0
7	1.3	1.3	1.1	1.0	1.4	1.8	3.2	13	*6.0	2.3	1:4	1.0
8	1.3	1.4	1.1	1.0	1.5	1.8	3.5	14	6.0	2.3	1.4	1.0
9	1.2	*1.0	1.1	1.0	1.4	1.8	3.2	13	5.7	2.3	1.4	1.0
10	1.2	1.1	1.1	1.0	1.5	1.4	3.0	13	5.7	2.1	1.3	1.0
11	1.2	1.2	1.0	*1.0	1.7	1.4	2.8	12	5.4	2.1	1.3	1.0
12	*1.2	1.2	1.0	1.0	1.5	1.5	3.0	14	5.1	*2.1	1.2	1.0
13	1.2	1.1	1.0	1.2	*1.3	1.5	2.8	14	4.8	2.0	1.2	1.0
14	1.2	1.1	1.0	1.1	1.4	1.5	3.0	11	4.5	2.0	1.2	1.0
15	1.3	1.2	1.1	1.2	1.7	*1.4	3.0	11	4.2	1.8	1.2	1.0
16	1.1	1.1	1.0	1.3	1.7	1.4	*3.2	11	4.2	2.0	1.2	1.0
17	1.1	1.1	1.0	1.3	1.5	1.4	3.5	11	4.2	1.8	1.2	.9
18	1.1	1.4	1.0	1.2	1.7	1.4	4.0	12	4.0	1.8	1.2	.9
19	1.1	1.5	1.0	1.0	1.8	1.4	4.2	14	3.7	1.8	1.8	.9
20	1.2	1.8	*1.0	1.2	1.8	1.4	4.5	16	3.5	2.0	1.5	.9
21	1.2	2.3	1.0	1.3	1.8	1.5	4.2	17	3.5	2.1	1.3	*.9
22	1.2	1.3	.9	1.3	1.8	1.5	4.0	*18	3.2	1.8	1.3	1.0
23	1.2	1.2	.9	1.3	2.0	1.4	4.2	18	3.0	1.7	1.2	1.0
24	1.2	1.2	1.0	*1.5	1.8	1.5	4.5	18	3.0	1.7	1.2	1.0
25	1.2	1.1	1.0	1.5	1.7	1:8	4.2	16	3.0	1.5	1.2	1.0
26	*1.2	1.1	1.0	1.4	1.7	2.0	4.5	15	2.8	1.7	1.2	.9
27	1.4	1.1	1.0	1.4	1.8	2.0	4.8	15	2.8	1.7	1.2	.9
28	1.4	*1.1	1.0	1.4	*1.8	1.8	4.8	14	*2.6	1.8	*1.2	1.0
29	1.4	1.0	1.0	1.2	-	*1.8	5.4	13	2.6	1.8	1.2	1.0
30	1.3	1.0	1.0	1.2	-	2.0	4.8	12	2.6	1.7	1.2	1.1
31	1.4	-	1.0	1.2	-	2.0	-	9.9	-	1.7	1.2	-
Total	38.1	38.2	31.5	36.2	43.1	50.4	107.1	385.5	142.1	62.3	42.1	29.8
Mean	1.23	1.27	1.02	1.17	1.54	1.63	3.57	12.4	4.74	2.01	1.36	0.99
Ac-ft	76	76	62	72	85	100	212	765	282	124	84	59

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 18 Min 0.9 Mean 2.76 Ac-ft 2,000

Peak discharge (base, 10 cfs).--May 22 (11:45 a.m.) 20 cfs (1.11 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Centerville Creek above diversions, near Centerville, Utah

Location.--Lat 40°55'00", long. 111°51'20", in SE¼ sec. 8, T. 2 N., R. 1 E., on right bank 1.2 miles east of Centerville.

Records available.--November 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,000 ft (from U. S. Forest Service topographic map).

Extremes.--1949-50: Maximum discharge during period November to September, 22 cfs May 17; minimum, 1.3 cfs Sept. 1-6.
1950-51: Maximum discharge during water year not determined, occurred during periods of no gage-height record; minimum not determined, probably occurred during periods of ice effect or no gage-height record.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Records include flow of one ditch which diverts water about a quarter of a mile above station.

Discharge, in cubic feet per second, 1949-51

1949-50

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	1.5	1.6	1.5	2.4	2.6	6.4	15	3.8	1.9	1.3
2		-	1.5	1.5	bl.5	2.4	3.0	6.4	16	3.7	1.9	1.3
3		-	1.5	1.4	bl.5	2.4	3.1	6.5	15	3.4	2.0	1.3
4		-	1.5	bl.4	bl.5	2.4	3.1	6.5	14	3.3	1.9	1.3
5		-	1.5	bl.4	1.6	2.4	3.1	6.3	13	3.3	1.8	1.3
6		-	1.4	1.4	1.8	2.6	3.6	6.3	12	3.4	1.8	1.3
7		-	1.4	1.4	2.1	2.4	4.4	6.2	13	3.5	1.9	1.4
8		-	1.4	1.4	1.8	2.2	6.1	6.4	12	3.3	1.7	1.5
9		-	1.4	1.5	1.7	2.1	6.7	6.7	11	3.1	1.8	1.5
10		1.7	bl.4	1.4	1.7	2.0	5.7	6.8	9.8	3.8	1.9	1.5
11		1.6	1.4	1.4	1.8	2.0	5.3	8.1	8.6	3.4	2.0	1.8
12		1.4	bl.4	1.4	1.6	1.8	5.1	11	8.4	3.1	1.9	1.6
13		1.4	1.4	1.4	bl.6	2.4	5.5	14	8.0	2.9	1.9	1.5
14		1.4	1.4	1.4	1.6	1.9	5.8	17	7.8	2.8	1.8	1.5
15		1.4	1.4	1.4	1.6	1.9	5.6	18	7.5	2.7	1.8	1.5
16		1.4	1.4	1.4	1.6	1.8	5.7	20	7.3	2.5	1.8	1.4
17		1.5	1.4	1.6	1.7	2.0	5.5	20	7.3	2.5	1.8	1.4
18		1.5	1.5	2.0	1.7	2.0	5.7	20	7.0	2.4	1.8	1.4
19		1.5	1.5	1.7	1.8	2.0	6.2	18	6.5	2.2	1.6	1.4
20		1.4	1.5	1.6	1.8	2.0	7.3	18	6.1	2.1	1.7	1.4
21		1.4	bl.4	1.7	1.8	2.0	8.2	17	6.0	2.0	1.7	1.5
22		1.5	1.4	1.7	1.7	2.0	8.7	17	5.7	1.9	1.6	1.4
23		1.5	1.4	1.8	1.7	1.9	9.4	18	5.1	1.8	1.6	1.4
24		1.7	1.4	1.8	1.7	2.0	7.9	18	5.0	1.8	1.6	1.4
25		1.6	1.4	1.6	1.8	2.1	7.9	18	5.0	1.7	1.5	1.4
26		1.6	1.4	bl.6	2.2	2.0	8.0	17	4.6	1.7	1.5	1.4
27		1.6	1.4	bl.6	2.4	2.0	8.0	16	4.5	1.7	1.4	1.4
28		1.8	1.4	1.6	2.4	1.9	7.7	15	4.3	2.2	1.5	1.4
29		1.6	1.4	1.6	-	1.9	6.8	15 *	4.1	2.1	1.4	1.4
30		1.6	1.4	1.6	-	2.1	6.6	15	3.9	2.0	1.4	1.6
31		-	1.4	1.5	-	2.4	-	15	-	1.9	1.4	-
Total		32.1	44.2	47.8	49.2	65.4	178.3	409.6	253.5	82.0	53.3	42.9
Mean		1.53	1.43	1.54	1.76	2.11	5.94	13.2	8.45	2.65	1.72	1.43
Ac-ft		64	88	95	98	130	354	812	503	163	106	85

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

b Stage-discharge relation affected by ice at Centerville Creek gage.
Note.--No gage-height record at diversion ditch gage Apr. 8-20, May 20-30; total discharge estimated on basis of records for Centerville Creek gage.

Discharge, in cubic feet per second, of Centerville Creek above diversions, near Centerville, Utah, 1949-51--Continued

1950-51

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	1.6	1.4	b1.3	b1	1.6	2.0	6.2	8.5	3.3	2.0	1.7
2	1.5	1.8	1.4	1.4	b1	1.6	2.3	6.0	8.0	3.3	2.0	1.6
3	1.5	1.6	1.6	1.4	1.3	1.6	2.8	8.5	7.0	3.0	2.4	1.6
4	1.4	1.6	1.7	1.4	1.6	1.6	4.9	8.3	5.9	2.8	3.0	1.5
5	1.4	1.5	1.5	1.4	1.6	1.6	4.7	13	5.7	2.7	2.6	1.4
6	1.4	1.5	1.5	b1.4	1.4	1.6	4.7	13	5.7	2.5	2.2	1.4
7	1.4	1.5	1.6	b1.3	1.6	1.7	4.9	16	5.5	2.5	2.0	1.4
8	1.4	1.6	1.5	b1.3	1.7	1.7	4.9	17	5.2	2.4	1.9	1.3
9	1.4	1.5	1.6	1.3	1.7	1.7	4.8	16	5.1	2.4	1.9	1.4
10	1.5	1.4	1.6	1.3	1.8	1.6	4.6	15	5.0	2.4	1.8	1.3
11	1.5	1.5	1.6	1.4	2.0	b1.5	4.4	15	4.8	2.4	1.7	1.3
12	1.5	1.4	1.6	1.4	1.9	b1.5	4.4	15	4.7	2.4	1.7	1.3
13	1.5	1.4	1.6	1.4	1.8	1.6	4.4	14	4.5	2.4	1.7	1.3
14	1.5	1.5	1.6	1.4	1.7	1.6	4.5	13	4.5	2.3	1.7	1.2
15	1.6	1.5	1.6	1.4	1.7	1.6	4.6	12	4.4	2.4	1.7	1.2
16	1.6	1.4	1.6	1.4	1.7	1.6	5.0	12	4.2	2.4	1.6	1.2
17	1.5	1.4	1.5	1.4	1.7	1.6	5.0	11	4.5	2.2	1.7	1.2
18	1.5	1.8	1.5	1.4	1.7	b1.5	5.1	12	4.3	2.1	1.7	1.1
19	1.5	2.1	1.5	1.3	1.7	1.6	5.3	12	4.0	2.2	2.2	1.1
20	1.5	2.1	1.5	1.4	1.7	1.6	5.7	12	4.1	2.4	1.8	1.0
21	1.4	3.1	1.5	1.5	1.7	1.7	5.2	12	4.1	2.6	1.6	1.1
22	1.4	2.0	1.4	1.3	1.6	1.9	5.1	13	3.9	2.4	1.6	1.1
23	1.4	1.7	1.4	1.3	1.6	1.8	5.1	14	4.0	2.2	1.6	1.0
24	1.4	1.6	1.4	1.4	1.6	2.0	5.5	14	4.0	2.0	1.5	1.0
25	1.4	1.6	1.4	1.4	1.6	2.1	5.3	13	4.0	2.0	1.5	1.0
26	1.4	1.5	1.5	1.4	1.6	2.4	5.4	13	3.9	2.0	1.5	1.0
27	1.7	1.5	1.4	1.3	1.6	2.4	5.7	12	3.8	2.0	1.4	1.0
28	1.6	1.5	1.4	1.3	1.6	2.2	5.8	12	3.7	3.0	1.5	1.0
29	1.6	1.4	1.6	1.3	-	2.0	6.4	11	3.6	2.5	1.7	1.0
30	1.5	1.4	1.5	b1	-	2.0	6.0	10	3.5	2.3	1.8	1.0
31	1.6	-	1.5	b1	-	2.1	-	9.3	-	2.1	1.8	-
Total	46.0	49.0	47.0	41.6	45.2	54.6	144.5	378.3	144.1	75.6	56.8	36.7
Mean	1.48	1.63	1.52	1.34	1.61	1.76	4.82	12.2	4.80	2.44	1.83	1.22
Ac-ft	91	97	93	83	90	108	287	750	286	150	113	73

Calendar year 1950: Max 20 Min 1.3 Mean 3.63 Ac-ft 2,630
Water year 1950-51: Max 17 Min - Mean 3.04 Ac-ft 2,220

b Stage-discharge relation affected by ice at Centerville Creek gage.
Note.--No gage-height record at either Centerville Creek or diversion ditch gage Mar. 11 to Apr. 15, May 5-20, June 2-4, Sept. 25-30; total discharge estimated on basis of records for gage remaining in operation.

Parrish Creek above diversions, near Centerville, Utah

Location.--Lat 40°55'25", long. 111°51'30", in NE¼ sec. 8, T. 2 N., R. 1 E., on left bank 1 mile northeast of Centerville.

Drainage area.--2.0 sq mi, approximately.

Records available.--November 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,100 ft (from Forest Service topographic map).

Extremes.--1949-50: Maximum discharge during period November to September, 19 cfs May 24 (gage height, 2.02 ft); minimum, 0.3 cfs Sept. 23, 24.
1950-51: Maximum discharge during year, 13 cfs May 7 (gage height, 1.52 ft); minimum, 0.4 cfs on several days during year.

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

Rating table, Nov. 10, 1949 to Sept. 30, 1951, except for periods of ice effect
(gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 18-27, 1951)

0.1	0.2	1.0	6.5
.3	.9	1.5	12
.5	2.0	2.0	19
.7	3.6		

Discharge, in cubic feet per second, Parrish Creek above diversions, near Centerville, Utah, 1949-51

1949-50

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	0.6	0.9	b0.5	1.2	1.4	4.4	11	1.9	0.9	0.5
2		-	.6	.8	b.5	1.2	1.6	4.2	9.8	1.8	.9	.5
3		-	.6	b.7	*b.5	1.2	1.6	4.2	8.5	1.8	.9	.5
4		-	.6	b.6	.6	1.3	1.6	4.0	7.7	1.8	.8	.5
5		-	.5	b.6	.7	1.5	1.7	3.9	7.4	1.8	.8	.5
6		-	.5	.6	.8	1.4	1.8	3.7	7.5	1.6	.8	.6
7		-	.5	.6	1.1	1.2	*2.2	3.6	*7.7	1.7	.8	*.6
8		-	.5	.7	.9	*1.2	3.0	3.8	6.8	1.7	.8	.6
9		-	b.5	.7	.9	1.2	3.2	4.0	6.7	1.6	.8	.7
10		1.0	b.5	.6	.8	1.2	2.7	*4.3	5.7	1.9	.8	.7
11		.8	.5	.6	.8	1.1	2.4	5.8	5.1	1.6	.8	.9
12		.8	.6	*.6	.7	.9	2.5	7.1	5.0	1.5	.8	.7
13		.8	.5	.6	.7	1.0	3.0	8.9	4.9	1.3	.8	.5
14		*.8	.5	b.6	.7	.9	3.4	11	*4.5	1.2	.8	.5
15		.7	.6	.6	.7	1.0	3.2	12	4.2	1.2	.8	.6
16		.8	.6	.6	.8	1.0	3.4	13	3.9	1.2	.7	.5
17		.8	.6	.8	.7	1.0	3.8	*15	3.8	1.2	.7	.4
18		.8	.7	1.2	.8	.9	4.2	16	3.5	1.1	*.7	.4
19		.8	.7	.9	.8	1.0	4.6	15	3.3	1.1	.7	.4
20		.8	.6	*.8	*.9	.9	5.2	15	3.1	*1.1	.8	.4
21		.7	b.6	.9	.8	.9	*6.1	15	*3.0	1.0	.8	.5
22		.8	b.6	.9	.8	.9	6.8	16	2.9	1.0	.6	.4
23		.8	b.6	1.0	.8	.9	7.1	17	2.7	1.0	.6	.4
24		.8	b.6	.9	.9	*.9	6.9	*17	2.6	1.0	.6	.4
25		.8	.6	.8	1.0	1.0	6.6	16	2.6	1.0	.6	.5
26		.7	.6	b.7	1.1	1.0	6.3	15	2.4	.9	.6	.5
27		.7	.6	.7	1.2	1.0	6.3	14	2.4	1.0	.6	.5
28		.8	.7	.7	1.2	.9	5.9	13	*2.2	1.1	.6	*.5
29		.7	*.7	.7	-	.9	5.8	13	2.1	1.0	.5	.6
30		*.7	.7	b.5	-	1.0	4.9	12	1.9	1.0	.5	.6
31		-	.7	.5	-	1.2	-	11	-	.9	*.5	-
Total		-	18.3	22.4	22.7	32.9	119.2	317.9	144.9	41.0	22.0	15.9
Mean		-	0.59	0.72	0.81	1.06	3.97	10.3	4.83	1.32	0.71	0.53
Ac-ft		-	36	44	45	65	236	631	287	81	44	32

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

Peak discharge (base, 10 cfs).--May 24 (5:00 p.m.) 19 cfs (2.02 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

1950-51

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	0.7	0.7	b0.5	b0.5	1.0	1.3	5.1	*6.2	1.3	0.8	0.7
2	.6	.9	.7	.6	b.6	.9	1.4	5.0	5.5	1.3	.8	.7
3	.5	.8	.9	.6	.7	.9	1.7	*5.5	5.0	1.2	.9	.7
4	.5	.8	.9	.7	.8	.8	2.2	6.8	4.7	1.2	1.2	.7
5	.5		.8	.6	.8	.8	2.5	8.2	*4.3	1.1	1.0	.7
6	.6	(*)	.8	b.6	.7	.8	2.7	10	4.1	1.1	*.8	.7
7	.6		.8	b.6	.8	.9	3.1	12	4.0	1.1	.8	.6
8	.6		.8	b.5	.9	.9	3.3	12	3.7	1.0	.8	.6
9	.6	a.6	.8	.5	.9	1.0	3.3	11	3.5	1.0	.8	.7
10	.6		.8	.4	1.0	.8	3.2	11	3.5	1.0	.7	.6
11	.6		.8	*.5	1.2	b.8	3.2	11	3.2	1.0	.7	.7
12	*.6		.8	.4	1.0	b.8	3.4	11	3.0	*.9	.7	.7
13	.6	.6	.8	.5	*.9	..8	3.8	10	2.7	.9	.7	.7
14	.7	.7	.8	.5	.8	.7	4.1	9.6	2.6	.8	.7	.6
15	.7	.7	.8	.6	.9	*.8	3.9	9.0	2.5	.8	.7	.6
16	.7	.7	.8	.5	.8	.8	*4.0	8.4	2.4	.8	.7	.6
17	.6	.8	.8	.5	.9	.8	4.1	8.5	2.4	.8	.7	.5
18	.7	1.1	.7	b.5	.9	b.8	4.4	9.1	2.1	.8	.7	.5
19	.7	1.2	.7	b.5	1.0	.8	4.4	10	2.0	.8	1.0	.5
20	.6	1.1	*.7	b.5	b1.0	.8	4.5	11	1.9	.9	1.0	.5
21	.6	1.4	.7	b.5	.9	.9	4.2	11	1.9	1.0	.8	.6
22	.6	1.2	.7	b.5	.9	1.0	4.0	*11	1.8	.8	.7	.7
23	.6	1.0	.7	.7	.9	1.0	4.1	11	1.8	.8	.7	.6
24	.6	.8	.7	*.9	.9	1.0	4.4	*11	1.7	.8	.7	.6
25	.6	.8	.7	.8	.9	1.2	4.1	11	1.7	.8	.7	.6
26	*.5	.8	.7	b.8	.9	1.2	4.1	10	1.6	.8	.7	.5
27	.7	.8	.7	b.8	.9	1.2	4.5	9.6	1.6	.8	.7	.6
28	.7	.8	.7	b.8	*.9	1.2	4.4	*9.1	*1.5	1.1	.7	.5
29	.8	.8	.7	b.7	-	*1.2	4.8	8.0	1.4	1.0	*.7	.6
30	.6	.8	.7	b.6	-	1.2	4.8	7.3	1.3	.8	.7	.6
31	.8	-	.7	b.5	-	1.2	-	6.8	-	.8	.8	-
Total	19.3	24.1	23.4	18.2	24.3	29.0	107.7	290.0	85.6	29.3	24.1	18.5
Mean	0.62	0.80	0.75	0.59	0.87	0.94	3.59	9.35	2.85	0.95	0.78	0.62
Ac-ft	38	48	46	36	48	58	214	575	170	58	48	37

Calendar year 1950:	Max 17	Min 0.4	Mean 2.21	Ac-ft	1,600
Water year 1950-51:	Max 12	Min 0.4	Mean 1.90	Ac-ft	1,380

Peak discharge (base, 10 cfs).--May 7 (7:00 p.m.) 13 cfs (1.52 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of discharge measurement, weather records, and records for nearby streams.
b Stage-discharge relation affected by ice.

Stone Creek above diversions, near Bountiful, Utah

Location.--Lat 40°54'10", long. 111°50'40", in NW¼ sec. 21, T. 2 N., R. 1 E., on right bank 2.2 miles east of Bountiful.

Records available.--April 1950 to September 1951.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,500 ft (from Forest Service topographic map).

Extremes.--1950: Maximum discharge during period April to September, 64 cfs May 16 (gage height, 1.38 ft); minimum, 0.7 cfs Aug. 23, Sept. 3, 4.
1950-51: Maximum discharge during water year, 21 cfs May 7, 8 (gage height, 1.23 ft); minimum, 0.6 cfs Sept. 5-8, 10.

Remarks.--Records good.

Rating tables, Apr. 6, 1950, to Sept. 30, 1951, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Apr. 6 to May 19, 1950				May 20, 1950, to Sept. 30, 1951			
0.9	2.8	1.2	21	0.7	0.5	1.1	9.3
1.0	5.3	1.3	43	.8	1.3	1.2	16
1.1	10	1.4	70	.9	2.8	1.3	27
				1.0	5.3		

Discharge, in cubic feet per second, 1950-51

1950

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	9.1	21	4.2	1.7	0.8
2							-	9.7	18	3.9	1.5	.8
3							-	9.7	16	3.6	1.4	.9
4							-	9.7	13	3.6	1.4	.8
5							-	9.1	13	3.4	1.3	.8
6							*4.4	9.1	13	3.2	1.3	.9
7							6.5	8.6	14	3.4	1.4	.9
8							10	9.1	*15	3.6	1.2	1.0
9							9.7	8.6	14	3.2	1.2	1.1
10							8.0	*9.7	12	3.9	1.2	1.0
11							7.0	14	11	3.6	1.2	1.3
12							7.5	25	10	3.0	1.3	1.2
13							8.6	41	10	2.8	1.2	1.1
14							10	48	10	2.6	1.2	1.1
15							9.1	51	9.3	2.6	1.1	1.1
16							8.6	46	9.3	2.4	1.1	1.1
17							10	38	8.8	2.2	1.0	1.1
18							12	25	8.4	2.2	*.8	1.0
19							12	*31	7.9	2.0	.8	1.1
20							13	30	*7.5	*2.0	.8	1.2
21							*16	25	7.5	2.0	.8	1.1
22							17	28	7.1	1.9	.9	1.0
23							18	28	6.7	1.9	.9	1.0
24							16	*28	6.4	1.8	1.0	1.0
25							14	28	6.0	1.8	1.0	1.0
26							13	28	5.3	1.8	1.0	.9
27							12	34	5.3	1.8	.9	1.0
28							12	34	*4.7	1.8	1.2	*.9
29							11	30	4.4	1.8	1.1	.8
30							9.7	27	4.4	1.8	1.1	1.1
31							-	25		1.8	*.9	-
Total							-	756.4	299.0	81.6	34.9	30.1
Mean							-	24.4	9.97	2.63	1.13	1.00
Ac-ft							-	1,500	593	162	69	60

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

Peak discharge (base, 15 cfs).--May 16 (6:30 p.m.) 64 cfs (1.38 ft).
* Discharge measurement made on this day.

Discharge, in cubic feet per second, of Stone Creek above diversions, near Bountiful, Utah, 1950-51--Continued

1950-51

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	1.4	1.5	1.3	b1.4	1.7	2.8	8.8	*12	2.4	1.2	0.9
2	1.1	1.7	1.4	1.5	b1.4	1.7	3.2	7.9	10	2.0	1.2	.9
3	1.1	1.4	1.5	1.5	1.4	1.7	3.9	*8.4	9.8	1.9	1.3	.8
4	1.0	1.3	1.7	1.5	1.7	1.7	4.7	11	8.4	1.9	1.5	.8
5	.9	1.3	1.5	1.5	1.5	1.5	5.6	17	7.5	1.9	1.7	.7
6	.9	1.2	1.5	1.4	1.5	1.7	5.6	19	7.5	1.9	*1.4	.7
7	1.1	1.2	1.5	1.4	1.7	1.7	6.0	20	*7.5	1.7	1.4	.7
8	1.1	1.3	1.5	1.5	1.9	1.7	6.0	20	7.1	1.8	1.3	.7
9	1.1	*1.3	1.5	1.5	2.0	1.8	6.0	19	6.7	1.8	1.2	.7
10	1.1	1.2	1.7	1.5	2.2	1.5	6.0	17	6.4	1.5	1.2	.7
11	1.1	1.4	1.7	1.4	3.0	1.5	5.3	17	6.0	1.7	1.1	.8
12	*1.1	1.3	1.7	1.4	2.8	1.5	5.3	17	5.6	1.7	1.0	.8
13	1.1	1.3	1.7	1.4	*2.4	1.7	5.3	16	5.6	*1.4	1.0	.7
14	1.1	1.3	1.7	1.4	2.2	1.7	5.6	15	5.3	1.5	.9	.7
15	1.2	1.4	1.8	1.4	2.0	*1.8	5.6	15	5.0	1.4	.9	.7
16	1.2	1.4	1.7	1.4	2.0	1.8	*5.6	14	5.0	1.4	.7	.7
17	1.1	1.3	1.7	1.4	2.0	1.7	5.6	14	5.0	1.7	.7	.7
18	1.1	1.8	1.5	1.4	2.0	1.5	6.0	15	4.4	1.4	.7	.7
19	1.3	2.2	1.5	b1.4	2.0	1.7	6.4	15	*4.2	1.7	1.1	.7
20	1.3	2.1	*1.5	1.4	1.9	1.8	6.7	16	3.9	1.8	1.4	.7
21	1.2	3.9	1.5	1.4	1.9	2.0	6.4	*16	3.9	1.9	1.2	.8
22	1.2	2.0	1.5	1.5	1.9	2.2	6.0	16	3.6	1.8	1.1	.9
23	1.2	1.8	1.5	1.5	1.9	2.4	6.0	18	3.4	1.7	.9	.8
24	1.3	1.7	1.5	*1.7	1.9	2.4	6.7	19	3.2	1.5	.8	.8
25	1.2	1.5	1.5	1.5	1.8	2.6	6.4	16	3.2	1.4	.8	.8
26	*1.2	1.5	1.5	1.5	1.8	3.0	6.4	16	3.2	1.4	.8	.8
27	1.4	1.5	1.4	1.5	1.8	2.8	6.4	16	3.0	1.4	.8	.7
28	1.5	*1.5	1.4	1.5	*1.7	2.6	6.7	*15	*2.8	1.4	.7	.8
29	1.4	1.5	1.5	1.4	-	*2.6	8.4	15	2.6	1.4	.8	1.0
30	1.2	1.5	1.5	b1.4	-	2.8	7.9	14	2.6	1.2	1.1	1.0
31	1.4	-	1.4	b1.4	-	2.8	-	13	-	1.1	1.0	-
Total	36.3	47.2	48.0	44.9	53.7	61.6	174.5	476.1	164.4	50.7	32.9	23.2
Mean	1.17	1.57	1.55	1.45	1.92	1.99	5.82	15.4	5.48	1.64	1.06	0.77
Ac-ft	72	94	95	89	107	122	346	944	326	101	65	46

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 20 Min 0.7 Mean 3.32 Ac-ft 2,410

Peak discharge (base, 15 cfs).--May 7, 8 (at intervals) 21 cfs (1.23 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Mill Creek at Mueller Park, near Bountiful, Utah

Location.--Lat 40°51'50", long. 111°50'10", in SE¼ sec. 33, T. 2 N., R. 1 E., 2 miles southeast of Bountiful.

Records available.--April 1950 to September 1951.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,240 ft (from topographic map).

Extremes.--1950: Maximum discharge during period April to September, 74 cfs May 15; minimum, 1.2 cfs Sept. 3.
1950-51: Maximum discharge during water year, 44 cfs May 7; minimum, 1.2 cfs Sept. 25, 27, 28.

Remarks.--Records good. Records include flow of pipe line which diverts about a quarter of a mile above station.

Discharge, in cubic feet per second, of Mill Creek at Mueller Park, near Bountiful, Utah, 1950-51

1950

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							-	22	40	14	4.8	1.9
2							-	21	38	14	4.7	1.9
3							-	22	34	13	4.5	1.8
4							-	21	38	12	4.4	1.8
5							-	20	39	12	4.4	1.7
6							-	20	41	10	3.9	1.8
7							-	18	42	9.7	3.9	1.8
8							-	18	33	9.2	3.6	1.9
9							-	18	24	8.8	3.8	2.1
10							-	20	22	9.1	3.9	2.0
11							-	24	23	8.7	3.9	2.8
12							-	33	27	8.5	3.8	2.4
13							21	43	27	8.2	3.8	2.2
14							27	46	27	8.0	3.3	2.2
15							25	54	27	7.6	3.3	2.2
16							24	53	26	7.0	3.1	2.1
17							25	59	25	6.7	2.9	2.0
18							28	56	24	6.5	2.8	1.9
19							29	49	24	6.4	2.6	1.8
20							31	47	24	6.3	2.7	1.8
21							34	47	24	6.0	2.5	1.9
22							38	49	23	5.8	2.5	1.9
23							39	49	22	5.8	2.4	2.1
24								55	21	5.5	2.4	2.0
25								52	19	5.3	2.5	1.9
26							a31	45	17	5.3	2.5	1.8
27								45	16	5.4	2.4	1.9
28								43	16	5.5	2.3	1.8
29								40	16	5.6	2.1	1.8
30								42	15	5.2	2.1	2.2
31							-	41	-	5.0	2.0	-
Total							-	1,172	794	246.1	99.8	59.4
Mean							-	37.8	26.5	7.94	3.22	1.98
Ac-ft							-	2,320	1,570	488	198	118

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

a No gage-height record; discharge computed on basis of hydroelectric comparison with other streams in vicinity and recorded range in stage.

1950-51

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	2.3	2.2	2.0	1.6	3.0	5.4	15	26	7.2	3.3	2.4
2	2.0	2.4	2.2	2.0	1.8	3.0	5.8	14	24	7.0	3.4	2.2
3	2.0	2.2	2.5	2.0	1.7	2.6	6.9	15	19	6.8	4.1	1.9
4	1.8	2.1	3.0	2.0	2.2	2.6	9.7	19	17	6.4	4.5	2.2
5	1.8	2.0	2.6	1.9	2.3	2.6	11	27	17	6.2	4.3	2.0
6	1.9	2.0	2.3	1.9	2.2	2.5	13	33	17	5.6	3.5	1.9
7	1.9	2.0	2.4	1.9	2.3	2.5	14	37	17	5.6	3.3	1.8
8	1.9	2.1	2.4	1.9	2.7	2.5	16	38	16	5.3	3.2	1.8
9	1.8	2.0	2.4	1.9	2.7	2.6	16	33	16	5.3	2.9	1.8
10	1.8	1.7	2.4	1.7	3.3	2.5	15	30	14	5.3	2.8	1.8
11	1.8	1.9	2.4	1.9	4.7	2.2	14	30	14	5.2	2.7	1.8
12	1.8	1.9	2.5	1.9	4.7	2.5	14	30	14	5.0	2.9	1.8
13	1.8	1.8	2.5	1.9	4.1	2.5	14	30	14	4.6	2.7	1.8
14	1.8	1.9	2.4	1.9	3.7	2.5	16	27	14	4.6	2.7	1.7
15	1.9	1.9	2.6	1.9	3.6	2.6	15	25	14	4.4	2.6	1.5
16	2.0	1.7	2.6	1.9	3.6	2.8	14	24	13	4.4	2.4	1.5
17	1.9	1.7	2.5	1.9	3.7	2.7	14	22	12	4.3	2.4	1.5
18	2.1	2.5	2.5	1.9	3.9	2.7	14	24	12	4.1	2.3	1.5
19	2.1	3.2	2.5	1.9	3.6	2.9	14	27	11	3.8	2.4	1.5
20	2.0	2.9	2.5	1.7	3.5	3.0	15	29	10	4.1	3.5	1.4
21	2.0	4.9	2.4	1.7	3.4	3.6	14	31	9.7	6.4	3.2	1.4
22	1.9	3.6	2.4	2.1	3.5	4.5	14	30	9.1	4.2	2.7	1.5
23	2.1	2.9	2.2	2.0	3.5	4.6	14	30	9.0	3.9	2.4	1.4
24	2.1	2.5	2.2	2.1	3.4	4.6	14	32	8.5	3.8	2.4	1.4
25	2.1	2.4	2.2	1.9	3.5	5.0	13	34	8.2	3.5	2.4	1.4
26	2.0	2.3	2.2	1.9	3.3	5.9	13	36	7.9	3.5	2.3	1.4
27	2.4	2.3	2.1	1.8	3.2	6.1	13	38	7.7	3.4	2.3	1.2
28	2.2	2.3	2.1	1.8	3.1	6.0	13	33	7.6	3.1	2.2	1.2
29	2.1	2.2	2.1	1.8	-	5.8	16	29	7.4	4.5	2.3	1.4
30	2.0	2.1	2.1	1.7	-	5.6	16	29	7.5	3.9	2.4	1.4
31	2.2	-	2.0	1.6	-	5.6	-	28	-	3.5	2.3	-
Total	61.2	69.7	73.4	58.4	88.8	110.1	396.8	879	393.6	150.9	88.8	49.5
Mean	1.97	2.32	2.37	1.88	3.17	3.55	13.2	28.4	13.1	4.87	2.86	1.65
Ac-ft	121	138	146	116	176	218	787	1,740	781	299	176	98

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 38 Min 1.2 Mean 6.63 Ac-ft 4,800

Salt Creek at Nephi, Utah

Location.--Lat 39°42'30", long. 111°48'50", in SW¼ sec. 3, T. 13 S., R. 1 E., on right bank 1 mile east of Nephi.

Records available.--December 1950 to September 1951.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during period, 164 cfs June 17; minimum, 1.8 cfs Sept. 28.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Records include discharge of Salt Creek diversion canal near Nephi, Utah.

Discharge, in cubic feet per second, December 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			11	9.1	9.1	13	15	47	66	29	15	10
2			11	10	10	14	16	46	57	28	13	9.0
3			11	12	11	13	16	45	48	27	15	9.0
4			13	11	12	13	17	45	42	26	15	11
5			12	11	12	14	18	45	39	27	15	11
6			11	10	12	14	18	47	42	25	15	10
7			11	10	12	14	21	53	46	24	15	10
8			11	11	12	13	23	55	47	19	14	10
9			11	11	12	14	26	53	46	16	13	9.2
10			11	11	12	13	32	53	43	15	13	8.5
11			11	11	13	13	29	55	44	14	13	8.4
12			11	11	13	13	27	57	45	16	13	8.8
13			10	11	13	14	31	53	44	19	12	8.9
14			9.5	11	12	14	35	50	49	18	12	9.2
15			9.5	11	12	14	37	46	51	17	12	8.8
16			9.5	11	12	14	38	44	54	18	12	8.9
17			9.5	11	12	13	39	42	69	14	11	8.9
18			11	11	12	13	38	45	66	11	11	8.9
19			11	12	12	13	36	43	56	12	11	9.0
20			11	11	11	14	43	61	54	14	11	10
21			11	11	12	14	40	82	51	14	12	10
22			11	12	12	14	38	70	51	13	12	10
23			11	12	12	13	36	63	43	13	12	10
24			11	11	12	13	47	67	42	13	11	10
25			11	12	12	13	40	77	37	13	11	9.1
26			11	11	12	14	40	88	38	13	11	8.6
27			11	12	12	15	43	88	37	14	11	7.5
28			11	12	12	15	42	89	35	14	11	7.5
29			11	12	-	15	47	80	33	13	11	7.8
30			11	11	-	15	49	75	31	13	10	7.8
31			9.5	10	-	14	-	72	-	14	15	-
Total			335.5	343.1	332.1	425	977	1,836	1,406	536	385	275.8
Mean			10.8	11.1	11.9	13.7	32.6	59.2	46.9	17.3	12.4	9.19
Ac-ft			665	681	659	843	1,940	3,640	2,790	1,060	764	547

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

Note.--No gage-height record Dec. 1, July 8-11, July 20 to Sept. 4; discharge estimated on basis of discharge measurements, weather records, and records for nearby stations.

Payson Creek above diversions, near Payson, Utah

Location.--Lat 40°00', long. 111°42', in sec. 3, T. 10 S., R. 2 E., on left bank a quarter of a mile above diversion dam for Strawberry Water Users' Association power plant, 5 miles southeast of Payson, and 12 miles upstream from Utah Lake.

Drainage area.--19.6 sq mi.

Records available.--July 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,500 ft (from river-profile map).

Extremes.--Maximum discharge during year, 61 cfs May 20 (gage height, 1.70 ft); minimum not determined, probably occurred during period of ice effect.
1947-51: Maximum discharge, 194 cfs May 14, 1948 (gage height, 2.69 ft); minimum recorded, 3.0 cfs Sept. 29, 1947, and Nov. 27, 1947, but may have been less during period of ice effect or no gage-height record.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow affected by several small reservoirs.

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

0.7	3.3
.8	5.4
1.0	12
1.2	21
1.5	42

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.6	5.4	5.7	b5.0	b4.0	b5.0	5.7	20	*19	10	10	7.4
2	8.2	5.4	5.4	b5.0	b4.5	5.0	6.0	20	18	10	10	7.4
3	7.9	5.2	6.0	5.4	5.0	5.0	6.8	21	18	10	11	7.4
4	7.4	5.2	6.8	5.7	5.2	5.0	7.1	23	17	9.6	11	7.1
5	7.4	5.2	6.0	5.7	5.0	4.8	7.9	23	17	9.3	9.6	6.8
6	7.6	5.0	5.7	b5	*4.8	5.0	9.3	26	17	10	9.3	6.8
7	7.6	5.0	c.2	b5	5.0	5.0	10	28	16	11	8.6	6.8
8	7.6	5.2	6.2	b5	5.2	5.0	12	27	16	11	8.6	6.8
9	6.5	5.0	6.0	5.4	5.0	5.0	16	*27	16	10	8.2	6.8
10	5.2	b5.0	5.7	*5.2	5.2	5.0	*15	29	15	10	*8.9	6.5
11	*5.2	5.0	5.7	5.2	5.4	b5.0	12	29	15	10	8.9	*6.5
12	5.4	5.0	5.7	5.2	5.4	b5.0	12	29	*15	9.6	8.6	6.8
13	5.4	5.2	5.4	5.2	5.0	5.0	15	23	15	9.3	8.6	6.8
14	5.4	5.4	*5.7	5.2	4.8	*5.0	19	22	14	9.3	8.6	6.8
15	5.7	5.4	5.4	5.2	b4.8	5.0	20	21	14	9.3	8.6	6.5
16	5.7	5.4	5.2	5.2	4.8	5.0	20	20	14	9.3	8.2	6.5
17	5.7	*5.4	5.2	5.0	4.8	b5.0	20	20	15	9.3	7.9	6.5
18	5.7	6.0	5.0	5.2	b4.8	b5.0	21	23	14	8.9	7.9	6.5
19	5.7	8.9	5.0	5.0	b4.8	b5.0	23	24	13	*8.9	7.6	6.5
20	5.7	6.8	5.0	b5	b4.8	5.0	34	36	14	8.9	7.6	6.5
21	5.4	10	5.2	b5	4.8	5.4	28	34	14	9.3	8.9	6.5
22	5.4	6.8	5.0	b5	4.8	5.4	23	28	14	8.6	7.9	6.5
23	5.4	6.2	5.0	5.2	4.8	5.2	27	26	14	8.2	8.2	5.7
24	5.4	6.0	5.2	5.2	b4.8	5.2	27	26	13	7.6	7.6	4.6
25	5.4	5.7	5.2	5.0	b4.8	5.4	23	*24	12	7.9	7.6	4.4
26	5.7	5.7	5.2	5.0	5.0	6.0	21	23	*12	7.6	7.1	4.4
27	6.2	5.7	5.0	5.0	5.0	5.7	21	21	11	7.1	7.4	4.6
28	6.0	5.4	5.0	5.0	b5.0	5.2	22	20	11	7.1	7.4	4.6
29	5.7	5.4	5.2	b5	-	5.2	26	19	11	8.6	7.4	4.8
30	5.0	5.4	5.2	b4.5	-	5.4	23	18	11	10	7.6	4.6
31	5.7	-	b5.0	b4.0	-	5.4	-	18	-	10	7.4	-
Total	190.9	172.4	169.2	157.7	137.3	159.3	532.8	748	435	285.7	262.2	186.4
Mean	6.16	5.75	5.46	5.09	4.90	5.14	17.8	24.1	14.5	9.22	8.46	6.21
Ac-ft	379	342	336	313	272	316	1,060	1,480	863	567	520	370

Calendar year 1950: Max 96 Min 4.6 Mean 13.2 Ac-ft 9,580
Water year 1950-51: Max 36 Min 4.0 Mean 9.42 Ac-ft 6,820

Peak discharge (base, 80 cfs).--No peak above base.
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Spanish Fork at Thistle, Utah

Location.--Lat 40°00', long. 111°30', in SW¼ sec. 28, T. 9 S., R. 4 E., on right bank at Thistle, 600 ft downstream from confluence of Soldier Fork and Thistle Creek, and 2½ miles upstream from Diamond Fork.

Drainage area.--490 sq mi, approximately.

Records available.--January 1908 to September 1925 and October 1936 to September 1951 in reports of Geological Survey. January 1933 to September 1951 in reports of Spanish Fork water commissioner.

Gage.--Water-stage recorder. Altitude of gage is 4,950 ft. Prior to Nov. 21, 1912, staff gage about 1 mile downstream at different datum. Nov. 21, 1912, to Dec. 31, 1925, staff gage at site 200 ft downstream at different datum. Jan. 1, 1933, to May 10, 1937, staff gage at present site on left bank at different datum. May 12, 1937, to Oct. 8, 1938, staff gage at present site and datum.

Average discharge.--35 years (1908-25, 1933-51), 92.9 cfs.

Extremes.--Maximum discharge during year, 298 cfs May 21 (gage height, 3.53 ft); minimum, 20 cfs Sept. 11.
1908-25, 1933-51: Maximum discharge observed, 1,250 cfs May 26, 1922; minimum observed, 10 cfs Sept. 17, 22, 25, Oct. 25, 1934.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	46	53	42	b25	52	59	125	*169	63	45	39
2	33	48	50	37	b30	57	59	118	156	60	45	39
3	34	46	46	45	b40	55	63	109	142	57	53	34
4	35	44	58	48	50	54	65	108	137	58	53	33
5	35	43	57	49	54	55	68	109	126	58	50	33
6	34	44	44	39	*60	63	66	121	123	50	44	33
7	35	44	58	b30	62	68	68	133	*128	43	*45	28
8	34	43	60	b32	84	64	70	146	125	41	41	28
9	34	44	80	b35	97	64	72	*152	121	44	*38	27
10	34	36	58	*b40	90	58	*73	157	121	40	39	27
11	*35	40	54	42	90	50	64	171	116	38	40	*24
12	31	42	54	b40	79	51	66	185	109	38	36	25
13	30	48	*53	43	68	*57	69	181	*103	37	32	26
14	30	51	53	44	55	57	73	177	97	37	30	26
15	32	50	53	45	54	59	76	171	97	37	32	26
16	34	44	52	46	57	59	79	*165	92	37	33	28
17	33	*47	51	48	55	52	76	165	92	36	32	28
18	33	50	48	49	59	49	82	175	88	33	33	28
19	33	68	51	51	57	50	89	185	82	*33	34	28
20	34	80	48	46	52	*55	101	219	86	33	35	25
21	33	65	44	b40	*57	59	105	269	89	44	42	24
22	34	59	42	50	62	63	98	249	84	46	43	25
23	36	54	40	51	58	54	95	246	82	42	42	26
24	37	52	41	52	53	54	108	265	79	37	43	24
25	39	51	43	49	52	58	106	*272	73	37	42	24
26	39	50	42	48	55	63	105	284	*69	40	42	26
27	42	*51	41	51	55	60	105	275	66	37	41	24
28	43	50	42	54	54	54	109	258	68	46	41	24
29	43	49	49	*51	-	54	130	237	65	50	43	27
30	44	51	51	46	-	59	133	206	63	40	*45	28
31	44	-	49	b30	-	58	-	181	-	39	41	-
Total	1,100	1,470	1,545	1,373	1,664	1,765	2,532	5,818	3,048	1,331	1,255	837
Mean	35.5	49.0	49.8	44.3	59.4	56.9	84.4	188	102	42.9	40.5	27.9
Ac-ft	2,180	2,920	3,060	2,720	3,300	3,500	5,020	11,540	6,050	2,640	2,490	1,660

Calendar year 1950: Max 389 Min 30 Mean 83.7 Ac-ft 60,610
Water year 1950-51: Max 284 Min 24 Mean 65.0 Ac-ft 47,080

Peak discharge (base, 330 cfs).--No peak above base.
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Strawberry tunnel at West Portal, near Thistle, Utah

Location.--Lat 40°09'40", long. 111°14'40", in SW¼ sec. 34, T. 7 S., R. 6 E., on left bank 40 ft downstream from the west portal of the tunnel and 18 miles northeast of Thistle.

Records available.--October 1945 to September 1951 in reports of Geological Survey. October 1922 to September 1925, and May 1932 to September 1945 in Spanish Fork water commissioner's reports and files of Salt Lake City District office, Geological Survey.

Gage.--Water-stage recorder and rectangular weir. Altitude of gage is 7,500 ft.

Extremes.--1922-25, 1932-51: Maximum daily discharge, 595 cfs July 9, 1923; minimum daily observed, 4 cfs many times when no water is being diverted from Strawberry Reservoir.

Remarks.--Records good. Records show water diverted from Strawberry Reservoir (in Colorado River basin, capacity, 270,000 acre-ft) plus tunnel seepage for use on lands of Strawberry Project.

Cooperation.--Records furnished by Spanish Fork Water Users' Association.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	95						6	6	275	480	121	275
2	5						6	6	329	505	125	255
3	5						6	6	295	505	122	235
4	5						6	6	288	505	54	212
5	5						6	6	274	505	74	256
6	5						6	6	273	505	109	291
7	5						6	6	236	505	98	320
8	5						6	6	164	505	104	319
9	5						6	6	170	505	133	287
10	5						6	6	153	505	178	217
11	5						6	6	199	504	203	209
12	5						6	6	288	472	248	242
13	5						6	6	373	418	295	225
14	5						6	6	372	388	350	209
15	5						6	6	303	349	351	187
16	5	4.5	4.0	4.0	4.5	5.0	6	6	272	355	355	137
17	5						6	6	237	369	370	110
18	5						6	6	277	369	375	130
19	5						14	6	330	383	362	146
20	5						23	6	348	371	376	138
21	5						25	6	347	357	383	134
22	5						12	6	292	249	362	133
23	5						38	6	266	205	345	99
24	5						42	6	175	120	309	72
25	5						6	6	125	190	281	83
26	5						6	6	152	216	279	92
27	5						6	6	193	211	297	93
28	5						6	15	293	179	304	120
29	5					-	6	136	408	112	301	120
30	5					-	6	179	454	83	286	97
31	5	-				-	-	244	-	89	275	-
Total	245	135	124	124	126	155	298	736	8,161	11,014	7,825	5,423
Mean	7.90	4.5	4.0	4.0	4.5	5	9.93	23.7	272	355	252	181
Ac-ft	486	268	246	246	250	307	591	1,460	16,190	21,850	15,520	10,760

Calendar year 1950: Max 497 Min - Mean 92.0 Ac-ft 66,630
Water year 1950-51: Max 505 Min - Mean 94.2 Ac-ft 68,170

Note.--Discharge from Oct. 2 to Apr. 18 and Apr. 25 to May 27 computed on basis of determinations of seepage discharge Oct. 1 and May 28.

Diamond Fork near Thistle, Utah

Location.--Lat 40°03'38", long. 111°27'06", in approximate center of sec. 2, T. 9 S., R. 4 E., on left bank about 1 mile downstream from Little Diamond Creek, 4.2 miles upstream from mouth, and 5.2 miles northwest of Thistle.

Drainage area.--146 sq mi.

Records available.--January 1908 to September 1917, April 1940 to September 1951. (Records prior to 1915 not equivalent due to transmountain diversion.)

Gage.--Water-stage recorder. Altitude of gage is 5,100 ft (from topographic map). Prior to Apr. 9, 1940, staff gage at site 4 miles downstream at different datum. Apr. 9, 1940, to Oct. 6, 1949, water-stage recorder at site 2.7 miles downstream at different datum.

Average discharge.--14 years (1914-17, 1940-51), 112 cfs.

Extremes.--Maximum discharge during year, 550 cfs July 1 (gage height, 4.25 ft); mirimum daily, 8 cfs Jan. 7.
1908-17, 1940-51: Maximum discharge observed, 766 cfs Aug. 8, 1949 (gage height, 3.36 ft, site and datum then in use); minimum, 1.0 cfs Nov. 9, 1948 (gage height, 1.02 ft, site and datum then in use).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Beginning 1915, flow supplemented by water diverted via tunnel from Strawberry Reservoir in Colorado River basin for irrigation in Jordan River basin (see preceding page).

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1, 2, May 19 to June 9, Aug. 29 to Sept. 30)

1.7	6.0	2.2	39	3.5	290
1.9	15	2.5	75	4.0	455
2.0	21	3.0	160	4.2	530

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	136	27	26	b12	b13	23	48	150	*378	522	111	284
2	42	27	23	b10	b15	24	54	142	410	486	134	269
3	27	27	21	b13	b18	21	60	146	416	469	130	245
4	27	26	29	b17	b20	21	58	156	420	466	a120	225
5	26	27	27	b20	b22	23	68	164	410	469	a100	251
6	24	25	22	b15	*23	23	63	178	396	480	a120	284
7	25	25	27	b8	22	23	66	190	*354	486	*122	308
8	25	25	29	b10	23	26	90	192	275	502	a120	314
9	28	24	33	b12	25	27	98	*190	260	494	*148	284
10	27	15	28	*b13	26	24	*98	188	228	472	a180	236
11	*25	19	26	b14	27	21	90	195	248	452	a210	*220
12	25	19	25	b16	b24	24	92	198	314	438	a240	239
13	24	19	*24	b18	b20	*25	96	188	*406	406	272	230
14	24	20	25	19	b18	26	106	182	402	396	317	222
15	25	21	27	19	b19	27	110	170	350	357	347	205
16	25	18	26	20	b19	27	112	*164	317	344	360	168
17	24	*20	23	20	b19	23	117	160	269	360	382	142
18	25	26	20	19	b18	26	116	162	287	374	396	150
19	25	50	23	20	b17	26	116	166	338	378	399	160
20	24	28	21	b18	b19	*27	148	182	364	*385	402	160
21	24	44	20	b15	*b20	31	140	208	368	323	406	152
22	25	28	20	b20	b22	34	132	195	344	248	399	150
23	25	24	21	20	23	31	148	195	314	200	371	128
24	24	a23	21	20	22	32	172	185	236	198	323	108
25	24	a23	21	20	23	37	136	*180	188	190	287	106
26	24	a23	20	b18	23	44	134	178	*188	222	275	111
27	26	*23	19	b18	23	44	132	174	228	233	278	111
28	26	23	18	20	23	38	136	168	308	225	281	128
29	25	23	23	20	-	40	156	242	427	180	281	134
30	24	26	21	16	-	41	154	290	480	116	*290	116
31	27	-	b18	b15	-	46	-	329	-	100	287	-
Total	907	748	727	515	586	905	3,246	5,807	9,923	10,971	8,088	5,840
Mean	29.3	24.9	23.5	16.6	20.9	29.2	108	187	331	354	261	195
Ac-ft	1,800	1,480	1,440	1,020	1,160	1,800	6,440	11,520	19,680	21,760	16,040	11,580

Calendar year 1950: Max 545 Min 13 Mean 132 Ac-ft 95,740
Water year 1950-51: Max 522 Min 8 Mean 132 Ac-ft 95,730

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of discharge measurements, weather records, and records for Spanish Fork at Castilla and Thistle.
b Stage-discharge relation affected by ice.

Spanish Fork at Castilla, Utah

Location.--Lat 40°03'00", long. 111°32'45", in SW¼NE¼ sec. 12, T. 9 S., R. 3 E., on left bank 600 ft upstream from outlet of Gold Springs, 1 mile upstream from diversion dam of Bureau of Reclamation, 1¼ miles northwest of Castilla, and 3 miles downstream from Diamond Fork.

Drainage area.--670 sq mi, approximately.

Records available.--May 1919 to September 1925 and October 1936 to September 1951 in reports of Geological Survey. January 1933 to September 1951 in reports of Spanish Fork water commissioner.

Gage.--Water-stage recorder. Altitude of gage is 4,900 ft. Prior to Apr. 20, 1920, staff gage and Apr. 20, 1920, to Sept. 30, 1925, water-stage recorder at same site at different datums.

Average discharge.--24 years (1919-25, 1933-51), 214 cfs.

Extremes.--Maximum discharge during year, 622 cfs July 5 (gage height, 5.49 ft); minimum, 23 cfs Jan. 8.
1919-25, 1933-51: Maximum daily discharge, 1,520 cfs May 22, 1920; minimum discharge, that of Jan. 8, 1951.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Several small diversions above station for irrigation. Flow is materially increased by water diverted by tunnel from Strawberry Reservoir (capacity, 270,000 acre-ft) in Colorado River basin into Diamond Fork for irrigation of lands in Jordan River basin (see p. 114).

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

2.7	24
3.0	60
4.0	225
5.0	470
5.5	625

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	188	83	88	54	34	78	125	318	*539	563	190	a340
2	118	86	78	59	42	90	131	302	590	572	202	a320
3	100	82	76	76	64	84	144	293	584	578	217	a290
4	a80	80	100	77	77	83	163	300	515	597	168	260
5	a78	78	100	82	88	86	163	316	494	614	151	290
6	a76	78	76	59	*92	94	168	340	500	600	179	318
7	a76	78	96	41	90	100	177	345	*464	584	*172	340
8	a76	78	100	42	113	98	186	360	381	578	170	348
9	a80	78	104	57	141	101	195	*358	365	572	*188	a340
10	a77	60	100	*57	130	94	*206	360	342	557	a210	268
11	*74	68	94	63	131	78	183	378	365	566	a245	*256
12	*71	74	92	63	125	78	183	402	438	539	a280	279
13	67	80	*90	66	110	*90	193	397	*506	464	318	266
14	68	83	92	68	88	89	210	405	515	427	355	a260
15	70	83	94	70	86	92	219	363	479	391	373	a240
16	73	*78	92	74	90	95	221	*345	438	391	386	202
17	70	83	86	74	88	83	225	338	421	427	397	184
18	70	89	80	77	95	77	225	348	450	441	410	184
19	70	139	86	80	88	83	237	358	476	*456	a410	201
20	70	102	80	66	77	*88	279	424	518	458	a410	197
21	68	125	78	54	*88	94	279	527	530	453	a410	190
22	68	102	73	82	94	104	260	524	479	333	a410	190
23	68	90	66	77	89	89	277	515	447	270	a380	a160
24	70	84	70	80	78	95	325	497	376	206	a325	136
25	71	84	74	76	77	106	277	*458	318	233	a325	139
26	70	82	73	71	84	120	275	458	*288	270	a330	146
27	74	*82	73	74	86	120	268	450	306	268	335	148
28	78	82	71	83	83	104	273	427	386	262	345	168
29	77	80	80	*77	-	102	325	461	476	212	345	177
30	77	83	82	59	-	112	335	494	530	168	*340	a150
31	80	-	82	43	-	118	-	542	-	163	a340	-
Total	2,453	2,554	2,626	2,081	2,528	2,925	6,727	12,403	13,516	13,213	9,316	6,987
Mean	79.1	85.1	84.7	67.1	90.3	94.4	224	400	451	426	301	233
Ac-ft	4,870	5,070	5,210	4,130	5,010	5,800	13,340	24,600	26,810	26,210	18,480	13,860

Calendar year 1950: Max 672 Min 60 Mean 230 Ac-ft 166,700
Water year 1950-51: Max 614 Min 34 Mean 212 Ac-ft 153,400

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

Spanish Fork near Lake Shore, Utah

Location.--Lat 40°10', long. 111°44', in SE¼SE¼ sec. 32, T. 7 S., R. 2 E., on right bank 1 mile upstream from mouth and 2½ miles north of Lake Shore.

Drainage area.--700 sq mi, approximately.

Records available.--December 1903 to July 1907, March 1909 to September 1925, January 1938 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,500 ft (from topographic map). Prior to Jan. 23, 1938, staff gages at several sites about 3 miles upstream at various datums.

Average discharge.--30 years (1904-6, 1909-19, 1920-25, 1938-51), 87.5 cfs.

Extremes.--Maximum discharge during year, 236 cfs Apr. 10; minimum, 0.1 cfs Sept. 8. 1903-7, 1909-25, 1938-51: Maximum discharge observed, 1,430 cfs May 11, 1909; practically no flow at times during irrigation season of most years.

Remarks.--Records fair except those for periods of no gage-height record or backwater effect, which are poor. Flow regulated by many diversions for irrigation and hydroelectric power plant. During latter part of the irrigation season only waste and return waters pass gage. Station below all diversions. Discharge includes that of overflow canal constructed in winter of 1947-48, which diverts part of high flow from river about 1 mile above gage.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		40	99	76	b60	102	141	142		1.0	0.9	0.5
2		47	95	75	a70	103	141	89		1.1	.8	.5
3	c1.5	58	90	87	a90	105	152	71		1.8	.9	.5
4		59	107	92	a100	105	170	51		2.4	8.6	.4
5		56	114	96	101	105	172	56		4.0	1.2	.4
6	c3	54	94	85	109	106	175	76	a2	.4	1.2	.3
7	a5	59	103	74	115	111	184	a162		.6	1.4	.2
8	a6	66	108	94	120	114	193	a100		.4	1.7	.2
9	a8	72	109	109	144	115	200	a70		.4	1.7	.2
10	a10	62	106	81	155	114	212	56		.4	1.9	.2
11	15	53	101	85	155	109	187	46		.4	1.7	.4
12	16	64	94	83	153	104	185	50	1.2	2.5	1.5	.3
13	8.4	66	91	89	144	103	194	74	1.2	.5	1.0	.4
14	5.0	67	92	88	128	107	208	79		.4	.7	.5
15	a10	72	94	91	112	107	219	51		.4	.8	.8
16	20	74	93	94	110	112	187	17		.4	.7	.6
17	14	76	90	97	111	105	a132			.5	.8	.6
18	a11	70	84	97	111	97	a70			1.3	.8	.6
19	a11	116	88	100	112	103		a4		1.0	.9	.8
20	a10	103	88	90	108	111			a1.5	1.0	.8	.6
21	a10	126	83	89	106	112	a40	125		9.1	.8	.8
22	a10	112	82	102	109	122		166		1.8	.8	.7
23	a10	91	79	99	111	113		114		1.2	.7	.7
24	a10	85	79	101	109	111	24	80		.9	.9	.7
25	11	84	83	101	105	120	34	15		.9	1.7	1.0
26	10	84	84	93	103	132	27	17		3.1	1.4	1.0
27	14	82	83	97	104	140	32		1.3	1.3	1.2	.7
28	15	88	77	102	103	124	22		1.2	1.2	.6	.6
29	9.8	92	85	100	-	119	46	a5	1.5	14	.3	.8
30	14	93	91	b80	-	128	133		.9	1.2	.3	.8
31	32	-	93	b70	-	133	-		-	.8	.4	-
Total	305.7	2,271	2,859	2,817	3,158	3,492	3,640	1,748	48.8	56.4	39.1	16.8
Mean	9.86	75.7	92.2	90.9	113	113	121	56.4	1.63	1.82	1.26	0.56
Ac-ft	606	4,500	5,670	5,590	6,260	6,930	7,220	3,470	97	112	78	33

Calendar year 1950: Max 331 Min - Mean 71.3 Ac-ft 51,600
Water year 1950-51: Max 219 Min 0.2 Mean 56.0 Ac-ft 40,570

a No gage-height record; discharge estimated on basis of weather records and records for nearby stations.
b Stage-discharge relation affected by ice.
c Variable backwater from vegetation and debris.

Hobble Creek near Springville, Utah

Location.--Lat 40°09'30", long. 111°31'30", in NE¼ sec. 6, T. 8 S., R. 4 E., on right bank 1,000 ft downstream from Springville hydroelectric plant, 1¼ miles downstream from Right Fork, and 4 miles southeast of Springville.

Drainage area.--105 sq mi.

Records available.--March 1904 to December 1916 (1906-7 gage heights only), April 1945 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,920 ft (from topographic map). Mar. 23, 1904, to May 1909, staff gage at site 200 ft downstream at different datum (destroyed by flood). June 1, 1909, to Dec. 31, 1916, staff gage at site 800 ft upstream at different datum.

Average discharge.--16 years (1904-5, 1907-16, 1945-51), 55.2 cfs.

Extremes.--Maximum discharge during year, 212 cfs Apr. 30 (gage height, 3.24 ft); minimum, 7.2 cfs Nov. 3.
1904-16, 1945-51: Maximum discharge observed, 824 cfs Apr. 29, 1916 (gage height, 6.40 ft, site and datum then in use); minimum discharge, 1.4 cfs Feb. 12, 1946.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Several diversions above station for irrigation. Flow regulated by hydroelectric plant at times during low stages.

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

1.7	13	2.5	84
1.9	21	3.0	166
2.2	45	3.3	221

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	25	25	24		24	55	177	102	42	27	22
2	24	25	25	23		25	70	164	95	41	26	21
3	24	24	25	24		25	92	171	81	38	30	20
4	24	24	33	24	a22	24	113	182	72	34	30	19
5	23	24	31	24		25	113	195	67	30	28	20
6	22	24	27	22		25	126	204	66	25	26	18
7	22	24	29	21	*24	26	139	204	67	22	25	17
8	23	24	30	22	25	27	149	195	71	20	25	19
9	23	24	30	23	25	27	163	*184	68	19	*22	17
10	24	22	29	*23	25	27	166	180	56	17	21	17
11	24	21	28	24	26	25	*142	189	52	17	21	*18
12	*22	21	27	23	27	26	135	191	*55	16	21	20
13	20	23	*27	22	27	29	142	166	55	15	20	21
14	20	24	28	22	26	*28	159	151	54	15	18	22
15	22	24	29	23	27	28	164	137	56	16	19	21
16	24	*24	28	23	27	29	168	121	54	a21	19	20
17	21	24	27	22	27	28	164	114	56	*a30	20	20
18	20	25	27	22	27	27	158	113	58	25	18	21
19	19	39	27	23	27	28	156	106	52	23	15	21
20	21	30	26	22	27	29	179	126	54	22	17	22
21	24	38	26	22	27	30	184	146	58	27	20	21
22	24	31	25		27	34	168	142	56	24	25	21
23	24	28	25		27	34	171	135	58	23	22	21
24	24	27	25		27	37	182	142	58	22	20	21
25	24	25	25		26	43	163	147	54	22	21	21
26	23	25	23	a22	27	52	154	142	52	21	20	22
27	25	25	22		27	56	149	*149	*47	24	21	20
28	25	25	20		25	52	152	163	45	26	22	20
29	24	25	20		-	52	184	151	46	24	24	20
30	24	25	24		-	52	198	137	45	23	23	20
31	25	-	24		-	52	-	*113	-	27	23	-
Total	712	769	817	698	712	1,026	4,458	4,837	1,810	751	689	603
Mean	23.0	25.6	26.4	22.5	25.4	33.1	149	156	60.3	24.2	22.2	20.1
Ac-ft	1,410	1,530	1,620	1,380	1,410	2,040	8,840	9,590	3,590	1,490	1,370	1,200

Calendar year 1950: Max 237 Min 18 Mean 48.5 Ac-ft 35,100
Water year 1950-51: Max 204 Min 15 Mean 49.0 Ac-ft 35,470

Peak discharge (base, 120 cfs).--Apr. 30 (9:30 a.m.) 212 cfs (3.24 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of discharge measurements, weather records, and records for nearby stations.

Provo River near Kamas, Utah

Location.--Lat 40°35'00", long. 111°00'30", in NE¼ sec. 2, T. 3 S., R. 8 E., on right bank 3 miles upstream from Soapstone Creek and 14 miles east of Kamas.

Records available.--August 1949 to September 1951.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during year, 765 cfs May 27 (gage height, 3.49 ft); minimum, 4.5 cfs Nov. 1, but may have been less during period of no gage-height record.
1949-51: Maximum discharge, that of May 27, 1951; minimum, that of Nov. 1, 1950.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. No diversion above station. Flow regulated by several small lakes at headwaters which have dams and outlet works. Combined regulated capacity, 10,841 acre-ft. Station is immediately above the outlet of Duchesne tunnel now under construction.

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

0.4	4.6	1.3	31	2.6	360
.8	7.5	1.5	54	3.0	540
.9	9.8	1.8	106	3.2	630
1.1	18	2.2	207		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.5	6.3			b8.0	b7.7	9.6	33	360	145	98	50
2	7.2	7.7			8.2	7.7	10	30	247	130	94	48
3	7.0	6.8			8.0	b7.7	12	28	192	126	98	50
4	6.8	7.0			8.0	7.7	14	36	187	117	119	54
5	6.6	7.0	b8	a8	8.4	7.7	14	48	204	106	110	52
6	7.0	7.3			8.2	8.2	14	72	224	100	100	51
7	6.8	7.2			8.2	b8.2	17	*84	*247	90	*96	*51
8	6.6			*b8.0	*8.2	8.2	17	86	270	82	92	50
9	*6.6			8.0	8.2	8.0	18	86	262	77	77	45
10	6.5		9.1	8.0	8.0	8.0	19	104	227	92	42	38
11	6.3		*8.0	8.0	8.2	b7.8	19	135	217	117	32	36
12	6.3		8.9	8.0	8.0	b7.7	*22	133	240	113	32	37
13	6.1	(*)	8.9		8.0	7.7	a23	110	262	130	31	36
14	6.0	b6	8.6		b8.0	b7.7	a25	98	301	130	32	36
15	6.1		8.9		7.7	*7.7	a27	88	356	126	32	36
16	6.1		8.9		7.7	8.0	a30	79	418	*119	31	36
17	6.0		8.9		7.7	b7.7	a32	92	392	117	31	36
18	5.8		8.4		7.7	b7.7	a35	130	374	115	31	36
19	5.6		8.6		7.7	7.7	a38	157	*351	117	31	35
20	5.7		8.6		b7.7	7.7	42	201	360	119	33	35
21	5.6		8.4	a8.0	7.7	8.2	40	230	374	128	34	35
22	5.6		9.1		7.7	7.5	37	*233	301	115	34	35
23	5.4		8.4		7.7	b8.0	42	293	270	110	36	35
24	5.6		8.6		b7.7	b8.4	38	256	240	108	34	35
25	5.6	b7	8.4		b7.7	b8.8	42	441	244	110	38	34
26	5.4		8.4		7.5	9.1	40	526	255	110	51	34
27	6.0		b8.5		7.7	9.3	37	598	237	113	51	27
28	6.3				b7.7	b9.3	40	*590	217	113	50	13
29	6.8		a8.5		-	b9.3	44	580	*198	113	51	14
30	7.0			b8.0	-	9.3	38	536	178	106	50	14
31	7.2	-		b8.0	-	9.3	-	*486	-	102	51	-
Total	195.1	197.3	262.5	248.0	221.2	253.0	835.6	6,699	8,205	3,496	1,722	1,124
Mean	6.29	6.58	8.47	8.00	7.90	8.16	27.9	216	273	113	55.5	37.5
Ac-ft	387	391	521	492	439	502	1,657	13,290	16,270	6,934	3,416	2,229

Calendar year 1950: Max 480 Min - Mean 62.9 Ac-ft 45,530
Water year 1950-51: Max 598 Min - Mean 64.3 Ac-ft 46,530

Peak discharge (base, 400 cfs).--May 27 (5:30 p.m.) 765 cfs (3.49 ft); June 15 (8:00 p.m.) 495 cfs (2.95 ft).

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

Weber-Provo diversion canal at Oakley, Utah

Location.--Lat 40°42'30", long. 111°16'30", in NW¼ sec. 28, T. 1 S., R. 6 E., on right bank 1,400 ft downstream from head and three-quarters of a mile east of Oakley.

Records available.--October 1945 to September 1951 in reports of Geological Survey. October 1938 to September 1945, collected by Bureau of Reclamation, available in files of Salt Lake City district office, Geological Survey. October 1932 to September 1939 in reports of Weber River water commissioner.

Gage.--Water-stage recorder and Parshall flume. Altitude of gage is 6,500 ft (from topographic map).

Extremes.--1945-51: Maximum daily discharge, 747 cfs June 20, 1947; no water diverted from Weber River for several months each year.

Remarks.--Records excellent. Canal diverts water from Weber River in SW¼SW¼ sec. 21, T. 1 S., R. 6 E., for irrigation and water supply in Jordan River basin. Figures given herein represent water diverted from main stem of Weber River, some of which may return to Weber River through seepage.

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

0.0	0	0.7	46
.1	2.8	1.0	80
.2	7.0	1.5	149
.4	20	2.1	254

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									0	143	23	
2									0	142	9.4	
3									0	169	0	
4									0	246	0	
5									0	224	0	
6									0	200	0	
7								(*)	0	148	*0	(*)
8				(*)	(*)				0	122	0	
9	(*)								0	127	0	
10									0	122	0	
11			(*)				(*)		0	109	0	
12									0	85	0	
13		(*)							0	*69	0	
14									0	52	0	
15									0	42	0	
16									0	46	0	
17									0	48	0	
18									0	35	0	
19									0	33	0	
20									0	43	0	
21									0	97	0	
22								(*)	0	71	0	
23									0	46	0	
24									0	35	0	
25									0	33	0	
26									0	43	0	
27									63	43	0	
28									143	*46	0	
29					-				142	56	0	
30					-				*143	38	0	
31		-			-		-		-	30	0	
Total	0	0	0	0	0	0	0	0	491	2,743	32.4	0
Mean	0	0	0	0	0	0	0	0	16.4	88.5	1.05	0
Ac-ft	0	0	0	0	0	0	0	0	974	5,440	64	0

Calendar year 1950: Max 144 Min 0 Mean 8.44 Ac-ft 6,110
Water year 1950-51: Max 246 Min 0 Mean 8.95 Ac-ft 6,480

* Discharge measurement made on this day.

Weber-Provo diversion canal near Woodland, Utah

Location.--Lat 40°36'40", long. 111°18'15", in SW¼SE¼ sec. 30, T. 2 S., R. 6 E., on right bank 100 ft upstream from outlet to Provo River and 4½ miles northwest of Woodland.

Records available.--October 1931 to September 1951 (periods of diversion only).

Gage.--Water-stage recorder and Parshall flume. Datum of gage is 6,318 ft above mean sea level (levels by Bureau of Reclamation).

Extremes.--1931-51: Maximum daily discharge, 676 cfs, June 20, 1947; no water diverted from Weber River or Beaver Creek for several months during each year.

Remarks.--Records good. Canal diverts water from Weber River in SW¼SW¼ sec. 21, T. 1 S., R. 6 E., and from Beaver Creek in NE¼SE¼ sec. 17, T. 2 S., R. 6 E., to Provo River for irrigation along Provo and Jordan Rivers. Figures given herein represent quantity of water reaching Provo River during periods when water was diverted from Weber River and Beaver Creek. Not all of flow diverted reaches Provo River due to evaporation, transpiration, and seepage losses. No water was diverted from Weber River or Beaver Creek on days for which no figures are given.

Rating table, June 27 to August 2, 1951 (gage height, in feet, and discharge, in cubic feet per second)

0.3	11	1.0	76
.4	17	1.5	146
.7	43	2.0	231

Discharge, in cubic feet per second, June to August 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	122	20	
2									-	119	14	
3									-	126	-	
4									-	217	-	
5									-	195	-	
6									-	172	-	
7									-	137	-	
8									-	102	-	
9									-	97	-	
10									-	99	-	
11									-	85	-	
12									-	72	-	
13									-	*58	-	
14									-	46	-	
15									-	30	-	
16									-	30	-	
17									-	35	-	
18									-	30	-	
19									-	20	-	
20									-	28	-	
21									-	52	-	
22									-	72	-	
23									-	42	-	
24									-	29	-	
25									-	28	-	
26									-	31	-	
27									25	34	-	
28									124	34	-	
29									120	46	-	
30									*122	32	-	
31									-	24	-	
Total									391	2,244	34	
Mean									-	72.4	-	
Ac-ft									776	4,450	67	

Calendar year : Max Min Mean Ac-ft
Diversion period : Max - Min - Mean - Ac-ft 5,290

* Discharge measurement made on this day.

Provo River near Hailstone, Utah

Location.--Lat 40°36', long. 111°22', in SE¼ sec. 34, T. 2 S., R. 5 E., on right bank 3 miles upstream from Ross Creek and Hailstone.

Records available.--October 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,100 ft (from river-profile map).

Extremes.--Maximum discharge during year, 2,190 cfs May 29 (gage height, 6.43 ft); minimum, 29 cfs Jan. 31, result of freeze-up.
1949-51: Maximum discharge, that of May 29, 1951; minimum, that of Jan. 31, 1951.

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

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

Oct. 1 to May 19		May 20 to Sept. 30			
1.8	43	1.6	59	3.0	376
2.0	70	1.9	83	4.0	811
2.5	175	2.2	131	6.0	1,920
3.0	319	2.5	206		
3.8	609				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	69	61	82		54	61	111	288	1,480	492	189	82
2	67	63	74		58	67	120	273	1,070	431	181	79
3	64	64	79		62	63	137	252	840	407	184	77
4	60	61	93		66	63	153	270	725	484	209	77
5	55	60	97		72	69	163	304	684	423	242	76
6	57	63	91		78	70	168	387	693	399	195	75
7	61	61	107		82	70	180	*446	*716	353	178	74
8	63	69	111		*81	75	183	442	749	299	173	75
9	*61	69	103		77	81	196	432	787	278	158	79
10	63	57	93		77	74	207	478	693	258	*131	*78
11	61	63	*91		86	58	185	539	648	268	99	77
12	55	64	95		84	64	*193	601	679	242	95	78
13	54	67	95		77	81	218	539	675	246	90	78
14	53	*72	91		63	75	264	519	763	246	87	76
15	54	69	95	70	62	*88	288	489	850	236	86	75
16	*54	63	91		63	82	291	453	1,020	*230	81	74
17	49	74	84		64	74	294	439	1,040	230	70	72
18	48	82	77		64	69	282	527	945	215	69	71
19	47	107	86		65	75	285	601	*870	200	71	71
20	47	101	86		66	82	348	763	875	221	76	71
21	45	158	75		72	101	319	980	970	288	86	71
22	44	135	81		70	105	282	925	831	275	87	70
23	45	107	86		70	84	291	*1,150	698	221	82	69
24	44	93	86		66	91	345	*1,210	661	203	82	68
25	47	91	79		61	105	307	1,360	648	206	80	67
26	45	90	75		66	115	297	1,550	625	227	81	65
27	54	82	74		67	106	282	1,700	612	224	83	65
28	54	82	72		66	91	285	*1,840	643	221	80	64
29	53	79	74	66	-	90	351	1,910	599	252	81	65
30	52	88	76	55	-	103	322	1,800	*560	200	82	64
31	58	-	75	50	-	109	-	*1,690	-	189	82	-
Total	1,683	2,395	2,674	2,131	1,939	2,540	7,347	25,157	23,649	8,664	3,570	2,183
Mean	54.3	79.8	86.3	68.7	69.2	81.9	245	812	788	279	115	72.8
Ac-ft	3,340	4,750	5,300	4,230	3,850	5,040	14,570	49,900	46,910	17,180	7,080	4,330

Calendar year 1950: Max 1,810 Min 44 Mean 253 Ac-ft 183,200
Water year 1950-51: Max 1,910 Min 44 Mean 230 Ac-ft 168,500

Peak discharge (base, 1,200 cfs).--May 29 (9 a.m.) 2,190 cfs (6.43 ft); June 17 (4 a.m.) 1,250 cfs (4.84 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 27-30, Jan. 1-28, Feb. 1-6, 15-19.

Deer Creek Reservoir near Charleston, Utah

Location.--Lat 40°24', long. 111°32', in SW¼SW¼ sec. 5, T. 5 S., R. 4 E., at dam on Provo River, a quarter of a mile upstream from Deer Creek and 4½ miles southwest of Charleston.

Records available.--December 1940 to September 1951.

Gage.--Mercury indicating gage read once daily. Datum of gage is mean sea level (levels by Bureau of Reclamation).

Extremes.--Maximum contents during year, 153,500 acre-ft June 21, 22 (elevation 5,417.35 ft); minimum, 120,600 acre-ft Sept. 30 (elevation 5,403.93 ft).
1940-51: Maximum contents, 154,000 acre-ft June 19, 1946 (elevation 5,417.65 ft); minimum, 1,200 acre-ft Dec. 16, 1940 (elevation 5,296.8 ft).

Remarks.--Reservoir is formed by earth-fill dam with concrete cut-off wall. Storage began in October 1940. Dam completed in October 1941. Capacity, 152,560 acre-ft between elevations 5,280 ft (bottom of outlet tunnel) and 5,417 ft (top of 20-ft radial gates). Dead storage, 2,870 acre-ft below elevation 5,305 ft (sill of trash-rack structure). Water used for irrigation, domestic, and industrial purposes. Contents given herein include dead storage and are computed from 12 p.m. elevations which are based or trend indicated by 8 a.m. readings.

Cooperation.--Records of daily elevations and contents furnished by Provo River water commissioner.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	123,000	121,800	128,700	130,400	127,900	126,900	127,100	135,100	153,000	152,800	142,600	133,100
2	122,700	121,900	128,700	130,300	127,800	126,800	127,200	135,300	152,800	152,700	142,500	132,700
3	122,400	122,100	128,900	130,200	127,600	126,700	127,200	135,400	152,900	152,500	142,300	132,300
4	122,100	122,200	129,400	130,100	127,600	126,600	127,400	135,400	153,100	152,300	142,500	131,800
5	122,100	122,300	129,500	130,000	127,700	126,500	127,500	135,500	153,200	152,200	142,800	131,400
6	122,100	122,500	129,600	129,900	127,800	126,500	127,700	135,500	153,100	152,000	143,000	131,000
7	122,200	122,600	129,700	129,900	127,700	126,500	127,900	135,700	153,000	151,800	143,200	130,500
8	122,200	122,800	129,900	129,700	127,600	126,600	128,100	135,900	153,100	151,500	143,300	130,100
9	122,300	122,900	130,000	129,600	127,600	126,700	128,300	136,000	153,100	151,100	143,400	129,600
10	122,300	123,000	130,200	129,500	127,600	126,800	128,500	136,200	153,000	150,600	143,500	129,200
11	122,400	123,200	130,300	129,400	127,700	126,900	128,700	136,400	152,900	150,200	143,000	128,800
12	122,400	123,300	130,400	129,300	127,800	126,800	128,900	136,700	152,900	149,700	142,400	128,300
13	122,500	123,500	130,500	129,300	127,800	126,800	129,200	137,100	152,900	149,300	141,800	127,900
14	122,500	123,900	130,600	129,300	127,700	126,800	129,500	137,300	153,100	148,800	141,200	127,400
15	122,500	124,100	130,600	129,300	127,700	126,800	129,900	137,400	153,200	148,400	140,700	126,900
16	122,400	124,300	130,700	129,300	127,600	126,700	130,300	137,400	153,300	148,000	140,100	126,500
17	122,400	124,500	130,700	129,200	127,600	126,700	130,800	137,400	153,300	147,500	139,500	126,100
18	122,300	125,200	130,800	129,100	127,500	126,700	131,300	137,400	153,300	147,000	139,000	125,600
19	122,300	125,800	130,800	129,000	127,500	126,700	131,700	137,400	153,200	146,600	138,400	125,200
20	122,200	126,300	130,800	128,900	127,400	126,800	132,200	137,800	153,200	146,100	138,000	124,800
21	122,200	126,800	130,800	128,800	127,300	126,800	132,700	138,800	153,500	145,700	137,500	124,400
22	122,100	127,300	130,800	128,800	127,300	126,800	133,000	139,900	153,500	145,400	137,100	124,000
23	122,100	127,700	130,700	128,700	127,200	126,800	133,300	141,300	153,100	145,000	136,700	123,500
24	122,100	128,000	130,700	128,700	127,100	126,900	133,600	142,400	152,900	144,700	136,300	123,100
25	122,000	128,200	130,700	128,600	127,100	126,900	133,800	144,600	152,800	144,300	136,000	122,700
26	121,900	128,300	130,700	128,500	127,000	126,900	134,100	146,800	152,900	143,900	135,600	122,300
27	121,900	128,400	130,600	128,500	127,000	126,900	134,200	149,400	152,900	143,500	135,200	121,800
28	121,800	128,500	130,600	128,300	127,000	126,900	134,400	151,600	152,900	143,300	134,800	121,400
29	121,700	128,600	130,500	128,200	-	127,000	134,700	152,900	152,900	143,000	134,400	121,000
30	121,700	128,700	130,500	128,100	-	127,000	134,900	153,200	152,800	142,900	134,000	120,600
31	121,700	-	130,400	128,000	-	127,000	-	153,200	-	142,700	133,500	-

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

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	5,405.15	123,300	-
Oct. 31	5,404.45	121,700	-1,600
Nov. 30	5,407.49	128,700	+7,000
Dec. 31	5,408.25	130,400	+1,700
Calendar year 1950	-	-	+9,900
Jan. 31	5,407.20	128,000	-2,400
Feb. 28	5,406.77	127,000	-1,000
Mar. 31	5,406.78	127,000	0
Apr. 30	5,410.10	134,900	+7,900
May 31	5,417.22	153,200	+18,300
June 30	5,417.10	152,800	-400
July 31	5,413.25	142,700	-10,100
Aug. 31	5,409.53	133,500	-9,200
Sept.30	5,403.93	120,600	-12,900
Water year 1950-51	-	-	-2,700

Provo River at Vivian Park, Utah

Location.--Lat 40°22', long. 111°34', in NW¼ sec. 25, T. 5 S., R. 3 E., on right bank half a mile downstream from North Fork, 3,500 ft northeast of Vivian Park, and three-quarters of a mile upstream from South Fork.

Drainage area.--600 sq mi, approximately.

Records available.--November 1911 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,200 ft (from topographic map). Prior to Nov. 13, 1933, staff gage at site three-quarters of a mile downstream at different datum.

Average discharge.--39 years, 354 cfs. (Since 1932 flow includes that of Weber-Provo diversion canal.)

Extremes.--Maximum discharge during year, 1,950 cfs May 31 (gage height, 6.00 ft); minimum daily, 173 cfs Nov. 1.
1911-51: Maximum discharge observed, 3,180 cfs June 11, 1921; minimum discharge, 23 cfs Mar. 11, 1948.

Remarks.--Records good. Station is below diversions for irrigation in Heber Valley and above those in vicinity of Provo. Flow regulated by Deer Creek Reservoir and small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River drainage into Daniels Creek. Records include flow of Weber-Provo diversion canal (see p. 121).

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

2.0	165	4.0	802
2.5	283	5.0	1,320
3.0	430	6.0	1,900

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	344	173	291	302	a306	302	313	477	1,550	514	398	411
2	344	182	291	302	a308	305	316	477	1,300	508	398	395
3	344	186	302	302	a309	305	316	473	971	522	404	386
4	344	188	316	305	a310	305	318	477	590	514	330	389
5	248	188	298	305	a311	302	321	480	671	511	242	395
6	193	188	294	302	a312	302	324	508	*710	504	234	398
7	182	188	299	302	*313	305	330	532	714	508	232	404
8	180	188	296	305	313	307	332	*543	714	514	*230	404
9	180	188	294	*305	313	307	338	543	734	508	232	408
10	186	188	294	307	313	307	341	543	768	511	247	*411
11	201	188	294	307	313	302	*335	557	747	500	408	401
12	*201	188	*291	307	310	302	330	568	664	497	473	395
13	215	188	291	284	310	305	335	568	637	494	480	392
14	227	188	291	305	307	*305	338	568	637	490	480	392
15	227	188	294	305	307	302	341	564	749	494	480	392
16	227	*188	291	305	307	302	344	564	915	508	477	389
17	227	188	288	310	307	302	344	575	1,030	511	470	389
18	227	199	288	310	307	302	344	579	1,050	*518	470	379
19	227	218	288	307	307	302	347	582	1,030	518	470	373
20	227	206	288	307	307	302	376	597	975	514	424	373
21	220	210	288	307	307	305	411	604	970	508	395	373
22	215	197	286	310	307	305	446	608	1,030	487	395	373
23	215	195	286	310	307	305	483	608	1,060	466	392	373
24	208	193	286	310	307	307	494	*608	838	460	389	373
25	204	222	286	307	307	307	500	615	696	456	386	379
26	204	247	286	307	305	310	508	622	634	460	386	376
27	208	278	288	307	305	310	504	637	*641	450	386	370
28	210	291	299	307	305	310	518	940	645	443	386	364
29	220	291	302	307	-	310	532	*1,550	645	446	392	358
30	215	291	305	307	-	310	508	1,800	592	420	401	355
31	182	-	302	305	-	313	-	1,850	-	401	417	-
Total	7,052	6,211	9,091	9,468	8,640	9,465	11,587	21,217	24,907	15,155	11,904	11,570
Mean	227	207	293	305	309	305	386	684	830	489	384	386
Ac-ft	13,990	12,320	18,030	18,780	17,140	18,770	22,980	42,080	49,400	30,060	23,610	22,950

Calendar year 1950: Max 1,830 Min 173 Mean 421 Ac-ft 305,000
Water year 1950-51: Max 1,850 Min 173 Mean 401 Ac-ft 290,100

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage.

South Fork Provo River at Vivian Park, Utah

Location.--Lat 40°21', long. 111°34', in SE¼ sec. 26, T. 5 S., R 3 E., on right bank a quarter of a mile southeast of Vivian Park and half a mile upstream from mouth.

Drainage area.--30 sq mi, approximately.

Records available.--November 1911 to September 1951.

Gage.--Water-stage recorder and Parshall flume. Altitude of gage is 5,240 ft (from topographic map). Prior to June 15, 1913, staff gage at site half a mile downstream at different datum. June 15, 1913, to Nov. 21, 1933, staff gage at site a quarter of a mile downstream at different datum.

Average discharge.--39 years (1912-51), 29.9 cfs.

Extremes.--Maximum discharge during year, 61 cfs May 28 (gage height, 1.49 ft); minimum, 7.4 cfs June 5.
1911-51: Maximum discharge observed, 123 cfs May 27, 1922; minimum discharge, that of June 5, 1951.

Remarks.--Records good. Station below all diversions.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 1 to Mar. 15, June 6 to Sept. 15)

0.5	11
.7	19
1.0	34
1.4	58

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	34	29	27	27	25	24	28	36	23	25	28
2	30	33	28	27	a26	25	24	27	35	22	25	26
3	30	33	30	26	a27	25	25	26	28	20	27	28
4	30	33	30	27	a27	25	25	25	22	20	26	30
5	30	32	31	27	a27	25	25	26	12	21	25	28
6	30	31	30	26	a28	25	25	26	*17	20	24	21
7	31	31	31	26	*27	25	26	27	*24	20	25	27
8	32	31	30	27	28	26	26	*27	20	20	*25	25
9	32	31	30	*27	28	26	25	27	20	21	25	29
10	*30	31	30	27	28	25	25	27	20	20	24	*30
11	32	31	30	27	28	25	*25	28	20	21	24	30
12	32	31	29	26	28	25	25	29	21	21	25	29
13	32	32	29	26	28	25	25	30	23	21	26	28
14	31	32	*30	25	27	*25	24	*31	22	20	27	28
15	32	32	29	25	27	26	24	30	20	17	27	27
16	31	*31	28	25	27	25	23	28	23	16	20	26
17	31	31	28	24	28	25	25	27	26	16	15	26
18	31	33	28	24	27	25	25	26	26	*19	19	26
19	31	40	28	24	27	25	26	25	25	20	22	25
20	31	37	28	24	26	25	28	25	26	23	26	24
21	31	37	27	24	26	25	27	28	26	25	30	24
22	30	34	26	25	27	25	28	28	24	26	30	24
23	31	33	27	25	26	24	28	28	25	24	30	24
24	29	32	27	25	26	24	31	30	25	23	29	25
25	28	31	27	26	26	25	29	34	24	23	30	25
26	28	31	27	26	25	25	28	40	24	23	30	24
27	30	31	27	27	25	25	27	52	*23	24	30	25
28	30	30	26	27	25	24	27	57	23	24	28	26
29	29	30	26	28	-	24	29	*56	24	24	28	25
30	33	30	26	27	-	24	28	48	23	24	28	24
31	33	-	26	27	-	24	-	41	-	22	28	-
Total	952	969	878	804	752	772	782	987	707	663	803	785
Mean	30.7	32.3	28.3	25.9	26.9	24.9	26.1	31.8	23.6	21.4	25.9	26.2
Ac-ft	1,890	1,920	1,740	1,590	1,490	1,530	1,550	1,960	1,400	1,320	1,590	1,560

Calendar year 1950: Max 54 Min 14 Mean 28.1 Ac-ft 20,370
Water year 1950-51: Max 57 Min 12 Mean 27.0 Ac-ft 19,540

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage.

Provo River at Provo, Utah

Location.--Lat 40°41'15", long. 111°41'45", in NE¼SE¼ sec. 3, T. 7 S., R. 2 E., on left bank 1,300 ft downstream from bridge on State Highway 114, 2 miles west of Provo, and 2 miles upstream from mouth.

Records available.--May 1903 to June 1905 (gage heights only; published as Provo River at San Pedro, Los Angeles and Salt Lake Ry. bridge near Provo, Utah, for period 1903-04 and as Provo River at Rio Grande Western Ry. bridge near Provo, Utah, for year 1905), May 1933 to September 1934, January 1937 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,510 ft (from topographic map). May 1903 to June 1905, staff gages at site three-quarters of a mile upstream at different datums. May 1933 to September 1934, staff gage at present site at different datum. January 1937 to November 1938, water-stage recorder at site 1,100 ft upstream at different datum.

Average discharge.--15 years (1933-34, 1937-51), 171 cfs.

Extremes.--Maximum discharge during year, 1,240 cfs May 31 (gage height, 6.34 ft); minimum, 1.0 cfs Aug. 17.

1903-5, 1933-34, 1937-51: Maximum discharge observed, 1,620 cfs May 27, 1904; practically no flow during several periods.

Remarks.--Records good. Station is below all diversions. At times entire flow is diverted above station for irrigation. Flow regulated by Deer Creek Reservoir and small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River drainage into Daniels Creek. Flow affected by Weber-Provo diversion canal (see p. 121). Factory race diverts water above station into Provo Bay, an arm of Utah Lake, and Provo River water commissioner furnished following records of this diverted flow for water year 1950-51:

Month	Diversion (acre-feet)	Month	Diversion (acre-feet)
October	558	May	701
November	516	June	678
December	508	July	428
January	676	August	484
February	706	September	546
March	732		
April	720	Water year 1950-51	7,253

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 10 to Sept. 30)

0.6	0.9	1.4	17	4.0	401
.7	1.6	1.7	35	5.0	707
.8	2.5	2.0	60	6.0	1,080
1.0	5.0	2.5	114	6.2	1,160
1.2	9.6	3.0	186		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	164	285	314	333	326	312	273	977	6.2	1.9	2.6
2	101	173	290	312	326	328	308	273	810	5.8	1.8	2.9
3	100	180	303	314	336	326	308	254	510	4.9	2.7	3.0
4	96	180	338	314	338	326	310	242	125	3.9	4.6	3.5
5	91	180	317	314	*333	326	308	244	60	5.8	6.0	2.7
6	140	178	305	312	331	326	303	242	72	4.6	3.2	2.5
7	138	178	317	310	331	331	303	227	*78	3.9	2.6	3.9
8	133	180	319	314	336	333	303	*219	78	4.7	3.4	3.0
9	128	180	317	314	336	333	*301	208	81	3.6	2.6	5.0
10	73	178	319	312	336	333	303	172	107	4.2	2.0	9.9
11	88	188	317	*312	340	326	299	154	109	4.6	2.0	12
12	*90	189	317	308	340	*319	281	154	52	5.0	1.6	*12
13	88	188	317	295	338	314	268	151	27	5.2	*1.4	13
14	89	201	*317	312	336	314	262	139	22	3.6	1.2	14
15	100	205	312	312	336	314	248	129	45	2.6	1.2	9.1
16	124	203	308	310	333	317	219	131	165	2.3	1.2	7.8
17	139	*207	308	317	333	312	178	125	281	*2.4	1.1	8.8
18	117	219	308	319	333	310	167	94	321	2.9	1.2	9.6
19	116	264	308	319	331	310	161	94	326	4.2	1.3	9.1
20	116	229	305	317	331	308	160	89	294	4.3	1.3	9.6
21	104	260	301	319	331	310	172	94	319	7.0	1.5	11
22	90	236	301	326	333	312	186	105	368	5.2	1.3	17
23	98	223	305	324	331	312	196	115	391	3.5	1.5	24
24	131	217	303	324	328	312	216	*125	255	2.1	1.4	40
25	102	234	303	324	326	310	242	95	130	1.9	1.4	42
26	97	262	303	324	326	310	248	102	*52	2.0	1.6	52
27	119	277	303	326	326	314	248	98	35	2.2	1.7	52
28	162	294	314	324	326	312	242	270	27	2.2	1.7	42
29	172	296	317	326	-	310	260	780	22	2.9	1.5	31
30	156	292	317	321	-	308	279	1,040	17	2.8	1.4	31
31	166	-	321	317	-	314	-	1,200	-	3.2	1.7	-
Total	3,552	6,455	9,615	9,806	9,314	9,856	7,591	7,638	6,156	119.7	61.0	486.0
Mean	115	215	310	316	333	318	253	246	205	3.86	1.97	16.2
Ac-ft	7,050	12,800	19,070	19,450	18,470	19,550	15,060	15,150	12,210	237	121	964

Calendar year 1950: Max 1,110 Min 0.6 Mean 218 Ac-ft 157,700
Water year 1950-51: Max 1,150 Min 1.1 Mean 194 Ac-ft 140,100

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 1-11; discharge furnished by water commissioner.

American Fork above upper power plant, near American Fork, Utah

Location.--Lat 40°27', long. 111°41', in NE¼ sec. 26, T. 4 S., R. 2 E., on right bank 500 ft downstream from Rock Creek, 1,000 ft upstream from the intake for upper power plant of Utah Power & Light Co., 4 miles upstream from mouth of canyon, and 8 miles northeast of American Fork, Utah.

Drainage area.--55 sq mi, approximately.

Records available.--October 1945 to September 1951 in reports of Geological Survey. January 1927 to September 1945 in files of Salt Lake City district office, Geological Survey.

Gage.--Water-stage recorder. Altitude of gage is 5,950 ft (from topographic map).

Average discharge.--24 years, 52.7 cfs.

Extremes.--Maximum discharge during year, 645 cfs Aug. 3 (gage height, 7.38 ft); minimum, 8.9 cfs Jan. 31.
1927-51: Maximum discharge that of Aug. 3, 1951; minimum daily, 5 cfs Feb. 3, 1936.

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

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project. Fifteen discharge measurements were made by Geological Survey in addition to those made by power company.

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

Oct. 1 to Dec. 31		Jan. 1 to Sept. 30			
4.5	15	4.4	11	5.6	128
4.7	26	4.6	21	6.0	211
5.0	49	5.0	51	6.5	350
		5.3	84	7.0	510

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	20	24	18	b16	16	23	85	*284	148	56	34
2	24	24	21	18	b16	16	25	80	219	146	55	33
3	24	22	21	20	b16	16	28	79	181	144	81	33
4	23	21	19	20	16	16	33	87	158	141	72	31
5	23	21	*18	20	*16	16	35	97	162	133	80	30
6	23	20	19	18	16	16	40	117	176	123	63	30
7	23	20	23	b18	16	16	48	133	185	120	58	30
8	22	22	24	18	16	16	56	135	*194	115	55	30
9	22	21	23	18	16	16	*63	141	199	109	53	30
10	21	18	22	18	16	16	67	*158	172	104	50	28
11	21	19	22	*18	18	14	62	181	164	100	47	28
12	21	21	21	18	18	*14	67	181	172	94	46	*28
13	*21	20	21	16	17	15	78	162	183	89	*45	28
14	21	21	22	18	15	15	93	146	219	87	44	28
15	21	20	*21	18	16	16	102	135	250	84	43	28
16	21	19	21	18	17	16	110	128	272	81	42	27
17	21	20	21	18	18	16	114	137	270	*79	40	a27
18	21	22	20	18	18	16	106	168	248	81	40	a27
19	21	30	20	16	16	16	102	183	248	a79	39	a26
20	21	*27	20	17	16	18	102	211	234	a77	39	a26
21	21	49	19	18	18	20	94	229	221	a75	40	a26
22	21	31	18	18	18	20	90	229	194	a73	40	a26
23	21	27	17	18	17	20	97	253	197	a71	38	a25
24	21	26	18	18	16	22	104	278	189	68	36	25
25	20	25	20	17	16	24	96	*304	*189	63	36	25
26	20	25	20	18	17	a25	93	338	192	a63	35	25
27	22	24	18	18	17	26	92	430	185	*a67	35	25
28	21	24	18	18	16	25	96	473	174	66	35	26
29	21	24	20	17	-	*24	100	450	170	69	34	25
30	20	24	20	b17	-	24	92	392	160	62	34	25
31	21	-	18	*b17	-	24	-	344	-	57	34	-
Total	669	707	629	555	464	570	2,308	6,464	6,061	2,868	1,445	835
Mean	21.6	23.6	20.3	17.9	16.6	18.4	76.9	209	202	92.5	46.6	27.8
Ac-ft	1,330	1,400	1,250	1,100	920	1,130	4,580	12,820	12,020	5,690	2,870	1,660

Calendar year 1950: Max 368 Min 14 Mean 67.5 Ac-ft 48,870
Water year 1950-51: Max 473 Min 14 Mean 64.6 Ac-ft 46,770

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

Dry Creek near Alpine, Utah

Location.--Lat 40°28'30", long. 111°45'30", in NE¼ sec. 18, T. 4 S., R. 2 E., on right bank 2 miles northeast of Alpine and 3½ miles upstream from Fort Creek.

Records available.--July 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,280 ft (from topographic map).

Extremes.--Maximum discharge during year not determined, occurred during flood of Aug. 3 which destroyed gaging station; minimum discharge, 3.4 cfs Nov. 10.
1947-51: Maximum discharge not determined, occurred Aug. 3, 1951; minimum discharge, that of Nov. 10, 1950.

Remarks.--Records good except those for periods of no gage-height record, which are poor. The flow of Grove Creek, usually less than 1 cfs, was diverted to Dry Creek above station from about Dec. 7 to Apr. 11. During the remainder of the year it is normally not included.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 30 to May 15, May 25 to June 6, July 16 to Aug. 2)

0.6	3.0	0.9	8.0	1.6	52
.7	4.0	1.0	11	2.0	108
.8	5.7	1.3	26	2.5	204

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.4	5.2	6.8	7.3	5.0	7.5	11	23	*113	54	16	
2	6.2	9.8	5.9	7.5	6.2	7.8	13	21	83	53	16	
3	5.9	5.9	6.2	7.8	6.4	7.5	18	22	67	51	*125	
4	5.7	5.5	7.1	7.5	6.6	7.5	21	32	64	49	20	
5	5.7	5.5	6.4	7.8	*6.4	7.5	19	38	69	44	50	
6	5.9	5.5	6.6	7.3	6.4	7.5	24	39	74	40	25	
7	5.7	5.2	6.2	6.6	6.4	7.8	30	42	79	37	20	
8	5.7	5.4	6.2	7.3	6.8	8.0	34	38	*95	33		8
9	5.4	4.8	6.4	7.3	7.1	8.0	*41	38	78	29	15	
10	5.4	3.0	6.6	7.1	7.3	7.8	39	*45	64	25		
11	5.2	3.5	6.6	*7.1	7.8	7.8	33	58	73	22		
12	5.2	3.7	6.6	7.1	7.5	*7.5	38	56	73	21		
13	*5.2	3.9	6.6	7.1	7.3	7.8	47	46	83	20	*12	
14	5.0	4.2	6.6	7.1	7.1	7.8	54	43	118	18		
15	5.0	4.2	*7.1	7.1	7.3	7.8	62	39	129	18		
16	5.2	4.0	7.1	7.1	7.8	7.5	59	37	120	18		
17	5.0	4.0	7.1	7.3	7.8	7.5	52	46	100	*16		
18	5.0	4.3	7.1	7.1	8.0	7.5	40	60	97	15		
19	4.8	11	7.1	7.3	7.8	7.3	38	65	98	15		
20	5.0	*6.6	7.1	6.8	7.8	7.8	38	70	86	17		
21	4.8	19	7.1	7.1	7.8	8.9	32	72	88	30		
22	4.8	10	7.5	7.1	7.8	9.8	32	76	77	25		
23	4.8	8.0	7.5	7.1	8.0	9.8	38	95	77	21		6
24	4.8	7.5	8.0	6.8	7.8	11	39	112	73	20	10	
25	4.8	8.0	8.3	6.8	7.8	15	30	*136	*83	18		
26	4.8	8.0	8.3	6.6	7.8	17	28	160	84	18		
27	5.0	7.8	8.0	6.6	7.8	16	28	172	83	19		
28	5.2	7.5	8.0	6.6	7.5	14	30	190	73	18		
29	5.0	7.1	8.0	6.4	-	13	31	204	68	28		
30	4.8	7.1	8.0	5.7	-	13	25	202	60	19		
31	5.0	-	7.8	5.0	-	11	-	164	-	17		-
Total	162.4	195.2	219.9	216.4	203.1	291.7	1,024	2,441	2,529	828	537	210
Mean	5.24	6.51	7.09	6.98	7.25	9.41	34.1	78.7	84.3	26.7	17.3	7.00
Ac-ft	322	387	436	429	403	579	2,030	4,840	5,020	1,640	1,070	417

Calendar year 1950: Max 129 Min 3 Mean 19.4 Ac-ft 14,080
Water year 1950-51: Max 204 Min 3 Mean 24.3 Ac-ft 17,570

Peak discharge (base, 100 cfs).--May 27 (7 p.m.) 290 cfs (2.78 ft); June 15 (5 p.m.) 182 cfs (2.35 ft); July 21 (4 p.m.) 100 cfs (1.85 ft); Aug. 3 (1 p.m.) stage and discharge not determined.
* Discharge measurement made on this day.
Note.--No gage-height record Aug. 3 to Sept. 30; discharge estimated on basis of discharge measurements, weather records and records for nearby streams.

Fort Creek at Alpine, Utah

Location.--Lat 40°28'00", long. 111°46'45", in SW¼ sec. 13, T. 4 S., R. 1 E., on right bank three-quarters of a mile northwest of Alpine and 1½ miles above mouth.

Drainage area.--6.1 sq mi, approximately.

Records available.--July 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,050 ft (from topographic map).

Extremes.--Maximum discharge during year, 246 cfs Aug. 4 (gage height, 4.60 ft), from rating curve extended above 78 cfs; no flow at times during July, August, and September. 1947-51: Maximum discharge, that of Aug. 4; minimum, that of 1951.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. One diversion above station for irrigation.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 14 to Sept. 30)

0.6	0	0.9	1.1	1.4	11
.7	.2	1.0	2.6	1.8	27
.8	.5	1.2	5.8	2.2	50

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.9	3.3	3.7	b3.7	b3.0	4.5	7.4		*18	4.9	1.2	3.0
2	2.9	4.6	3.7	b3.7	b3.2	4.4	7.9		15	4.7	3.2	2.9
3	2.1	3.9	4.0	b3.7	b3.5	5.1	11	13	14	4.5	14	2.9
4	2.7	3.9	4.5	3.7	3.6	4.4	11		14	3.4	*10	2.7
5	2.7	4.0	4.2	3.6	*3.6	4.2	9.8		14	2.4	15	2.4
6	2.9	4.0	3.7	b3.5	3.4	4.2	11		15	3.7	4.5	0
7	3.0	3.9	3.9	b3.5	3.6	4.4	15		15	3.4	3.7	2.5
8	3.0	4.2	3.7	b3.4	4.2	4.9	16	19	*15	3.4	3.7	2.7
9	2.9	4.2	3.9	b3.4	4.5	5.1	*17		11	3.4	3.7	2.9
10	2.9	b3.0	4.2	b3.4	5.1	4.7	15	*22	12	3.4	.5	2.7
11	2.9	b3.3	4.5	*3.4	5.4	5.3	15	25	13	3.4	1.4	2.6
12	2.9	3.6	4.5	b3.3	5.1	*5.1	19	22	12	3.4	3.2	*1.7
13	*3.0	3.6	4.4	b3.3	4.9	4.7		18	13	.9	*3.4	.7
14	3.0	3.7	4.4	3.3	4.7	4.7		17	16	.6	3.7	2.4
15	3.2	3.7	*4.2	3.3	4.7	5.1		15	15	2.2	3.7	2.4
16	3.3	3.6	4.0	3.3	4.5	5.1	21	14	12	2.6	4.4	2.4
17	3.2	3.4	4.0	3.3	4.5	4.9		19	7.2	*3.0	1.3	2.5
18	3.2	3.6	4.0	3.2	4.5	6.1		21	9.1	3.2	2.3	2.5
19	3.3	4.5	3.9	3.2	4.9	5.3		25	10	3.2	3.2	.7
20	3.2	*3.3	3.9	b3.0	4.5	5.1		29	9.2	3.3	3.4	2.0
21	3.0	6.5	4.0	b3.0	4.4	6.0		26	14	4.7	2.4	2.9
22	3.0	4.5	4.0	3.0	4.4	6.5		24	8.7	.4	3.2	3.0
23	3.2	4.0	4.0	3.0	4.5	6.7		31	8.4	1.0	2.3	3.0
24	3.2	4.0	4.0	3.3	4.5	7.6		35	7.4	3.0	.5	3.2
25	3.0	4.0	4.2	3.6	4.4	9.5	15	*38	*5.8	3.2	3.0	2.5
26	3.0	4.0	4.2	3.6	4.4	11		44	4.3	3.4	2.9	.4
27	3.2	4.0	4.2	3.6	4.5	10		49	6.5	3.2	2.9	3.2
28	3.2	4.0	4.0	3.6	4.2	8.7		42	6.3	4.0	3.0	3.3
29	3.2	4.0	4.2	b3.5	-	7.9		37	5.6	4.8	3.2	3.3
30	3.2	4.0	4.2	b3.2	-	7.6		29	5.3	3.0	.9	3.3
31	3.3	-	b4.1	b3.0	-	7.6	-	24	-	.4	1.8	-
Total	93.7	118.3	126.4	104.6	120.7	186.4	473.1	747	331.8	94.1	115.6	72.7
Mean	3.02	3.94	4.08	3.37	4.31	6.01	15.8	24.1	11.1	3.04	3.73	2.42
Ac-ft	186	235	251	207	239	370	938	1,480	658	187	229	144

Calendar year 1950: Max 41 Min 0.1 Mean 7.72 Ac-ft 5,590
Water year 1950-51: Max 49 Min 0 Mean 7.08 Ac-ft 5,120

Peak discharge (base, 75 cfs).--May 27 (6 p.m.) 84 cfs (2.70 ft); Aug. 3 (5 p.m.) 148 cfs (3.50 ft); Aug. 4 (11:30 p.m.) 246 cfs (4.60 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Apr. 13 to May 9; discharge estimated on basis of weather records and records for nearby streams.

Transmountain diversions from Colorado River basin to Jordan River basin

The following tunnel and ditches in Utah, each equipped with a water-stage recorder, divert water from the Colorado River basin to the Jordan River basin.

Strawberry tunnel whose west portal is in SW¼ sec. 34, T. 7 S., R. 6 E., diverts water from Strawberry Reservoir on Strawberry River to Diamond Fork in the Jordan River basin. Records furnished by Spanish Fork Water Users' Association and include tunnel seepage.

Upper Hobble Creek ditch diverts water from tributary of Strawberry River to Daniels Creek. Gage is located in NW¼ sec. 15, T. 6 S., R. 6 E.

Lower Hobble Creek ditch diverts water from tributary of Strawberry River to Daniels Creek. Gage is located in NW¼ sec. 15, T. 6 S., R. 6 E.

Strawberry River and Willow Creek ditches divert water from the Strawberry River basin to Daniels Creek (a tributary of Provo River). The flow of each is gaged in sec. 4, T. 2 S., R. 12 W., Uinta Special Meridian.

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

Month	Strawberry tunnel	Upper Hobble Creek ditch	Lower Hobble Creek ditch	Strawberry River and Willow Creek ditches
October	486	0	0	135
November	268	0	0	0
December	246	0	0	0
Calendar year 1950	66,630	355	296	2,720
January	246	0	0	0
February	250	0	0	0
March	307	0	0	0
April	591	0	0	0
May	1,460	372	373	20
June	16,190	293	277	1,200
July	21,850	15	4	638
August	15,520	0	0	335
September	10,760	0	0	169
Water year 1950-51	68,170	680	654	2,500

Jordan River at Narrows, near Lehi, Utah

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

Drainage area.--2,960 sq mi, approximately, including 280 sq mi in closed basin in Cedar Valley.

Records available.--May to December 1904, July 1913 to September 1934, October 1934 to September 1951.

Gage.--Water-stage recorders. Altitude of gages is 4,480 ft. Prior to May 16, 1920, staff gage and May 16, 1920 to Sept. 30, 1934, water-stage recorder, at outlet of Utah Lake, 7½ miles upstream at different datum.

Average discharge.--38 years (1913-51), 359 cfs.

Extremes.--1913-51: Maximum daily discharge, 1,370 cfs June 8, 1922 (gage height, 7.78 ft, site and datum then in use); no flow at times when gates were closed.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	309	121	107	61	14	113	124	124	671	782	506	733
2	283	121	107	23	14	113	130	125	675	815	476	722
3	289	122	106	21	14	113	136	123	666	835	478	730
4	296	122	107	21	14	116	141	178	673	831	301	774
5	297	122	108	21	14	72	141	225	681	834	170	797
6	299	122	107	21	14	31	140	275	686	829	167	773
7	287	123	107	21	14	60	140	343	688	832	176	769
8	290	127	107	21	14	94	139	434	693	831	216	762
9	336	126	107	21	14	115	147	466	684	833	376	766
10	422	127	107	17	15	107	145	487	655	835	459	766
11	429	128	107	15	15	113	148	537	655	856	556	750
12	429	119	107	15	15	114	157	489	649	873	624	756
13	427	109	106	15	14	113	164	361	647	873	651	721
14	425	109	105	15	15	115	173	454	683	860	783	705
15	331	109	106	15	15	116	194	527	740	837	831	703
16	321	109	106	15	15	112	234	516	747	840	825	702
17	308	109	106	15	15	115	322	508	749	867	792	702
18	268	108	106	16	15	116	353	510	752	869	793	703
19	268	109	106	15	48	116	443	562	743	868	829	697
20	267	109	106	15	100	116	454	557	748	860	863	659
21	253	109	106	15	86	116	426	367	734	793	868	652
22	218	109	106	14	115	112	403	413	690	676	831	660
23	219	109	106	14	117	116	434	553	704	628	778	660
24	245	108	99	14	117	112	458	573	704	640	772	635
25	257	107	95	14	117	57	423	625	703	664	783	590
26	225	107	94	14	117	36	394	671	711	695	770	604
27	172	106	94	14	115	21	380	722	742	682	759	623
28	133	106	94	14	113	19	435	707	760	637	721	627
29	119	106	94	14	-	22	281	707	749	522	713	558
30	121	106	92	14	-	67	125	695	755	500	708	505
31	121	-	94	14	-	124	-	674	-	514	708	-
Total	8,664	3,424	3,205	554	1,305	2,882	7,784	14,508	21,137	23,811	19,283	20,804
Mean	279	114	103	17.9	46.6	93.0	259	468	705	768	622	693
Ac-ft	17,180	6,790	6,360	1,100	2,590	5,720	15,440	28,780	41,920	47,230	38,250	41,260

Calendar year 1950: Max 857 Min 12 Mean 376 Ac-ft 271,800
Water year 1950-51: Max 873 Min 14 Mean 349 Ac-ft 252,600

Surplus Canal at Salt Lake City, Utah

Location.--Lat 40°44', long. 111°55', in SW¼SW¼ sec. 14, T. 1 S., R. 1 W., on right bank 300 ft downstream from diversion dam which is an eighth of a mile downstream from highway bridge over Jordan River on Twenty-first South Street, Salt Lake City.

Records available.--December 1942 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,219.02 above mean sea level, datum of 1929. Since Dec. 31, 1946, auxiliary water-stage recorder about 1 mile downstream.

Average discharge.--8 years (1943-51), 141 cfs.

Extremes.--Maximum discharge during year, 585 cfs May 30 (gage height, 6.22 ft); minimum daily, 72 cfs Feb. 2, Apr. 4.
1942-51: Maximum discharge, 965 cfs June 3, 1944 (gage height, 7.50 ft); minimum daily, 31 cfs July 4, 1943.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by head gates at diversion dam 300 ft above station. Canal was built to bypass flood water of Jordan River around Salt Lake City residential area. (See p. 133). for records of combined flow of Jordan River and Canal.) Several diversions below station for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	128	113	144		76	116	86	*196	431	162	348	148
2	110	130	143		*72	118	83	182	398	155	357	153
3	114	148	138	a95	74	124	87	156	326	155	*327	150
4	105	146	142		76	118	72	137	307	139	417	137
5	95	148	132		132	120	82	140	245	145	502	144
6	98	148	*129		137	125	83	152	208	129	403	139
7	93	149	128		112	127	80	166	209	136	330	128
8	91	152	123	a85	104	169	78	205	214	134	292	124
9	90	165	122		104	182	88	334	188	125	256	125
10	90	160			92	178	87	220	163	113	251	127
11	96	156			90	173	86	209	174	115	212	138
12	113	158	a120		90	168	81	239	158	123	196	141
13	105	138		a75	93	163	78	278	162	*129	155	149
14	101	123			*92	*164	82	*256	*174	127	*139	*150
15	96	134		*76	93	158	83	245	179	131	146	142
16	91	132		79	94	146	80	246	199	127	132	142
17	82	129		77	92	131	82	246	211	126	116	147
18	76	118		76	96	128	88	220	216	124	107	150
19	124	142		78	99	120	82	214	204	131	110	168
20	159	154		78	96	111	88	242	195	148	119	186
21	158	*203	a110	74	97	109	123	345	240	216	124	168
22	153	200		74	95	114	130	316	319	377	125	183
23	146	177		76	95	107	122	305	267	372	124	186
24	144	165		77	106	100	140	277	243	318	127	191
25	143	157		96	102	96	167	282	247	303	119	184
26	111	154		101	108	107	172	279	239	286	120	173
27	*115	152	a100	91	120	107	173	320	184	287	123	168
28	119	151	(*)	97	*116	94	164	422	186	321	141	167
29	96	144	98	87	-	91	196	*547	*172	400	107	179
30	89	143	97	80	-	*90	240	561	165	405	124	161
31	98	-	a95	78	-	92	-	509	-	369	*142	-
Total	3,428	4,489	3,611	2,595	2,753	3,946	3,283	8,446	6,823	6,328	6,271	4,648
Mean	111	150	116	83.7	98.3	127	109	272	227	204	202	155
Ac-ft	6,800	8,900	7,160	5,150	5,460	7,830	6,510	16,750	13,530	12,550	12,440	9,220

Calendar year 1950: Max 393 Min 68 Mean 167 Ac-ft 121,100
Water year 1950-51: Max 561 Min 72 Mean 155 Ac-ft 112,300

* Discharge measurement made on this day.
a No gage-height record at base gage; discharge estimated on basis of engineers' notes, 1 measurement, and records for Surplus Canal at auxiliary gage and Jordan River at Salt Lake City.

Jordan River at Salt Lake City, Utah

Location.--Lat 40°44', long. 111°55', in SW¼SW¼ sec. 14, T. 1 S., R. 1 W., a quarter of a mile downstream from highway bridge on Twenty-first South Street, Salt Lake City and 2 miles downstream from Mill Creek.

Records available.--December 1942 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,220.73 ft above mean sea level, datum of 1929.

Average discharge.--8 years (1943-51), 145 cfs.

Extremes.--Maximum discharge during year, 285 cfs Oct. 1 (gage height, 4.71 ft); minimum, 63 cfs May 11.
Maximum combined discharge during year (Jordan River and Surplus Canal), 854 cfs May 29, 30; minimum daily, 182 cfs Apr. 8.
1942-51: Maximum discharge, 384 cfs June 3, 1944 (gage height, 5.55 ft); minimum daily, 13 cfs Apr. 9, 13, 14, 1943, July 19, 1944.
Maximum combined discharge (Jordan River and Surplus Canal), 1,190 cfs June 3, 1944; minimum daily, 145 cfs May 18, 1946.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by gates and pumps at outlet of Utah Lake. Many diversions above station for irrigation and industrial and municipal water supplies. Surplus Canal diverts water 1,000 ft upstream from station (see p.132). For records of combined flow see following page.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 12 to May 21, June 2 to Sept. 30)

1.8	62
2.0	74
3.0	142
4.0	222
4.6	275

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	275		148	145	135	130	121	*134	204	129	192	168
2	255		148	142	*134	132	120	122	190	129	150	168
3	244		148	142	136	132	118	113	138	130	*148	168
4	240		152	142	141	130	112	105	106	144	204	164
5	238	a150	154	141	116	130	107	109	116	143	182	164
6	237		*153	141	112	133	107	123	102	125	143	160
7	235		154	137	127	140	104	129	113	127	118	151
8	230		154	136	124	123	104	103	116	126	104	148
9	230		149	134	123	95	112	82	113	129	103	148
10	235		144	135	121	92	113	72	156	129	110	154
11	242		151	134	120	90	113	67	115	133	105	152
12	238		152	133	119	87	113	81	107	137	112	156
13	237		152	132	119	87	112	103	106	*140	123	160
14	229		152	132	*118	*87	113	*90	*113	140	*130	*162
15	222		152	*131	118	86	113	85	120	141	138	154
16	218	a155	152	132	118	107	113	88	131	138	147	153
17	208		152	132	118	123	115	88	138	136	150	159
18	207		152	134	119	122	120	76	144	133	144	148
19	171		151	142	120	121	110	75	141	129	143	129
20	141		152	140	120	120	113	93	141	138	150	135
21	142	(*)	152	141	120	123	111	154	152	169	157	138
22	141	154	152	147	120	123	102	144	186	193	160	141
23	140	148	153	147	122	120	104	141	167	188	161	147
24	139	146	153	150	124	118	110	160	161	176	159	149
25	141	145	152	159	124	117	121	180	162	169	156	151
26	144	144	152	153	126	124	122	193	152	163	156	147
27	*148	144	149	149	130	122	120	212	133	162	154	150
28	158	145	*149	149	*130	117	115	247	136	172	145	151
29	152	147	145	144	-	118	130	*262	*136	196	148	160
30	151	148	144	139	-	*118	152	260	131	204	154	153
31	a150	-	147	137	-	120	-	228	-	198	*163	-
Total	6,138	4,526	4,670	4,352	3,454	3,587	3,440	4,119	4,126	4,666	4,509	4,588
Mean	198	151	151	140	123	116	115	133	138	151	145	153
Ac-ft	12,170	8,980	9,260	8,630	6,850	7,110	6,820	8,170	8,180	9,250	8,940	9,100

Calendar year 1950: Max 279 Min 72 Mean 148 Ac-ft 107,500
Water year 1950-51: Max 275 Min 67 Mean 143 Ac-ft 103,500

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of one discharge measurement, weather records, and records for Surplus Canal at Salt Lake City.

Combined discharge, in cubic feet per second, of Jordan River and Surplus Canal at Salt Lake City, Utah, water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	403	263	292	240	211	246	207	330	635	291	540	316
2	365	280	291	237	206	250	203	304	586	284	487	321
3	358	298	286	237	210	256	205	269	464	285	475	318
4	345	296	294	237	217	248	184	242	413	283	621	301
5	333	298	286	236	248	250	189	249	361	288	684	308
6	335	298	282	226	249	258	190	275	310	254	546	299
7	328	299	282	222	239	267	184	295	322	263	448	279
8	321	302	277	221	228	292	182	308	330	260	396	272
9	320	315	271	219	227	277	200	416	301	254	359	273
10	325	310	264	220	213	270	200	292	319	242	361	281
11	338	311	271	209	210	263	199	276	289	248	317	290
12	351	313	272	208	209	255	194	320	265	260	308	297
13	342	293	272	207	212	250	190	381	268	269	278	309
14	330	278	272	207	210	251	195	346	287	267	269	312
15	318	289	272	207	211	244	196	330	299	272	284	296
16	309	287	262	211	212	253	193	334	330	265	279	295
17	290	284	262	209	210	254	197	334	349	262	266	306
18	282	273	262	210	215	250	208	296	360	257	251	298
19	295	297	261	220	219	241	192	289	345	260	253	297
20	300	309	262	218	216	231	201	335	336	286	269	321
21	300	358	262	215	217	232	234	499	392	385	281	306
22	294	354	262	221	215	237	232	460	505	570	285	324
23	286	325	263	223	217	227	226	446	434	560	285	333
24	283	311	263	227	230	218	250	437	404	494	286	340
25	284	302	262	255	226	213	288	462	409	472	275	335
26	255	298	252	254	234	231	294	472	391	449	276	320
27	263	296	249	240	250	229	293	532	317	449	277	318
28	277	296	249	246	246	211	279	689	322	493	286	318
29	248	291	243	231	-	209	326	809	308	596	255	339
30	240	291	241	219	-	208	392	821	296	609	278	314
31	248	-	242	215	-	212	-	737	-	567	305	-
Total	9,566	9,015	8,281	6,947	6,207	7,533	6,723	12,565	10,949	10,994	10,780	9,236
Mean	309	300	267	224	222	243	224	405	365	355	348	308
Ac-ft	18,970	17,880	16,430	13,780	12,310	14,940	13,330	24,920	21,720	21,810	21,380	18,320

Calendar year 1950: Max 549 Min 193 Mean 316 Ac-ft 228,600
Water year 1950-51: Max 821 Min 182 Mean 298 Ac-ft 215,800

Sevier River at Hatch, Utah

Location.--Lat 37°39'00", long. 112°25'30", in SW¼NW¼ sec. 28, T. 36 S., R. 5 W., on left bank 300 ft downstream from bridge, 0.2 mile east of Hatch, and 2.8 miles downstream from Mammoth Creek.

Drainage area.--260 sq mi, approximately.

Records available.--June 1911 to September 1928, June 1939 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,870 ft (from river-profile map). Prior to May 7, 1914, staff gages and May 7, 1914, to Oct. 3, 1949, water-stage recorder, at several sites within 2 miles of present site at various datums.

Average discharge.--20 years (1912-13, 1914-16, 1917-18, 1922-23, 1924-27, 1939-51), 132 cfs.

Extremes.--Maximum discharge during year, 248 cfs May 28 (gage height, 2,17 ft); minimum, 39 cfs Sept. 24.
1911-28, 1939-51: Maximum discharge not determined, occurred May 25, 1914, when Hatchtown Dam failed; maximum recorded, 1,490 cfs May 26, 1922 (gage height, 5.25 ft, datum then in use); minimum daily, 10 cfs for several days in 1912 when water was stored in Hatchtown Reservoir. Minimum natural flow, that of Sept. 24, 1951.

Remarks.--Records good except those for periods of ice effect, which are fair. Two small diversions from Mammoth Creek above station for irrigation. No regulation since Hatchtown Dam failed in 1914.

Revisions (water years).--W 960: 1939-40.

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

Oct. 1 to Nov. 19		Nov. 20 to Sept. 30	
1.3	45	1.2	40
1.5	79	1.4	68
		1.7	129
		2.0	202

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	51	64	b55	b45	b56	51	59	127	51	54	53
2	*55	51	60	b50	b45	b58	50	57	116	51	51	49
3	55	51	64	b55	b50	*b60	50	54	109	51	57	45
4	55	51	64	*59	b53	b58	49	53	101	50	54	44
5	55	50	64	59	57	56	50	54	93	49	49	44
6	53	51	60	b55	59	57	53	60	85	49	46	44
7	53	51	64	b52	*60	57	51	64	81	47	46	44
8	53	51	64	b50	60	59	51	68	77	47	44	44
9	51	51	62	b50	60	59	51	72	72	46	42	44
10	53	b48	64	b50	60	59	53	72	68	46	44	42
11	53	b46	64	54	60	59	*53	77	67	46	*44	42
12	53	b48	64	56	59	59	53	91	65	46	42	42
13	53	59	62	b54	b58	57	53	97	65	47	42	*44
14	53	61	64	b52	b57	62	54	99	65	47	41	44
15	53	b56	64	b50	b56	62	57	107	62	49	41	42
16	53	58	62	b51	b54	59	59	95	60	47	42	41
17	53	61	62	b52	b54	b55	62	81	59	49	42	41
18	53	65	62	53	57	b50	60	*85	57	*47	41	41
19	53	79	64	54	b55	54	64	99	57	47	44	40
20	51	*72	60	b52	b52	54	65	107	56	47	44	40
21	51	68	b59	b50	54	54	60	120	54	53	45	40
22	51	67	b58	53	54	*53	60	131	*56	56	45	40
23	51	65	b57	56	56	50	60	131	56	50	44	41
24	51	65	b56	57	b54	50	65	125	56	49	44	41
25	51	65	b59	56	b52	50	67	147	54	46	42	41
26	51	64	b58	56	54	50	*65	184	54	47	41	41
27	*51	64	b57	57	56	50	59	199	54	50	42	41
28	51	62	b57	57	b54	50	62	202	53	49	44	46
29	51	62	b58	59	-	50	67	179	53	47	54	46
30	51	62	b59	b55	-	51	62	164	53	46	56	45
31	51	-	60	b50	-	53	-	145	-	46	64	-
Total	1,627	1,755	1,898	1,669	1,545	1,711	1,716	3,278	2,085	1,498	1,431	1,292
Mean	52.5	58.5	61.2	53.8	55.2	55.2	57.2	106	69.5	48.3	46.2	43.1
Ac-ft	3,230	3,480	3,760	3,310	3,060	3,390	3,400	6,500	4,140	2,970	2,840	2,560

Calendar year 1950: Max 292 Min 46 Mean 88.5 Ac-ft 64,050
Water year 1950-51: Max 202 Min 40 Mean 58.9 Ac-ft 42,640

Peak discharge (base, 500 cfs).--No peak above base.
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Sevier River near Circleville, Utah

Location (revised).--Lat 38°06', long. 112°19', in SW¼ sec. 20, T. 31 S., R. 4 W. Salt Lake meridian, on left bank 2 miles upstream from Pine Creek and 6 miles southwest of Circleville.

Drainage area.--950 sq mi, approximately.

Records available.--May to September 1912, April 1914 to September 1927, November 1949 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,240 ft (from river-profile map). May 10 to Sept. 19, 1912, staff gage at different datum.

Average discharge.--10 years (1914-22, 1923-24, 1950-51), 215 cfs.

Extremes.--Maximum discharge during year, 709 cfs July 22 (gage height, 5.26 ft); minimum, 30 cfs July 13.
1912, 1914-27, 1949-51: Maximum discharge, 1,960 cfs about May 21, 1922 (gage height, 8.6 ft, from high-water mark), from rating curve extended above 1,000 cfs by logarithmic plotting; minimum, that of July 13, 1951. Flood of March 1938 probably exceeded that of May 1922.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Many diversions above and below station.

Revisions (water years).--W 1180: 1922(M).

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

1.6	24
2.0	61
3.0	192
3.6	300

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	75	74	132	114	87	111	66	71	119	35	48	a42
2	71	79	127	101	103	117	61	69	100	36	58	a40
3	*71	79	127	113	118	111	59	63	82	36	129	a38
4	75	78	136	127	127	113	58	57	78	35	222	a38
5	75	75	132	128	132	112	61	52	70	36	103	a37
6	74	75	127	118	136	120	61	51	60	33	a75	a36
7	74	76	133	101	127	119	58	47	54	32	a55	a36
8	75	79	136	100	124	120	54	48	52	32	a45	a36
9	73	78	129	106	124	120	53	49	49	32	a40	a36
10	72	72	127	108	123	117	47	47	46	31	a38	a36
11	68	87	127	114	123	109	45	48	50	31	a37	a36
12	69	85	128	117	115	108	*43	47	51	31	36	*36
13	68	120	127	112	107	111	43	52	50	30	*35	38
14	71	138	126	107	105	114	45	65	44	31	35	39
15	68	138	127	113	109	114	43	85	41	32	35	38
16	65	136	*126	114	109	114	42	97	37	33	37	37
17	68	*140	126	115	112	108	43	*79	36	*33	39	37
18	69	142	119	*115	115	85	43	69	37	34	35	38
19	69	160	120	119	*112	85	42	71	36	34	37	38
20	70	164	122	113	107	79	42	76	36	41	36	39
21	70	142	119	109	113	*76	42	93	*36	64	36	40
22	69	139	119	119	115	79	40	99	38	*299	40	39
23	69	138	118	128	113	73	40	103	38	100	41	42
24	69	138	117	124	105	73	40	95	37	a50	39	41
25	69	132	118	126	109	70	40	94	36	a40	36	39
26	64	131	119	127	119	73	*43	108	36	a35	35	a38
27	64	131	117	124	117	69	44	143	35	81	38	a36
28	68	131	118	128	113	61	47	150	35	88	41	a40
29	68	132	117	131	-	63	57	154	34	50	50	47
30	70	132	122	109	-	62	69	135	34	49	49	45
31	70	-	127	93	-	63	-	128	-	48	44	-
Total	2,170	3,421	3,865	3,573	3,219	2,949	1,471	2,545	1,487	1,572	1,624	1,158
Mean	70.0	114	125	115	115	95.1	49.0	82.1	49.6	50.7	52.4	38.6
Ac-ft	4,300	6,790	7,670	7,090	6,380	5,850	2,920	5,050	2,950	3,120	3,220	2,300

Calendar year 1950: Max 216 Min 52 Mean 106 Ac-ft 76,590
Water year 1950-51: Max 299 Min 30 Mean 79.6 Ac-ft 57,640

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of available trace, weather records, and records for stations at Hatch and near Kingston.

Sevier River near Kingston, Utah

Location.--Lat 38°12', long. 112°12', in NE¼NW¼ sec. 16, T. 30 S., R. 3 W., on left bank 1,000 ft upstream from bridge on State Highway 22, 1 mile west of Kingston, and 2 miles upstream from East Fork.

Drainage area.--1,110 sq mi, approximately.

Records available.--June 1914 to September 1951.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,980 ft (from river-profile map). Prior to Sept. 20, 1918, at site about 1 mile downstream at different datum.

Average discharge.--37 years, 143 cfs.

Extremes.--Maximum discharge during year, 549 cfs July 22 (gage height, 2.25 ft); minimum, 7.0 cfs July 11, 12 (gage height, 0.59 ft).

1914-51: Maximum discharge, about 3,000 cfs (including estimated flow of 360 cfs in overflow channel bypassing station) Mar. 4, 1938 (gage height, 5.20 ft), from rating curve extended above 600 cfs; minimum, 4 cfs Sept. 9, 1943.

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

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

0.6	7.0	0.9	38
.7	14	1.1	76
.8	24	1.5	194

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	50	151	160	88	138	94	22	34	9.1	16	13
2	57	50	151	141	120	141	78	22	35	9.1	15	13
3	*55	52	151	151	130	141	68	21	24	8.4	22	13
4	45	52	167	160	145	141	41	20	21	8.4	140	13
5	40	55	163	157	170	135	41	19	19	7.7	68	13
6	32	57	154	154	177	141	43	20	19	8.4	28	13
7	32	74	157	144	167	144	34	21	17	7.7	21	13
8	31	81	157	132	154	148	34	22	15	9.1	24	13
9	31	81	157	138	151	148	35	21	15	8.4	20	13
10	27	76	157	144	151	141	37	19	15	7.7	18	13
11	27	98	154	151	151	135	34	18	14	7.0	16	13
12	32	104	154	148	144	135	*32	18	13	7.7	15	*13
13	40	115	154	148	135	135	30	18	13	8.4	*13	13
14	38	138	157	148	129	141	30	19	12	8.4	12	14
15	34	154	157	144	132	141	30	22	11	8.4	12	15
16	34	167	*157	151	132	138	27	21	12	8.4	12	15
17	27	*167	154	151	129	135	24	*20	9.8	*8.4	12	16
18	25	163	151	151	135	121	23	20	9.1	8.4	12	17
19	25	194	151	*151	*135	121	21	20	9.1	9.1	12	17
20	34	191	151	148	132	115	22	25	9.1	9.8	12	17
21	31	163	151	144	138	*104	22	30	*8.4	9.8	12	17
22	30	154	148	148	138	98	22	35	8.4	155	12	17
23	28	148	148	160	138	98	21	35	8.4	*32	11	17
24	34	154	148	154	135	101	19	35	9.1	17	11	17
25	37	151	151	157	138	101	*19	35	8.4	15	12	17
26	40	148	151	157	148	101	22	40	8.4	15	12	16
27	40	148	148	160	148	94	23	50	9.1	15	12	15
28	45	148	144	160	144	84	21	50	9.1	52	12	16
29	43	151	141	167	-	91	21	50	9.1	20	13	17
30	50	154	154	154	-	94	21	40	9.1	17	13	17
31	50	-	160	110	-	91	-	35	-	16	13	-
Total	1,144	3,638	4,749	4,643	3,934	3,792	989	843	413.6	531.8	632	446
Mean	36.9	121	153	150	141	122	33.0	27.2	13.8	17.2	20.4	14.9
Ac-ft	2,270	7,220	9,420	9,210	7,800	7,520	1,960	1,670	820	1,050	1,250	885

Calendar year 1950: Max 243 Min 6.6 Mean 86.8 Ac-ft 62,860
Water year 1950-51: Max 194 Min 7.0 Mean 70.6 Ac-ft 51,080

* Discharge measurement made on this day.

Note.--No gage-height record May 18-31; discharge estimated on basis of records for stations near Circleville and at Hatch. Stage-discharge relation affected by ice Jan. 31, Feb. 2-5.

Otter Creek Reservoir near Antimony, Utah

Location.--Lat 38°10'15", long. 112°00'00", in NW¼ sec. 28, T. 30 S., R. 2 W., near spillway on right side of dam on Otter Creek, 5 miles northwest of Antimony, and 12 miles east of Kingston.

Records available.--January to September 1914, October 1945 to September 1951 in reports of Geological Survey. 1915, 1934-45 in files of Salt Lake City district office, Geological Survey.

Gage.--Staff gage. Altitude of gage is 6,340 ft.

Extremes.--Maximum contents observed during year, 32,600 acre-ft May 10 (gage height, 27.3 ft); minimum observed, 2,080 acre-ft Sept. 30 (gage height, 4.8 ft).
1914-15, 1934-51: Maximum contents observed, 55,000 acre-ft May 1, 1946, May 20, 1948, June 10, 20, 1949 (gage height, 37.0 ft); minimum, 400 acre-ft Aug. 1, Sept. 1, 20, Oct. 1, 1934.

Remarks.--Reservoir was formed in 1891 by a 40-ft earth-fill, rock-faced dam, and 5 ft were added to height in 1901. Capacity, 52,500 acre-ft between gage height zero (bottom of outlet gate) and gage height 36.0 ft (top of flashboards on spillway). Spillway crest is at gage height 33.5 ft. Reservoir stores water from Otter Creek and also water diverted from East Fork Sevier River, for irrigation in Sevier River basin.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,300	10,960	14,470	19,200	22,980	28,020	31,600	32,400	29,280	21,180	8,500	4,500
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-
7	9,620	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-
10	-	11,610	15,860	20,640	25,320	29,100	32,200	32,600	27,300	16,750	7,300	3,700
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	9,980	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	10,340	12,260	17,350	21,900	26,760	30,200	32,400	32,200	24,960	12,260	5,900	2,900
21	10,340	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-
28	10,700	-	-	-	a27,900	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-
30	-	a14,300	-	-	-	-	a32,400	-	a21,600	-	-	2,080
31	a10,800	-	19,200	a22,900	-	31,600	-	a29,600	-	a8,900	a4,600	-

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

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	a9,300	-
Oct. 31	-	a10,800	+1,500
Nov. 30	-	a14,300	+3,500
Dec. 31	20.0	19,200	+4.900
Calendar year 1950	-	-	-24 100
Jan. 31	-	a22,900	+3.700
Feb. 28	-	a27,900	+5.000
Mar. 31	26.8	31,600	+3,700
Apr. 30	-	a32,400	+800
May 31	-	a29,600	-2,800
June 30	-	a21,600	-8.000
July 31	-	a8,900	-12.700
Aug. 31	-	a4,600	-4,300
Sept.30	4.8	2,080	-2,520
Water year 1950-51	-	-	-7,220

a No gage-height record; contents interpolated.

East Fork Sevier River near Kingston, Utah

Location.--Lat 38°12', long. 112°09', in SW¼NW¼ sec. 13, T. 30 S., R. 3 W., on right bank 1,000 ft downstream from bridge on State Highway 22, 1.7 miles east of Kingston, and 4.1 miles upstream from mouth.

Drainage area.--1,260 sq mi, approximately.

Records available.--March 1913 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,110 ft (from river-profile map). Prior to Apr. 29, 1914, staff gage at site 1 mile upstream at different datum. Apr. 29, 1914, to June 2, 1939, water-stage recorder at site 1,500 ft downstream at different datum.

Average discharge.--38 years, 88.1 cfs.

Extremes.--Maximum daily discharge during year, 242 cfs July 24; minimum daily, 9 cfs Feb. 1.
1913-51: Maximum discharge, 2,030 cfs May 12, 1941 (gage height, 5.05 ft); minimum, 3.8 cfs Jan. 7, 1946.

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. Flow regulated by Otter Creek Reservoir (see p. 138).

Revisions (water years).--W 750: 1931-32.

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

0.2	9.0	1.5	124
.4	15	2.0	222
.7	31	2.1	247
1.0	56		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	16	14	b13	b9	b14	13	27	127	237	217	84
2	14	16	14	b13	b12	15	13	28	132	234	215	80
3	*16	16	14	b12	b13	b14	14	26	134	234	147	78
4	17	16	15	a12	b13	b14	15	25	134	234	130	77
5	20	16	15	a12	b13	15	15	22	132	237	121	76
6	21	16	14	a12	b14	16	15	22	130	234	120	74
7	22	16	14	b10	15	15	15	20	130	232	120	73
8	23	17	15	b10	14	15	15	18	129	232	115	73
9	20	17	14	b10	14	15	15	19	127	234	114	72
10	16	16	14	b10	15	15	14	16	134	240	114	72
11	19	a14	14	b12	15	15	15	14	130	237	112	77
12	19	a15	14	b12	15	15	*15	14	127	234	*112	*80
13	19	a16	14	b10	14	16	13	18	124	232	103	80
14	20	a16	14	b10	b14	15	13	24	124	230	103	78
15	19	a16	14	b12	b13	15	13	27	122	227	103	77
16	19	16	*14	a12	b13	15	14	30	120	227	105	76
17	21	*16	14	a12	b14	15	31	*27	124	*224	103	74
18	16	17	14	a12	14	15	35	27	127	230	103	73
19	18	19	13	*a12	*14	15	38	41	126	232	105	72
20	17	17	13	a10	b12	15	42	110	122	234	103	73
21	17	15	b13	a10	b14	*15	46	137	*122	237	103	72
22	17	15	b13	b12	14	15	30	140	122	237	102	72
23	16	14	b13	b13	15	15	21	140	126	237	103	72
24	17	14	b13	b13	b14	14	23	135	124	242	93	71
25	16	14	b13	a13	b14	14	*24	134	121	237	91	71
26	17	14	b13	b13	15	14	24	134	132	232	91	69
27	17	14	b13	b13	15	15	25	134	186	232	92	68
28	16	14	b13	b13	b14	15	24	134	234	230	89	68
29	16	14	b13	b13	-	15	25	130	237	222	89	67
30	16	14	b13	b12	-	14	26	130	237	220	89	68
31	16	-	b13	b10	-	13	-	129	-	217	87	-
Total	549	466	424	363	385	458	641	2,032	4,196	7,198	3,520	2,217
Mean	17.7	15.5	13.7	11.7	13.8	14.8	21.4	65.5	140	232	114	73.9
Ac-ft	1,090	924	841	720	764	908	1,270	4,030	8,320	14,280	6,980	4,400

Calendar year 1950: Max 299 Min 9 Mean 89.8 Ac-ft 65,040
Water year 1950-51: Max 242 Min 9 Mean 61.5 Ac-ft 44,530

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

Piute Reservoir near Marysvale, Utah

Location.--Lat 38°20', long. 112°12', in NW¼ sec. 3, T. 29 S., R. 3 W., at Piute Dam 9 miles south of Marysvale.

Drainage area.--2,440 sq mi, approximately.

Records available.--March 1914 to September 1951.

Gage.--Staff gage read once daily. Datum of gage is 5,900.8 ft above mean sea level.

Extremes.--Maximum contents during year, 46,640 acre-ft Apr. 9, 10 (gage height, 63.3 ft); minimum, 110 acre-ft Sept. 30 (gage height, 19.0 ft).
1914-51: Maximum contents, 82,300 acre-ft May 28, 1922 (gage height, 76.4 ft, original capacity table); no contents at times during several years.

Remarks.--Reservoir is formed by earth-fill dam; storage began in summer of 1910. Capacity, 74,010 acre-ft between gage height 16 ft (approximate bottom of reservoir) and gage height 76 ft (top of flashboards on spillway since 1941). Spillway crest is at gage height 70.2 ft. No dead storage. Water is used for irrigation. Figures of contents correspond to gage readings about 4 p.m. daily.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,720	566	10,180	20,840	30,260	39,200	45,710	39,200	29,800	19,040	15,340	7,630
2	2,420	637	10,380	21,120	30,560	39,560	45,900	39,030	29,350	18,410	15,570	7,390
3	2,200	373	10,870	21,380	30,710	39,910	46,080	38,850	28,760	17,800	15,790	7,070
4	1,930	390	11,370	21,660	31,020	40,090	46,260	38,510	28,020	17,190	16,140	6,760
5	1,680	566	11,890	21,920	31,480	40,270	46,260	37,990	27,440	16,720	16,490	6,370
6	1,420	664	12,410	22,200	31,940	40,440	46,450	37,650	26,860	16,250	16,830	6,000
7	1,040	1,070	12,830	22,470	32,410	40,800	46,450	36,960	26,280	15,790	17,070	5,630
8	664	1,380	13,260	22,750	32,880	41,160	46,450	36,290	25,710	15,230	17,190	5,200
9	390	1,560	13,580	23,030	33,200	41,340	46,640	35,620	25,140	14,670	17,310	4,770
10	305	2,200	13,910	23,300	33,510	41,520	46,640	34,800	24,710	14,120	17,310	4,370
11	220	2,200	14,230	23,580	33,830	41,700	46,450	33,990	24,290	13,580	17,190	4,040
12	110	2,420	14,560	23,860	34,150	42,060	46,260	33,200	24,000	13,260	16,830	3,730
13	220	2,670	14,890	24,140	34,480	42,240	46,080	32,570	23,720	12,940	16,490	3,420
14	220	2,920	15,340	24,430	34,800	42,600	45,340	32,100	23,160	12,620	16,020	3,260
15	356	3,200	15,570	24,710	35,130	42,970	44,610	31,790	22,610	12,410	15,570	3,030
16	356	3,480	15,910	24,990	35,450	43,150	44,060	31,630	22,060	12,200	15,120	2,770
17	220	3,850	16,250	25,420	35,620	43,330	43,510	31,480	21,790	11,990	14,780	2,570
18	154	3,600	16,600	25,710	35,950	43,510	43,150	31,330	21,520	11,780	14,450	2,380
19	165	4,100	16,830	25,990	36,290	43,690	42,780	31,020	21,250	11,680	14,230	2,240
20	187	4,700	17,070	26,280	36,460	43,880	42,240	30,710	20,980	11,570	14,020	2,150
21	198	5,270	17,310	26,570	36,790	44,060	41,880	30,560	20,710	11,680	13,690	2,060
22	209	5,850	17,560	26,860	37,130	44,240	41,700	30,560	20,580	12,300	13,370	1,970
23	254	6,450	17,800	27,150	37,470	44,420	41,520	30,710	20,450	12,720	13,040	1,890
24	305	7,070	18,040	27,580	37,820	44,610	41,520	30,860	20,450	12,940	12,620	1,810
25	373	7,550	18,410	28,020	38,160	44,790	40,800	31,020	20,320	13,370	12,200	1,680
26	522	8,040	18,780	28,460	38,330	44,980	40,440	31,020	20,190	13,580	11,370	1,560
27	588	8,550	19,160	28,760	38,680	45,160	40,270	30,860	20,060	13,800	10,570	1,450
28	664	9,080	19,540	29,050	39,030	45,340	40,090	30,710	19,930	14,120	9,800	1,340
29	745	9,620	19,930	29,350	-	45,340	39,740	30,560	19,670	14,560	9,160	1,270
30	637	9,900	20,320	29,650	-	45,530	39,380	30,410	19,410	14,890	8,630	1,270
31	566	-	20,580	29,950	-	45,530	-	30,110	-	15,120	8,130	-

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

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	28.5	3,200	-
Oct. 31	21.8	566	-2,630
Nov. 30	37.4	9,900	+9,330
Dec. 31	46.9	20,580	+10,680
Calendar year 1950	-	-	-15,710
Jan. 31	53.5	29,950	+9,370
Feb. 28	59.1	39,030	+9,080
Mar. 31	62.7	45,530	+6,500
Apr. 30	59.3	39,380	-6,150
May 31	53.6	30,110	-9,270
June 30	46.0	19,410	-10,700
July 31	42.4	15,120	-4,290
Aug. 31	35.4	8,130	-6,990
Sept.30	24.2	1,270	-6,860
Water year 1950-51	-	-	-1,930

Sevier River below Piute Dam, near Marysvale, Utah

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

Drainage area.--2,440 sq mi, approximately.

Records available.--May 1911 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,900 ft. Prior to May 4, 1912, staff gage at site half a mile upstream at different datum. May 4, 1912, to Apr. 7, 1939, water-stage recorder at site a quarter of a mile upstream at different datum.

Average discharge.--39 years (1912-51), 244 cfs.

Extremes.--Maximum discharge during year, 606 cfs July 7 (gage height, 2.34 ft); minimum not determined, occurred during period of ice effect.
1911-51: Maximum discharge, 2,600 cfs May 23, 24, 1922; practically no flow at times when reservoir gates were closed.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. One small diversion between gage and Piute Reservoir. Flow regulated by Piute Reservoir (see preceding page).

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	333	84	14	2.7		1.6	2.7	129	388	494	101	224
2	272	67	14	2.4	b1	1.6	2.2	107	414	487	20	227
3	*258	64		1.6		2.4	2.0	166	459	473	16	252
4	281	48		1.4	2.4	2.2	2.2	218	448	504	15	272
5	258	34		1.4	2.2	1.6	2.4	227	490	515	15	287
6	278	25	a14	1.4	1.8	1.6	2.2	314	526	555	18	308
7	272	43		1.6	1.6	1.6	2.2	384	512	591	15	308
8	221	33			1.6	1.6	2.2	384	452	598	51	272
9	189	22	14		1.6	2.2	2.2	401	414	595	116	261
10	136	18			1.6	2.4	37	418	394	569	129	*258
11	110	17			1.8	2.4	82	418	374	526	246	243
12	105	17	a14		1.8	3.0	*105	414	327	504	*320	235
13	105	17			2.2	3.0	186	411	355	459	308	191
14	84	17			2.2	3.0	305	314	407	435	358	176
15	44	16			2.2	3.0	317	261	421	394	342	202
16	118	16	*13		2.2	3.0	281	153	397	397	330	238
17	105	16	7.2		2.0	3.0	249	*150	424	*365	302	224
18	105	16	6.9		1.8	3.3	238	181	361	296	287	191
19	97	*18	6.6	(*)	*1.6	3.3	252	221	287	269	281	176
20	78	18	6.6	b1.5	1.6	3.3	238	287	246	218	299	168
21	72	18	6.6		1.6	*4.9	238	227	*235	202	381	194
22	61	17	6.3		1.8	10	184	136	205	146	378	171
23	56	16	6.3		1.8	12	189	114	184	110	374	153
24	54	15	6.3		1.8	24	227	110	122	99	371	138
25	52	15	6.3		1.8	24	*241	114	132	136	378	143
26	40	15	6.3		1.8	24	275	171	202	184	378	146
27	49	14	6.3		1.8	38	317	238	278	150	374	146
28	60	14	5.2		1.6	48	241	238	349	129	365	146
29	103	14	2.0		-	46	186	199	411	118	361	148
30	146	14	1.8		-	46	166	216	490	120	327	87
31	107	-	1.6		-	41	-	308	-	127	258	-
Total	4,249	758	305.3	48.5	49.2	367.0	4,574.3	7,629	10,704	10,765	7,514	6,185
Mean	137	25.3	9.85	1.56	1.76	11.8	152	246	357	347	242	206
Ac-ft	8,430	1,500	606	96	98	728	9,070	15,130	21,230	21,350	14,900	12,270

Calendar year 1950: Max 651 Min 1.6 Mean 211 Ac-ft 152,800
Water year 1950-51: Max 598 Min - Mean 146 Ac-ft 105,400

* 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 nearby stations.
b Stage-discharge relation affected by ice.

Sevier River above Clear Creek, near Sevier, Utah

Location.--Lat 38°34'20", long. 112°15'25", in NW¼NE¼ sec. 5, T. 26 S., R. 4 W., on right bank 0.6 mile upstream from bridge on U. S. Highway 89, 0.7 mile upstream from Clear Creek, and 1 mile south of Sevier.

Drainage area.--2,700 sq mi, approximately.

Records available.--May 1911 to November 1916 (published as Sevier River at Sevier), April 1939 to September 1951. Records for November 1916 to September 1929 (published as Sevier River at Sevier) include flow of Clear Creek and are not equivalent.

Gage.--Water-stage recorder. Altitude of gage is 5,550 ft. Prior to May 16, 1912, staff gage and May 16, 1912, to Sept. 30, 1929, water-stage recorder at site 0.8 mile downstream at different datums (datum lowered 1 ft Mar. 31, 1913). Clear Creek diverted into Sevier River above station Nov. 16, 1916.

Average discharge.--16 years (1912-16, 1939-51), 284 cfs.

Extremes.--Maximum discharge during year, 601 cfs July 9 (gage height, 2.79 ft); minimum not determined, occurred during period of ice effect.

1911-16, 1939-51 (not including flow of Clear Creek): Maximum discharge, 2,270 cfs May 16, 1941 (gage height, 4.83 ft); minimum, 6.2 cfs Feb. 13, 1950.

1916-29 (including flow of Clear Creek): Maximum discharge, 2,800 cfs during last week of May 1922, computed on basis of records for station near Marysvale; minimum, 10 cfs Nov. 27, 1919.

Remarks.--Records good except those for periods of ice effect or doubtful or no gage-height record, which are fair. Many diversions above station for irrigation. Flow regulated by Piute and Otter Creek Reservoirs.

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

0.7	13	2.0	255
.9	28	2.5	460
1.2	59	2.8	606
1.5	110		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	312	146		b16		b14	45	171	339	474	151	255
2	300	149		b14		b14	31	146	381	479	117	238
3	274	156				b14	25	131	411	465	45	248
4	270	108				b18	23	191	428	474	18	274
5	*277	72				b22	25	224	428	493	17	*288
6	274	55				b23	26	252	493	507	16	281
7	285	51				23	23	327	502	556	19	339
8	266	58				24	22	347	465	591	18	308
9	241	51	b36			23	22	360	420	596	*70	288
10	198	45				22	20	385	389	*591	115	281
11	165	51				21	39	394	381	556	179	266
12	128	49				23	85	394	343	527	277	255
13	124	38				25	128	398	323	498	304	234
14	128	38				23	210	360	364	456	319	204
15	78	38				23	281	*304	389	433	347	198
16	98	38			b14	22	285	230	406	406	343	230
17	141	41	b33	b13		20	255	165	389	402	327	248
18	136	41	*b30			21	*241	174	411	356	304	224
19	117	*43		(*)	(*)	24	230	191	*319	300	304	210
20	98	42				*23	262	238	300	266	381	204
21	104	40				22	266	270	277	227	352	201
22	108	39				22	210	188	262	210	385	214
23	96	39				26	182	151	238	168	385	204
24	92	38	b28			26	198	122	207	124	381	194
25	92	37				32	227	128	174	106	385	185
26	87	36				32	248	141	179	146	389	174
27	70	36				34	281	224	241	214	389	171
28	76	36				37	292	292	308	191	385	171
29	104	36			-	44	220	*277	368	154	381	171
30	159	b36	b25		-	45	201	248	424	128	368	176
31	182	-	b20		-	45	-	281	-	143	308	-
Total	5,080	1,683	992	407	392	787	4,603	7,704	10,559	11,237	7,779	6,934
Mean	164	56.1	32.0	13.1	14.0	25.4	153	249	352	362	251	231
Ac-ft	10,080	3,340	1,970	807	778	1,560	9,130	15,280	20,940	22,290	15,430	13,750

Calendar year 1950: Max 621 Min - Mean 219 Ac-ft 158,700
Water year 1950-51: Max 596 Min - Mean 159 Ac-ft 115,400

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Doubtful or no gage-height record Aug. 3-8; discharge estimated on basis of discharge measurement, weather records, and records for station below Piute Reservoir.

Clear Creek at Sevier, Utah

Location.--Lat 38°34'55", long. 112°15'35", in SE¼NE¼ sec. 32, T. 25 S., R. 4 W., on right bank 400 ft upstream from bridge on U. S. Highway 89, 1,000 ft upstream from mouth, and 0.3 mile south of Sevier.

Drainage area.--169 sq mi.

Records available.--February 1912 to September 1919 and October 1940 to September 1951 in reports of Geological Survey. April 1934 to September 1951 in reports of Sevier River water commissioner.

Gage.--Water-stage recorder. Altitude of gage is 5,530 ft (from topographic map). Prior to Oct. 1, 1940, at site 700 ft downstream at different datum. Oct. 1, 1940, to Sept. 29, 1946, at site 400 ft downstream at different datum.

Average discharge.--16 years (1912-17, 1940-51), 32.4 cfs.

Extremes.--Maximum discharge during year, 59 cfs May 29 (gage height, 2.17 ft); minimum, 0.6 cfs Aug. 13.
1912-19, 1940-51: Maximum discharge observed, 487 cfs Aug. 7, 1941 (gage height, 4.05 ft); no flow Aug. 26, 1913.

Remarks.--Records good. Practically entire flow is diverted above station each year during latter part of irrigation season.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 24 to June 9)

0.7	0.6	1.2	11
.8	1.4	1.5	25
.9	2.7	2.0	63
1.0	4.6		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	5.9	3.8	10	8.5	10	3.6	9.2	34	6.2	2.4	1.2
2	1.7	5.4	3.5	9.8	11	14	3.5	7.5	27	5.1	2.6	1.2
3	1.7	5.4	3.6	13	13	14	2.7	9.2	22	4.4	6.1	1.2
4	1.5	5.4	5.4	14	16	13	2.6	11	19	3.6	9.5	1.1
5	*1.7	4.9	7.5	10	17	14	2.4	12	17	2.7	13	*1.1
6	1.7	4.4	6.2	6.9	16	14	2.4	12	15	2.0	14	1.2
7	1.7	4.6	8.5	6.2	16	15	2.3	14	14	1.9	12	1.2
8	1.7	5.1	7.2	8.2	16	15	2.4	14	16	1.8	7.4	1.1
9	1.7	5.1	5.4	10	16	15	2.6	15	16	1.4	*4.0	1.1
10	1.8	6.4	4.9	10	16	14	2.6	14	16	*1.9	2.6	1.1
11	1.9	10	4.6	11	16	11	2.4	17	14	2.4	1.7	1.2
12	1.9	12	5.6	13	15	11	2.4	19	14	2.7	1.4	1.2
13	4.0	14	5.4	12	14	13	2.2	19	14	2.7	.9	1.2
14	7.4	14	7.2	12	11	11	2.3	18	18	2.6	.7	1.2
15	4.2	14	8.5	12	11	10	2.2	*19	22	2.6	1.2	1.3
16	3.6	12	7.9	13	14	12	2.4	18	27	2.6	1.2	1.4
17	3.1	13	7.5	13	14	10	3.3	17	28	2.9	1.3	1.3
18	2.9	11	*8.5	13	16	10	*5.4	17	32	2.9	1.2	1.3
19	2.9	*8.5	14	*13	*14	12	6.7	15	*31	5.6	1.2	1.4
20	3.1	6.2	12	8.5	9.5	*14	5.9	16	26	4.4	1.3	1.3
21	3.5	4.6	10	11	14	13	7.9	23	25	3.1	1.3	1.3
22	3.1	4.4	9.5	16	14	12	5.9	34	23	3.8	1.4	1.3
23	3.3	3.8	8.8	13	14	10	4.9	29	19	7.9	1.2	1.3
24	4.6	3.6	9.8	13	9.8	11	5.9	30	16	14	1.2	1.4
25	6.2	3.8	11	14	11	14	8.5	33	14	9.8	1.2	1.3
26	5.9	3.5	10	12	14	12	8.8	41	12	5.6	1.4	1.3
27	5.9	3.5	8.5	14	14	8.8	6.7	44	12	4.2	1.2	1.5
28	5.9	3.6	8.5	14	12	6.2	5.4	51	11	3.8	1.3	1.7
29	5.9	3.6	10	14	-	4.9	6.7	*58	9.8	3.3	1.4	1.7
30	5.9	4.0	12	8.5	-	4.4	8.8	48	7.5	3.3	1.7	1.5
31	6.2	-	13	7.2	-	3.8	-	44	-	3.1	1.2	-
Total	108.1	205.7	248.3	355.3	382.8	352.1	131.8	727.9	571.3	124.3	100.2	38.6
Mean	3.49	6.86	8.01	11.5	13.7	11.4	4.39	23.5	19.0	4.01	3.23	1.29
Ac-ft	214	408	492	705	759	698	261	1,440	1,130	247	199	77

Calendar year 1950: Max 95 Min 1.1 Mean 16.3 Ac-ft 11,810
Water year 1950-51: Max 58 Min 0.7 Mean 9.17 Ac-ft 6,630

* Discharge measurement made on this day.

Sevier River near Sigurd, Utah

Location.--Lat 38°52', long. 111°57', in SW¼ sec. 19, T. 22 S., R. 1 W., on left bank 200 ft downstream from bridge, half a mile downstream from Rockyford Dam, 2 miles northeast of Sigurd, and 5 miles upstream from Lost Creek.

Drainage area.--3,340 sq mi, approximately.

Records available.--July to September 1912, July 1914 to September 1951. Prior to 1935, published as "near Vermillion."

Gage.--Water-stage recorder. Altitude of gage is 5,230 ft. Prior to September 1912, staff gage a quarter of a mile downstream at different datum. July 31, 1914, to Apr. 19, 1917, staff gage and Apr. 20, 1917, to Oct. 16, 1935, water-stage recorder, at same site at datum 2.00 ft lower.

Average discharge.--37 years (1914-51), 109 cfs.

Extremes.--Maximum discharge during year, 131 cfs Feb. 17, 18 (gage height, 1.98 ft); minimum, 0.8 cfs Sept. 28.

1914-51: Maximum discharge, 2,400 cfs May 30, 1922 (gage height, 8.1 ft, datum then in use), from rating curve extended above 600 cfs on basis of maximum discharge for other Sevier River stations; practically no flow (seepage only) when Rockyford Reservoir gates are closed.

Remarks.--Records good above 10 cfs and fair below except those for periods of no gage-height record, which are fair. Flow regulated by reservoirs above station. During irrigation season practically the entire flow through Rockyford Dam is diverted above station for irrigation below the station.

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

0.6	0.5	0.9	6.7	1.4	38
.7	1.0	1.0	10	1.7	78
.8	3.5	1.2	21	2.0	137

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		76	102	85	106	116	40	2.2	2.8	1.2	3.0	1.0
2		76	102	83	106	116	36	2.2	3.5	1.5	3.0	1.0
3	a40	76	100	80	110	118	29	2.2	3.8	2.0	3.0	1.0
4			100	83	118	116	17	2.5	3.8	2.0	2.8	1.0
5	*46		94	89	126	114	14	2.2	3.5	1.8	2.2	1.0
6	30		90	89	129	112	14	2.0	3.0	1.5	1.8	*1.0
7	37		90	87	129	112	13	1.8	2.8	1.0	1.2	1.0
8	50		92	87	126	112	11	1.5	2.8	1.0	*1.2	1.0
9	50		90	94	126	112	9.1	1.5	2.5	1.2	1.2	1.0
10	53		85	90	126	112	7.1	1.2	2.5	*1.2	1.2	1.0
11	69	a80	83	89	126	112	5.1	1.0	2.8	1.2	1.2	1.0
12	75		83	83	129	114		1.2	2.2	1.0	1.5	1.0
13	80		83	83	129	114	a4	1.2	1.5	1.2	1.8	1.0
14	82		83	92	129	104		1.8	1.5	1.5	1.8	1.2
15	85		85	92	129	106	3.2	1.8	1.0	1.5	1.5	1.2
16	94		87	92	129	106	**3.8	**1.8	1.0	1.5	1.5	1.0
17	89		87	94	*131	100	3.8	1.8	1.0	1.5	1.5	1.0
18	90		*89	96	*131	96	4.8	3.2	1.0	1.8	1.5	1.0
19			92	100	129	61	3.5	5.1	1.0	1.8	1.2	1.0
20		*104	85	*98	126	.9	2.5	11	*1.0	2.2	1.8	1.0
21		102	85	94	126	2.2	2.8	29	1.0	2.5	2.5	1.0
22		96	82	96	124	*3.5	2.8	49	1.2	2.5	2.5	1.0
23		96	83	102	124	3.0	2.2	56	1.2	2.5	1.8	1.2
24		92	83	104	120	2.2	2.0	*49	1.0	2.8	1.5	1.0
25	a70	92	83	106	114	2.5	2.2	46	1.0	3.0	1.5	1.0
26		89	82	108	112	2.8	2.2	30	1.0	3.0	1.5	.9
27		90	80	110	110	3.8	2.2	28	1.2	3.0	1.0	.9
28		98	80	108	114	4.8	2.0	17	1.2	3.0	1.0	1.0
29		100	90	110	-	6.4	2.0	8.3	1.8	3.0	1.0	1.0
30		100	82	114	-	22	1.8	4.1	2.0	3.2	1.0	.9
31	73	-	85	116	-	37	-	*3.5	-	3.2	1.0	-
Total	2,003	2,567	2,707	2,954	3,434	2,144.1	251.1	369.1	57.6	61.3	52.2	30.3
Mean	64.6	85.6	87.3	95.3	123	69.2	8.37	11.9	1.92	1.98	1.68	1.01
Ac-ft	3,970	5,090	5,370	5,860	6,810	4,250	498	732	114	122	104	60

Calendar year 1950: Max 212 Min 1.6 Mean 59.2 Ac-ft 42,880
Water year 1950-51: Max 131 Min .9 Mean 45.6 Ac-ft 32,980

* Discharge measurement made on this day.
** Field estimate made on this day.
a No gage-height record; discharge estimated on basis of range in stage, weather records, and records for station near Gunnison.

Salina Creek at Salina, Utah

Location.--Lat 38°57', long. 111°52', in NW¼ sec. 25, T. 21 S., R. 1 W., on right bank 150 ft upstream from bridge on U. S. Highway 89 in Salina and three-quarters of a mile upstream from mouth.

Drainage area.--298 sq mi.

Records available.--April 1914 to September 1917 (fragmentary), October 1917 to September 1919, November 1942 to September 1951.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,140 ft. Prior to Mar. 23, 1915, staff gage at site 150 ft downstream at different datum. Mar. 23, 1915, to Oct. 16, 1917, staff gage, and Oct. 17, 1917, to Sept. 30, 1919, water-stage recorder, at site about a quarter of a mile upstream at different datum.

Average discharge.--10 years (1917-19, 1943-51), 20.6 cfs.

Extremes.--Maximum discharge during year, 223 cfs May 27 (gage height, 2.12 ft); no flow part of several days during year.
1914-19, 1942-51: Maximum discharge 926 cfs May 15, 1948 (gage height 3.87 ft) from rating curve extended above 400 cfs; no flow at times in 1950 and 1951.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation. Releases from desilting facilities above station affected maximum discharge.

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

0.73	0	1.0	5.0	1.4	43
.8	.3	1.1	10	1.6	80
.9	2.0	1.2	18	1.8	127

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	4.4	4.7			8.2	0.6	1.5	16	0.3	1.3	0.2
2	**1.0	4.1	3.2			11	.3	1.7	7.2	.5	1.3	.2
3	.3	5.0	1.7		8	12	.3	1.0	4.4	.2	20	.2
4	.2	6.6	27			9.6	.8	1.3	3.5	.2	20	.1
5	.1	5.3	6.1			10	1.3	1.2	1.7	.3	1.8	.2
6	.1	3.7	2.3			11	.6	1.2	.8	.2	1.2	*.2
7	.3	6.1	5.5			14	.6	1.0	.6	.3	1.0	.3
8	.3	5.0	8.8			16	.6	1.5	1.7	.2	*1.0	.1
9	.5	3.5	8.2			14	.3	1.5	1.5	.2	.5	.1
10	.5	2.3	6.1		8	9.9	1.7	1.3	.5	*.3	.5	.1
11	1.0	2.9	6.1			6.3	1.0	1.3	.6	.5	.3	.1
12	.5	3.2	6.6			8.0	.8	1.5	1.5	.2	.5	.1
13	.8	2.9	7.2			11	.5	1.0	1.5	.3	.3	.1
14	.2	4.7	7.2		8.2	10	.6	1.3	1.0	.3	.3	.3
15	.3	5.0	8.2	8	9.3	8.1	1.3	1.2	.5	.2	.2	.1
16	2.0	3.8	8.2		8.8	.6	*.8	*1.3	.2	.2	.3	.1
17	.8	4.9	5.0		*7.7	.6	1.0	1.7	.1	.3	.6	.1
18	.5	5.2	4.1		8.8	.5	.6	2.0	.3	.2	1.3	.1
19	.8	20	*7.1		10	*.6	.6	2.0	.3	.2	.6	.1
20	1.0	*8.2	6.1	(*)	9.8	.8	.8	2.3	*.5	.6	.3	.1
21	1.3	3.2	6.5		10	.8	.6	42	.5	1.7	.5	.2
22	1.5	3.8	4.7		8.8	1.2	.5	43	.6	1.7	.3	.3
23	1.6	2.9	4.1		8.2	1.3	.3	61	.5	1.2	.3	.3
24	3.0	2.0	5.1		6.1	1.3	.6	45	.5	.6	.5	.2
25	1.2	3.2	8.8		9.3	1.0	1.0	72	.8	1.7	.3	.3
26	1.2	4.1	7.2		10	1.0	.6	113	.5	1.5	.2	.3
27	1.2	2.9	5.5		13	1.2	.6	114	.3	1.7	.3	.3
28	1.3	2.6	8.2		9.3	1.3	.6	96	.5	2.7	.3	.3
29	1.8	3.2	6.1		-	1.7	.6	58	.3	1.8	.2	1.0
30	2.0	4.2	8.0	8	-	1.2	.8	40	.2	.6	.2	.5
31	3.5	-	8.0	8	-	.8	-	*25	-	1.0	.2	-
Total	31.1	138.9	211.6	248	241.3	175.0	21.3	737.8	49.1	21.9	56.6	6.6
Mean	1.00	4.63	6.83	8.0	8.62	5.65	0.71	23.8	1.64	0.71	1.83	0.22
Ac-ft	62	276	420	492	479	347	42	1,460	97	43	112	13

Calendar year 1950: Max 50 Min 0 Mean 6.79 Ac-ft 4,920
Water year 1950-51: Max 114 Min 0.1 Mean 5.31 Ac-ft 3,840

* Discharge measurement made on this day.
** Field estimate made on this day.
Note.--No gage-height record Jan. 30 to Feb. 5; discharge estimated on basis of discharge measurements, weather records, and records for Clear Creek at Sevier. Stage-discharge relation affected by ice Dec. 30 to Jan. 29, Feb. 6-13.

Transmountain diversions from Colorado River basin to Sevier Lake basin

The following 13 ditches and tunnels in Utah, each equipped with a water-stage recorder, divert water from the Colorado River basin to the Sevier Lake basin.

Fairview ditch diverts water from tributaries of San Rafael River and Price River to San Pitch River in Sevier Lake basin. Gage is located in SE¼ sec. 26, T. 13 S., R. 5 E.

Candland ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in NW¼ sec. 1, T. 15 S., R. 5 E.

Coal Fork ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SW¼ sec. 24, T. 15 S., R. 5 E.

Twin Creek tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SE¼ sec. 35, T. 15 S., R. 5 E.

Spring City tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SE¼ sec. 16, T. 16 S., R. 5 E.

Black Canyon ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SE¼ sec. 10, T. 16 S., R. 5 E.

Cedar Creek tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SE¼ sec. 10, T. 16 S., R. 5 E.

Reeder ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in NW¼ sec. 32, T. 16 S., R. 5 E.

John August ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in NW¼ sec. 35, T. 17 S., R. 4 E.

Madsen ditch diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SW¼ sec. 23, T. 17 S., R. 4 E.

Ephraim tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in NW¼ sec. 24, T. 17 S., R. 4 E.

Larsen tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SE¼ sec. 10, T. 17 S., R. 4 E.

Horseshoe tunnel diverts water from tributary of San Rafael River to San Pitch River. Gage is located in SW¼ sec. 2, T. 17 S., R. 4 E.

Transmountain diversions, in acre-feet, from Colorado River basin to Sevier Lake basin, water year 1950-51

Month	Fairview ditch	Candland ditch	Coal Fork ditch	Twin Creek ditch	Spring City tunnel	Black Canyon ditch	Cedar Creek tunnel
October	0	0	3	0	0	1	6
November	0	0	0	0	0	0	3
December	0	0	0	0	0	0	0
Calendar year 1950	1,490	130	155	163	1,290	200	293
January	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0
March	0	0	0	0	6	0	0
April	0	0	0	0	21	0	0
May	0	6	13	26	268	22	61
June	121	145	145	153	1,140	215	200
July	704	62	34	23	158	22	40
August	776	10	8	3	13	0	22
September	216	1	6	0	24	0	6
Water year 1950-51	1,820	224	209	205	1,630	260	338

Month	Reeder ditch	John August ditch	Madsen ditch	Ephraim tunnel	Larsen tunnel	Horseshoe tunnel	
October	6	0	0	15	0	0	
November	4	0	0	18	0	0	
December	0	0	0	12	0	0	
Calendar year 1950	255	186	7	3,050	744	698	
January	0	0	0	6	0	0	
February	0	0	0	6	0	0	
March	0	0	0	12	0	0	
April	0	0	0	24	0	0	
May	6	0	0	1,030	90	123	
June	50	169	47	1,810	738	518	
July	32	118	22	115	78	60	
August	12	12	0	55	4	2	
September	6	0	0	37	0	0	
Water year 1950-51	116	299	69	3,180	910	703	

Note.--There is one diversion from the Sevier Lake basin to the Colorado River basin. This diversion is the Tropic and East Fork Canal, which diverts water from East Fork Sevier River to tributary of Paria River. Gage is located in SW¼ sec. 17, T. 36 S., R. 3 W. Figures of diversion, in acre-feet, for the 1951 water year are as follows: October, 68; total for the calendar year, 3,970; May, 691; June, 837; July, 427; August, 289; September, 84; total for the water year, 2,400.

Sevier River below San Pitch River, near Gunnison, Utah

Location.--Lat 39°09'00", long. 111°52'30", in NE¼ sec. 14, T. 19 S., R. 1 W., on left bank 1,000 ft downstream from San Pitch River and 3 miles west of Gunnison.

Drainage area.--4,880 sq mi, approximately.

Records available.--October 1917 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,900 ft (from topographic map).

Average discharge.--34 years, 225 cfs.

Extremes.--Maximum discharge during year, 396 cfs Oct. 25 (gage height, 2.65 ft); maximum gage height, 4.25 ft Feb. 2 (backwater from ice); minimum, 13 cfs July 10 (gage height, 0.60 ft).
1917-51: Maximum discharge, 2,620 cfs June 1, 1922 (gage height, 5.68 ft); minimum daily, 8 cfs July 13-17, Sept. 6, 1934.

Remarks.--Records good. Flow regulated by reservoirs and many diversions above station for irrigation. Most of flow diverted above station during irrigation season.

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

0.6	13	1.4	95
.7	19	1.9	191
1.0	44	2.4	316

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	136	178	248	236		226	95	128	59	25	95	86
2	*140	184	241	231	b230	228	107	132	56	33	94	86
3	147	184	241	236		231	75	128	52	34	91	83
4	163	189	266	243	236	231	71	117	50	34	128	79
5	155	212	263	246	258	233	72	121	45	34	121	78
6	151	219	263	241	289	231	65	128	40	33	100	73
7	155	224	241	233	292	231	72	130	46	33	107	*69
8	165	226	248	224	292	231	75	130	46	33	*80	69
9	221	214	248	226	302	226	71	112	53	33	43	69
10	207	209	243	226	300	219	59	105	52	20	33	71
11	200	209	238	226	294	212	59	73	49	17	22	65
12	198	209	238	228	289	209	56	49	59	*17	20	43
13	198	212	241	226	284	219	63	47	52	20	20	22
14	202	219	241	228	281	219	62	54	53	24	18	21
15	200	221	243	231	273	216	60	*62	78	41	18	22
16	196	216	253	233	241	196	*83	78	85	34	18	23
17	173	224	250	238	*256	191	91	75	86	33	17	22
18	171	228	248	238	250	176	86	68	99	33	16	49
19	153	233	*248	238	243	173	89	60	92	32	17	54
20	134	*246	246	226	236	*126	92	83	*86	33	28	53
21	134	233	243	*224	243	94	100	114	73	28	33	53
22	134	226	236	233	241	80	107	198	71	31	34	88
23	136	226	233	214	236	121	116	224	72	34	33	76
24	140	228	243	253	226	83	107	221	73	34	35	40
25	213	228	243	211	224	100	85	221	68	44	37	42
26	191	226	241	238	228	102	89	236	64	65	42	26
27	182	228	236	246	231	97	92	236	59	69	88	25
28	178	236	233	248	226	75	89	216	60	79	88	26
29	178	250	233	250	-	56	95	182	32	80	92	27
30	180	241	238	248	-	64	109	134	24	91	89	25
31	178	-	243	230	-	78	-	*67	-	83	85	-
Total	5,309	6,578	7,570	7,249	7,161	5,174	2,492	3,929	1,834	1,234	1,744	1,565
Mean	171	219	244	234	256	167	83.1	127	61.1	39.8	56.3	52.2
Ac-ft	10,530	13,050	15,010	14,380	14,200	10,260	4,940	7,790	3,640	2,450	3,460	3,100

Calendar year 1950: Max 371 Min 24 Mean 166 Ac-ft 120,400
Water year 1950-51: Max 302 Min 17 Mean 142 Ac-ft 102,800

* Discharge measurement made on this day.

Sevier Bridge Reservoir near Juab, Utah

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

Drainage area.--5,120 sq mi, approximately.

Records available.--January 1914 to September 1951.

Gage.--Staff gage below gage height 60 ft and wire-weight gage above, read once daily.

Extremes.--Maximum contents during year, 130,800 acre-ft Apr. 16 (gage height, 67.32 ft); no storage Sept. 23-28.
1914-51: Maximum contents, 251,000 acre-ft Apr. 19, 20, 1922 (gage height, 80.0 ft), from former capacity table; no storage at times during 1927-28, 1930-36, 1951.

Remarks.--Reservoir was formed by a 30-ft earth-fill dam. Storage began about 1904. Dam ultimately raised to 90 ft by June 1916. Capacity, 236,000 acre-ft between gage heights 6 ft (approximate bottom of outlet tunnel) and 80.0 ft (top of flashboard on spillway). No dead storage. Water is used for irrigation. Figures of contents given correspond to daily gage reading between 7 and 8 a.m.

Revisions (water years).--W 960: 1941.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	54,950	63,210	76,640	92,100	106,200	-	130,000	124,000	-	67,110	32,920	12,160
2	-	63,620	77,260	92,450	-	-	130,100	123,700	-	65,570	-	-
3	-	64,030	77,710	92,980	-	-	130,100	123,400	-	64,030	-	-
4	-	64,450	78,320	93,510	-	-	129,800	122,800	-	62,380	-	-
5	-	64,860	78,930	94,040	-	-	129,800	120,900	-	61,030	-	-
6	-	65,290	79,550	94,570	-	-	130,000	119,300	-	59,820	-	-
7	-	65,710	80,170	94,930	-	-	130,100	117,900	-	58,220	-	9,560
8	-	66,130	80,640	95,280	-	-	130,100	115,700	-	56,500	-	9,020
9	-	66,550	81,100	95,630	-	-	130,100	113,600	83,140	54,560	-	8,540
10	-	66,830	81,580	96,020	-	-	130,100	112,000	-	52,020	-	8,010
11	-	67,250	82,040	96,590	-	-	130,100	109,400	-	49,160	-	7,200
12	-	67,680	82,660	97,160	-	-	130,100	107,700	-	46,490	-	6,720
13	57,690	67,970	83,140	97,730	-	-	130,300	105,800	-	43,420	-	6,230
14	58,080	68,540	83,620	98,300	-	-	130,400	104,400	-	41,570	-	-
15	58,480	69,120	84,090	98,690	-	-	130,700	103,600	-	-	-	5,230
16	58,870	69,400	84,570	99,070	-	-	130,800	102,300	78,930	-	-	-
17	59,270	69,840	85,040	99,450	-	-	130,600	101,500	78,630	-	-	-
18	59,680	70,260	85,520	99,860	-	-	130,600	100,700	78,170	-	-	-
19	60,080	70,850	86,000	100,300	-	127,700	130,100	99,860	77,710	-	-	-
20	60,360	71,440	86,490	100,700	-	127,800	129,800	99,070	77,100	37,560	-	1,960
21	60,220	72,020	86,970	101,300	-	128,000	129,400	97,920	76,640	-	-	1,100
22	60,080	72,460	87,460	101,900	-	128,200	128,800	96,780	76,030	36,800	-	a300
23	60,220	72,900	87,940	102,300	-	128,300	128,700	96,210	75,440	36,160	18,110	a0
24	60,490	73,500	88,430	102,700	-	128,400	127,100	96,020	74,840	-	-	a0
25	60,760	73,940	88,920	103,200	-	128,500	127,100	96,020	74,390	35,300	-	a0
26	61,030	74,390	89,420	103,560	-	-	126,200	95,630	73,940	35,200	-	a0
27	61,440	74,800	89,920	104,000	-	-	125,700	95,450	73,500	-	-	a0
28	61,840	75,290	90,430	104,400	a120,000	-	125,400	95,100	72,320	34,370	-	a0
29	62,240	75,740	90,930	104,900	-	129,200	124,500	94,040	70,850	-	-	a50
30	62,520	76,190	91,430	105,300	-	129,500	124,000	93,510	69,120	-	-	a150
31	62,800	-	91,940	105,800	-	129,800	-	92,450	-	a33,280	12,510	-

a No gage-height record; contents estimated on basis of records for Sevier River stations and notes of water commissioner.

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

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	a54,800	-
Oct. 31	49.35	62,800	+8,000
Nov. 30	54.0	76,190	+13,390
Dec. 31	58.95	91,940	+13,860
Calendar year 1950...	-	-	-43,060
Jan. 31	62.5	105,800	+14,200
Feb. 28	-	a120,000	+14,200
Mar. 31	67.15	129,800	+9,800
Apr. 30	66.15	124,000	-5,800
May 21	59.1	92,450	-31,550
June 30	51.6	69,120	-23,330
July 31	-	a33,280	-35,840
Aug. 31	24.74	12,510	-20,770
Sept.30	-	a150	-12,360
Water year 1950-51...	-	-	-54,650

a No gage-height record; contents estimated on basis of records for Sevier River stations and notes of water commissioner.

Sevier River near Juab, Utah

Location.--Lat 39°22', long. 112°02', in NE¼ sec. 2, T. 17 S., R. 2 W., on left bank 1,600 ft downstream from Sevier Bridge Dam and 11 miles southwest of Juab.

Drainage area.--5,120 sq mi, approximately.

Records available.--September 1911 to September 1951.

Gage.--Water-stage recorder. Rubble masonry control since Apr. 16, 1914. Altitude of gage is 4,800 ft. Apr. 8, 1938, to Mar. 31, 1942, at site 1,300 ft upstream at different datum.

Average discharge.--40 years, 249 cfs.

Extremes.--Maximum discharge during year, 1,140 cfs May 7 (gage height, 4.82 ft); minimum daily, 0.5 cfs Sept. 30.
1911-51: Maximum discharge, 2,140 cfs June 2, 1922 (gage height, 8.50 ft); practically no flow at times when reservoir gates are closed.

Remarks.--Records good except those for periods of ice effect, which are fair. No diversions between station near Gunnison and this station. Flow regulated by Sevier Bridge Reservoir (see preceding page).

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

0.7	0.3	1.2	26
.8	1.4	1.5	88
.9	2.5	2.0	210
1.0	6.0	3.0	502
1.1	12	4.7	1,060

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	43	9.1	6.0	5.1		6.0	10	269	646	860	382	391
2	*45	9.1	6.0	5.1		6.0	10	269	724	852	382	379
3	45	8.5	6.0	5.1	b6	6.0	10	358	613	742	355	376
4	45	8.5	6.0	5.1		6.5	10	583	496	674	249	322
5	45	8.5	6.0	5.1	6.5	6.5	10	712	496	685	185	283
6	45	8.5	6.0	5.1	6.5	6.5	10	782	496	733	185	278
7	20	9.1	6.0	5.1	6.5	7.0	10	986	496	769	185	*319
8	5.6	9.1	6.0		6.5	7.0	11	1,040	496	828	*188	376
9	5.6	9.1	6.0	b5	6.5	7.0	11	1,000	496	954	188	370
10	5.6	9.1	6.0		6.5	7.0	11	1,000	463	1,000	313	361
11	5.6	9.1	6.0		6.5	7.5	11	947	433	993	505	358
12	6.5	9.1	6.0		6.5	7.5	12	905	433	*982	565	349
13	5.6	*9.1	6.0		6.0	7.5	12	877	313	972	562	343
14	5.6	9.8	6.0		6.0	8.0	12	742	225	894	559	334
15	5.6	9.8	6.0		6.0	8.0	12	616	225	766	553	328
16	5.6	9.8	6.0	b5.5	6.0	8.0	98	514	266	664	547	370
17	5.6	9.8	6.0		6.0	8.0	178	*481	301	*601	544	415
18	5.6	9.8	5.6		6.0	8.0	*178	499	272	517	541	403
19	5.6	10	*5.6		6.0	*8.0	220	517	252	517	532	418
20	115	10	5.1		6.0	8.0	260	586	*373	466	529	421
21	190	10	5.1		6.0	8.0	260	628	481	310	529	418
22	99	10	5.1	(*)	6.0	8.5	260	523	421	257	520	243
23	8.5	10	5.1		*6.0	8.5	346	328	265	257	520	68
24	8.5	10	5.1		6.0	8.5	418	230	313	257	514	62
25	8.5	9.8	5.1	b6	6.0	8.5	457	298	313	257	487	47
26	8.5	8.5	5.1		6.0	9.8	439	385	388	257	469	62
27	8.5	6.5	5.1		6.0	9.8	322	406	544	257	463	49
28	8.5	6.5	5.1		6.0	9.8	266	612	655	257	457	53
29	8.5	6.5	5.1	6.0	-	9.8	266	601	789	257	451	39
30	8.5	6.5	5.1	6.0	-	10	269	532	863	328	445	.5
31	8.5	-	5.1	b6	-	10	-	*529	-	382	433	-
Total	836.6	269.2	174.4	171.7	172.0	245.2	4,399	18,755	13,547	18,545	13,337	8,235.5
Mean	27.0	8.97	5.63	5.54	6.14	7.91	147	605	452	598	430	275
Ac-ft	1,660	534	346	341	341	486	8,730	37,200	26,870	36,780	26,450	16,330

Calendar year 1950: Max 1,030 Min 5.1 Mean 222 Ac-ft 161,000
Water year 1950-51: Max 1,040 Min 0.5 Mean 216 Ac-ft 156,000

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

Sevier River near Lynndyl, Utah

Location.--Lat 39°29', long. 112°24', in SE¼ sec. 27 T. 15 S., R. 5 W., on right bank 1½ miles downstream from highway bridge and 3⅔ miles southwest of Lynndyl.

Drainage area.--6,270 sq mi, approximately.

Records available.--April 1914 to October 1919. November 1942 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,650 ft.

Average discharge.--13 years (1914-19, 1943-51), 226 cfs.

Extremes.--Maximum discharge during year, 825 cfs May 9 (gage height, 6.15 ft); minimum, 16 cfs Jan. 3 (gage height, 1.87 ft), result of freeze-up.
1914-19, 1942-51: Maximum daily discharge, 1,820 cfs June 9, 1914, based on records at Leamington; minimum recorded, 9.6 cfs Jan. 22, 1945.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Sevier Bridge Reservoir (see p. 148). Several diversions for irrigation between reservoir and station.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 7 to May 6, May 25 to June 16)

2.0	20	3.0	100	5.0	504
2.3	35	3.5	170	6.0	766
2.6	59	4.0	265	6.1	793

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	93	58	46	24		64	51	350	424	728	218	238
2	*94	62	45	23		69	50	347	494	734	226	228
3	93	66	46	23		68	48	340	607	720	242	238
4	93	66	44	23	b24	20	48	371	564	677	250	*242
5	93	64	a44	23		28	50	524	439	576	194	220
6	91	65	a44			25	51	558	432	494	133	185
7	91	62	a36		25	23	50	573	429	479	*113	177
8	92	60	a31		23	22	51	654	427	524	110	177
9	84	58	31		22	22	51	780	432	*526	76	209
10	66	57	30		22	21	48	774	429	602	63	211
11	61	56	28		21	21	47	747	412	662	65	207
12	60	58	28		22	20	49	731	376	682	199	200
13	59	61	28		21	20	53	677	369	680	338	178
14	57	*61	*28		23	21	53	662	391	675	352	175
15	57	67	28	b23	55	21	54	578	285	669	338	170
16	58	68	27		62	20	60	449	259	586	340	168
17	56	66	28		64	20	*60	*338	250	452	324	175
18	53	65	27		65	21	*176	294	*289	442	322	205
19	54	67	27		67	20	232	283	285	381	319	200
20	54	69	27		65	23	259	287	261	345	312	196
21	54	66	27	(*)	*67	53	324	328	316	317	278	209
22	152	66	27		65	*54	326	422	464	250	285	209
23	211	75	25	24	65	48	333	383	449	159	296	182
24	112	64	25	24	64	44	364	263	367	146	276	74
25	65	63	25	23	65	43	462	144	303	144	274	56
26	57	61	24	22	66	44	489	122	328	150	280	105
27	57	55	24	22	66	44	516	192	359	152	278	105
28	55	49	24	23	68	43	429	*250	499	148	283	111
29	55	47	24	23	-	44	359	355	628	146	276	98
30	56	46	24	23	-	47	352	496	707	145	267	99
31	57	-	24	23	-	50	-	405	-	154	244	-
Total	2,390	1,848	946	714	1,227	1,083	5,495	13,677	12,274	13,545	7,571	5,247
Mean	77.1	61.6	30.5	23.0	43.8	34.9	183	441	409	437	244	175
Ac-ft	4,740	3,670	1,880	1,420	2,430	2,150	10,900	27,130	24,350	26,870	15,020	10,410

Calendar year 1950: Max 769 Min - Mean 184 Ac-ft 133,500
Water year 1950-51: Max 780 Min - Mean 181 Ac-ft 130,900

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of water commissioner's records and records for station near Juab.
b Stage-discharge relation affected by ice.

Chalk Creek near Fillmore, Utah

Location.--Lat 38°58', long. 112°18', in NE¼ sec. 28, T. 21 S., R. 4 W., on right bank 1 mile east of Fillmore and 2¼ miles downstream from South Fork.

Drainage area.--60 sq mi, approximately.

Records available.--May to July 1914, March 1944 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,200 ft. May to July 1914, staff gage at site 1¼ miles upstream at different datum.

Extremes.--Maximum discharge during year, 64 cfs May 27; minimum daily, 5.3 cfs Jan. 31 and Aug. 27.
1914, 1944-51: Maximum discharge, 490 cfs May 9, 1914 (gage height, 3.40 ft, site and datum then in use); minimum daily, that of Jan. 31, Aug. 27, 1951.

Remarks.--Records good. Records include flow of Fillmore Canal which diverts on left bank at flood control dam 400 ft upstream. During low-water periods flow is diverted 2 miles upstream and carried in a lined ditch to the head of the Fillmore Canal. One small irrigation diversion above gage.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	11	9.9	9.0	6.0	9.2	9.8	22	46	15	8.0	7.2
2	11	12	8.8	9.2	6.2	9.7	8.5	23	45	14	9.0	7.0
3	10	12	10	10	6.2	6.4	8.8	26	38	14	10	6.6
4	10	12	10	10	8.4	11	9.1	32	35	13	14	6.6
5	10	11	10	10	11	11	9.2	38	32	12	11	6.4
6	10	11	10	7.4	10	11	9.1	46	31	12	8.4	6.2
7	10	11	11	6.6	10	11	9.1	50	30	12	8.0	6.2
8	10	11	10	9.9	10	12	9.5	54	29	12	7.6	6.2
9	10	10	10	10	10	12	9.5	51	28	11	8.0	6.2
10	10	7.4	10	9.9	10	12	11	48	27	11	7.6	6.2
11	10	9.7	10	10	10	9.9	12	48	26	11	7.4	6.2
12	10	10	10	10	10	10	13	49	26	11	7.2	6.4
13	10	9.4	10	9.7	10	11	13	48	25	10	6.4	6.4
14	10	10	10	9.7	8.8	11	14	46	24	10	6.2	6.2
15	10	10	10	9.7	9.2	11	14	43	23	10	6.0	6.2
16	10	7.2	10	9.7	9.4	11	15	40	22	10	6.0	5.9
17	10	7.0	10	9.7	9.4	9.4	16	37	22	9.9	6.0	5.7
18	10	8.2	9.9	9.7	9.7	9.3	17	36	22	9.4	5.7	5.7
19	11	12	10	9.4	9.4	9.9	17	37	20	9.7	5.9	6.0
20	10	10	10	7.6	8.8	10	19	42	20	10	5.9	5.9
21	10	9.9	9.9	9.2	10	10	19	52	20	11	11	6.2
22	11	9.7	9.9	11	9.9	10	18	52	20	10	6.9	6.0
23	10	9.4	9.7	10	10	10	18	53	18	9.0	6.2	6.0
24	11	9.2	9.7	9.9	8.6	10	19	53	18	8.8	6.2	5.9
25	11	9.2	9.4	9.9	9.2	11	20	56	17	9.2	5.9	6.0
26	11	9.0	9.2	9.9	9.7	11	20	61	16	10	5.7	6.0
27	11	9.0	9.0	9.9	9.7	11	19	61	16	9.4	5.3	6.0
28	11	9.2	9.4	9.9	9.2	10	19	59	16	9.9	5.1	6.6
29	11	9.2	9.4	9.0	-	11	22	56	15	9.4	7.2	6.8
30	11	9.4	9.2	6.2	-	11	22	52	16	8.8	8.6	6.6
31	12	-	9.4	5.3	-	12	-	48	-	8.4	7.6	-
Total	323	295.1	303.8	287.4	258.8	324.8	439.6	1,419	743	330.9	230.6	187.5
Mean	10.4	9.84	9.80	9.27	9.24	10.5	14.7	45.8	24.8	10.7	7.44	6.25
Ac-ft	641	585	603	570	513	644	872	2,810	1,470	656	457	372

Calendar year 1950: Max 161 Min 7.0 Mean 27.6 Ac-ft 19,990
Water year 1950-51: Max 61 Min 5.3 Mean 14.1 Ac-ft 10,190

Three Creeks near Beaver, Utah

Location.--Lat 38°17'40", long. 112°25'40", in NW¼NW¼ sec. 16, T. 29 S., R. 5 W., on right bank half a mile downstream from Three Creeks Dam, half a mile upstream from Merchant Creek, and 16 miles east of Beaver.

Drainage area.--19.5 sq mi.

Records available.--July 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 8,550 ft (from topographic map). Prior to Aug. 24, 1947, at site 500 ft downstream at different datum. Aug. 24, 1947, to May 11, 1950, at site 700 ft upstream at different datum.

Extremes.--Maximum discharge during year, 38 cfs June 7 (gage height, 2.16 ft); minimum, 0.2 cfs May 26, 27, when gates of Three Creeks Dam were closed.
1947-51: Maximum discharge, 290 cfs Aug. 9, 1947 (gage height, 4.35 ft, site and datum then in use), by slope-area determination of peak flow; minimum, that of May 26, 27, 1951.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Flow affected by storage in Puffer Lake and in Three Creeks Reservoir (capacity, 2,020 acre-ft) completed in 1950.

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

0.9	0.1	1.3	2.7	2.0	28
1.0	.3	1.4	4.5	2.2	41
1.1	.6	1.6	9.9		
1.2	1.4	1.8	17		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	3.2					3.0	5.2	9.3	12	8.7	6.7
2	3.3	3.0					3.0	6.7	12	11	*9.6	6.5
3	*3.3	3.0					3.0	7.0	16	10	9.9	6.2
4	3.3	2.8					3.1	9.9	24	9.9	10	6.2
5	3.3	3.0					3.1	13	34	9.6	10	5.9
6	3.2	3.0					*3.2	15	34	9.3	9.3	5.9
7	3.2	3.0					3.3	16	37	9.3	8.7	5.7
8	3.2	3.0					3.9	14	35	9.3	8.4	5.7
9	3.2	2.7					5.2	14	35	9.3	8.1	5.4
10	3.2	2.6	3				5.4	14	35	9.0	7.8	5.4
11	3.0	2.5					5.0	14	35	9.0	7.6	5.4
12	3.0	2.6					5.7	15	35	9.0	7.6	5.2
13	3.0	3.5					6.7	13	34	8.7	7.3	5.2
14	3.0	4.0					7.6	12	34	8.4	7.3	5.2
15	3.0	3.5					8.7	12	34	8.4	7.3	5.0
				3	3	3						
16	3.0	*3.0					9.0	11	34	8.7	7.0	5.0
17	3.0	3.0		(*)			8.4	10	33	9.6	7.6	5.0
18	3.0	3.0					8.1	11	32	9.3	7.6	5.0
19	3.0	6.5					7.8	12	32	8.7	7.6	4.7
20	3.0	4.5			(*)		7.3	15	30	9.0	7.8	5.0
21	2.8	3.9					7.3	18	29	9.3	7.8	5.0
22	2.8	3.2					9.0	19	28	11	7.8	5.0
23	2.8						9.9	*20	27	10	7.8	5.0
24	2.8						8.4	23	25	9.6	7.6	5.0
25	3.0		3				7.0	11	23	9.3	7.3	4.7
26	2.8	3					5.9	.2	22	9.6	7.0	4.7
27	2.8						6.2	.2	20	11	6.7	4.7
28	2.8						6.5	.2	18	9.9	7.0	5.9
29	2.8				-		6.2	.2	*17	9.6	7.6	5.7
30	2.8				-		5.7	.2	15	9.3	*7.6	5.2
31	3.2	-			-		-	2.8	-	9.0	7.0	-
Total	93.9	96.5	93	93	84	93	182.6	334.6	828.3	295.1	246.4	161.2
Mean	3.03	3.22	3.00	3.00	3.00	3.00	6.09	10.8	27.6	9.52	7.95	5.37
Ac-ft	186	191	184	184	167	184	362	664	1,640	585	489	320

Calendar year 1950: Max 28 Min 2.5 Mean 6.35 Ac-ft 4,600
Water year 1950-51: Max 37 Min 0.2 Mean 7.13 Ac-ft 5,660

* Discharge measurement made on this day.

Note.--No gage-height record Nov. 11-16, Dec. 19 to Apr. 5 (stage-discharge relation affected by ice most of periods); discharge estimated on basis of discharge measurements, weather records and records for Beaver River near Beaver. Stage-discharge relation affected by ice Nov. 10, 17, Nov. 23 to Dec. 18.

Beaver River near Beaver, Utah

Location.--Lat 38°17', long. 112°34', in SW¼SW¼ sec. 17, T. 29 S., R. 6 W., on left bank at Fishlake National Forest boundary, three-quarters of a mile downstream from Bakers Canyon, and 4¼ miles east of Beaver.

Drainage area.--82 sq mi, approximately.

Records available.--June to September 1906, March 1914 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,200 ft. Prior to Mar. 30, 1914, staff gage and Mar. 30, 1914, to Oct. 15, 1937, water-stage recorder at site 1,000 ft downstream at different datum.

Average discharge.--37 years (1914-51), 55.5 cfs.

Extremes.--Maximum discharge during year, 220 cfs May 27 (gage height, 3.13 ft); minimum, 3.0 cfs Dec. 4, Jan. 12.

1914-51: Maximum discharge, 1,080 cfs July 22, 1936 (gage height, 7.27 ft, site and datum then in use), from rating curve extended above 500 cfs; minimum, that of Dec. 4, 1950, Jan. 12, 1951.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. No diversions above station for irrigation. Water diverted for hydroelectric power, but returned to stream above station. Some regulation by power plants and several small reservoirs.

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

1.8	7.8	2.3	43
1.9	12	2.6	87
2.1	24	3.0	177

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	17	18	b15	12	b15	19	37	123	44	30	28
2	18	20	16	b14	13	18	20	33	106	42	30	26
3	*18	18	14	b14	14	19	22	38	98	40	34	24
4	17	19	16	15	15	20	*23	49	98	39	39	24
5	16	17	17	15	15	17	24	70	104	37	33	22
6	18	19	19	b14	16	17	22	75	104	36	34	21
7	13	18	17	b13	16	17	22	80	106	34	31	19
8	14	18	17	b14	16	16	23	78	106	33	29	20
9	18	17	16	b14	16	18	29	78	102	32	25	20
10	14	b16	16	b14	15	18	35	80	100	31	23	19
11	14	16	17	15	17	b17	29	95	96	31	22	20
12	13	16	18	14	16	b16	31	91	96	30	23	20
13	15	18	18	b13	15	16	37	80	95	29	26	19
14	13	19	16	b13	b14	16	41	72	95	29	24	19
15	16	17	*16	b15	b14	16	47	67	95	28	24	19
16	14	*16	15	16	b15	17	53	60	96	28	23	19
17	15	16	17	16	b15	18	47	61	96	35	23	19
18	15	16	18	b15	15	19	42	67	95	32	23	19
19	14	22	16	b14	b15	18	42	82	89	30	26	18
20	14	26	15	b12	*b15	17	39	91	95	30	26	18
21	16	19	16	b14	*15	18	39	106	89	31	25	18
22	15	18	17	*17	15	22	37	104	87	48	27	19
23	20	16	b16	16	15	20	47	*106	80	35	25	18
24	16	16	b15	16	b14	22	48	127	70	32	24	18
25	18	16	15	16	b14	22	41	146	66	30	24	17
26	16	16	17	16	b15	23	38	161	61	30	23	18
27	16	16	b16	16	15	22	37	174	58	36	21	18
28	17	16	b16	15	b14	20	38	172	*56	36	25	20
29	16	15	16	b14	-	18	39	154	50	36	30	25
30	19	16	17	b13	-	18	*37	137	49	30	*29	19
31	18	-	17	11	-	19	-	125	-	*30	29	-
Total	493	525	510	449	416	569	1,048	2,896	2,661	1,044	830	603
Mean	15.9	17.5	16.5	14.5	14.9	18.4	34.9	93.4	88.7	33.7	26.8	20.1
Ac-ft	978	1,040	1,010	891	825	1,130	2,080	5,740	5,280	2,070	1,650	1,200

Calendar year 1950: Max 141 Min 13 Mean 31.8 Ac-ft 23,010
Water year 1950-51: Max 174 Min 11 Mean 33.0 Ac-ft 23,890

Peak discharge (base, 250 cfs).--No peak above base.
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 31 to Feb. 5; discharge estimated on basis of discharge measurements, weather records, and records for station at Adamsville.

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Beaver River at Adamsville, Utah

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

Drainage area.--272 sq mi.

Records available.--December 1913 to September 1936, October 1937 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,000 ft (from topographic map). Prior to Sept. 30, 1936, at site 300 ft upstream at different datum.

Average discharge.--36 years (1914-36, 1937-51), 37.5 cfs.

Extremes.--Maximum discharge during year, 78 cfs July 22 (gage height, 2.05 ft); minimum, 0.2 cfs Oct. 1.
1913-36, 1937-51: Maximum discharge, 1,090 cfs July 23, 1941, from rating curve extended above 500 cfs; no flow during periods of 1924, 1931, 1934, 1935, 1939.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 1, July 13 to Sept. 15)

0.6	0.3	0.9	2.6	1.2	11
.7	.7	1.0	4.5	1.4	22
.8	1.4	1.1	7.2	1.7	49

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	12	33	27	26	36	12	14	3.4	2.1	2.2	2.8
2	.4	27	30	30	27	37	5.0	*8.2	5.0	2.1	2.8	2.5
3	*.4	30	30	32	28	37	4.0	5.8	5.5	1.9	3.8	2.3
4	.4	30	32	31	30	39	*2.9	5.2	5.8	1.9	3.6	2.3
5	.3	30	34	30	32	43	5.5	3.1	5.2	1.7	3.6	2.5
6	.3	30	33	28	33	43	3.8	3.3	4.5	1.5	2.9	1.9
7	.5	29	37	27	34	40	3.4	5.2	5.2	1.5	2.6	1.7
8	.7	30	36	28	36	37	2.6	6.0	4.7	1.7	2.6	1.7
9	.8	29	35	29	37	34	2.3	5.5	4.3	1.7	2.5	1.7
10	.5	28	33	29	38	32	2.3	5.5	3.6	1.6	2.3	1.8
11	.6	27	32	30	39	31	2.6	4.0	3.8	1.4	2.1	1.7
12	.5	28	32	28	38	32	2.5	4.0	3.6	1.2	2.3	1.5
13	.6	30	32	30	34	30	2.3	5.0	3.3	1.0	2.2	1.8
14	.5	31	31	32	33	28	2.3	12	3.6	1.0	2.2	1.9
15	.7	*30	*31	32	33	28	1.9	19	3.4	1.0	2.5	1.7
16	.9	30	30	32	32	26	1.7	15	2.9	1.0	2.6	1.8
17	.6	30	30	32	27	26	1.6	9.2	2.2	1.0	3.1	1.8
18	.4	30	30	34	28	26	1.7	10	1.9	.9	2.3	1.7
19	.3	36	30	34	27	27	1.9	8.9	2.8	1.0	2.9	1.7
20	.4	45	30	34	*32	27	1.8	8.9	3.1	1.2	3.6	1.7
21	.6	39	29	34	33	30	2.5	22	2.3	1.7	2.9	1.4
22	.7	37	30	*39	30	32	3.4	23	2.8	35	3.1	1.5
23	3.8	35	29	39	32	31	2.8	19	2.9	10	3.1	1.6
24	4.3	34	29	40	33	31	2.3	*13	3.3	1.9	3.1	1.3
25	4.5	34	29	40	36	33	2.1	21	2.3	1.3	2.9	1.3
26	4.5	33	29	40	36	34	3.1	16	2.2	1.2	2.3	1.9
27	3.3	31	30	39	35	31	3.3	18	1.9	1.9	1.8	1.6
28	3.6	30	28	40	36	28	3.3	21	*2.6	2.5	1.7	2.6
29	3.8	30	30	37	-	30	15	11	1.9	1.6	2.3	3.4
30	3.4	31	29	31	-	29	14	6.3	1.7	1.7	*3.6	1.9
31	4.0	-	28	28	-	30	-	4.5	-	*2.2	2.9	-
Total	46.6	926	961	1,016	915	998	115.9	332.6	101.7	89.4	84.4	57.0
Mean	1.50	30.9	31.0	32.8	32.7	32.2	3.86	10.7	3.39	2.88	2.72	1.90
Ac-ft	92	1,840	1,910	2,020	1,810	1,980	230	660	202	177	167	113

Calendar year 1950: Max 143 Min 0.2 Mean 18.3 Ac-ft 13,260
Water year 1950-51: Max 45 Min 0.3 Mean 15.5 Ac-ft 11,200

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 10, 11, Jan. 6-9, 19-21, Jan. 31 to Feb. 10.

Rockyford Reservoir near Minersville, Utah

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

Drainage area.--510 sq mi, approximately.

Records available.--October 1937 to September 1951.

Gage.--Staff gage.

Extremes.--Maximum contents observed during year, 11,550 acre-ft Mar. 31 (gage height, 37.9 ft); minimum observed, 2,370 acre-ft Sept. 21 (gage height, 18.5 ft).
1937-51: Maximum contents observed, 23,810 acre-ft Apr. 22, 25, 28, 30, May 1, 1945; no contents Oct. 16, 31, 1939.

Remarks.--Reservoir is formed by earth-fill dam completed in 1914. Capacity, 23,200 acre-ft between gage height 0.0 (bottom of outlet tunnel) and 51.0 ft (spillway crest). Prior to fall of 1937, the spillway crest was at elevation 52.5 ft; capacity, 24,910 acre-ft. Dead storage negligible. Water is used for irrigation in Milford Valley.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-		-	-	8,580	-		-	-	-	-	-
2	-		-	-	-	-		-	-	-	-	-
3	-		-	-	-	-		-	-	-	-	-
4	-		-	-	-	-		-	-	-	-	-
5	-		-	-	-	-		-	-	-	-	-
6	-		-	-	-	-		10,940	-	-	-	-
7	2,840		-	-	-	-		-	-	-	-	-
8	-		-	-	-	-		-	-	-	-	-
9	-		-	7,270	-	10,810		-	8,750	-	-	-
10	-		-	-	9,250	-		-	-	-	-	-
11	-		-	-	-	-		-	-	-	4,460	-
12	-		-	-	-	-		10,610	-	-	-	-
13	-		-	-	-	-		-	-	-	-	-
14	-		-	-	-	-		-	-	-	-	-
15	2,870		-	-	-	-		-	-	-	-	-
16	-		-	-	-	11,080		-	-	-	-	-
17	-		-	7,600	9,590	-		-	-	-	-	-
18	-		-	-	-	-		-	-	-	3,920	-
19	-		-	-	-	-		-	-	-	-	-
20	-		-	-	-	-		-	-	-	-	-
21	-		-	-	-	-		-	-	5,040	-	2,370
22	2,970		-	-	-	-		-	-	-	-	-
23	-		-	-	-	-		-	7,540	-	-	-
24	-		-	-	-	11,280		-	-	-	-	-
25	-		-	-	9,930	-		-	-	-	-	-
26	-		-	8,250	-	-		-	-	-	3,440	-
27	-		-	-	-	-		-	-	-	-	-
28	-		-	-	10,200	-		-	-	-	-	-
29	-		-	-	-	-		-	-	-	-	-
30	-	4,400	6,720	-	-	-	11,250	-	6,940	-	-	2,490
31	3,200	-	6,770	8,530	-	11,550	-	9,500	-	5,000	3,200	-

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

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	2,810	-
Oct. 31	-	a3,200	+390
Nov. 30	-	a4,400	+1,200
Dec. 31	-	a6,770	+2,370
Calendar year 1950...	-	-	-8,430
Jan. 31	-	a8,530	+1,760
Feb. 28	35.9	10,200	+1,670
Mar. 31	37.9	11,550	+1,350
Apr. 30	-	a11,250	-300
May 31	-	a9,500	-1,750
June 30	30.4	6,940	-2,560
July 31	-	a5,000	-1,940
Aug. 31	-	a3,200	-1,800
Sept.30	19.0	2,490	-710
Water year 1950-51...	-	-	-320

a No gage-height record; contents estimated on basis of records of inflow and outflow.

Beaver River at Rockyford Dam, near Minersville, Utah

Location.--Lat 38°14', long. 112°50', in NW¼ sec. 11, T. 30 S., R. 9 W., on right bank half a mile downstream from Rockyford Dam and 4¾ miles east of Minersville.

Drainage area.--512 sq mi.

Records available.--December 1913 to September 1951.

Gage.--Water-stage recorder. Concrete control since Nov. 12, 1916. Altitude of gage is 5,500 ft. Prior to June 1, 1916, at site 1,500 ft upstream at different datum.

Average discharge.--36 years (1914-36, 1937-51), 39.5 cfs.

Extremes.--Maximum daily discharge during year, 65 cfs June 23; minimum daily, 4.0 cfs Oct. 27, Nov. 16-24, 28, 29, Feb. 2.
1913-51: Maximum discharge, 727 cfs June 10, 1921 (gage height, 8.53 ft); minimum, 0.3 cfs Mar. 19, 20, 1914.

Remarks.--Records good except those for periods of no gage-height record, which are fair. One small diversion between dam and station. Flow regulated by Rockyford Reservoir (see preceding page). Numerous diversions above reservoir for irrigation and municipal use.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 10 to June 23, June 28, July 2-30)

0.7	4.0
.8	9.3
.9	13
1.1	37
1.4	79

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.9	4.4	4.9	4.9	4.4	5.9	5.9	24	48	50	42	42
2	4.9	4.4	4.9	4.9	4.0	5.9	5.9	*40	48	*50	*43	40
3	*4.4	4.4	4.9	4.4	4.4	5.9	5.9	42	48	42	35	39
4	4.4	4.4	4.9	4.9	4.4	5.9	*6.4	39	39	28	5.0	39
5	4.4	4.4	4.9	4.9	4.4	5.9	6.4	40	20	35	5.0	40
6	4.4	4.4	4.9	4.9	4.4	5.9	6.4	40	38	38	14	39
7	4.4	4.4	4.9	4.9	4.9	6.4	6.9		53	48		38
8	4.9	4.4	4.9	4.9	4.9	5.9	6.9	40	52	53		39
9	4.9	4.4	4.9	4.9	4.9	6.4	6.9		53	58		39
10	4.9	4.4	4.9	4.9	4.9	6.4	6.9	39	53	58	28	39
11	4.4	4.4	4.9	4.9	5.4	6.4	6.9	39	55	58		18
12	4.4	4.4	4.9	4.9	5.4	6.4	6.9	40	55	56		6.9
13	4.4	4.4	4.9	4.9	5.4	6.4	7.5	40	56	56		5.4
14	4.9	4.4	4.9	4.9	4.9	6.4	7.5	42	55	53		5.4
15	4.9	*4.4	*4.9	5.4	4.9	6.4	7.5	42	56	53		5.4
16	4.9	4.0	4.9	5.4	4.9	5.4	7.5	43	56	53		4.9
17	5.4	4.0	4.9	5.4	4.9	5.4	7.5	42	58	52		4.9
18	5.4	4.0	4.9	5.4	4.9	5.4	7.5	43	58	48		5.4
19	5.4	4.0	4.9	5.4	4.9	5.4	6.9	47	60	45		4.9
20	5.4	4.0	4.9	5.4	4.9	5.4	7.5	49	60	45		4.9
21	5.4	4.0	4.9	5.4	*5.4	5.4	7.5	50	62	45	42	4.9
22	5.4	4.0	4.9	*5.4	5.9	5.9	7.5	50	63	42		4.9
23	5.9	4.0	4.9	4.9	5.9	5.9	7.5	49	65	33		4.9
24	5.9	4.0	4.9	4.9	5.9	5.4	7.5	*49	62	31		4.9
25	5.9	4.4	4.9	4.9	5.9	5.4	7.5	48	60	33		4.9
26	4.9	4.4	4.9	4.9	5.9	5.4	8.1	48	58	36		4.9
27	4.0	4.4	5.4	4.9	5.9	5.4	8.1	48	55	37		4.9
28	4.4	4.0	5.4	5.4	5.9	5.9	8.1	48	*53	38		4.9
29	4.4	4.0	5.4	5.4	-	5.9	8.7	47	52	38		4.9
30	4.4	4.4	5.4	4.9	-	5.9	8.7	48	50	39	*42	4.9
31	4.4	-	5.9	4.9	-	5.9	-	47	-	42	42	-
Total	151.0	127.6	154.9	156.4	142.8	181.9	216.9	1,343	1,601	1,393	1,110.0	509.1
Mean	4.87	4.25	5.00	5.05	5.10	5.87	7.23	43.3	53.4	44.9	35.8	17.0
Ac-ft	300	253	307	310	283	361	430	2,660	3,180	2,760	2,200	1,010

Calendar year 1950: Max 120 Min 4.0 Mean 33.2 Ac-ft 24,020
Water year 1950-51: Max 65 Min 4.0 Mean 19.4 Ac-ft 14,050

* Discharge measurement made on this day.

Note.--No gage-height record May 7-9, June 24-27, June 29 to July 1, Aug. 4-29; discharge estimated on basis of engineer's notes, gate changes at Rockyford Dam, and records for nearby stations.

Coal Creek near Cedar City, Utah

Location.--Lat 37°40'15", long. 113°00'20", in SE¼ sec. 17, T. 36 S., R. 10 W., on right bank 2 miles downstream from South Creek and 3.3 miles southeast of Cedar City.

Drainage area.--77.4 sq mi.

Records available.--May 1915 to November 1919, May 1935 to September 1951. Records for May 1915 to November 1919 do not include flow of power canal operated prior to November 1919 but would be equivalent if flow of power canal is added. For amount of flow in power canal see Diversion paragraph for Coal Creek near Cedar City for these years.

Gage.--Water-stage recorder. Altitude of gage is 6,400 ft. Prior to Mar. 30, 1939, staff gages and Mar. 30, 1939, to May 14, 1945, water-stage recorder at several sites about 1.5 miles downstream at various datums.

Average discharge.--15 years (1935-37, 1938-51), 32.5 cfs.

Extremes.--Maximum discharge during year, 112 cfs May 6 (gage height, 2.43 ft); minimum, 2.7 cfs Nov. 10, result of freeze-up.
1935-51: Maximum discharge observed, 2,910 cfs July 9, 1936 (gage height, 6.4 ft, site and datum then in use), from rating curve extended by broad-crested weir formula; minimum recorded, that of Nov. 10, 1950.

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

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

1.4	3.5
1.5	6.3
1.6	12
1.8	29
2.1	61

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.9	8.5	*7.9		b5.0		10	17	29	11	13	
2	7.9	8.5	b7.8		b6.8		11	17	26	10	9.5	
3	7.9	7.9	b7.8		b7.4	*b9.0	12	29	25	10	15	
4	7.9	7.9	7.9		b7.6		13	46	23	9.5	9.5	a6
5	7.9	7.9	6.8	(*) b7.4	b7.8		13	54	*22	10	7.9	
6	7.9	7.9	b6.8		b7.8	9.0	11	59	20	10		
7	7.9	7.9	8.5		*7.9	9.0	13	53	20	10		
8	7.9	7.9	7.9		7.9	9.0	14	42	20	9.0		*6.3
9	7.9	6.8	7.4		7.9	9.0	18	*39	18	9.0		6.3
10	7.9	b6.0	7.4		7.9	9.0	20	39	18	9.0		6.3
11	7.9	b6.2	6.8		7.9		17	38	17	9.0		6.3
12	7.4	b6.8	7.4		7.9		19	34	17	9.0		6.3
13	7.4	b7.2	6.8		7.9		17	27	16	8.5		6.3
14	7.4	7.9	7.4	b6.8			29	26	16	8.5		6.3
15	7.4	b7.0	7.9				35	29	16	9.0	a8	6.3
16	7.4	b7.5	7.4				35	36	14	13		6.3
17	7.4	b8.0		6.8			33	52	13	12		6.3
18	7.4	8.5		6.0			28	58	13	14		6.3
19	7.4	12		5.2		b9	25	49	13	9.5		6.3
20	7.9	11		b5.0			22	46	12	9.0		6.3
21	7.9	10		b4.8	b7.8		24	51	12			6.3
22	7.9	9.5		4.6			30	50	12			6.3
23	7.9	7.9		4.6			30	46	12		*7.9	6.3
24	7.9	7.9	b7.4	4.3			*25	46	11		7.9	6.3
25	7.9	7.9		4.9			22	50	11	a8	7.4	6.3
26	*7.9	7.9		6.0			19	54	*11		7.4	6.3
27	7.9	7.4		7.9		(*)	21	51	11		7.4	6.3
28	7.9	7.4		7.9		9.0	22	45	11		7.9	18
29	7.9	7.4		b6.6	-	10	20	42	11		26	9.0
30	7.9	7.9		b5.2	-	10	19	37	11		10	7.4
31	7.9	-		b4.0	-	10	-	33	-	*7.4	8	-
Total	240.9	240.5	230.9	198.6	214.7	282.0	627	1,295	481	286.4	280.8	202.4
Mean	7.77	8.02	7.45	6.41	7.67	9.10	20.9	41.8	16.0	9.24	9.06	6.75
Ac-ft	478	477	458	394	426	559	1,240	2,570	954	568	557	401

Calendar year 1950: Max 135 Min 6.0 Mean 21.3 Ac-ft 15,450
Water year 1950-51: Max 59 Min 4.0 Mean 12.5 Ac-ft 9,080

Peak discharge (base, 350 cfs).--No peak above base.
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of engineer's notes, available fragments of gage-height record, and weather records.
b Stage-discharge relation affected by ice.

Baker Creek at narrows, near Baker, Nev.

Location.--Lat 38°59', long. 114°13', in sec. 22, T. 13 N., R. 69 E., on left bank half a mile downstream from Pole Canyon, 1 mile downstream from narrows, and 4¾ miles southwest of Baker.

Records available.--December 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,400 ft.

Extremes.--Maximum discharge during year, 84 cfs May 28 (gage height, 2.10 ft); minimum, 0.4 cfs Mar. 11, but may have been less during periods of ice effect.
1947-51: Maximum discharge, 146 cfs June 16, 1949 (gage height, 2.43 ft), from rating curve extended above 60 cfs by logarithmic plotting; minimum recorded, that of Mar. 11, 1951.

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

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

0.5	0.2	1.2	9.6
.6	.6	1.4	18
.7	1.2	1.7	38
.9	3.1	2.0	69
1.0	4.7	2.1	83

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.1	2.6	2.1		0.6		1.5	*3.3	47	18	*6.4	4.7
2	*3.1	2.6	b2.1	b2.0	.9		1.6	3.3	38	17	6.6	4.7
3	3.0	2.5	2.6		.9		1.6	3.4	32	16	8.0	4.5
4	3.0	2.4	2.4	2.2	b.9	b1.2	1.7	3.3	28	15	7.7	4.4
5	2.9	2.4	2.2	1.9	b.9		*1.7	3.3	26	14	7.4	4.2
6	2.9	2.4	b2.2		.5		1.7	3.3	26	13	7.1	4.2
7	2.9	2.3	2.5	b2.0	.9	1.2	1.8	3.4	24	12	7.1	4.1
8	2.9	2.3	2.4		.9	1.0	1.8	3.7	25	12	7.1	4.1
9	2.8	2.0	2.3	2.1	1.0	.9	2.0	3.7	24	11	6.6	4.1
10	2.8	b2.0	2.3	2.2	1.0		2.0	3.7	23	11	6.6	3.9
11	2.6	2.2	2.3	2.5	1.1	b.9	1.8	4.1	21	10	6.4	3.9
12	2.6	2.4	2.2	2.5	1.2		1.9	4.4	21	10	6.4	3.9
13	2.4	2.2	2.1	2.3		1.5	1.9	4.7	23	9.4	6.2	3.7
14	2.4	*2.2	*2.2	2.2		1.2	2.0	5.1	28	8.8	6.0	3.6
15	2.4	b2.4	2.3	2.0		1.2	2.1	5.6	33	8.2	5.8	3.6
16	2.4	b2.4	2.2	*1.6		1.1	2.2	5.8	40	8.5	5.8	3.4
17	2.3	2.4	2.2	1.3			2.2	5.8	44	8.2	5.6	3.3
18	2.4	3.0	b2.2	1.2		b1.1	2.4	5.8	45	8.2	5.3	3.4
19	2.4	5.8	2.3	1.2			2.5	6.2	39	8.2	5.3	3.3
20	2.4	3.1	2.2	1.2		1.2	2.5	7.1	38	7.7	5.1	3.3
21	2.4	2.9		1.4	b1.2	1.3	2.6	11	36	7.7	6.2	3.4
22	2.4	2.5		1.4	(*)	1.3	2.6	12	30	8.2	6.4	3.4
23	2.4	2.3		.9		b1.3	2.6	14	27	7.7	5.6	3.3
24	2.5	2.3		.7		b1.3	2.9	*16	26	6.8	5.3	3.3
25	2.5	2.3		.6		1.5	3.0	21	24	6.6	5.6	3.1
26	2.5	2.3	b2.0	.7		1.5	3.1	31	23	8.8	5.3	3.1
27	2.9	2.4		.7		1.4	3.1	52	*21	8.2	5.3	3.1
28	2.6	2.3		.8		1.5	3.3	79	20	7.4	5.6	3.6
29	2.5	2.2		.8	-	1.5	3.3	76	20	7.1	5.3	3.6
30	2.5	2.4		.9	-	1.5	3.0	68	19	6.8	5.1	3.3
31	2.8	-		b.9	-	1.6	-	57	-	6.6	*5.1	-
Total	81.7	75.5	67.3	48.2	30.0	38.2	68.4	526.0	871	308.1	189.3	111.5
Mean	2.64	2.52	2.17	1.55	1.07	1.23	2.28	17.0	29.0	9.94	6.11	3.72
Ac-ft	162	150	133	96	60	76	136	1,040	1,730	611	375	221

Calendar year 1950: Max 47 Min - Mean 5.57 Ac-ft 4,040
Water year 1950-51: Max 79 Min 0.5 Mean 6.62 Ac-ft 4,790

Peak discharge (base, 20 cfs).--May 28 (3:30 a.m.) 84 cfs (2.10 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Lehman Creek near Baker, Nev.

Location.--Lat 39°01', long. 114°13', in sec. 10, T. 13 N., R. 69 E., on left bank 4¾ miles west of Baker.

Records available.--December 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,400 ft.

Extremes.--Maximum discharge during year, 16 cfs May 28 to June 1 (gage height, 1.14 ft); minimum, 0.8 cfs Mar. 18, but may have been less during periods of ice effect.
1947-51: Maximum discharge, 34 cfs June 19, 1949; minimum recorded, that of Mar. 18, 1951.

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

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

0.6	0.9
.7	1.5
.8	2.8
1.0	8.3
1.2	19

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.2	2.2	1.9			b1.1	1.1	*1.7	16	11	*6.8	4.5
2	*3.2	2.2	b1.9	b1.7		b1.1	1.1	1.7	15	11	7.5	4.8
3	3.0	2.0	2.0		b1.1	1.3	1.1	1.7	14	10	7.9	4.5
4	3.0	2.0	1.9			1.3	1.1	1.9	13	10	7.9	4.5
5	2.8	2.0	1.9	1.7		1.3	*1.1	1.9	13	9.6	7.9	4.3
6	2.8	2.0	b1.9		1.1	1.3	1.1	2.0	12	10	7.5	4.3
7	2.8	2.0	b1.9		1.2	1.2	1.1	2.0	12	9.6	7.9	4.3
8	2.5	2.0	1.8		1.2	1.2	1.1	2.2	11	9.2	7.9	4.0
9	2.5	1.9	1.8	b1.7	1.1	1.1	1.2	2.3	11	8.3	7.5	4.0
10	2.3	b1.9	1.8		1.1		1.2	2.5	10	8.3	7.1	4.0
11	2.3	b1.9	1.8		1.1	b1.2	1.3	2.6	9.6	8.3	7.1	4.0
12	2.3	b1.9	1.8	1.9	1.2		1.3	2.8	9.2	8.3	6.8	4.0
13	2.5	b1.8	1.8	1.7			1.3	2.8	9.2	7.9	6.8	4.0
14	2.5	*1.9	*1.8	1.7			1.3	2.8	9.2	7.1	6.4	3.8
15	2.5	b1.9	1.8	1.6		1.3	1.4	3.0	9.2	7.1	6.1	3.6
16	2.5	b1.9	1.7	*1.3		1.2	1.5	3.0	10	7.1	6.1	3.6
17	2.5	2.0	1.8	1.3			1.6	3.2	11	7.1	5.8	3.4
18	2.5	2.3	b1.7	1.3		b1.2	1.5	3.4	13	7.1	5.8	2.8
19	2.3	3.2	1.7	1.3			1.5	3.8	13	7.1	5.8	2.8
20	2.3	2.5	1.7	1.3			1.5	4.0	14	6.8	5.8	2.8
21	2.3	2.5		b1.2	b1.1	1.1	1.4	5.0	15	6.4	5.8	2.8
22	2.2	2.2		b1.2	(*)	1.1	1.5	5.3	15	6.4	5.8	2.6
23	2.2	2.0		1.2			1.6	5.8	14	6.4	5.8	2.6
24	2.2	2.0		1.2		b1.1	1.7	*5.8	14	6.4	5.3	2.6
25	2.2	2.0		b1.2			1.7	7.1	13	6.8	5.3	2.6
26	2.2	1.9	b1.7	1.2		1.1	1.7	9.6	13	7.5	5.3	2.6
27	2.6	2.0		1.2			1.6	12	*12	6.8	5.3	2.6
28	2.3	1.9				b1.1	1.7	15	12	6.8	5.0	2.6
29	2.2	1.9		b1.1	-		1.7	16	12	6.8	4.8	2.6
30	2.0	1.9			-	1.1	1.6	16	11	6.8	4.6	2.6
31	2.3	-			-	1.1	-	16	-	6.8	*4.8	-
Total	77.0	61.8	55.1	44.9	31.1	36.3	41.6	164.9	365.4	244.8	195.5	104.2
Mean	2.48	2.06	1.78	1.45	1.11	1.17	1.39	5.32	12.2	7.90	6.31	3.47
Ac-ft	153	123	109	89	62	72	83	327	725	486	388	207

Calendar year 1950: Max 15 Min - Mean 3.66 Ac-ft 2,650
Water year 1950-51: Max 16 Min - Mean 3.90 Ac-ft 2,820

Peak discharge (base, 10 cfs).--May 28 to June 1, 16 cfs (1.14 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Salton Sea, Calif.

Location.--Lat 33°26'55", long. 116°02'20", in NW¼ sec. 27, T. 8 S., R. 9 E., 1 mile northeast of Figtree John Spring and about 9 miles south of Mecca.

Drainage area.--8,360 sq mi, approximately.

Records available.--November 1904 to September 1951. Records prior to September 1932 are published in Water-Supply Paper 735.

Gage.--Bench mark set by Imperial Irrigation District. Elevation is 242.44 ft below mean sea level.

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

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

Elevation, in feet, below mean sea level, water year October 1950 to September 1951

Sept.30, 1950	240.20	May 1, 1951	238.60
Nov. 1	240.05	June 1	238.75
Dec. 1	239.90	June 30	238.70
Jan. 2, 1951	239.60	Aug. 1	238.85
Feb. 1	239.25	Aug. 31	238.85
Mar. 1	239.05	Oct. 1, 1951	238.85
Mar. 31	238.75		

Whitewater River at Whitewater, Calif.

Location.--Lat 33°56'50", long. 116°38'20", in NE¼ sec. 2, T. 3 S., R. 3 E., on right bank 1.5 miles north of Whitewater and 3½ miles upstream from San Gorgonio River.

Drainage area.--57.4 sq mi.

Records available.--October 1948 to September 1951.

Gage.--Water-stage recorder and sharp-crested weir. Datum of gage is 1,605.40 ft above mean sea level, adjustment of 1934. Auxiliary water-stage recorder on river 400 ft east and 500 ft upstream from base gage. Prior to Feb. 24, 1950, auxiliary gage used as base gage.

Extremes.--Maximum discharge during year, 102 cfs Jan. 29 (gage height, 6.93 ft); minimum daily, 2.4 cfs July 29.

1948-51: Maximum discharge, 450 cfs Sept. 6, 1950 (gage height, 8.08 ft); minimum daily, 2.3 cfs Jan. 1, 1950.

Maximum discharge known, 42,000 cfs Mar. 2, 1938, from slope-area determination of peak flow, at site 2.5 miles upstream (drainage area, 51.4 sq mi).

Remarks.--Records fair. Discharge measurements generally made three times a month. These records show, in monthly and yearly figures but not in daily figures, the total discharge of Whitewater River past this point. They include water pumped from open sumps in rising-water area surrounding station and are adjusted for underground diversion through infiltration line above station. One small diversion for domestic use and one for irrigation, 2 to 3 miles upstream. The following records, in acre-feet, of water diverted out of basin about 15 miles upstream for power plants and irrigation use in San Gorgonio River basin for water years 1949-51, are furnished by California Electric Power Co:

Month	Diversion	Month	Diversion	Month	Diversion
October 1948	118	October 1949	97	October 1950	78
November	126	November	107	November	84
December	140	December	111	December	82
Calendar year 1948	-	Calendar year 1949	1,496	Calendar year 1950	1,230
January 1949	145	January 1950	121	January 1951	82
February	144	February	135	February	84
March	175	March	144	March	100
April	214	April	150	April	77
May	153	May	109	May	101
June	93	June	88	June	62
July	82	July	85	July	54
August	89	August	79	August	54
September	86	September	74	September	55
Water year 1948-49	1,565	Water year 1949-50	1,300	Water year 1950-51	913

Discharge, in cubic feet per second, of Whitewater River at Whitewater, Calif., water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	6.6	5.1	6.1	4.6	6.7	4.6	7.8	4.6	5.0	4.8	5.3
2	11	6.8	5.6	6.8	4.6	5.6	5.3	7.8	4.0	4.8	4.4	4.8
3	7.4	7.6	6.3	6.3	4.3	6.0	4.6	7.1	4.6	5.0	4.4	4.9
4	6.7	6.3	9.5	5.8	4.3	7.4	6.1	6.3	4.4	5.0	4.3	4.9
5	6.3	5.3	24	5.3	4.0	4.3	5.6	7.1	4.8	5.0	4.3	4.9
6	5.8	7.5	11	5.8	4.0	3.0	6.3	7.8	4.9	5.0	4.3	4.7
7	5.8	6.1	6.7	5.3	4.0	4.4	5.3	6.0	4.1	4.3	4.2	5.2
8	5.0	6.1	5.8	6.7	3.8	5.6	4.0	5.1	6.3	4.8	4.5	4.9
9	5.6	5.8	5.8	9.2	5.3	6.0	4.9	5.6	4.6	4.0	4.1	4.5
10	5.6	7.7	5.6	7.8	4.6	6.0	5.6	5.1	4.6	4.8	4.8	5.0
11	5.6	6.3	5.3	8.4	3.7	5.3	5.3	5.7	4.7	4.6	3.6	4.4
12	5.3	5.3	4.9	11	5.0	5.6	5.5	4.9	4.5	4.6	4.8	4.9
13	5.8	9.5	4.9	7.8	6.0	5.3	5.5	3.2	4.3	4.6	4.4	4.8
14	5.3	12	4.9	6.7	6.0	5.3	5.1	6.1	4.3	4.6	4.3	5.2
15	4.3	6.0	5.1	7.1	5.1	5.6	3.2	5.3	4.4	4.8	4.7	4.8
16	6.1	7.4	5.3	6.3	6.4	6.0	5.8	5.1	4.1	5.0	4.3	4.6
17	6.4	5.6	4.9	7.4	5.1	5.6	5.1	5.1	3.8	4.4	4.3	4.6
18	6.4	6.0	5.8	6.0	5.1	5.6	5.1	5.0	4.4	4.4	4.8	4.4
19	7.0	4.6	5.3	8.7	5.8	5.6	4.6	4.8	3.7	4.4	4.4	4.6
20	7.7	4.9	5.1	6.7	6.0	5.6	6.0	2.6	5.2	4.3	3.9	4.2
21	7.0	5.6	5.3	6.3	5.8	5.3	5.4	5.2	6.6	4.2	5.0	5.0
22	5.3	6.0	6.1	5.3	5.3	5.3	3.0	5.3	7.1	4.4	5.0	4.4
23	7.0	6.3	7.6	5.8	6.7	6.4	6.0	4.9	4.3	4.3	5.4	4.4
24	6.1	7.4	5.3	5.6	6.3	5.3	5.8	4.6	4.2	4.4	4.9	4.6
25	6.3	5.6	8.1	5.6	6.7	5.3	5.5	4.6	4.2	4.2	4.7	4.2
26	6.6	6.3	7.3	6.2	7.1	5.9	6.2	4.6	4.0	4.3	5.0	4.5
27	8.4	5.3	6.6	4.6	7.1	5.1	6.6	3.6	3.8	4.7	5.2	4.7
28	6.3	4.6	6.6	5.1	6.0	5.8	6.0	4.5	3.9	5.0	5.3	5.2
29	5.6	4.6	6.6	30	-	5.1	18	5.2	3.8	2.4	4.6	7.8
30	8.2	4.6	6.8	10	-	4.9	8.7	4.0	3.9	4.5	5.2	4.9
31	6.6	-	6.1	4.6	-	4.9	-	4.4	-	5.0	5.6	-
Total	203.5	189.7	209.3	230.3	148.7	169.8	174.7	164.4	136.1	140.8	143.5	145.3
Mean	6.56	6.32	6.75	7.43	5.31	5.48	5.82	5.30	4.54	4.54	4.63	4.84
Ac-ft	404	376	415	457	295	337	347	326	270	279	285	288
	77	90	102	105	80	102	52	45	15	16	12	10

Adjusted for infiltration

Mean	-	-	-	-	-	-	-	-	-	-	-	-
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Ac-ft	491	466	517	562	375	439	399	371	285	295	297	298

Observed

Calendar year 1950: Max .60 Min 2.3 Mean 6.63 Ac-ft 4,800
Water year 1950-51: Max 30 Min 2.4 Mean 5.63 Ac-ft 4,080

Adjusted

Calendar year 1950: Mean - Cfsm - In. - Ac-ft 5,880
Water year 1950-51: Mean - Cfsm - In. - Ac-ft 4,790

† Diversion in acre-feet by infiltration conduit discharging below station, records furnished by Whitewater Mutual Water Co.

Tahquitz Creek near Palm Springs, Calif.

Location.--Lat 33°47'40", long. 116°33'45", in SW¼ sec. 22, T. 4 S., R. 4 E., on left bank 1.5 miles southwest of Palm Springs and 6.2 miles upstream from mouth.

Records available.--October 1947 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 764.5 ft above mean sea level (levels by Riverside County Flood Control and Water Conservation District).

Extremes.--Maximum discharge during year, 102 cfs July 28 (gage height, 4.15 ft), from rating curve extended above 15 cfs by logarithmic plotting; no flow during several months.
1947-51: Maximum discharge, that of July 28, 1951; no flow during several months of each year.

Remarks.--Records good except those above 15 cfs, which are fair. No regulation or diversions above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	0.2	0.3	0.6	0.2	0.6	a0.2	0		
2			0	.2	.3	.9	.2	.5	a.2	0		
3	(*)		0	.2	.3	.6	.2	.5	a.1	0		
4			0	.2	.3	.5	*.2	.4	a.1	0		
5			0	.2	.3	.5	.2	.4	a.1	0		
6			0	.2	.3	.4	.2	.3	a.1	0		(*)
7		(*)	0	.2	.3	.4	.2	.7	a.1	0		
8			0	*.2	.3	.4	.2	*.8	a.1	0	(*)	
9			0	.2	.3	.4	.2	.8	a.1	0		
10			0	.3	.3	.5	.2	.8	a.1	0		
11			0	.3	.3	.5	.2	.8	0	0		
12			0	.3	.3	.4	.2	.8	0	0		
13			0	.3	.3	.4	.2	.8	0	0		
14			0	.3	.3	.4	.3	.8	*0	0		
15			0	*.3	.3	.4	.2	.8	0	0		
16			0	.3	.3	.4	.1	.8	0	0		
17			0	.3	.3	.3	.1	.7	0	0		
18			0	.3	.3	.3	.1	.6	0	0		
19			0	.3	.3	*.3	.1	.5	0	0		
20		(*)	0	.3	.3	.3	.1	.5	0	0		
21			0	.3	*.3	.3	.1	.4	0	0		
22			0	.3	.3	.3	a.1	.4	0	0		
23			0	.3	.3	.3	a.1	.4	0	0		
24			0	.3	.3	.3	*.1	*.3	0	*0		
25			0	.3	.3	.3	.2	.3	0	0		
26			.2	.3	.3	.3	.2	.3	0	0		
27			.2	.2	.4	.3	.2	.3	0	0		
28			.3	.2	.5	.3	.2	.2	0	1.4		
29			*.3	.2	-	.3	.3	.2	0	**.1		
30			.3	.2	-	.3	.7	.2	0	.1		
31		-	.2	*.2	-	.3	-	a.2	-	.1		
Total	0	0	1.5	7.9	8.7	12.2	5.8	16.1	1.2	1.7	0	0
Mean	0	0	0.05	0.25	0.31	0.39	0.19	0.52	0.04	0.05	0	0
Ac-ft	0	0	3.0	16	17	24	12	32	2.4	3.4	0	0

Calendar year 1950: Max 12 Min 0 Mean 0.931 Ac-ft 675
Water year 1950-51: Max 1.4 Min 0 Mean 0.15 Ac-ft 110

* Discharge measurement made on this day.
** Field estimate made on this day.
a No gage-height record; discharge interpolated or estimated on basis of weather records and records for nearby stations.

Palm Canyon Creek near Palm Springs, Calif.

Location.--Lat 33°44'55", long. 116°32'15", in S½ sec. 11, T. 5 S., R. 4 E., on right bank three-quarters of a mile upstream from Murray Canyon Creek and 6 miles south of Palm Springs.

Drainage area.--94.0 sq mi.

Records available.--January 1930 to January 1942, October 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 700 ft (from topographic map). Jan. 6, 1930, to Jan. 14, 1942, water-stage recorder at same site at datum 0.02 ft higher.

Average discharge.--15 years (1930-41, 1947-51), 5.81 cfs; median of yearly mean discharges, 1.55 cfs.

Extremes.--Maximum discharge during year, 850 cfs July 28 (gage height, 4.88 ft), from rating curve extended above 100 cfs on basis of slope-area determination of peak flow; no flow during several months.
1930-42, 1947-51: Maximum discharge, 3,850 cfs Feb. 6, 1937 (gage height, 5.60 ft, datum then in use), from rating curve extended above 120 cfs on basis of velocity-area study; no flow during several months of most years.

Remarks.--Records good except those above 5 cfs, which are fair. No regulation or diversions above station.

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

1.6	0	2.1	8.0
1.7	.05	2.2	13
1.8	.35	2.3	20
1.9	1.4	2.5	40
2.0	4.0	2.7	66

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	0.1		0		
2							0	0		0		
3	(*)						0	0		0		
4							*0	0		0		
5							0	0		0		
6							0	0		0		(*)
7							0	0		0		
8							0	*0		0		
9							0	0		0		
10							0	0		0		
11							0	0		0		
12							0	0		0		
13							0	0		0		
14							0	0	(*)	0		
15				(*)			0	0		0		
16							0	0		0		
17							0	0		0		
18							0	0		0		
19						(*)	0	0		2.1		
20							0	0		0		
21							0	0		0		
22							0	0		0		
23							0	0		0		
24							0	*0		*0		
25							0	0		0		
26							0	0		0		
27							0	0		0		
28							0	0		*64		
29			(*)			-	.1	0		0		
30		(*)				-	.2	0		0		
31	(*)	-		(*)		-	-	0	-	*0		-
Total	0	0	0	0	0	0	0.3	0.1	0	68.1	0	0
Mean	0	0	0	0	0	0	0.01	0.003	0	2.13	0	0
Ac-ft	0	0	0	0	0	0	0.6	0.2	0	131	0	0

Calendar year 1950: Max 12 Min 0 Mean 0.236 Ac-ft 170
Water year 1950-51: Max 64 Min 0 Mean 0.18 Ac-ft 132

Peak discharge (base, 100 cfs).--July 28 (12:45 p.m.) 850 cfs (4.88 ft).
* Discharge measurement made on this day.

Andreas Creek near Palm Springs, Calif.

Location.--Lat 33°45'35", long. 116°32'55", in SE¼ sec. 3, T. 5 S., R. 4 E., on left bank at Indian Service diversion dam, 0.9 mile above mouth and 5.4 miles south of Palm Springs.

Drainage area.--8.78 sq mi.

Records available.--October 1948 to September 1951. (Prior to Mar. 25, 1949, no gage-height record; monthly discharges estimated on basis of 26 discharge measurements and station characteristics.)

Gage.--Water-stage recorder and concrete control. Altitude of gage is 800 ft (from topographic map).

Extremes.--Maximum discharge during year, 50 cfs July 28 (gage height, 2.41 ft), from rating curve extended above 5 cfs on basis of velocity-area study; minimum daily, 0.3 cfs on many days during July and August.
1949-51: Maximum discharge, that of July 28, 1951; minimum daily, 0.3 cfs on many days during 1950 and 1951.

Remarks.--Records good except those for periods of backwater, which are fair. Discharge measurements generally made twice or more a month. One small diversion for domestic use about 1 mile above station.

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

1.3	0.4	1.6	5.0	2.0	20
1.4	1.4	1.7	7.9	2.2	33
1.5	2.9	1.8	12	2.5	58

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	0.9	1.2	1.4	1.6	3.5	c1.5	1.5	1.1	0.4	0.6	0.7
2	.7	.9	1.4	1.4	1.6	3.7	c1.6	1.6	1.1	.4	.6	.6
3	.7	.9	1.5	1.4	1.6	3.3	c1.7	1.6	1.1	.5	.6	.6
4	.7	.9	1.4	1.4	c1.6	c2.8	1.8	1.6	1.1	.5	.6	.6
5	.7	c.8	1.2	1.4	c1.6	c2.5	1.8	1.5	1.2	.4	.4	.6
6	.7	c.8	1.1	1.2	c1.5	c2.2	1.8	1.4	1.1	.4	.4	.5
7	.8	.8	1.1	1.1	1.5	c2.1	1.8	1.2	1.0	.4	.3	.5
8	.8	.8	1.2	1.1	1.4	c2.0	c1.8	1.2	.9	.4	.3	.5
9	.8	.9	1.1	1.1	1.4	c1.9	c1.8	1.2	.9	.4	.3	.5
10	.8	.9	1.0	1.4	c1.4	c1.9	c1.6	1.2	.8	.4	.4	.5
11	.7	.9	1.1	1.9	c1.4	c1.8	c1.4	1.2	.8	.4	.5	.5
12	.7	.9	1.2	1.8	c1.2	c1.8	c1.4	1.4	.7	.4	.4	.5
13	.7	1.0	1.2	1.6	1.1	c1.8	c1.4	1.2	.7	.3	.4	.4
14	.7	2.0	1.1	1.5	1.1	c1.8	c1.4	1.4	.8	.3	.3	.4
15	.7	1.8	1.1	1.4	1.1	c1.8	c1.4	1.4	.8	.4	.3	.4
16	.7	1.8	c1.1	1.5	1.1	c1.8	c1.4	1.4	.9	.4	.3	.4
17	.7	1.8	c1.1	1.6	c1.1	c1.8	c1.4	1.4	1.0	.4	.4	.4
18	.7	1.9	1.1	1.6	c1.2	c1.8	c1.5	1.2	1.1	.4	.3	.4
19	.7	1.6	1.2	1.5	c1.4	1.8	1.5	1.1	1.2	.4	.3	.4
20	.8	1.2	1.2	1.4	1.4	1.6	1.5	1.1	1.4	.4	.3	.4
21	.8	1.2	1.1	1.4	1.4	1.5	1.5	1.1	1.5	.3	.3	.4
22	.8	1.1	1.0	1.4	1.8	1.5	c1.5	1.1	1.6	.3	.3	.5
23	.8	1.1	1.0	1.2	2.2	c1.5	c1.4	1.1	1.6	.4	.4	.5
24	.8	1.0	1.1	1.1	2.2	c1.5	c1.4	1.1	1.5	.4	.4	.5
25	.9	.9	1.1	1.1	2.0	c1.5	1.4	1.1	1.5	.4	.3	.5
26	.9	1.0	1.1	1.1	2.0	c1.5	1.4	1.0	1.5	.4	.4	.4
27	.9	1.0	1.1	1.1	3.5	c1.5	1.4	1.0	1.4	.4	.6	.4
28	.9	1.2	1.1	1.1	3.3	c1.5	1.2	1.0	1.1	3.4	1.0	.6
29	1.0	1.2	1.1	1.8	-	c1.5	3.0	1.0	.8	.8	1.1	.5
30	.9	1.2	1.1	1.8	-	c1.5	2.1	1.0	.6	.6	3.2	.5
31	.9	-	1.2	1.6	-	c1.5	-	1.1	-	.5	.8	-
Total	24.1	34.4	35.6	43.4	45.7	60.2	47.8	38.4	32.8	15.9	16.8	14.6
Mean	0.78	1.15	1.15	1.40	1.63	1.94	1.59	1.24	1.09	0.51	0.54	0.49
Ac-ft	48	68	71	86	91	119	95	76	65	32	33	29

Calendar year 1950: Max 8.8 Min 0.3 Mean 1.33 Ac-ft 961
Water year 1950-51: Max 3.7 Min 0.3 Mean 1.12 Ac-ft 813

c Backwater conditions caused by rock dams on control.

Coyote Creek near Borrego Springs, Calif.

Location.--Lat 33°22'30", long. 116°25'45", in SE¼ sec. 23, T. 9 S., R. 5 E., on right bank 800 ft upstream from Box Canyon and 9 miles northwest of Borrego Springs.

Records available.--November 1950 to September 1951.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during period, 3,800 cfs July 28 (gage height, 14.14 ft, from floodmark), from rating curve extended above 4 cfs on basis of slope-area determination of peak flow; minimum daily, 1.7 cfs Aug. 11-17.

Remarks.--Records fair except those for periods of doubtful or no gage-height record, which are poor. Discharge measurements generally made twice a month. No regulation or diversions above station.

Discharge, in cubic feet per second, November 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			3.4	3.0	3.8	4.0	3.4	2.9	2.2	2.0	a2.5	2.5
2			3.4	3.0	3.8	4.0	3.4	2.9	2.2	2.0	a2.5	2.5
3			3.2	3.0	3.8	3.8	3.4	2.9	2.3	2.2	a2.5	2.5
4			3.2	3.0	3.8	3.8	3.6	2.7	2.3	2.2	a2.5	2.5
5			3.2	3.0	3.8	3.6	3.6	2.7	2.5	2.2	a2.5	2.5
6			3.2	3.0	3.8	3.6	3.6	2.5	2.5	2.0	a2.0	2.5
7			3.2	3.0	3.8	3.6	3.2	2.5	2.5	2.0	a2.0	2.5
8			3.2	2.9	3.6	3.6	2.9	2.3	2.3	2.0	a2.0	2.5
9			3.2	2.9	3.4	3.6	2.7	2.3	2.3	2.0	a2.0	2.7
10			3.2	3.0	3.4	3.6	2.7	2.3	2.3	2.0	a2.0	2.5
11			3.2	3.2	3.6	3.6	2.7	2.5	2.3	2.0	a1.7	2.7
12			3.2	3.2	3.6	3.6	2.7	2.5	2.2	2.2	a1.7	2.5
13			3.4	3.0	3.8	3.6	2.7	2.7	2.2	2.0	a1.7	2.3
14			3.4	3.0	3.6	3.6	2.7	2.9	2.0	2.2	1.7	2.3
15			3.4	3.2	3.8	3.4	2.7	2.9	2.2	2.3	1.7	2.3
16			3.4	3.4	4.0	3.4	2.7	2.7	2.2	2.3	1.7	2.3
17			3.4	3.4	3.8	3.6	2.7	2.5	2.3	2.3	1.7	2.3
18			3.4	3.4	4.0	3.6	2.7	2.3	2.2	2.3	1.8	2.3
19			3.4	3.6	3.8	3.6	2.7	2.3	2.3	2.3	1.8	2.3
20			3.4	3.6	3.8	3.4	2.7	2.3	2.3	2.2	1.8	2.3
21			3.4	3.6	4.0	3.4	2.7	2.3	2.5	2.2	1.8	2.2
22			3.4	3.4	4.0	3.4	2.7	2.3	2.7	2.3	2.0	a2.2
23			3.4	3.4	4.2	3.4	2.7	2.3	2.5	2.3	2.0	a2.2
24			3.2	3.4	4.0	3.4	2.7	2.2	2.5	2.5	2.0	a2.1
25			3.2	3.4	3.8	3.4	2.9	2.0	2.3	e11	2.0	a2.1
26			3.2	3.6	4.0	3.2	3.0	2.0	2.3	a3.6	2.0	a2.1
27			3.2	3.6	4.2	3.2	2.9	2.0	2.3	a3.2	2.5	a2.1
28			3.0	3.6	3.8	3.2	2.9	2.0	2.3	a200	3.2	a2.0
29			3.0	3.8	-	3.4	3.0	2.0	2.5	a5.0	2.5	a2.0
30		3.2	3.0	3.6	-	3.4	2.9	2.0	2.3	a4.0	2.7	a2.0
31		-	3.0	3.6	-	3.4	-	2.2	-	a3.0	2.5	-
Total		-	101.0	101.8	106.8	109.4	87.9	74.9	69.8	281.8	65.0	69.8
Mean		-	3.26	3.28	3.81	3.53	2.93	2.42	2.33	9.09	2.10	2.33
Ac-ft		-	200	202	212	217	174	149	138	559	129	138

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

Peak discharge (base not determined).--July 28 (11 a.m.) 3,800 cfs (14.14 ft).
a Doubtful or no gage-height record; discharge estimated on basis of recorder graph, discharge measurements, weather records, and records for nearby stations.

Palm Canyon Creek near Borrego Springs, Calif.

Location.--Lat 33°16'40", long. 116°25'50", in NW¼ sec. 26, T. 10 S., R. 5 E., on left bank 3.5 miles northwest of Borrego Springs.

Drainage area.--21.7 sq mi.

Records available.--December 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 1,200 ft (from topographic map).

Extremes.--Maximum discharge during period, 45 cfs July 28 (gage height, 2.60 ft), from rating curve extended above 2 cfs on basis of slope-area determination of peak flow; minimum, no flow on many days.

Remarks.--Records good except those above 3 cfs, which are fair. Discharge measurements generally made twice a month. No regulation or diversions above station.

Discharge, in cubic feet per second, December 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0.1	0.2	0.9	1.2	0.5	1.4	0.1	0		
2			.1	.3	.7	1.6	.5	.9	.1	0		
3			.1	.3	.7	1.2	.5	.7	0	0		
4			.1	.3	.6	1.1	.5	.6	0	0		
5			.1	.3	.5	1.4	.5	.5	0	0		
6			.1	.3	.5	2.0	.6	.4	0	0		
7			.1	.4	.5	1.8	.5	.4	0	0		
8			.1	.4	.5	1.5	.5	.3	0	0		
9			.1	.4	.5	1.2	.4	.3	0	0		
10			.1	.4	.5	1.0	.4	.3	0	0		
11			.1	.6	.5	.9	.4	.3	0	0		
12			.1	1.1	.5	.8	.3	.2	0	0		
13			.1	.7	.6	.8	.3	.2	0	0		
14			.1	.6	.5	.7	.3	.3	0	0		
15			.2	.6	.5	.6	.3	.4	0	0		
16			.2	.5	.5	.6	.2	.3	0	0		
17			.2	.5	.5	.6	.2	.3	0	0		
18			.2	.5	.5	.6	.2	.2	0	0		
19			.2	.5	.5	.5	.3	.2	0	0		
20			.2	.5	.5	.5	.3	.2	0	0		
21			.2	.5	.5	.5	.3	.2	0	0		
22			.2	.5	.5	.5	.3	.2	0	0		
23			.2	.5	.6	.5	.3	.1	0	0		
24			.2	.5	.7	.4	.3	.1	0	0		
25			.2	.6	.6	.4	.4	.1	0	0		
26			.2	.6	.7	.4	.7	.1	0	0		
27			.2	.7	1.4	.4	.7	.1	0	0		
28			.2	.7	.9	.4	.6	.1	0	3.6		
29			.2	1.1	-	.4	2.3	.1	0	.1		
30			.2	3.0	-	.4	2.0	.1	0	0		
31			.2	1.2	-	.5	-	.1	-	0		
Total			4.8	19.3	16.9	25.4	15.6	9.7	0.2	3.7	0	0
Mean			0.15	0.62	0.60	0.82	0.52	0.31	0.01	0.12	0	0
Ac-ft			9.5	38	34	50	31	19	0.4	7.3	0	0

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

Deep Creek near Hesperia, Calif.

Location.--Lat 34°20'30", long. 117°13'40", in SE¼ sec. 18, T. 3 N., R. 3 W., on right bank 0.5 mile upstream from confluence with West Fork Mojave River and 8 miles southeast of Hesperia.

Drainage area.--137 sq mi.

Records available.--December 1929 to September 1951.

Gage.--Water-stage recorder and broad-crested weir. Altitude of gage is 3,050 ft (from topographic map). Prior to Dec. 10, 1938, at same site but at slightly different datum, except Mar. 2, 1938, to Apr. 20, 1938, when gage was out of operation after being destroyed by flood, and Apr. 21, 1938, to Dec. 10, 1938, when temporary gage was used at site half a mile downstream at different datum.

Average discharge.--21 years (1930-51), 58.1 cfs; median of yearly mean discharges, 38.1 cfs.

Extremes.--Maximum discharge during year, 40 cfs May 3 (gage height, 1.87 ft); minimum daily, 0.3 cfs on many days during August and September.
1929-51: Maximum discharge, 46,600 cfs Mar. 2, 1938, by slope-area method; minimum, 0.1 cfs at times during 1932-34, 1936.

Remarks.--Records good except those for discharges between 9 and 11 cfs, which are fair. Diversion 2½ miles above station for irrigation of about 1,500 acres. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). For records of combined discharge of Deep Creek and Hesperia Water Co.'s canal, which diverts above station, see following page.

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

0.68	0.3	1.0	3.4	1.5	11
.7	.4	1.1	5.1	1.6	16
.8	1.0	1.3	10	1.7	22
.9	2.0	1.4	10	1.8	30

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	1.0	2.6	3.8	7.7	4.4	2.2	9.5	1.4	1.1	0.6	0.4
2	.7	1.0	2.6	3.5	8.4	5.1	2.6	13	1.4	1.1	.6	.4
3	.6	1.0	2.6	3.7	10	5.1	2.6	*27	1.3	*1.1	.5	.4
4	*.6	1.0	2.9	3.5	9.7	5.1	2.6	30	1.3	1.0	.4	*.4
5	.6	1.0	3.2	2.2	*9.3	5.1	*2.8	22	1.4	1.0	.4	.4
6	.7	1.0	*3.2	2.2	8.8	5.3	2.9	16	1.4	1.0	.4	.4
7	.7	1.0	3.4	2.2	8.8	5.3	3.2	13	1.4	1.0	.4	.4
8	.7	1.0	3.2	2.2	8.5	6.4	3.1	7.1	1.4	1.0	.3	.4
9	.6	1.1	2.2	2.4	9.0	10	3.2	5.9	1.4	a1.0	.3	.3
10	.6	1.2	2.1	*2.5	8.5	11	2.9	4.6	1.3	a1.0	.3	.3
11	.6	2.1	2.2	3.7	7.9	11	2.6	2.5	1.2	a1.0	.3	.3
12	.7	3.4	2.2	6.2	6.6	10	2.5	2.4	1.1	a1.0	.3	.3
13	.7	3.4	2.2	8.1	7.5	10	2.4	2.1	1.4	a1.2	*.3	.3
14	.7	7.0	2.2	5.9	7.3	10	2.2	3.7	1.5	a1.4	.4	.3
15	.7	*7.6	2.4	2.9	7.7	12	2.2	10	1.6	a1.6	.4	.3
16	.7	4.2	2.4	3.1	7.9	14	2.2	10	1.7	a1.7	.4	.3
17	.7	3.2	1.8	3.5	6.4	14	2.1	*9.5	1.7	*1.9	.4	.3
18	.7	2.8	2.1	3.2	2.6	10	2.1	4.9	1.7	2.0	.4	.3
19	*.7	2.6	3.4	3.2	*2.8	*7.3	*2.1	4.0	*1.8	2.1	.4	.3
20	.7	2.5	3.4	5.5	2.8	3.4	2.1	a3.6	1.8	2.1	.4	.4
21	.7	2.6	3.4	5.3	2.1	3.1	2.0	a3.2	1.8	1.9	.4	.4
22	.7	2.8	3.5	4.2	2.4	3.2	2.0	a2.7	1.8	1.8	.4	.4
23	.7	2.6	3.5	4.0	2.5	2.9	2.1	*a2.4	1.7	1.7	.4	.4
24	.8	2.5	3.4	4.0	2.6	2.9	2.1	2.1	1.5	1.7	.4	.4
25	.8	2.5	3.4	4.2	2.8	2.6	2.4	1.9	1.5	1.6	.4	.4
26	.9	2.5	*3.5	3.8	2.9	2.1	2.8	1.8	1.3	*1.5	.4	.4
27	1.1	2.5	3.5	3.7	3.4	2.1	2.9	1.6	1.3	1.0	.4	.4
28	1.3	2.4	3.5	3.5	3.2	2.1	3.2	1.5	1.3	.9	.4	.4
29	1.3	2.4	3.5	4.2	-	2.0	13	1.4	1.2	.8	.5	.5
30	1.0	2.5	3.7	17	-	2.0	13	1.4	1.1	.7	.5	.5
31	1.0	-	3.8	*14	-	2.0	-	1.4	-	.7	.4	-
Total	23.7	74.4	91.0	141.4	170.1	191.5	96.1	222.2	43.7	40.6	12.5	11.1
Mean	0.76	2.48	2.94	4.56	6.08	6.18	3.20	7.17	1.46	1.31	0.40	0.37
Ac-ft	47	148	180	280	337	380	191	441	87	81	25	22

Calendar year 1950: Max 500 Min 0.4 Mean 10.5 Ac-ft 7,580
Water year 1950-51: Max 30 Min 0.3 Mean 3.06 Ac-ft 2,220

Peak discharge (base, 400 cfs).--No peak above base.
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Hesperia Water Co.'s canal.

Combined discharge, in cubic feet per second, of Deep Creek and Hesperia Water Co.'s canal near Hesperia, Calif., water year October 1950 to September 1951

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	2.3	4.5	4.7	11	9.9	8.8	18	4.2	5.2	0.6	0.4
2	.8	2.3	4.5	4.4	9.9	10	9.0	22	4.2	5.2	.6	.4
3	.7	2.3	4.4	4.6	10	9.9	9.0	35	3.9	5.2	.5	.4
4	.7	2.3	4.6	5.1	9.7	9.6	9.1	39	3.7	4.8	.4	.4
5	.7	2.3	4.7	4.6	9.3	10	9.4	31	3.8	4.8	.4	.4
6	.8	2.3	4.7	4.8	8.8	11	12	24	4.0	4.8	.4	.4
7	.8	2.3	4.9	4.8	8.8	11	12	21	4.0	4.7	.4	.4
8	.8	2.3	4.9	4.6	8.5	12	11	14	3.8	4.6	.3	.4
9	.7	2.4	4.2	5.0	9.0	15	10	12	3.8	4.6	.3	.3
10	.7	2.6	4.1	5.3	8.5	17	9.5	11	3.6	4.6	.3	.3
11	.7	4.2	4.2	6.1	7.9	17	8.8	9.5	3.4	4.6	.3	.3
12	.8	6.2	4.2	6.6	6.6	16	8.4	9.2	4.6	4.6	.3	.3
13	.8	6.6	4.2	8.1	7.5	18	8.1	8.7	6.8	4.7	.3	.3
14	.8	9.8	4.1	7.4	7.3	18	7.7	12	7.0	4.9	.4	.3
15	.8	11	4.3	6.8	7.7	19	7.2	18	7.0	5.1	.4	.3
16	.8	7.4	4.6	7.0	7.9	17	7.2	18	7.1	5.2	.4	.3
17	.8	5.8	4.4	7.4	6.8	16	6.9	17	6.9	5.5	.4	.3
18	.8	5.2	3.9	6.9	5.7	17	6.8	12	6.8	5.8	.4	.3
19	.8	4.9	4.5	7.1	6.7	16	6.8	11	7.0	6.4	.4	.3
20	.8	4.7	4.4	9.4	6.9	13	6.9	11	7.0	6.2	.4	.4
21	.8	4.7	4.4	9.2	6.5	13	6.8	9.8	7.0	5.8	.4	.4
22	.8	4.8	4.5	7.9	6.9	13	6.4	8.7	7.0	5.5	.4	.4
23	.8	4.5	4.5	7.9	7.5	12	6.4	8.1	6.8	5.4	.4	.4
24	1.0	4.3	4.4	8.4	7.6	12	6.4	7.3	6.5	5.3	.4	.4
25	1.2	4.3	4.4	8.6	7.7	11	6.9	6.3	6.4	5.2	.4	.4
26	1.5	4.3	4.5	8.0	7.9	10	9.3	5.8	6.0	3.6	.4	.4
27	1.8	4.3	4.5	7.8	8.8	9.7	9.1	5.2	5.6	1.7	.4	.4
28	2.2	4.2	4.5	7.4	8.1	9.4	9.1	4.9	5.7	1.3	.4	.4
29	2.3	4.2	4.5	7.7	-	9.1	21	4.6	5.5	1.1	.5	.5
30	2.3	4.4	4.7	20	-	8.9	22	4.2	5.3	.9	.5	.5
31	2.3	-	4.7	18	-	8.8	-	4.2	-	.8	.4	-
Total	32.4	133.2	137.9	231.6	225.5	399.3	278.0	422.5	164.4	138.1	12.5	11.1
Mean	1.05	4.44	4.45	7.47	8.05	12.9	9.27	13.6	5.48	4.45	0.40	0.37
Ac-ft	64	264	274	459	447	792	551	838	326	274	25	22

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 39 Min 0.3 Mean 5.99 Ac-ft 4,340

West Fork Mojave River near Hesperia, Calif.

Location.--Lat 34°20'20", long. 117°14'35", in SE¼ sec. 13, T. 3 N., R. 4 W., on left bank at highway bridge 0.5 mile upstream from confluence with Deep Creek and 7 miles southeast of Hesperia.
Drainage area.--74.8 sq mi.
Records available.--January 1930 to September 1951.
Gage.--Water-stage recorder. Altitude of gage is 3,050 ft (from topographic map).
Average discharge.--21 years, 30.2 cfs; median of yearly mean discharges, 15.7 cfs.
Extremes.--No flow during year.
1930-51: Maximum discharge, 26,100 cfs Mar. 2, 1938, by slope-area method; no flow during several months of each year.
Remarks.--No flow since Apr. 30, 1950. Water diverted from Lake Gregory above station for domestic use and fire protection; no regulation. One small diversion for irrigation above station. Figures for the 1950 calendar year are as follows: Maximum daily discharge, 166 cfs; minimum daily, no flow; mean, 3.64 cfs; runoff, 2,640 acre-ft.

Mojave River at lower narrows, near Victorville, Calif.

Location.--Lat 34°34'25", long. 117°19'10", in SW¼SE¼ sec. 29, T. 6 N., R. 4 W., 500 ft upstream from bridge on U. S. Highway 66 and 3 miles northwest of Victorville.
Drainage area.--530 sq mi.
Records available.--February 1899 to July 1906, November 1930 to September 1951.
Gage.--Water-stage recorder. Prior to July 31, 1906, staff gage and Nov. 12, 1930, to Sept. 30, 1936, water-stage recorder, at site 3 miles upstream at different datum. Oct. 1, 1936, to Mar. 1, 1938, water-stage recorder at present site at datum 2.00 ft lower.
Average discharge.--15 years (1936-51), 91.8 cfs; median of yearly mean discharges, 52.1 cfs.
Extremes.--Maximum discharge during year, 109 cfs Apr. 28 (gage height, 2.27 ft); minimum daily, 6 cfs Aug. 19, 21, 26.
1930-51: Maximum discharge, 70,600 cfs Mar. 2, 1938 (gage height, 18.7 ft, present datum), by slope-area method; minimum daily, that of Aug. 19, 21, 26, 1951.
Remarks.--Records fair. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions above station for irrigation of about 1,500 acres. Discharge measurements made at approximately two-week intervals.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	31	46	37	43	43	23	34	31	28	17	10
2	26	37	43	34	40	43	26	34	23	23	19	8
3	25	28	43	40	46	46	28	34	23	28	15	10
4	17	26	43	46	46	43	28	34	28	26	17	13
5	15	23	43	43	43	46	31	a33	28	23	17	a12
6	19	26	40	40	43	46	34	a33	31	23	13	a11
7	17	28	34	37	43	53	34	a32	28	28	11	a11
8	25	31	34	40	43	53	34	a32	28	26	11	a11
9	31	28	34	43	43	53	37	a31	28	21	11	a12
10	28	28	34	43	40	50	40	a30	26	19	13	a12
11	28	28	40	43	40	53	37	a30	26	19	19	a13
12	17	28	31	46	40	53	34	a29	28	15	15	a13
13	13	34	34	43	40	50	34	a28	26	17	8	a13
14	13	37	34	43	43	34	34	a27	23	15	13	a13
15	13	37	34	43	43	31	31	a27	23	15	15	a14
16	11	34	34	43	40	26	28	a26	19	21	13	a14
17	15	34	34	43	43	19	28	a26	21	17	10	a14
18	34	34	31	43	40	31	26	a25	15	17	8	a14
19	31	28	34	46	43	31	26	a25	19	13	6	a14
20	34	28	40	40	40	31	31	a24	21	13	7	a15
21	26	31	34	40	40	31	26	a24	23	15	6	a15
22	23	37	34	40	40	53	28	a23	21	15	10	a15
23	23	43	34	37	40	50	23	30	19	17	10	a15
24	23	40	37	43	34	50	19	40	19	11	10	a16
25	17	46	37	40	34	50	17	40	21	13	10	a17
26	19	46	34	43	37	46	21	40	23	15	6	a17
27	17	50	34	43	37	43	21	34	23	15	8	a17
28	21	46	34	40	37	43	36	37	19	17	11	a19
29	21	46	37	50	-	40	46	31	21	15	13	a19
30	21	46	37	50	-	40	37	26	31	11	11	a19
31	23	-	37	46	-	28	-	31	-	17	7	-
Total	666	1,039	1,129	1,308	1,141	1,309	898	950	715	568	360	416
Mean	21.5	34.6	36.4	42.2	40.8	42.2	29.9	30.6	23.8	18.3	11.6	13.9
Ac-ft	1,320	2,060	2,240	2,590	2,260	2,600	1,780	1,880	1,420	1,130	714	825

Calendar year 1950: Max 53 Min 8.0 Mean 29.2 Ac-ft 21,140
Water year 1950-51: Max 53 Min 6 Mean 28.8 Ac-ft 20,820

Peak discharge (base, 200 cfs).--No peak above base.
a No gage-height record; discharge estimated on basis or recorded range in stage, weather records, and records for Deep Creek near Hesperia.

Mojave River at Barstow, Calif.

Location.--Lat 34°54'25", long. 117°01'20", in SW¼SE¼ sec. 31, T. 10 N., R. 1 W., on left bank 75 ft upstream from bridge on U. S. Highway 91 at Barstow.
Records available.--October 1930 to September 1951.
Gage.--Water-stage recorder. Altitude of gage is 2,090 ft (from topographic map).
Average discharge.--21 years, 35.8 cfs; median of yearly mean discharges, 1.09 cfs.
Extremes.--No flow during year.
1930-51: Maximum discharge, 64,300 cfs Mar. 3, 1938 (gage height, 8.60 ft), by slope-area method; no flow for several months each year.
Remarks.--No flow since Mar. 23, 1947. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions above station for irrigation of about 1,500 acres.

ANTELOPE VALLEY BASIN

Rock Creek near Valyermo, Calif.

Location.--Lat 34°25'10", long. 117°50'25", in NE¼ sec. 20, T. 4 N., R. 9 W., on left bank 0.2 mile upstream from Punchbowl Canyon and 0.9 mile (revised) south of Valyermo.
Drainage area.--23.0 sq mi.
Records available.--January 1923 to September 1951.
Gage.--Water-stage recorder. Altitude of gage is 4,050 ft (from topographic map). Prior to May 4, 1938, water-stage recorder at same site at different datums. May 4, 1938, to Jan. 26, 1939, water-stage recorder at site 600 ft downstream (below Punchbowl Creek) at different datum.
Average discharge.--27 years (1923-37, 1938-51), 15.3 cfs; median of yearly mean discharges, 10.3 cfs.
Extremes.--Maximum discharge during year, 4.3 cfs Apr. 28 (gage height, 2.02 ft); minimum daily, 0.9 cfs July 24, 25, Sept. 14-27.
1923-51: Maximum discharge, 8,300 cfs Mar. 2, 1938, by slope-area determination of peak flow; minimum daily, that of July 24; 25, Sept. 14-27, 1951.
Remarks.--Records good. Discharge measurements generally made once a week. No regulation or diversions above station. There is evidence of appreciable infiltration into the stream bed in the immediate vicinity of station.
Cooperation.--Twenty-four discharge measurements furnished by Los Angeles County Flood Control District, through H. E. Hedger, chief engineer.

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

0.83	0.9	0.90	2.2
.85	1.3	.95	3.7

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	1.8	1.8	1.8	2.5	2.5	2.8	2.8	2.2	1.6	1.3	1.3
2	2.0	1.8	1.8	1.8	2.5	2.5	2.8	2.8	2.2	1.6	1.3	1.3
3	2.0	1.8	1.8	1.8	2.2	2.5	2.8	2.5	2.2	1.6	1.3	1.3
4	2.0	1.8	2.0	1.8	2.2	2.5	2.8	2.5	2.2	1.6	1.3	1.3
5	2.0	1.8	2.0	1.8	2.2	2.5	2.8	2.2	2.2	1.4	1.3	1.3
6	2.0	1.8	2.0	1.8	2.2	2.5	2.8	2.2	2.2	1.4	1.1	1.3
7	2.0	1.6	2.0	1.8	2.5	2.5	2.8	2.5	2.2	1.4	1.1	1.3
8	1.8	1.8	2.0	2.0	2.5	2.5	2.8	2.5	2.2	1.4	1.1	1.3
9	1.8	1.8	2.2	2.0	2.5	2.5	2.8	2.5	2.2	1.4	1.1	1.1
10	1.8	1.8	2.2	2.0	2.5	2.5	2.8	2.2	2.2	1.3	1.1	1.1
11	1.8	1.6	2.2	2.2	2.5	2.5	2.5	2.2	2.2	1.3	1.1	1.1
12	1.6	1.6	2.2	2.2	2.2	2.5	2.5	2.5	2.0	1.3	1.1	1.1
13	1.6	1.8	2.2	2.2	2.2	2.5	2.5	2.8	2.0	1.3	1.1	1.1
14	1.4	1.8	2.2	2.2	2.2	2.5	2.5	3.7	1.8	1.3	1.1	.9
15	1.4	1.8	2.2	2.2	2.2	2.2	2.5	3.0	1.8	1.3	1.1	.9
16	1.6	1.8	2.2	2.0	2.2	2.2	2.5	2.8	1.8	1.4	1.1	.9
17	1.6	1.8	2.2	2.0	2.2	2.2	2.5	2.5	1.8	1.4	1.1	.9
18	1.6	1.8	2.2	2.0	2.5	2.2	2.5	2.2	1.8	1.4	1.1	.9
19	1.6	1.8	2.2	2.0	2.5	2.2	2.5	2.2	1.8	1.4	1.1	.9
20	1.6	1.8	2.2	2.0	2.5	2.2	2.5	2.0	1.6	1.3	1.1	.9
21	1.6	2.0	2.2	2.0	2.5	2.2	2.5	2.0	1.8	1.1	1.1	.9
22	1.6	2.0	2.2	2.0	2.5	2.2	2.5	2.0	1.8	1.1	1.1	.9
23	1.6	2.0	2.2	2.0	2.5	2.2	2.8	2.0	1.6	1.1	1.1	.9
24	1.6	1.8	2.2	2.2	2.5	2.2	2.8	2.0	1.6	.9	1.1	.9
25	1.8	1.8	2.2	2.2	2.5	2.2	2.8	2.0	1.6	.9	1.1	.9
26	1.8	1.8	2.2	2.2	2.5	2.2	2.5	2.0	1.6	1.1	1.1	.9
27	1.8	1.8	2.2	2.2	2.5	2.2	2.5	2.0	1.6	1.1	1.1	.9
28	1.6	1.8	2.2	2.2	2.5	2.5	2.8	2.0	1.4	1.1	1.1	1.1
29	1.6	1.8	2.2	2.8	-	2.8	3.0	2.0	1.4	1.1	1.1	1.1
30	1.6	1.8	2.0	2.8	-	2.8	2.8	2.0	1.4	1.1	1.3	1.1
31	1.8	-	2.0	2.8	-	2.8	-	2.2	-	1.1	1.3	-
Total	53.6	54.0	65.6	65.0	67.0	74.5	80.0	72.8	56.4	39.8	35.5	31.8
Mean	1.73	1.80	2.12	2.10	2.39	2.40	2.67	2.35	1.88	1.28	1.15	1.06
Ac-ft	106	107	130	129	133	148	159	144	112	79	70	63

Calendar year 1950: Max 31 Min 1.4 Mean 4.30 Ac-ft 3,110
Water year 1950-51: Max 3.7 Min 0.9 Mean 1.91 Ac-ft 1,380

Peak discharge (base, 50 cfs).--No peak above base.

172 Little Rock Creek near Little Rock, Calif.

Location.--Lat 34°27'50", long. 118°01'05", on right bank 0.2 mile upstream from Santiago Creek, 2 miles upstream from Little Rock Palmdale Irrigation District's dam, and 5 miles south of Little Rock, Los Angeles County.

Drainage area.--49.0 sq. mi.

Records available.--October 1930 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 3,290 ft (from topographic map). Prior to May 1943, at site 500 ft downstream at different datums (datum changed in March 1939).

Average discharge.--19 years (1930-37, 1939-51), 18.7 cfs; median of yearly mean discharges, 9.7 cfs.

Extremes.--Maximum discharge during year, 5.0 cfs May 4 (gage height, 3.64 ft); no flow during several months.
1930-51: Maximum discharge, 17,000 cfs (estimated) Mar. 2, 1938; no flow during periods in most years.

Remarks.--Records good except those for period of no gage-height record, which are fair. Discharge measurements generally made twice a month. No diversion above station.

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	1.6	1.3	1.4	4.2	0.4	0.1		
2				0	1.4	1.3	1.4	4.4	.4	.1		
3				0	1.4	1.3	1.4	4.7	.4	.1		
4				0	1.4	1.3	1.4	4.7	.4	.1		
5				0	1.4	1.4	1.4	4.2	.4	0		
6				0	1.6	1.4	1.4	3.4	.4	0		
7				0	1.6	1.6	1.4	2.8	a.4	0		
8				0	1.6	1.9	1.3	2.2	a.4	0		
9				0	1.4	2.4	1.3	1.8	a.4	0		
10				0	1.4	3.0	1.2	1.6	a.4	0		
11				0	1.3	2.8	1.2	1.3	a.4	0		
12				.3	1.2	2.4	1.2	1.3	a.3	0		
13				.6	1.0	2.2	1.2	1.3	a.3	0		
14				.7	.8	2.2	1.2	2.0	a.3	0		
15				.8	.8	2.2	1.2	2.4	a.2	0		
16				.8	.8	2.4	1.0	2.0	a.2	0		
17				.8	.8	2.4	1.0	1.8	a.2	0		
18				.8	.8	2.2	1.0	1.6	a.2	0		
19				.8	.8	1.9	1.0	1.3	a.1	0		
20				1.0	.8	1.8	1.2	1.3	.1	0		
21				1.2	.8	1.8	1.2	1.3	.1	0		
22				1.3	.8	1.6	1.0	1.3	.1	0		
23				1.3	.8	1.4	.8	1.2	.1	0		
24				1.2	.8	1.4	.8	.8	.1	0		
25				1.2	1.0	1.4	.8	.6	.1	0		
26				1.2	1.0	1.4	1.0	.7	.1	0		
27				1.2	1.2	1.4	1.0	.6	.1	0		
28				1.3	1.2	1.4	2.0	.5	.1	0		
29				1.8	-	1.4	4.2	.4	.1	0		
30				2.4	-	1.4	4.7	.4	.1	0		
31				1.9	-	1.4	-	.4	-	0		
Total	0	0	0	22.6	31.5	55.4	42.3	58.5	7.3	0.4	0	0
Mean	0	0	0	0.73	1.12	1.79	1.41	1.89	0.24	0.01	0	0
Ac-ft	0	0	0	45	62	110	84	116	14	0.8	0	0

Calendar year 1950: Max 114 Min 0 Mean 3.09 Ac-ft 2,230
Water year 1950-51: Max 4.7 Min 0 Mean 0.60 Ac-ft 432

a No gage-height record; discharge interpolated.

Mono Lake near Mono Lake, Calif.

Location.--Lat 38°00', long. 119°08', in NE¼ sec. 31, T. 2 N., R. 26 E., on west bank 1 mile south of Mono Lake post office.

Records available.--June 1912 to September 1951; those prior to September 1934 are published in Water-Supply Paper 765.

Gage.--Staff gage. Datum of gage is 6,410.73 ft above mean sea level, datum of 1929. Gage readings have been reduced to elevations above mean sea level.

Extremes.--1912-51: Maximum elevation observed, 6,428.1 ft July 18, 1919; minimum observed, 6,408.31 ft Sept. 27, 1951.

Cooperation.--Gage-height record furnished by City of Los Angeles.

Elevation, in feet, water year October 1950 to September 1951

Oct.	2	6,410.06	Jan.	23	6,409.96	June	14	6,409.45
	9	6,409.95		31	6,409.94		25	6,409.43
	12	6,409.95	Feb.	8	6,409.90		29	6,409.40
	18	6,409.88		13	6,409.91	July	6	6,409.30
	31	6,409.73		27	6,409.87		11	6,409.23
Nov.	5	6,409.74	Mar.	12	6,409.82		13	6,409.21
	8	6,409.76		20	6,409.81		16	6,409.17
	15	6,409.70	Apr.	2	6,409.77		26	6,409.11
	22	6,409.93		9	6,409.77		30	6,409.09
	27	6,409.89		12	6,409.78		31	6,409.08
	29	6,409.92		20	6,409.80	Aug.	2	6,409.06
Dec.	7	6,409.94		27	6,409.78		24	6,408.75
	13	6,410.05	May	5	6,409.70		31	6,408.58
	18	6,410.04		9	6,409.70	Sept.	6	6,408.52
	20	6,410.01		18	6,409.66		13	6,408.44
	28	6,410.00		24	6,409.61		19	6,408.41
Jan.	5	6,410.04	June	7	6,409.51		27	6,408.31
	9	6,410.00		8	6,409.50			

WALKER LAKE BASIN

Walker Lake near Hawthorne, Nev.

Location.--Lat 38°35', long. 118°42' in NE¼NE¼ sec. 2, T. 8 N., R. 29 E., 3 miles northwest of Hawthorne.

Records available.--August 1928 to September 1951. Occasional readings prior to August 1928.

Gage.--Bench mark, at United States Naval Depot, 4,053.41 ft above mean sea level, adjustment of 1912.

Extremes.--1928-51: Maximum elevation observed, 4,051.8 ft Mar. 13, 1928 (Indian Service); minimum observed, 3,998.4 ft Dec. 11, 1950.
An elevation of 4,078.0 ft, adjustment of 1912, was observed Sept. 27, 1908, by Geological Survey.

Remarks.--Elevations determined by spirit leveling.

Cooperation.--Records furnished by United States Navy Department.

Elevation, in feet, water year October 1950 to September 1951

Oct. 6.....3,999.0	Feb. 13.....3,998.9	June 7.....3,998.8
Nov. 4.....3,998.7	Mar. 28.....3,999.0	July 5.....3,998.8
Dec. 11.....3,998.4	May 16.....3,999.0	Sept.28.....3,997.7

Bridgeport Reservoir near Bridgeport, Calif.

Location.--Lat 38°19'30", long. 119°12'50", in SE¼ sec. 34, T. 6 N., R. 25 E., at Bridgeport Dam on East Walker River, 4½ miles north of Bridgeport.

Drainage area.--362 sq mi.

Records available.--October 1931 to September 1951 in reports of Geological Survey. March 1926 to September 1951 in files of Walker River Irrigation District.

Gage.--Float gage read once daily. Datum of gage is at mean sea level.

Extremes.--Maximum contents during year, 44,430 acre-ft June 24 (elevation, 6,460.65 ft); minimum, 4,640 acre-ft Oct. 1, 2 (elevation, 6,437.90 ft).
1926-51: Maximum contents, 44,580 acre-ft June 12, 1938 (elevation, 6,460.7 ft); no contents during fall of 1929, 1930.

Remarks.--Reservoir is formed by earth-fill, rock-faced dam. Storage began Dec. 8, 1923. Dam completed in November 1924. Capacity, 42,460 acre-ft between elevations 6,412 ft (sill of outlet gate) and 6,460 ft (crest of spillway). No dead storage. Water is used for irrigation by Walker River Irrigation District.

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

Revisions (water years).--W 1180: 1949.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,640	5,920	24,040	35,300	41,880	42,610	43,820	42,460	40,560	43,370	34,900	26,530
2	4,640	6,080	24,350	35,170	42,170	42,760	43,980	42,310	40,850	43,370	34,510	26,420
3	4,680	6,240	25,760	35,300	42,170	42,920	43,980	42,170	40,850	43,220	34,110	26,310
4	4,710	6,420	27,780	35,300	42,310	42,920	43,980	42,610	41,000	43,070	33,730	26,310
5	4,750	6,550	29,040	35,570	42,460	43,070	43,980	41,880	41,000	43,220	33,350	26,200
6	4,820	6,680	29,880	35,960	42,460	43,220	43,980	41,730	40,850	42,760	32,970	26,090
7	4,860	6,770	30,850	36,100	42,610	43,520	43,980	41,730	41,000	42,760	32,710	25,980
8	4,860	6,900	32,710	35,960	42,760	43,520	43,980	41,580	41,000	42,610	32,330	25,760
9	4,890	6,990	34,510	35,960	42,460	43,670	43,980	41,440	40,850	42,460	31,950	25,540
10	4,930	7,080	34,900	36,230	42,610	43,670	43,980	41,440	40,710	42,310	31,570	25,320
11	5,000	7,170	35,300	36,500	42,920	43,670	43,980	41,290	40,710	42,020	31,210	24,990
12	5,080	7,310	35,700	36,630	42,760	43,670	43,820	41,000	40,710	41,880	30,730	24,660
13	5,110	7,460	35,960	36,760	42,460	43,820	43,820	40,850	40,710	41,580	30,360	24,450
14	5,150	7,600	35,700	36,900	42,460	43,820	43,820	40,710	40,710	41,440	29,880	24,140
15	5,180	7,700	35,170	37,040	42,460	43,820	43,820	40,420	41,000	41,150	29,400	23,930
16	5,220	7,840	34,900	37,320	42,310	43,980	43,820	40,420	41,000	41,000	28,930	23,620
17	5,220	7,980	34,380	37,590	42,310	43,820	43,820	40,270	41,290	40,710	28,580	23,410
18	5,220	8,130	33,980	37,870	42,170	43,980	43,820	40,120	41,580	40,420	28,120	23,200
19	5,220	10,910	34,110	38,150	42,020	43,980	43,670	39,980	42,020	40,120	28,010	23,000
20	5,180	12,630	33,980	38,430	42,020	43,980	43,670	39,830	42,310	39,830	27,900	22,790
21	5,150	14,580	34,110	38,570	41,880	44,130	43,670	39,400	43,070	39,400	27,780	22,480
22	5,180	17,060	34,380	38,840	41,880	44,130	43,520	38,980	43,670	38,980	27,660	22,290
23	5,180	18,610	34,510	39,120	41,880	44,130	43,370	38,840	44,130	39,120	27,440	21,990
24	5,180	19,880	34,770	39,540	41,880	44,130	43,220	38,570	44,430	38,150	27,440	21,700
25	5,180	20,620	34,770	40,270	42,020	44,130	43,220	38,430	44,130	37,590	27,320	21,500
26	5,180	21,400	34,900	40,560	42,310	44,130	43,370	38,570	43,980	37,320	27,090	21,210
27	5,330	21,990	35,040	40,710	42,460	44,130	43,220	38,570	43,820	36,760	27,090	20,910
28	5,480	22,480	35,170	41,290	42,460	43,980	43,070	38,840	43,520	36,360	26,980	20,720
29	5,600	23,000	35,170	41,440	-	44,130	42,920	39,260	43,370	35,960	26,750	20,530
30	5,680	23,520	35,170	41,580	-	44,130	42,760	39,690	43,370	35,570	26,640	20,340
31	5,800	-	35,300	41,730	-	43,980	-	40,270	-	35,300	26,530	-

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

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	6,437.90	4,640	-
Oct. 31	6,439.45	5,800	+1,160
Nov. 30	6,452.45	23,520	+17,720
Dec. 31	6,457.45	35,300	+11,780
Calendar year 1950	-	-	+27,320
Jan. 31	6,459.75	41,730	+6,430
Feb. 28	6,460.01	42,460	+730
Mar. 31	6,460.50	43,980	+1,520
Apr. 30	6,460.10	42,760	-1,220
May 31	6,459.25	40,270	-2,490
June 30	6,460.32	43,370	-3,100
July 31	6,457.45	35,300	-8,070
Aug. 31	6,453.87	26,530	-8,770
Sept.30	6,450.85	20,340	-6,190
Water year 1950-51	-	-	+15,700

East Walker River near Bridgeport, Calif.

Location.--Lat 38°19'40", long. 119°12'50", in SW¼NE¼ sec. 34, T. 6 N., R. 25 E., on right bank 1,500 ft downstream from Bridgeport Reservoir, 5 miles north of Bridgeport, and 10 miles upstream from Sweetwater Creek.

Drainage area.--362 sq mi.

Records available.--July 1911 to September 1914 (gage heights only), October 1921 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,400 ft (from topographic map). Prior to Oct. 1, 1921, staff gage at site half a mile upstream at different datum. Oct. 1, 1921, to Feb. 21, 1924, water-stage recorder at site 1 mile downstream at different datum. Feb. 21, 1924, to Sept. 30, 1931, water-stage recorder and Oct. 1, 1931, to May 25, 1939, staff gage, at present site at datum 2.34 ft lower.

Average discharge.--28 years (1922-24, 1925-51), 125 cfs.

Extremes.--Maximum discharge during year, 714 cfs June 24 (gage height, 3.02 ft); minimum, 0.6 cfs Nov. 14, 15.
1921-51: Maximum discharge, 1,240 cfs Jan. 22, 1943; minimum daily, 0.5 cfs Dec. 31, 1949, to Feb. 17, 1950, Feb. 22 to Mar. 3, 1950.

Remarks.--Records excellent except those below 5 cfs, which are good. Diversion for irrigation of meadow and pasture lands near Bridgeport. Flow regulated by Bridgeport Reservoir (see preceding page).

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

-0.1	0.5	0.3	7.5	1.0	91
0.0	1.0	.4	13	1.5	202
.1	2.0	.5	20	2.0	351
.2	4.0	.7	42	2.7	594

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	3.8	5.0	115	25	37	53	145	244	270	255	113
2	28	*3.8	5.0	115	68	37	53	*103	244	261	*255	113
3	28	3.8	5.3	115	86	38	53	97	244	238	229	113
4	29	3.8	5.4	*115	97	40	53	84	241	229	205	113
5	21	3.8	5.4	115	105	45	55	84	232	224	205	113
6	17	3.8	5.4	115	111	48	56	84	232	197	205	128
7	19	3.8	5.5	115	139	46	70	84	*232	184	205	152
8	26	3.8	5.9	115	156	50	78	84	232	190	205	172
9	26	3.8	55	91	156	52	93	84	232	200	213	190
10	25	3.8	182	50	156	50	117	87	232	202	232	187
11	25	3.8	210	50	156	52	117	97	232	202	249	192
12	26	2.9	296	50	156	53	119	105	232	207	261	192
13	26	.7	424	50	156	*55	128	109	235	224	261	192
14	26	.6	*514	50	156	58	150	111	244	224	261	192
15	27	1.5	580	33	156	61	147	111	244	241	261	192
16	31	3.0	533	18	156	59	150	117	246	267	255	192
17	43	3.0	449	18	156	61	156	128	258	288	244	192
18	40	3.2	358	18	142	61	175	139	258	*307	244	190
19	40	3.4	244	18	130	63	175	166	249	329	235	192
20	40	3.6	154	18	130	64	175	197	241	329	210	192
21	40	4.1	122	18	112	66	177	197	252	329	192	190
22	41	4.6	122	18	73	83	197	197	288	329	192	190
23	41	4.7	119	17	49	63	192	200	329	316	180	187
24	41	4.7	119	17	37	64	194	200	533	297	168	187
25	34	4.9	119	17	37	64	197	200	536	297	168	187
26	24	5.0	117	17	37	61	197	213	490	288	168	175
27	19	5.0	117	17	37	58	190	252	473	261	145	152
28	19	5.0	117	16	37	59	170	252	445	261	117	150
29	19	5.0	117	16	-	61	170	252	319	258	117	147
30	13	5.0	117	*16	-	53	170	252	270	258	*117	150
31	3.8	-	117	16	-	55	-	249	-	255	115	-
Total	865.8	111.7	5,344.9	1,569	3,012	1,697	4,027	4,680	8,739	7,962	6,369	5,027
Mean	27.9	3.72	172	50.6	108	54.7	134	151	291	257	205	168
Ac-ft	1,720	222	10,600	3,110	5,970	3,370	7,990	9,280	17,330	15,790	12,630	9,970

Calendar year 1950: Max 580 Min 0.5 Mean 98.0 Ac-ft 70,980
Water year 1950-51: Max 580 Min 0.6 Mean 135 Ac-ft 97,980

* Discharge measurement made on this day.

East Walker River above Strosnider ditch, near Mason, Nev.

Location.--Lat 38°49', long. 119°03', in sec. 14, T. 11 N., R. 26 E., on left bank 0.9 mile upstream from head of Strosnider ditch, 12 miles southeast of Mason, and 13½ miles southeast of Yerington.

Records available.--January 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,600 ft (from topographic map).

Extremes.--Maximum discharge during year, 489 cfs June 25 (gage height, 3.40 ft); minimum, 20 cfs Nov. 16.
1947-51: Maximum discharge, that of June 25, 1951; minimum, 3.1 cfs Mar. 21, 1948.

Remarks.--Records good. Diversions above and below station for irrigation. Flow regulated by Bridgeport Reservoir (capacity, 42,460 acre-ft).

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

0.9	17	2.0	172
1.1	32	3.0	388
1.3	53	3.4	484
1.5	82		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	33	28	133	45	60	68	164	224	248	230	120
2	40	32	27	133	45	63	68	148	222	*234	232	120
3	38	28	28	*133	60	60	67	120	220	232	226	119
4	37	27	91	133	80	58	67	*112	220	230	*210	115
5	37	26	73	131	74	60	66	101	206	222	194	112
6	35	26	52	129	*79	60	67	100	*190	208	190	*108
7	34	25	47	135	87	60	67	96	190	190	182	106
8	32	25	55	137	105	60	73	95	192	180	176	106
9	*31	23	60	119	117	60	80	93	194	172	172	119
10	31	23	59	112	137	60	84	90	194	172	172	133
11	32	22	163	80	141	60	98	88	198	170	178	139
12	32	22	202	80	135	60	98	96	202	166	188	141
13	32	21	266	80	137	61	101	101	202	166	194	150
14	31	21	*369	73	139	67	106	106	202	170	202	152
15	30	20	*450	70	141	68	128	108	208	168	198	148
16	31	20	474	66	141	68	135	108	212	184	202	154
17	33	20	462	63	156	67	135	110	240	196	206	158
18	35	20	414	59	156	67	139	120	234	206	206	160
19	43	22	336	56	133	66	148	120	228	218	218	158
20	43	48	267	51	126	67	150	133	220	242	224	156
21	41	46	200	48	124	68	154	162	226	246	206	152
22	41	42	166	48	119	*70	158	166	236	246	196	154
23	42	39	146	48	96	64	172	168	240	246	196	156
24	43	37	141	48	85	67	174	164	280	246	218	158
25	43	37	133	47	73	68	184	168	424	232	168	156
26	42	32	133	46	63	64	194	170	465	240	162	160
27	43	31	131	45	60	61	190	180	424	248	156	160
28	42	30	131	44	60	59	180	216	414	226	142	139
29	37	31	133	44	-	57	170	222	395	228	126	135
30	34	31	133	44	-	60	168	226	291	323	122	133
31	33	-	133	44	-	66	-	226	-	250	120	-
Total	1,138	860	5,503	2,479	2,914	1,957	3,689	4,277	7,593	6,705	5,812	4,177
Mean	36.7	28.7	178	80.0	104	63.1	123	138	253	216	187	139
Ac-ft	2,260	1,710	10,920	4,920	5,780	3,880	7,320	8,480	15,060	13,300	11,530	8,280

Calendar year 1950: Max 474 Min 8.0 Mean 91.1 Ac-ft 65,930
Water year 1950-51: Max 474 Min 20 Mean 129 Ac-ft 93,440

*. Discharge measurement made on this day.

East Fork West Walker River near Bridgeport, Calif.

Location.--Lat 38°21'30", long. 119°26'30", in NW¼NW¼ sec. 22, T. 6 N., R. 23 E., on right bank three-quarters of a mile north of Sonora Junction, 1½ miles upstream from mouth, and 14 miles northwest of Bridgeport.

Drainage area.--63 sq mi, approximately.

Records available.--April to August 1910, October 1944 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,790 ft (from topographic map). April to August 1910, staff gage at site 1 mile upstream at different datum.

Average discharge.--7 years (1944-51), 46.4 cfs.

Extremes.--Maximum discharge during year, 650 cfs Dec. 3 (gage height, 2.60 ft), from rating curve extended above 300 cfs on basis of slope-area determination of peak flow; minimum, 10 cfs Nov. 12.
1910, 1944-51: Maximum discharge recorded, 660 cfs Feb. 2, 1945 (gage height, 2.69 ft), from rating curve extended above 270 cfs on basis of velocity-area study and later verified by slope-area determination at gage height 2.60 ft; minimum recorded, 4.9 cfs Nov. 17, 1948.

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

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

Oct. 1 to Dec. 3		Dec. 3 to Sept. 30			
0.8	14	0.7	14	1.7	204
1.0	30	.9	31	2.0	330
1.2	57	1.1	54	2.2	432
1.5	122	1.4	114		
2.0	300				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	20	44	b40	b30	35	29	62	164	114	44	23
2	14	*19	49	b40	b30	29	30	*61	152	109	*42	23
3	14	20	*394	b40	30	41	29	61	149	*102	40	22
4	14	20	*161	*37	35	29	30	61	143	98	39	21
5	14	19	103	41	37	24	31	56	143	91	39	20
6	14	18	128	48	34	28	32	54	146	87	38	20
7	14	18	227	45	45	34	34	53	*140	85	36	20
8	14	18	*335	39	39	33	36	53	140	83	36	19
9	14	18	166	40	40	30	40	53	137	81	36	19
10	14	b17	130	36	37	34	46	62	140	77	35	18
11	14	b17	112	39	37	31	46	73	149	77	34	18
12	14	17	99	b35	36	31	48	62	152	77	33	18
13	14	16	89	b35	35	*31	51	61	164	81	31	18
14	14	b15	100	b35	34	31	51	59	187	75	29	18
15	14	b15	81	31	32	29	56	53	204	73	29	18
16	14	b17	71	35	32	28	61	57	231	73	29	17
17	14	21	68	29	30	28	59	66	242	75	32	18
18	14	192	64	35	31	28	59	77	231	77	33	18
19	14	233	61	59	28	28	66	102	208	71	32	18
20	14	*235	57	130	34	30	62	114	215	68	33	17
21	14	286	53	69	30	31	61	137	180	62	36	17
22	14	*151	50	48	28	30	64	155	161	56	34	17
23	15	108	50	39	37	30	69	*167	158	56	32	16
24	18	88	53	35	28	31	68	173	158	54	31	16
25	16	75	48	35	35	33	69	194	155	53	29	15
26	20	66	44	31	33	31	69	231	146	48	28	15
27	24	59	44	31	31	31	64	284	143	46	26	16
28	24	54	46	29	b30	31	66	293	135	46	26	16
29	20	50	42	28	-	33	66	255	124	53	25	16
30	24	56	40	*30	-	32	66	215	119	51	*26	16
31	20	-	b40	b30	-	31	-	187	-	48	25	-
Total	489	1,958	3,049	1,274	938	956	1,558	3,591	4,916	2,247	1,018	543
Mean	15.8	65.3	98.4	41.1	33.5	30.8	51.9	116	164	72.5	32.8	18.1
Ac-ft	970	3,880	6,050	2,530	1,860	1,900	3,090	7,120	9,750	4,460	2,020	1,080

Calendar year 1950: Max 394 Min 11 Mean 51.6 Ac-ft 37,330
Water year 1950-51: Max 394 Min 14 Mean 61.7 Ac-ft 44,710

Peak discharge (base, 200 cfs).--Nov. 20 (11 p.m.) 407 cfs (2.23 ft); Dec. 3 (3 p.m.) 650 cfs (2.60 ft); Dec. 8 (4 a.m.) 512 cfs (2.35 ft); May 27 (10 p.m.) 380 cfs (2.11 ft); June 16 (11 p.m.) 280 cfs (1.88 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

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

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

Drainage area.--182 sq mi.

Records available.--April 1938 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,650 ft (from topographic map). Prior to Oct. 1, 1939, at site 125 ft downstream at datum 1.00 ft higher.

Average discharge.--13 years, 251 cfs.

Extremes.--Maximum discharge during year, 6,220 cfs Nov. 20 (gage height, 8.10 ft), from rating curve extended above 1,800 cfs on basis of slope-area determination of peak flow; minimum, 32 cfs Oct. 17 (gage height, 1.22 ft).
1938-51: Maximum discharge, that of Nov. 20, 1950; minimum, 4.0 cfs Nov. 18, 1948, result of freeze-up.

Remarks.--Records good except those above 2,000 cfs, which are fair. Station is above diversions except a few small ranch ditches. Flow very slightly regulated by Poor Lake Reservoir (capacity unknown), 7 miles upstream.

Revisions (water years).--W 880: 1917 (runoff in acre-feet).

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

Oct. 1 to Nov. 18				Nov. 19 to Sept. 30					
1.2	30	2.5	279	0.7	34	2.0	249	5.0	2,070
1.4	50	3.0	450	.8	44	2.5	401	6.0	3,250
1.7	93	3.5	669	1.0	66	3.0	606	6.5	3,900
2.0	150	3.8	828	1.5	139	4.0	1,210		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	77	231	159	127	108	143	313	816	664	171	72
2	38	*80	216	179	116	97	143	*293	743	611	*161	74
3	37	93	1,220	165	118	98	143	284	754	*588	148	73
4	35	102	*842	*153	125	98	143	287	776	535	137	72
5	34	100	516	144	134	89	148	273	782	465	129	69
6	34	93	543	136	125	101	163	265	805	442	120	66
7	34	85	1,140	140	146	104	181	252	*788	434	114	66
8	34	85	*1,700	133	143	104	209	257	770	431	110	73
9	34	83	923	125	139	100	257	301	776	423	107	77
10	34	71	663	128	146	95	337	390	776	416	103	76
11	34	70	555	125	150	94	370	518	822	401	100	74
12	34	66	480	120	144	98	412	408	864	401	97	73
13	34	67	421	110	134	*104	450	360	958	401	91	70
14	33	58	446	120	134	107	442	334	1,100	384	85	68
15	33	56	380	132	130	106	469	313	1,200	353	82	64
16	34	75	337	127	125	104	489	363	1,400	347	82	62
17	33	79	310	124	120	104	461	522	1,420	356	90	58
18	34	786	293	107	118	103	431	695	1,230	376	103	53
19	34	3,010	282	100	114	108	450	870	1,040	353	101	50
20	34	*2,750	254	220	118	118	408	972	1,140	337	106	48
21	33	3,800	*239	211	114	122	427	984	984	319	113	48
22	33	*1,250	221	216	108	124	434	1,020	822	282	100	47
23	35	709	211	188	106	127	438	*1,120	816	252	97	45
24	44	525	211	165	110	134	431	1,180	822	244	90	44
25	44	439	201	153	106	144	408	1,310	840	223	83	43
26	54	380	186	141	104	144	363	1,570	822	201	77	43
27	107	334	177	137	106	144	353	1,940	805	190	73	42
28	95	293	180	129	103	150	384	1,900	770	184	76	42
29	82	266	179	124	-	159	373	1,450	674	195	77	42
30	98	278	169	*116	-	153	340	1,220	654	186	*76	42
31	87	-	161	129	-	146	-	1,000	-	175	74	-
Total	1,399	16,160	13,887	4,456	3,463	3,587	10,200	22,964	26,969	11,169	3,173	1,776
Mean	45.1	539	448	144	124	116	340	741	899	360	102	59.2
Ac-ft	2,770	32,050	27,540	8,840	6,870	7,110	20,230	45,550	53,490	22,150	6,290	3,520

Calendar year 1950: Max 3,800 Min 26 Mean 308 Ac-ft 222,900
Water year 1950-51: Max 3,800 Min 33 Mean 327 Ac-ft 236,400

Peak discharge (base, 1,120 cfs).--Nov. 20 (11 p.m.) 6,220 cfs (8.10 ft); Dec. 3 (8 p.m.) 2,140 cfs (5.06 ft); Dec. 8 (8 a.m.) 2,180 cfs (5.10 ft); May 28 (1 a.m.) 2,340 cfs (5.21 ft); June 16 (12 p.m.) 1,700 cfs (4.62 ft).
* Discharge measurement made on this day.

Topaz Reservoir near Topaz, Calif.

Location.--Lat 38°41', long. 119°31', in sec. 28, T. 10 N., R. 22 E., 6 miles north of Topaz.

Records available.--October 1931 to September 1951.

Gage.--Float and staff gages at outlet works of Topaz Reservoir. Datum of gage is mean sea level (levels by Walker River Irrigation District).

Extremes.--Maximum contents observed during year, 59,720 acre-ft June 5 (elevation, 5,005.12 ft); minimum, 14,280 acre-ft Oct. 26 (elevation, 4,981.32 ft).
1931-51: Maximum contents observed, 60,240 acre-ft June 30, 1941 (elevation, 5,005.35 ft); minimum observed, 505 acre-ft Oct. 22-25, 1931 (elevation, 4,972.63 ft).

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

Cooperation.--Elevations furnished by the Walker River Irrigation District.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16,110	14,790	40,510	49,480	57,090	59,480	59,320	57,180	58,980	59,390	45,570	30,020
2	15,840	14,840	41,110	49,480	57,360	59,420	59,280	57,160	59,190	59,480	45,130	29,360
3	15,710	14,990	41,940	49,510	57,730	59,350	59,210	57,140	59,390	59,580	44,470	28,920
4	15,630	15,220	45,760	49,480	58,050	59,370	59,100	57,050	59,580	59,460	43,830	28,480
5	15,600	15,450	47,450	49,480	58,390	59,510	58,980	57,000	59,720	59,300	43,210	28,050
6	15,460	15,700	48,670	49,480	58,710	59,440	58,870	56,910	59,580	59,100	42,590	27,580
7	15,410	15,910	49,270	49,870	58,870	-	58,730	56,730	59,480	58,910	41,940	27,040
8	15,330	16,110	50,410	50,260	59,070	59,440	58,550	56,680	59,370	58,680	41,330	26,470
9	15,230	16,310	51,150	50,670	59,100	59,510	58,360	56,230	59,320	58,360	40,670	25,830
10	15,100	16,470	50,830	51,090	59,230	59,350	58,200	55,760	59,350	57,980	40,010	25,160
11	15,020	16,590	49,940	51,480	59,210	59,320	58,070	55,940	59,350	57,480	39,330	24,500
12	14,920	-	49,380	51,880	59,210	59,320	57,890	55,920	59,370	56,930	38,640	23,850
13	14,840	16,880	48,800	52,250	59,210	59,350	57,770	55,760	59,390	56,390	37,940	23,200
14	14,760	-	48,770	52,580	59,160	59,370	57,610	55,560	59,420	55,780	37,300	22,580
15	14,660	17,200	48,970	53,000	59,120	59,390	57,430	55,360	59,480	55,180	36,710	22,010
16	14,610	-	48,970	53,370	59,120	59,370	57,270	55,040	59,480	54,600	36,140	21,850
17	14,530	-	48,920	53,800	59,190	59,370	57,160	54,750	59,480	54,000	35,410	21,050
18	14,480	-	49,310	53,880	59,140	-	57,050	54,640	59,320	53,400	34,910	20,650
19	14,450	19,720	49,460	53,910	59,140	59,370	56,890	54,800	59,140	52,800	34,320	20,280
20	14,410	22,860	49,460	53,910	59,210	59,440	56,820	55,270	59,050	52,200	33,780	19,920
21	14,400	26,290	49,460	53,910	59,230	59,440	56,730	55,940	59,300	51,660	33,310	19,600
22	14,360	30,410	49,460	54,020	59,300	59,480	56,640	56,590	59,480	51,130	32,930	19,220
23	14,350	32,510	49,480	53,910	59,320	59,440	56,590	57,270	59,370	50,630	32,420	18,870
24	14,330	34,160	49,480	54,350	59,320	59,420	56,550	58,090	-	50,180	32,330	18,720
25	14,350	35,350	49,510	54,780	59,300	59,390	56,410	58,910	59,190	49,760	32,100	18,430
26	14,280	36,520	49,510	55,180	59,260	59,420	56,460	59,120	59,280	49,310	31,850	18,080
27	14,540	37,420	49,510	55,560	59,280	59,440	56,320	59,280	59,370	48,730	31,600	17,810
28	14,510	38,270	-	55,870	59,440	59,440	56,370	59,420	59,440	48,300	31,300	17,530
29	14,530	39,070	-	56,230	-	59,440	56,770	59,280	59,460	47,470	30,940	17,220
30	-	39,810	49,570	56,550	-	59,440	57,070	59,030	59,460	46,810	30,640	17,100
31	14,710	-	49,510	56,800	-	-	-	58,890	-	46,200	30,430	-

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

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,982.53	16,270	-
Oct. 31	4,981.58	14,710	+1,560
Nov. 30	4,995.87	39,810	+25,100
Dec. 31	5,000.54	49,510	+9,700
Calendar year 1950	-	-	+40,310
Jan. 31	5,003.84	56,800	+7,290
Feb. 28	5,005.00	59,440	+2,640
Mar. 31	5,005.00	59,440	+0
Apr. 30	5,003.96	57,070	-2,370
May 31	5,004.76	58,890	+1,820
June 30	5,005.01	59,460	+570
July 31	4,998.99	46,200	-13,260
Aug. 31	4,990.83	30,430	-15,770
Sept.30	4,983.03	17,100	-13,330
Water year 1950-51	-	-	+830

West Walker River near Hudson, Nev.

Location.--Lat 38°49', long. 119°14', in SW¼ sec. 18, T. 11 N., R. 25 E., on left bank half a mile upstream from Wilson Canyon and 3 miles southeast of Hudson.

Records available.--May 1921 to March 1925, January 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,670 ft (from topographic map). Prior to Jan. 14, 1947, at approximately same site at different datum.

Average discharge.--7 years (1921-24, 1947-51), 168 cfs.

Extremes.--Maximum discharge during year, 1,690 cfs Dec. 10 (gage height, 5.36 ft); minimum, 37 cfs Feb. 5-7.
1921-25, 1947-51: Maximum discharge, 2,530 cfs June 7, 1922; minimum daily, 14 cfs Sept. 27 to Oct. 3, 1924.

Remarks.--Records good. Flow somewhat regulated by storage in Poor Lake (capacity unknown), and by off-channel storage in Topaz Reservoir. Many diversions above station for irrigation.

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

0.9	28	2.0	317
1.1	53	3.0	715
1.3	91	4.0	1,125
1.6	174	5.0	1,540

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	106	60	67	249	44	138	122	232	618	302	187	104
2	111	58	61	242	46	200	104	218	414	*290	210	111
3	111	50	70	*253	41	181	106	207	368	268	187	133
4	108	50	415	257	39	153	127	*207	383	283	*162	150
5	72	49	*340	253	37	133	122	194	450	290	156	153
6	67	47	248	242	*37	147	119	194	*450	253	168	*168
7	67	47	578	153	56	147	114	214	442	257	168	181
8	65	46	*811	87	104	124	124	214	422	232	184	194
9	*63	43	*1,380	70	133	150	127	200	387	221	197	224
10	63	45	1,540	61	156	150	138	207	372	249	194	224
11	60	45	1,270	58	159	147	168	246	372	264	187	214
12	60	45	1,090	55	174	136	246	249	379	283	200	190
13	60	47	942	50	190	136	287	246	462	290	214	184
14	53	47	614	51	184	138	325	283	542	313	190	200
15	50	47	566	50	194	136	317	268	598	313	174	187
16	49	47	542	47	174	130	336	246	682	298	184	177
17	53	46	498	47	168	124	372	232	809	309	187	171
18	51	49	263	79	153	119	379	268	949	302	174	162
19	60	162	290	168	150	119	329	287	908	317	187	156
20	55	806	372	150	138	116	302	287	606	309	221	147
21	58	*828	356	171	138	111	283	290	598	283	224	127
22	56	1,250	336	210	141	*114	268	275	678	279	194	124
23	60	587	325	249	153	127	238	283	598	264	174	127
24	61	211	313	167	168	130	249	333	578	283	156	124
25	60	140	309	80	168	127	287	344	534	268	141	127
26	61	116	302	63	165	127	272	566	458	253	138	122
27	78	108	283	55	153	124	260	748	434	221	136	111
28	68	96	272	49	104	111	238	957	395	204	122	104
29	65	91	272	46	-	94	194	1,370	372	221	119	101
30	61	86	275	42	-	85	232	1,310	344	235	114	91
31	60	-	272	40	-	106	-	1,070	-	207	111	-
Total	2,072	5,349	15,272	3,794	3,567	4,080	6,785	12,245	15,602	8,361	5,360	4,588
Mean	66.8	178	493	122	127	132	226	395	520	270	173	153
Ac-ft	4,110	10,610	30,290	7,530	7,080	8,090	13,460	24,290	30,950	16,580	10,630	9,100

Calendar year 1950: Max 1,540 Min 33 Mean 181 Ac-ft 131,400
Water year 1950-51: Max 1,540 Min 37 Mean 239 Ac-ft 172,700

Peak discharge (base, 500 cfs).--Nov. 22 (6 p.m.) 1,420 cfs (4.72 ft); Dec. 10 (1 a.m.) 1,690 cfs (5.36 ft); May 29 (5 p.m.) 1,520 cfs (4.94 ft); June 18 (3:30 p.m.) 945 cfs (3.57 ft).
* Discharge measurement made on this day.
Note.--Discharge computed from staff-gage readings Oct. 1-7, Sept. 8-30.

East Fork Carson River above Soda Springs ranger station, near Markleeville, Calif.

Location.--Lat 38°30', long. 119°41', in sec. 28, T. 8 N., R. 21 E., on left bank half a mile downstream from Murray Canyon Creek, 2 miles southwest of Soda Springs ranger station, and 14 miles southeast of Markleeville.

Drainage area.--30 sq mi, approximately.

Records available.--September 1946 to September 1951 (discontinued).

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

Average discharge.--5 years, 61.6 cfs.

Extremes.--Maximum discharge during year, 3,570 cfs Nov. 20 (gage height, 7.62 ft), from rating curve extended above 320 cfs on basis of slope-area determination of peak flow; minimum, 7.4 cfs Oct. 22 (gage height, 0.97 ft).
1946-51: Maximum discharge, that of Nov. 20, 1950; minimum, 4.5 cfs Sept. 25, 1949.

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

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

Oct. 1 to Mar. 22				Mar. 23 to Sept. 30			
0.9	6.5	3.0	237	0.8	6.8	2.2	108
1.0	7.8	3.5	362	.9	10	2.6	174
1.2	12	4.0	537	1.1	17	3.0	260
1.4	22	5.0	1,040	1.4	32	3.5	390
1.7	42	6.0	1,720	1.8	81	4.0	551
2.1	87	6.3	2,000				
2.5	145						

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.2	17	78	34	25	22	44	85	230	153	28	14
2	8.7	20	77	35	25	22	46	80	217	142	27	13
3	8.5	23	388	32	25	22	46	80	211	129	26	13
4	8.2	22	207	29	26	22	44	89	202	116	26	12
5	8.3	21	131	29	26	22	48	83	209	105	25	*12
6	8.3	18	205	29	25	22	57	82	215	97	24	11
7	8.3	*16	384	29	33	21	66	77	211	93	23	11
8	8.3	16	593	28	34	21	72	83	209	89	22	11
9	8.0	16	248	28	33	20	94	102	213	87	22	10
10	8.0	12	185	27	36	20	118	133	224	84	21	10
11	8.0	12	157	26	34	a20	126	149	219	82	20	10
12	7.8	12	135	25	32	a21	136	117	233	80	20	10
13	7.8	12	118	23	31	a22	146	102	255	76	19	9.8
14	8.0	9.6	124	23	29	a23	134	97	296	70	18	9.4
15	8.0	13	101	22	28	a24	134	100	314	65	17	9.4
16	7.8	16	91	22	27	a25	154	131	349	63	17	9.1
17	7.8	24	83	22	26	a27	137	176	332	63	19	9.1
18	8.0	795	76	14	25	a29	128	209	*302	64	19	9.1
19	8.0	1,130	70	23	25	a31	131	239	272	*58	19	9.1
20	8.0	*1,920	64	33	24	a33	131	253	265	58	19	9.1
21	7.8	1,220	60	36	24	a36	136	270	244	54	20	9.1
22	7.7	360	55	37	24	a38	136	277	226	48	*21	9.1
23	8.3	234	51	36	23	42	131	*304	207	45	22	8.8
24	12	184	50	35	23	44	123	316	202	43	19	8.4
25	11	156	47	32	22	50	116	372	209	40	17	8.4
26	15	134	44	30	22	48	104	435	200	38	16	8.4
27	20	114	41	30	22	48	108	532	198	36	15	8.4
28	17	101	40	28	22	*51	114	474	180	35	14	8.4
29	16	91	38	25	-	56	100	402	163	35	14	8.4
30	27	95	36	25	-	49	90	335	160	32	14	8.8
31	19	-	32	25	-	46	-	270	-	30	14	-
Total	322.8	6,813.6	4,009	872	751	977	3,150	6,454	6,967	2,210	617	297.3
Mean	10.4	227	129	28.1	26.8	31.5	105	208	232	71.3	19.9	9.91
Ac-ft	640	13,510	7,950	1,730	1,490	1,940	6,250	12,800	13,820	4,380	1,220	590

Calendar year 1950: Max 1,920 Min 6.0 Mean 91.8 Ac-ft 66,480
Water year 1950-51: Max 1,920 Min 7.7 Mean 91.6 Ac-ft 66,320

Peak discharge (base, 300 cfs).--Nov. 20 (9:30 p.m.) 3,570 cfs (7.62 ft); Dec. 3 (5:15 p.m.) 733 cfs (4.44 ft); Dec. 8 (7:30 a.m.) 934 cfs (4.82 ft); May 27 (8:15 p.m.) 744 cfs (4.46 ft).

* Discharge measurement made on this day.

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

Note.--Stage-discharge relation affected by ice Jan. 5-14, 18-23, 30, 31, Feb. 1, 16, Feb. 18 to Mar. 10.

Silver King Creek near Coleville, Calif.

Location.--Lat 38°31', long. 119°36', in sec. 30, T. 8 N., R. 22 E., on left bank a quarter of a mile downstream from Poison Valley, 2½ miles east of Soda Springs ranger station, and 6½ miles southwest of Coleville.

Drainage area.--30 sq mi, approximately.

Records available.--September 1946 to September 1951 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 7,650 ft (from topographic map).

Average discharge.--5 years, 37.3 cfs.

Extremes.--Maximum discharge during year, 748 cfs Nov. 20 (gage height, 5.47 ft); minimum, 3.8 cfs Oct. 1.
1946-51: Maximum discharge, that of Nov. 20, 1950; minimum recorded, 2.5 cfs Oct. 28, Nov. 8, 1948.

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

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

Oct. 1 to Nov. 20				Nov. 20 to Sept. 30			
1.1	8.5	2.0	103	1.3	8.5	2.0	70
1.3	20	3.0	292	1.5	20	3.0	250
1.5	35	4.0	482	1.7	35	3.8	410
1.7	58	4.1	501				

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	15	71	46	31	24	35	68	121	74	24	14
2	11	15	*74	47	32	24	35	66	113	71	24	14
3	12	15	339	45	31	24	35	64	109	68	22	14
4	12	15	196	42	32	23	35	68	103	63	21	14
5	12	14	140	42	32	23	39	63	103	59	21	14
6	12	13	185	41	31	23	43	62	101	56	20	*14
7	12	13	274	40	36	23	45	58	100	53	20	13
8	12	*13	342	40	36	23	50	58	96	52	20	13
9	12	14	208	40	36	22	58	62	96	50	19	13
10	12	13	172	39	39	22	62	68	96	48	18	12
11	12	18	153	39	37	22	64	77	95	48	18	12
12	12	16	133	38	35	21	70	68	95	47	17	12
13	12	15	121	37	36	21	74	66	103	45	18	12
14	12	14	127	37	37	22	72	67	109	43	18	12
15	11	31	106	37	32	23	74	64	116	41	17	12
16	11	24	96	37	31	23	83	67	129	41	16	12
17	11	37	90	38	31	24	80	77	130	40	18	12
18	11	284	84	42	30	25	75	89	125	40	19	13
19	11	415	81	48	30	26	80	101	*116	*38	19	13
20	11	*494	74	52	29	27	75	109	116	38	20	12
21	10	397	68	54	29	28	74	116	111	36	21	12
22	10	229	66	55	29	29	74	121	101	34	21	12
23	12	176	62	53	28	31	78	127	93	32	*21	12
24	14	146	59	50	27	33	75	*132	93	31	19	12
25	12	126	54	45	26	34	78	147	92	30	17	12
26	19	111	53	43	25	36	75	170	89	29	16	12
27	18	96	52	37	25	*38	70	199	89	27	15	12
28	22	89	52	34	24	40	71	193	84	26	15	12
29	17	81	50	32	-	38	72	178	78	26	15	12
30	21	78	45	32	-	34	68	157	77	28	15	12
31	16	-	45	32	-	35	-	138	-	26	15	-
Total	402	3,017	3,672	1,294	877	841	1,919	3,100	3,079	1,342	579	377
Mean	13.0	101	118	41.7	31.3	27.1	64.0	100	103	43.3	18.7	12.6
Ac-ft	797	5,980	7,280	2,570	1,740	1,670	3,810	6,150	6,110	2,660	1,150	748

Calendar year 1950: Max 494 Min 7.5 Mean 54.7 Ac-ft 39,630
Water year 1950-51: Max 494 Min 10 Mean 56.2 Ac-ft 40,660

Peak discharge (base, 100 cfs).--Nov. 20 (8:30 p.m.) 748 cfs (5.47 ft); Dec. 3 (2 p.m.) 520 cfs (4.35 ft); Dec. 8 (4:45 a.m.) 464 cfs (4.07 ft); May 27 (9 p.m.) 230 cfs (2.87 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Feb. 17 to Mar. 27; discharge estimated on basis of weather records and records for nearby streams. Stage-discharge relation affected by ice Nov. 30, Dec. 2, Jan. 1-3, 5-25, Jan. 30 to Feb. 1, Feb. 16.

Wolf Creek near Markleeville, Calif.

Location.--Lat 38°32', long. 119°43', in sec. 24, T. 8 N., R. 20 E., on left bank three-quarters of a mile downstream from Bull Canyon Creek and 12 miles southwest of Markleeville.

Drainage area.--9.8 sq mi, approximately.

Records available.--September 1946 to September 1951 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 7,350 ft (from topographic map).

Average discharge.--5 years, 29.0 cfs.

Extremes.--Maximum discharge during year, 1,480 cfs Nov. 20 (gage height, 7.10 ft), from rating curve extended above 150 cfs on basis of slope-area determination of peak flow; minimum, 1.7 cfs Oct. 4.
1946-51: Maximum discharge, that of Nov. 20, 1950; minimum, 0.6 cfs Sept. 29, 1950.

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

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

Oct. 1 to Nov. 20				Nov. 21 to Sept. 30			
1.3	4.5	4.0	231	0.4	5.5	2.0	107
1.5	9.5	4.5	314	.6	13	3.0	222
2.0	28	5.0	444	.9	28	4.0	363
2.5	56	6.1	855	1.5	65	4.6	460
3.0	105						

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	12	65	25	20	16	22	41	91	48	12	7.4
2	5.6	12	64	25	19	16	22	39	85	45	12	7.4
3	5.6	*16	218	25	19	b17	23	40	81	42	12	7.0
4	5.4	17	159	24	21	b18	22	41	81	39	12	6.6
5	5.9	14	111	23	22	b17	22	38	82	36	10	6.6
6	5.9	13	137	23	19	b17	23	37	82	35	10	6.6
7	5.9	12	220	23	21	b17	26	36	79	34	10	*8.5
8	5.6	12	308	21	24	16	31	39	78	32	10	5.9
9	5.6	11	160	21	23	16	41	48	78	31	10	5.5
10	5.6	9.5	116	20	24	15	47	63	77	31	10	5.9
11	5.6	9.5	94	20	24	15	51	68	84	30	9.6	6.2
12	5.9	9.0	79	b20	22	14	55	55	87	29	10	6.2
13	5.9	8.4	71	b19	22	15	*63	50	93	27	8.1	6.2
14	6.1	7.3	65	18	b21	15	59	48	105	25	8.5	5.9
15	6.1	8.7	56	18	b21	16	63	49	107	24	8.5	5.9
16	5.9	9.5	51	18	b21	16	70	62	117	23	8.5	5.2
17	5.9	15	47	18	b20	17	65	79	112	23	9.2	5.5
18	5.9	329	42	22	b20	17	63	99	98	22	8.8	5.9
19	5.9	375	*39	b26	b21	18	62	114	89	21	9.2	5.9
20	5.9	*827	38	b31	b21	18	64	120	*90	*21	9.6	5.9
21	5.9	458	37	32	b20	19	65	122	79	19	10	5.9
22	5.9	219	35	35	b19	20	64	123	72	18	11	5.9
23	7.1	155	34	30	b18	20	63	131	68	17	10	5.2
24	9.5	125	34	26	b17	21	59	130	68	17	*8.8	5.5
25	7.9	107	32	24	16	23	55	*148	66	16	8.5	5.2
26	12	93	31	23	16	23	51	170	64	15	8.1	5.5
27	11	83	30	22	16	24	54	194	63	14	7.7	5.5
28	12	76	29	22	16	24	54	167	58	14	7.7	5.5
29	12	73	28	22	-	25	49	145	53	14	8.1	5.9
30	16	73	28	b21	-	23	44	126	51	14	8.1	5.9
31	12	-	26	b20	-	21	-	106	-	13	7.7	-
Total	227.1	3,188.9	2,484	717	563	569	1,452	2,728	2,438	789	293.7	182.2
Mean	7.33	106	80.1	23.1	20.1	18.4	48.4	88.0	81.3	25.5	9.47	6.07
Ac-ft	450	6,330	4,930	1,420	1,120	1,130	2,880	5,410	4,840	1,560	583	361

Calendar year 1950: Max 827 Min 4.0 Mean 43.8 Ac-ft 31,740
Water year 1950-51: Max 827 Min 5.2 Mean 42.8 Ac-ft 31,010

Peak discharge (base, 150 cfs).--Nov. 18 (10 p.m.) 875 cfs (6.14 ft); Nov. 20 (5:30 p.m.) 1,480 cfs (7.10 ft); Dec. 3 (3:30 p.m.) 326 cfs (3.75 ft); Dec. 8 (6:30 a.m.) 428 cfs (4.41 ft); May 27 (5:30 p.m.) 232 cfs (3.08 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Silver Creek below Pennsylvania Creek, near Markleeville, Calif.

Location.--Lat 38°36', long. 119°47', in sec. 28, T. 9 N., R. 20 E., on left bank a quarter of a mile downstream from Pennsylvania Creek and 6½ miles south of Markleeville.

Drainage area.--20 sq mi, approximately.

Records available.--December 1946 to September 1951.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during year, 1,260 cfs Nov. 20 (gage height, 7.95 ft), from rating curve extended above 350 cfs on basis of slope-area determination of peak flow; minimum, 2.5 cfs Oct. 1.
1946-51: Maximum discharge, that of Nov. 20, 1950; minimum, 1.1 cfs Nov. 10, 1949.

Remarks.--Records good except those for periods of doubtful or no gage-height record, which are fair. Flow partly regulated by three small reservoirs (total capacity, about 1,700 acre-ft).

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-22, Nov. 18-20, Jan. 31 to Feb. 26, May 22 to June 10)

Oct. 1 to Nov. 20				Nov. 20 to Sept. 30			
1.1	2.7	2.3	56	0.6	5.0	2.5	216
1.2	3.8	2.7	103	.8	15	4.5	575
1.4	7.7	3.3	253	1.1	37	5.4	750
1.6	15	4.0	497	1.5	76		
1.8	23						

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.1	16	47	22	24	16	31	61	127	50	40	29
2	3.2	18	46	22	22	16	32	59	120	46	39	29
3	3.1	25	290	23	22	15	33	59	114	43	37	29
4	3.1	20	174	22	25	15	32	62	116	38	34	*28
5	*3.1	18	101	22	*26	13	35	60	117	35	31	28
6	3.2	15	171	20	25	12	45	58	113	32	27	28
7	3.2	14	291	20	39	13	52	58	110	30	24	28
8	3.1	13	420	*19	41	14	60	63	108	28	15	26
9	3.0	11	*210	18	40	15	74	77	105	26	7.4	20
10	3.0	9.2	155	20	40	14	81	101	106	24	5.9	19
11	3.1	a8.6	123	18	39	14	83	99	106	22	5.5	18
12	3.1	a7.9	103	18	35	15	87	83	109	22	5.5	18
13	3.1	a7.2	88	16	33	17	95	75	114	19	5.5	18
14	3.1	*6.6	*96	16	32	20	92	69	124	16	5.0	18
15	3.2	8.9	80	16	31	20	96	73	127	15	5.0	18
16	3.2	10	72	15	29	21	105	93	135	15	5.0	17
17	3.2	16	63	16	28	21	98	*120	123	*14	*4.6	17
18	3.2	474	59	11	27	20	94	144	109	14	4.6	16
19	3.2	388	57	14	25	24	93	162	99	14	5.0	16
20	3.2	*d742	57	14	25	28	98	172	*94	14	5.9	16
21	3.2	d516	49	18	24	*30	96	178	89	13	7.8	15
22	3.2	d308	45	62	22	31	94	179	81	12	9.7	17
23	4.5	d215	42	43	20	31	90	197	76	11	8.8	17
24	8.6	d156	40	34	21	34	*88	203	75	20	7.8	16
25	7.5	d117	39	32	20	35	83	*229	72	46	6.4	16
26	17	d92	35	31	20	35	76	249	69	45	7.8	16
27	14	d74	33	30	18	36	78	284	67	46	24	15
28	14	d61	32	28	17	38	78	242	61	44	28	14
29	13	*54	31	26	-	40	68	221	55	36	29	14
30	23	54	29	23	-	35	64	186	55	11	30	13
31	14	-	25	24	-	31	-	149	-	41	30	-
Total	184.7	3,475.4	3,103	713	770	719	2,231	4,065	2,976	842	501.2	589
Mean	5.96	116	100	23.0	27.5	23.2	74.4	131	99.2	27.2	16.2	19.6
Ac-ft	366	6,890	6,150	1,410	1,530	1,430	4,430	8,060	5,900	1,670	994	1,170

Calendar year 1950: Max 742 Min 3.0 Mean 61.8 Ac-ft 44,750
Water year 1950-51: Max 742 Min 3.0 Mean 55.3 Ac-ft 40,000

Peak discharge (base, 190 cfs).--Nov. 18 (10:30 p.m.) 910 cfs (6.15 ft); Nov. 20 (5 p.m.) 1,260 cfs (7.95 ft); Dec. 3 (6 p.m.) 457 cfs (3.87 ft); Dec. 8 (7 a.m.) 571 cfs (4.48 ft); May 27 (5 p.m.) 359 cfs (3.17 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge interpolated.
d Doubtful gage-height record; discharge computed from reconstructed gage-height graph based on recorded graph, high-water marks, and engineers' notes.

Markleeville Creek above Grover Hot Springs, near Markleeville, Calif.

Location.--Lat 38°42', long. 119°51', in SE¼NE¼ sec. 23, T. 10 N., R. 19 E., on left bank half a mile upstream from Buck Creek, 4 miles upstream from mouth, and 4 miles west of Markleeville.

Drainage area.--14 sq mi, approximately.

Records available.--October 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,880 ft (from river-profile map, extended).

Average discharge.--5 years, 25.2 cfs.

Extremes.--Maximum discharge during year, 1,740 cfs Nov. 20 (gage height, 8.49 ft), from rating curve extended above 33 cfs on basis of slope-area determination of peak flow; minimum not determined.
1946-51: Maximum discharge, that of Nov. 20, 1950; minimum, 0.2 cfs Aug. 20, 23, Sept. 1-5, Oct. 13-16, 1949.

Remarks.--Records good except those for periods of backwater due to beaver dams, which are poor. No diversions above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	6.3	39	20	18	14	22	45	57	14	1.2	
2	1.0	7.6	39	*19	*17	14	23	43	52	12	1.3	
3	.9	*10	282	19	19	15	24	43	50	11	1.2	
4	.8	9.7	152	18	20	14	24	45	50	9.7	1.2	
5	.9	9.0	83	17	21	14	28	42	50	9.0	1.0	
6	1.0	6.7	142	16	20	13	33	40	48	8.2	1.0	
7	1.0	5.9	*258	14	24	14	40	39	45	7.4	1.0	
8	1.0	5.9	537	14	25	15	45	46	43	6.7	1.0	
9	.8	5.6	168	13	23	15	54	55	42	7.0	1.0	
10	.8	4.7	114	13	21	14	62	76	40	6.3	1.0	
11	*1.0	4.5	96	13	20	14	65	75	42	5.9	1.0	
12	1.4	4.3	79	12	19	14	69	59	40	5.2	.9	
13	1.7	4.3	66	12	18	15	71	52	42	5.0	.7	
14	1.8	3.4	70	12	17	15	70	52	43	4.7	.8	
15	1.9	2.9	59	12	17	15	70	53	45	5.2	.8	0.8
16	2.1	5.2	51	13	17	15	74	66	48	5.4	.8	
17	2.4	8.3	45	13	16	15	75	85	43	*5.6	.9	
18	2.7	370	42	13	16	15	75	105	38	4.3	.8	
19	2.8	568	38	14	15	15	66	111	34	3.4	.9	
20	2.9	*1,100	36	16	15	17	67	*112	*35	3.0	.9	
21	2.9	582	33	20	14	*20	68	112	30	3.3	1.2	
22	2.8	187	31	28	14	21	67	109	28	2.9	1.3	
23	3.4	134	28	25	13	21	67	114	26	2.7	1.0	
24	5.1	105	28	23	13	21	*65	109	25	1.8	.9	
25	6.3	*81	26	25	12	23	60	*118	26	1.6	.9	
26	8.1	58	23	22	12	23	54	127	23	1.6	.9	
27	8.0	50	22	22	12	23	56	144	21	1.5	.8	
28	8.5	45	21	21	13	24	53	123	18	1.3	.8	
29	9.0	47	20	20	-	26	54	105	16	1.4	*.9	
30	11	47	19	20	-	24	48	84	15	1.3	.9	
31	6.2	-	20	20	-	23	-	67	-	1.3	.8	-
Total	101.1	3,478.3	2,667	539	481	541	1,649	2,456	1,115	159.7	29.8	24.0
Mean	3.26	116	86.0	17.4	17.2	17.5	55.0	79.2	37.2	5.15	0.96	0.80
Ac-ft	201	6,900	5,290	1,070	954	1,070	3,270	4,870	2,210	317	59	48

Calendar year 1950: Max 1,100 Min 0.5 Mean 45.8 Ac-ft 33,160
Water year 1950-51: Max 1,100 Min - Mean 36.3 Ac-ft 26,260

Peak discharge (base, 175 cfs).--Nov. 18 (11 p.m.) 1,200 cfs (7.43 ft); Nov. 20 (2 p.m.) 1,740 cfs (8.49 ft); Dec. 3 (5:30 p.m.) 558 cfs (5.86 ft); Dec. 8 (6 a.m.) 810 cfs (6.50 ft); May 27 (6 p.m.) 186 cfs (4.16 ft).
* Discharge measurement made on this day.
Note.--Backwater due to beaver dams Oct. 15 to Nov. 3, Jan. 4 to Mar. 21, July 18 to Sept. 30.

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East Fork Carson River near Gardnerville Nev.

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

Drainage area.--344 sq mi.

Records available.--April 1890 to December 1893, October 1900 to December 1906, March 1908 to December 1910, June to October 1917, December 1924 to September 1929, October 1935 to December 1937, May 1939 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,985.11 ft above mean sea level (levels by Bureau of Reclamation). Prior to May 19, 1939, staff gages at several sites within 2 miles of present site at various datums.

Average discharge.--24 years (1890-93, 1901-1903, 1908-10, 1925-28, 1935-37, 1939-51), 403 cfs.

Extremes.--Maximum discharge during year, 12,100 cfs Nov. 21 (gage height, 9.66 ft), from rating curve extended above 6,000 cfs on basis of slope-area determination of peak flow; minimum, 52 cfs Oct. 15-19.

1890-93, 1900-1906, 1908-10, 1917, 1924-29, 1935-37, 1939-51: Maximum discharge, that of Nov. 21, 1950; minimum observed, 8 cfs Dec. 4-10, 19-23, 1904.

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

Water-Supply Paper	Water year	Date	Gage height (feet)	Discharge (cfs)
860.....	1937-38	Dec. 11	-	10,300
960.....	1941-42	Dec. 3	6.00	4,030
980.....	1942-43	Jan. 21	6.86	5,420
1040.....	1944-45	Feb. 2	5.57	3,490

Remarks.--Records good except those for periods of no gage-height record, which are fair. Station is above all diversions in Carson Valley. Diversions above station for irrigation. Flow slightly regulated by several small reservoirs (total capacity, about 5,000 acre-ft).

Revisions.--W 1060: Drainage area.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	148	520	a310	260	237	273	501	987	411	137	99
2	78	148	463	a310	257	224	281	465	894	392	130	99
3	78	167	4,640	a310	250	195	285	465	868	369	127	99
4	76	178	2,640	a300	294	227	281	512	836	346	124	95
5	74	164	1,330	a290	351	207	292	506	824	334	120	91
6	74	148	*1,300	a270	294	214	325	486	824	316	115	89
7	76	135	2,800	a260	334	217	373	455	805	296	110	95
8	78	128	*4,520	a250	381	230	401	465	780	285	104	101
9	76	123	2,240	a240	*343	230	481	*538	762	266	87	93
10	*64	110	1,560	*233	355	214	592	649	749	259	79	89
11	58	107	1,250	240	364	204	620	818	774	251	91	87
12	58	107	1,080	227	343	214	649	684	762	241	106	85
13	57	101	*944	214	314	230	696	626	792	234	106	87
14	58	103	1,060	240	306	241	725	609	843	217	99	85
15	56	83	878	227	298	251	678	576	*908	201	995	83
16	54	110	770	220	283	251	768	660	954	*192	104	81
17	57	156	698	220	272	248	756	830	973	192	99	79
18	54	2,860	644	230	260	237	696	994	894	186	101	*81
19	57	6,320	604	177	243	244	696	1,100	799	180	108	79
20	58	6,350	a560	198	257	266	666	1,180	774	171	*113	76
21	58	*6,550	a520	250	250	289	713	1,200	719	171	115	74
22	58	2,230	a480	534	243	*289	701	*1,200	701	160	120	76
23	60	1,450	a460	518	214	289	690	1,240	626	a160	120	76
24	74	*1,080	a440	398	243	285	666	1,270	592	a160	106	74
25	89	925	a420	351	240	304	649	1,340	576	*166	91	67
26	107	800	a400	338	236	296	587	*1,540	570	158	79	64
27	214	710	a380	334	236	300	570	1,730	543	155	85	64
28	142	632	a360	318	217	300	678	1,720	506	152	91	62
29	142	578	a340	294	-	325	609	1,510	*450	152	93	64
30	239	591	a330	257	-	308	538	1,330	416	132	97	62
31	211	-	a320	236	-	285	-	1,140	-	135	99	-
Total	2,711	33,292	34,951	8,794	7,938	7,851	16,935	28,339	22,501	7,040	3,251	2,456
Mean	87.5	1,110	1,127	284	284	253	564	914	750	227	105	81.9
Ac-ft	5,380	66,030	69,320	17,440	15,740	15,570	33,590	56,210	44,630	13,960	6,450	4,870

Calendar year 1950: Max 6,550 Min 40 Mean 529 Ac-ft 383,300
Water year 1950-51: Max 6,550 Min 54 Mean 482 Ac-ft 349,200

Peak discharge (base, 1,300 cfs).--Nov. 19 (2:30 a.m.) 10,500 cfs (9.07 ft); Nov. 21 (12:45 a.m.) 12,100 cfs (9.66 ft); Dec. 3 (7:45 p.m.) 10,700 cfs (9.14 ft); Dec. 8 (10 a.m.) 6,320 cfs (7.34 ft); May 28 (1:30 a.m.) 2,040 cfs (4.08 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 streams.

West Fork Carson River above Woodfords, Calif.

Location.--Lat 38°47', long. 119°54', in sec. 31, T. 11 N., R. 19 E., on right bank 1 mile above Horsethief Canyon Creek and 4 miles west of Woodfords.

Drainage area.--53 sq mi, approximately.

Records available.--December 1946 to September 1951 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 6,860 ft (from river-profile map).

Extremes.--Maximum discharge during year, 4,600 cfs Nov. 20 (gage height, 9.82 ft); minimum, 9.0 cfs Sept. 5.
1946-51: Maximum discharge, that of Nov. 20, 1950; minimum, 2.5 cfs Dec. 3, 1948.

Remarks.--Records good except those for periods of ice effect and those above 2,000 cfs, which are fair. Flow slightly regulated by several small reservoirs (total capacity, about 1,500 acre-ft).

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

1.0	8.7	2.3	99	6.0	1,120
1.2	15	2.6	135	7.0	1,750
1.4	23	3.0	193	8.0	2,600
1.7	42	4.0	390		
2.0	67	5.0	680		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	36	118	85	*b82	58	100	162	160	70	46	23
2	14	36	113	86	b82	54	104	159	146	64	44	12
3	14	40	1,850	77	76	57	104	166	142	58	41	10
4	14	38	639	74	97	50	112	190	149	52	43	9.5
5	14	36	302	70	110	28	126	169	145	46	37	9.0
6	16	32	599	b70	97	42	136	160	138	45	28	10
7	15	30	*1,080	b70	138	51	153	149	132	42	26	13
8	14	29	1,350	b70	138	60	162	156	127	39	*25	12
9	14	28	490	60	120	58	180	168	126	37	25	12
10	14	24	329	54	120	59	196	*186	126	37	25	20
11	13	24	283	54	112	56	195	206	131	38	23	26
12	*13	23	244	b54	102	56	196	175	130	37	15	26
13	13	23	214	b54	92	63	207	162	134	36	33	25
14	13	*21	*290	b55	89	67	209	163	145	34	61	24
15	13	24	223	55	86	71	204	153	149	31	59	23
16	13	20	188	64	81	78	207	163	164	49	54	20
17	13	47	170	49	76	73	206	193	166	54	49	13
18	13	1,160	159	b48	72	70	187	223	145	54	40	13
19	13	1,630	152	b45	72	76	178	243	134	51	25	13
20	13	*2,540	139	b60	68	96	172	*247	142	49	15	12
21	13	1,670	131	102	68	*103	174	243	128	46	18	12
22	13	460	123	284	65	101	168	236	114	43	20	12
23	14	287	114	218	65	101	168	243	107	29	19	12
24	21	227	112	162	70	108	164	243	102	*29	16	12
25	24	193	108	132	63	109	166	248	103	29	14	11
26	34	168	99	115	60	109	153	*284	100	31	14	12
27	42	*148	92	107	60	109	155	321	91	28	21	11
28	46	135	92	97	57	114	163	302	84	21	27	15
29	33	123	*90	86	-	121	180	250	*78	20	*27	21
30	69	164	79	82	-	114	162	219	74	33	26	16
31	45	-	81	b82	-	100	-	186	-	47	25	-
Total	627	9,416	10,053	2,731	2,418	2,412	4,987	6,368	3,815	1,279	941	459.5
Mean	20.2	314	324	88.1	86.4	77.8	166	205	127	41.3	30.4	15.3
Ac-ft	1,240	18,680	19,940	5,420	4,800	4,780	9,890	12,630	7,570	2,540	1,870	911

Calendar year 1950: Max 2,540 Min 10 Mean 146 Ac-ft 105,500
Water year 1950-51: Max 2,540 Min 9.0 Mean 125 Ac-ft 90,270

Peak discharge (base, 450 cfs).--Nov. 20 (8:45 p.m.) 4,600 cfs (9.82 ft); Dec. 3 (5:30 p.m.) 3,190 cfs (8.59 ft); Dec. 8 (7:30 a.m.) 2,010 cfs (7.33 ft).

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

West Fork Carson River at Woodfords, Calif.

Location.--Lat 38°46'00", long. 119°50'00", in SE¼SW¼ sec. 34, T. 11 N., R. 19 E., on left bank 0.3 mile downstream from bridge on State Highway 8, 0.8 mile west of Woodfords, and 3¾ miles downstream from Willow Creek.

Drainage area.--66 sq mi, approximately.

Records available.--October 1900 to May 1907, 1910-11 (fragmentary), October 1938 to September 1951. April 1890 to March 1892 and June 1907 to September 1920 at site 0.7 mile downstream, records not equivalent due to diversions for irrigation.

Gage.--Water-stage recorder. Altitude of gage is 5,760 ft (from river-profile map). Prior to Oct. 1, 1938, staff gage at about the same site at different datum.

Average discharge.--15 years (1901-3, 1905-6, 1939-51), 113 cfs.

Extremes.--Maximum discharge during year, 4,730 cfs Nov. 20 (gage height, 8.35 ft, from high-water marks), from rating curve extended above 1,000 cfs on basis of slope-area determination of peak flow; minimum, 19 cfs Sept. 5, 6.
1900-07, 1910-11, 1938-51: Maximum discharge, that of Nov. 20, 1950; minimum (1900-07, 1938-51), 8.4 cfs Nov. 21, 1948.
Flood of Dec. 11, 1937, reached a stage of 9.0 ft (present datum), from floodmarks (discharge, 3,500 cfs).

Remarks.--Records good except those above 500 cfs, which are fair. One small diversion above station for irrigation. Flow slightly regulated by several small reservoirs (total capacity, about 1,500 acre-ft).

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

Oct. 1 to Nov. 18				Nov. 18 to Sept. 30			
0.9	18	3.0	234	0.5	16	3.0	349
1.2	31	4.0	465	.8	30	4.0	662
1.5	51	5.0	810	1.1	48	5.0	1,130
2.0	97	5.2	900	1.5	85	6.0	1,860
2.5	157			2.0	150	6.6	2,420
				2.5	237		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	45	130	86	*94	72	104	171	176	79	48	33
2	23	45	115	*86	92	68	109	166	161	73	46	24
3	22	48	1,880	87	94	71	109	173	156	67	44	22
4	21	48	720	85	118	64	117	197	164	61	45	*20
5	*21	45	*341	80	136	43	132	180	160	57	40	19
6	22	40	580	74	118	57	146	169	155	55	34	20
7	22	37	1,120	75	163	60	161	156	148	52	31	22
8	21	36	1,360	74	168	68	174	161	140	48	*31	22
9	21	35	558	70	148	66	193	*173	141	47	30	22
10	20	30	379	68	148	65	213	195	138	47	31	25
11	20	30	327	70	141	64	211	214	142	48	30	32
12	20	30	280	71	128	66	213	185	146	48	24	33
13	20	30	246	70	115	71	224	169	148	46	32	33
14	20	29	*323	75	108	78	228	171	163	44	63	31
15	20	27	253	67	102	80	222	158	*168	40	61	30
16	20	26	213	69	97	85	228	166	183	*52	57	28
17	20	30	195	67	94	83	222	*197	190	58	53	22
18	20	898	178	54	89	77	200	237	171	57	48	*21
19	20	1,760	169	52	88	84	192	259	153	56	36	22
20	20	*2,380	156	73	83	103	186	270	161	53	28	21
21	20	1,830	146	84	81	113	186	265	148	52	31	21
22	20	523	136	246	83	*110	181	*257	131	49	31	20
23	21	329	128	257	78	109	180	259	118	39	34	20
24	28	253	124	197	78	113	178	*257	114	38	28	20
25	31	216	122	160	77	118	180	268	112	36	26	20
26	41	*186	111	141	73	117	161	307	113	38	24	20
27	54	163	104	134	73	117	163	344	101	36	28	20
28	53	147	100	116	72	118	174	338	92	32	35	21
29	49	139	100	108	-	128	188	272	84	29	36	28
30	83	181	90	97	-	121	169	243	81	37	35	25
31	56	-	84	90	-	104	-	202	-	49	35	-
Total	872	9,636	10,768	3,083	2,939	2,693	5,344	6,779	4,258	1,523	1,155	717
Mean	28.1	321	347	99.5	105	86.9	178	219	142	49.1	37.3	23.9
Ac-ft	1,730	19,110	21,360	6,120	5,830	5,340	10,600	13,450	8,450	3,020	2,290	1,420

Calendar year 1950: Max 2,380 Min 15 Mean 161 Ac-ft 116,240
Water year 1950-51: Max 2,380 Min 19 Mean 136 Ac-ft 98,720

Peak discharge (base, 500 cfs).--Nov. 19 (10 p.m.) 4,730 cfs (8.35 ft); Dec. 3 (6:30 p.m.) 3,400 cfs (7.45 ft); Dec. 8 (8 a.m.) 2,070 cfs (6.23 ft).
* Discharge measurement made on this day.

Clear Creek near Carson City, Nev.

Location.--Lat 39°07', long. 119°49', in sec. 1, T. 14 N., R. 19 E., on left bank 3 miles upstream from mouth and 4 miles southwest of Carson City.

Drainage area.--15 sq mi, approximately.

Records available.--March 1948 to September 1951.

Gage.--Water-stage recorder and sharp-crested weir. Altitude of gage is 4,700 ft (from river-profile map).

Extremes.--Maximum discharge during year, 56 cfs Dec. 3 (gage height, 1.95 ft); minimum, 2.1 cfs Sept. 13.
1948-51: Maximum discharge, that of Dec. 3, 1950; minimum, 1.0 cfs Aug. 4, 5, 6, 20, 1949.

Remarks.--Records fair. Four small diversions for irrigation of about 150 acres of hay meadows and pasture above station. Practically all remaining flow diverted below station for irrigation.

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

0.2	1.3	0.6	12
.3	2.9	1.0	28
.4	5.2	1.5	43

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	5.0	11	7.6	10	8.9	7.6	8.2	3.8	2.3	2.4	2.4
2	2.6	5.0	10	d7.6	10	8.6	7.6	7.9	4.0	2.3	2.3	2.4
3	2.4	5.0	*41	d7.8	10	b8.6	7.6	8.2	4.0	2.4	2.3	2.4
4	2.3	4.7	29	d8.0	12	8.6	7.9	8.6	4.0	3.1	2.3	2.4
5	2.4	4.5	20	d8.0	16	9.2	8.2	8.2	3.8	3.1	2.3	2.4
6	2.6	4.3	22	d8.0	11	8.9	7.9	8.6	3.8	3.1	2.4	2.4
7	2.6	4.0	23	d8.0	12	8.9	7.9	*7.3	3.8	3.4	2.4	2.4
8	2.6	4.0	*29	d8.0	12	8.2	7.9	6.7	3.8	3.1	2.4	2.3
9	2.6	3.8	21	*7.9	11	8.2	7.9	6.7	3.8	2.9	2.4	2.3
10	2.6	*4.0	18	7.6	11	8.2	7.9	7.0	3.6	3.1	2.4	2.3
11	2.4	4.5	18	7.9	11	8.6	7.3	7.6	*3.8	3.1	2.4	2.3
12	2.4	4.5	16	7.9	11	7.9	7.3	7.6	3.6	2.9	2.3	2.4
13	2.4	4.7	14	8.9	10	7.9	7.3	6.7	3.6	2.7	2.4	2.1
14	2.6	5.2	18	8.2	10	8.2	7.3	6.4	3.6	2.7	2.4	2.3
15	2.6	5.2	14	8.2	9.6	8.2	7.6	5.8	3.8	2.6	2.4	2.3
16	2.6	18	12	7.9	9.2	8.2	7.9	6.1	3.6	2.6	2.4	2.3
17	2.6	7.2	12	8.6	8.9	7.6	7.6	6.1	3.6	2.6	2.6	2.4
18	2.6	35	11	7.9	8.9	7.6	7.6	6.1	3.6	2.7	2.6	2.7
19	2.6	27	11	b7.8	8.9	7.6	7.6	6.1	3.4	2.6	2.7	2.7
20	2.6	29	10	b7.8	8.6	7.6	7.0	6.1	3.8	*2.6	3.4	2.6
21	2.6	26	9.6	15	*9.2	*7.9	7.0	6.1	4.0	2.6	2.1	2.6
22	2.6	18	9.2	*31	10	7.9	6.7	6.1	3.1	2.4	3.1	2.6
23	2.9	14	8.9	17	b10	7.9	7.0	5.2	2.9	2.4	2.9	2.6
24	3.6	13	8.6	14	9.6	7.6	6.7	4.5	2.9	2.4	2.9	2.6
25	3.8	12	8.6	13	9.6	7.3	8.9	4.5	3.1	2.4	2.7	2.6
26	6.4	11	8.2	12	8.9	7.3	7.9	4.5	3.1	2.4	2.4	2.6
27	7.7	11	7.9	12	8.9	7.3	7.3	4.5	2.9	2.4	*2.3	2.6
28	5.0	11	7.9	11	8.9	7.3	12	4.5	2.7	2.4	2.3	2.6
29	4.3	10	7.9	11	-	7.6	9.2	4.3	2.6	2.4	2.3	2.7
30	9.4	12	8.2	b10	-	7.9	8.6	4.3	2.3	2.4	2.4	2.6
31	5.2	-	7.9	b10	-	7.6	-	3.8	-	2.4	2.4	-
Total	104.2	322.6	452.9	315.6	286.2	249.3	234.2	194.3	104.4	82.5	78.0	73.9
Mean	3.36	10.8	14.6	10.2	10.2	8.04	7.81	6.27	3.48	2.66	2.52	2.46
Ac-ft	207	640	898	626	568	494	465	385	207	164	155	147

Calendar year 1950: Max 41 Min 1.9 Mean 7.09 Ac-ft 5,130
Water year 1950-51: Max 41 Min 2.1 Mean 6.84 Ac-ft 4,960

Peak discharge (base, 15 cfs).--Oct. 26 (11 p.m.) 22 cfs (0.86 ft); Oct. 30 (5:30 a.m.) 22 cfs (0.85 ft); Nov. 18 (9:30 p.m.) 48 cfs (1.70 ft); Dec. 3 (5:30 p.m.) 56 cfs (1.95 ft); Dec. 8 (7 a.m.) 35 cfs (1.22 ft); Dec. 14 (11 a.m.) 25 cfs (0.92 ft); Jan. 22 (4:45 a.m.) 40 cfs (1.39 ft) Feb. 5 (4:30 a.m.) 26 cfs (0.94 ft); Apr. 28 (8 a.m.) 16 cfs (0.78 ft).

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
d Doubtful gage-height record; discharge estimated on basis of weather records and records for nearby streams.

Carson River near Carson City, Nev.

Location.--Lat 39°06'30", long. 119°42'30", in NW¼ sec. 2, T. 14 N., R. 20 E., on right bank 2 miles downstream from Clear Creek, 2½ miles upstream from bridge on road to Mexican Dam, and 5 miles southeast of Carson City.

Drainage area.-- 876 sq mi.

Records available.--May 1939 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,620 ft (from river-profile map).

Average discharge.--12 years, 395 cfs.

Extremes.--Maximum discharge during year, 15,500 cfs Nov. 22 (gage height, 11.40 ft), on basis of computation of flow over dam; minimum, 17 cfs Aug. 17.
1939-51: Maximum discharge, that of Nov. 22, 1950; minimum daily, 4 cfs (estimated) Aug. 17, 1939.

Remarks.--Records good except those for periods of ice effect, which are fair. Many diversions above station for irrigation. Flow slightly regulated by several small reservoirs on tributaries.

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

0	14	0.7	57	2.0	399	6.0	4,220
.1	18	.9	80	2.5	647	7.0	5,650
.2	22	1.1	112	3.0	995	8.0	7,220
.3	27	1.3	158	4.0	1,860	9.0	9,100
.5	40	1.5	217	5.0	2,960	10.0	11,500

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	307	885	585	b480	395	395	703	965	208	24	28
2	59	237	745	564	483	412	371	585	838	217	20	24
3	66	224	1,310	574	483	383	363	548	768	158	19	24
4	55	240	7,280	569	479	387	348	508	735	169	19	*33
5	50	250	*6,860	537	508	433	348	522	722	146	19	31
6	58	237	2,950	508	532	379	329	532	618	127	19	32
7	54	217	2,400	488	503	363	329	*558	542	104	20	29
8	53	202	*4,230	488	527	359	317	488	508	88	22	27
9	52	186	5,770	498	*564	367	344	447	460	83	21	31
10	51	*180	*4,900	465	564	363	416	465	498	80	20	32
11	43	164	2,820	465	569	355	493	503	512	75	19	26
12	40	164	2,160	*460	585	351	460	624	517	65	22	28
13	45	158	1,780	b440	522	351	442	585	508	59	21	26
14	43	153	1,600	b430	479	367	456	564	460	54	19	25
15	46	143	1,770	483	474	371	483	569	498	49	20	22
16	45	138	1,500	456	465	371	479	483	579	38	18	22
17	53	182	1,290	442	447	371	579	451	659	39	19	22
18	56	457	*1,170	517	442	371	596	498	672	43	24	29
19	52	2,490	1,100	517	438	363	532	653	585	43	28	39
20	54	*9,480	1,010	b460	408	371	548	912	527	*35	*26	34
21	56	*9,080	942	b640	408	*387	508	*988	558	32	32	30
22	56	*11,400	890	1,050	412	408	574	995	630	35	36	29
23	58	4,850	824	1,230	403	412	553	995	607	41	33	28
24	59	2,620	782	942	383	425	479	1,140	542	36	34	30
25	60	1,740	755	762	391	451	493	1,120	508	41	27	29
26	67	1,370	729	672	383	465	585	1,260	399	43	28	31
27	114	1,170	684	636	391	456	569	1,400	348	32	29	32
28	250	1,020	653	607	395	447	585	1,620	*292	31	31	34
29	220	902	653	553	-	433	935	1,640	274	28	26	34
30	234	838	653	b520	-	447	868	1,460	264	30	25	36
31	363	-	647	b490	-	429	-	1,170	-	26	27	-
Total	2,546	50,799	61,742	18,048	13,118	12,243	14,777	24,986	16,593	2,255	747	877
Mean	82.1	1,693	1,992	582	468	395	493	806	553	72.7	24.1	29.2
Ac-ft	5,050	100,800	122,500	35,800	26,020	24,280	29,310	49,560	32,910	4,470	1,480	1,740

Calendar year 1950: Max 11,400 Min 11 Mean 661 Ac-ft 478,800
Water year 1950-51: Max 11,400 Min 18 Mean 599 Ac-ft 433,900

Peak discharge (base, 1,600 cfs).--Nov. 22 (1 a.m.) 15,500 cfs (11.40 ft); Dec. 4 (7 p.m.) 11,300 cfs (9.94 ft); May 28 (11:30 p.m.) 1,750 cfs (3.87 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Carson River near Fort Churchill, Nev.

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

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

Records available.--April 1911 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,200 ft (from topographic map). Prior to Apr. 25, 1924, staff gage at site 7¾ miles upstream at different datum. Apr. 25, 1924, to Dec. 31, 1933, water-stage recorder at site 8 miles upstream at different datum.

Average discharge.--40 years, 362 cfs.

Extremes.--Maximum daily discharge during year, 7,850 cfs Nov. 23; no flow Oct. 1-9, July 13 to Sept. 30.
1911-51: Maximum daily discharge, that of Nov. 23, 1950; no flow during some periods in nearly every year since 1923.

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

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

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	366	1,890	1,040	433	406	322	885	845	139		
2	0	330	1,780	970	444	402	290	690	690	99		
3	0	286	1,850	770	462	397	299	555	620	80		
4	0	277	3,630	555	462	388	277	433	568	63		
5	0	286	7,100	555	462	397	232	420	503	56		
6	0	299	6,670	516	473	433	214	415	503	53		
7	0	286	2,840	456	490	386	193	411	424	49		
8	0	272	4,020	473	473	375	171	371	353	42		
9	0	255	5,650	473	503	322	139	357	322	36		
10	66	232	6,880	473	523	313	128	313	308	32		
11	66	228	4,020	456	529	299	183	299	330	24		
12	64	223	3,670	456	542	290	255	344	353	18		
13	66	223	2,740	444	542	277	210	375	371	0		
14	66	219	2,280	429	503	268	193	388	344	0		
15	66	210	2,200	429	479	290	210	388	308	0		
16	72	203	2,140	444	467	299	232	366	330	0		
17	70	193	1,720	456	462	299	277	313	388	0		
18	56	290	1,550	503	462	299	299	286	444	0		
19	53	722	1,450	516	456	290	366	308	444	0		
20	56	2,320	1,430	549	456	277	299	462	411	0		
21	56	6,600	1,420	568	450	277	299	655	462	0		
22	59	7,560	1,390	706	444	308	277	669	444	0		
23	63	7,850	1,320	1,030	439	344	344	669	467	0		
24	70	5,110	1,240	1,080	433	353	366	793	450	0		
25	74	2,900	1,230	861	429	366	322	823	411	0		
26	59	2,640	1,190	746	424	388	344	808	366	0		
27	85	2,440	1,160	669	420	388	388	909	299	0		
28	128	2,440	1,100	706	411	386	433	1,020	255	0		
29	241	2,280	1,070	601	-	379	588	1,280	232	0		
30	246	2,040	1,050	536	-	344	925	1,250	163	0		
31	255	-	1,070	473	-	344	-	1,090	-	0		
Total	2,037	49,580	78,750	18,939	13,073	10,566	9,075	18,345	12,408	691	0	0
Mean	65.7	1,653	2,540	611	467	341	302	592	414	22.3	0	0
Ac-ft	4,040	98,340	156,200	37,560	25,930	20,960	18,000	36,390	24,610	1,370	0	0

Calendar year 1950: Max 7,850 Min 0 Mean 702 Ac-ft 508,300
Water year 1950-51: Max 7,850 Min 0 Mean 585 Ac-ft 423,400

Marys River above Hot Springs Creek, near Deeth, Nev.

Location.--Lat 41°15', long. 115°17', in NE¼SE¼ sec. 24, T. 39 N., R. 59 E., 1 mile upstream from Hot Springs Creek, 7 miles north of Cross Ranch, and 13 miles north of Deeth.

Drainage area.--415 sq mi.

Records available.--October 1943 to September 1951. Published as "below Hot Springs Creek, near Deeth" prior to October 1950.

Gage.--Water-stage recorder. Altitude of gage is 5,500 ft (from river-profile map). Prior to Nov. 3, 1950, at site 1¼ miles downstream at different datum.

Average discharge.--8 years, 60.7 cfs.

Extremes.--Maximum discharge during year, 452 cfs Apr. 18 (gage height, 5.39 ft); minimum, 0.8 cfs Sept. 18.
1943-51: Maximum discharge, 676 cfs May 9, 1945 (gage height, 5.99 ft, site and datum then in use); minimum, 0.1 cfs Sept. 5, 1950. Flood in January 1943 reached a stage of 7.2 ft, former site and datum, from floodmarks (discharge, 1,030 cfs by slope-area method).

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

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 15, Sept. 12-17)

Oct. 1 to Nov. 2		Nov. 3 to Sept. 30			
1.1	1.4	0.9	0.8	2.0	68
1.2	2.9	1.0	2.2	3.0	158
1.3	5.0	1.3	9.7	4.0	272
1.4	7.6	1.5	22	5.4	454

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	*5.3	26	b28	b20	b45	163	361	301	30	5.6	1.4
2	2.4	5.6	28	26	21	b45	155	331	264	27	5.6	1.4
3	2.6	*6.1	36	26	22	48	163	280	229	25	6.1	1.2
4	2.6	6.6	44	30	125	48	*188	*250	199	19	7.0	1.2
5	2.9	7.0	53	27	193	50	228	237	174	17	7.0	1.2
6	2.7	7.4	49	b22	147	50	273	252	*148	15	6.1	1.4
7	2.9	7.4	47	b17	175	50	318	270	137	*14	*5.6	1.4
8	2.9	7.4	48	b18	176	54	353	302	129	13	5.2	1.4
9	3.1	7.4	49	19	144	57	*391	313	119	12	4.9	1.4
10	3.3	7.0	48	21	129	54	394	302	112	11	4.3	1.2
11	3.5	7.0	47	*21	128	48	404	299	111	10	3.7	1.1
12	3.5	7.0	45	22	125	45	417	331	108	9.7	3.1	1.1
13	3.5	7.0	46	23	100	47	396	358	98	9.2	2.8	1.1
14	3.7	7.4	46	21	83	*62	392	343	93	8.4	2.5	1.1
15	4.2	7.4	43	22	83	84	408	300	99	7.4	2.5	1.1
16	4.2	6.6	*42	24	81	96	430	256	100	7.0	2.2	1.1
17	4.2	6.1	39	24	*76	97	438	236	102	7.0	2.1	*1.0
18	4.0	12	38	b22	75	77	444	234	106	6.6	2.1	.9
19	4.0	21	36	b20	67	66	447	250	106	6.6	2.5	1.1
20	4.0	25	36	b18	59	65	440	291	100	6.6	2.5	1.1
21	4.2	35	34	21	64	87	435	335	94	7.0	2.5	1.2
22	4.2	38	30	29	66	110	425	352	84	7.0	2.5	1.2
23	4.2	45	28	30	62	118	409	332	73	7.0	2.2	1.4
24	4.4	38	26	34	60	99	390	321	66	6.6	2.5	1.4
25	4.4	33	26	36	57	108	375	339	59	5.6	2.5	1.5
26	4.4	30	27	36	54	125	383	347	52	5.6	2.2	1.5
27	5.0	30	27	37	b45	144	380	354	44	5.6	1.9	1.5
28	4.8	30	27	32	b45	149	366	365	40	5.6	1.6	1.6
29	4.8	29	36	b23	-	143	364	371	36	6.1	1.6	1.8
30	4.8	29	37	b15	-	158	375	375	32	6.6	1.5	1.8
31	5.5	-	30	b18	-	170	-	344	-	6.1	1.5	-
Total	117.3	510.7	1,170	762	2,482	2,599	10,744	9,631	3,415	330.3	105.9	38.8
Mean	3.78	17.0	37.7	24.6	88.6	83.8	358	311	114	10.7	3.42	1.29
Ac-ft	233	1,010	2,320	1,510	4,920	5,160	21,310	19,100	6,770	655	210	77

Calendar year 1950: Max 441 Min 0.2 Mean 69.7 Ac-ft 50,460
Water year 1950-51: Max 447 Min 0.9 Mean 87.4 Ac-ft 63,280

Peak discharge (base, 200 cfs).--Feb. 4 (8 p.m.) 352 cfs (4.63 ft); Apr. 18 (6 p.m.) 452 cfs (5.39 ft); May 30 (3:30 a.m.) 379 cfs (4.89 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Lamoille Creek near Lamoille, Nev.

Location.--Lat 40°41'30", long. 115°28'30", in NE¼ sec. 6, T. 32 N., R. 58 E., on left bank at Lamoille Creek bridge at mouth of canyon, 300 ft downstream from Elko-Lamoille power plant, and 3 miles south of Lamoille.

Drainage area.--25 sq mi, approximately.

Records available.--May 1915 to June 1923, October 1943 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,240 ft (from topographic map). Prior to Oct. 1, 1943, staff gages at various sites nearby at different datums.

Average discharge.--14 years (1915-16, 1917-22, 1943-51), 44.8 cfs.

Extremes.--Maximum discharge during year, 505 cfs May 26; minimum, 2.2 cfs Nov. 10.
1915-23, 1943-51: Maximum discharge recorded, 588 cfs July 6, 1950, but may have been exceeded by that of June 1917 when gage washed out; minimum, 1 cfs Jan. 24, 1918.

Remarks.--Records good except those for periods of ice effect, indefinite stage-discharge relation, or no gage-height record, which are fair. Records include flow of McDermott ditch which diverts about 200 ft upstream from gage. Elko-Lamoille power plant diverts about 6 miles upstream but flow is returned to channel at power plant 300 ft upstream from station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.7	6.2	9.5	9.0	b7	6.5	8.5	59	234	155	*40	10
2	7.4	6.7	9.0	9.5	b7	6	8.5	58	184	153	37	10
3	7.4	6.7	11	9.5	7.2	5.5	10	58	166	145	41	9.7
4	7.2	6.2	12	10	8.0	6	10	65	163	131	43	9.1
5	6.9	6.2	11	9.0	8.5	6.5	10	69	*167	117	36	8.6
6	7.2	5.8	12	b9	8.5	7.2	12	72	173	*111	32	8.6
7	7.0	5.8	14	9.0	9.0	6.7	13	73	173	105	29	8.1
8	6.8	5.8	12	*9.5	9.5	6.7	14	73	170	101	26	7.7
9	6.8	*4.9	12	9.5	9.5	6.7	16	76	178	96	24	7.7
10	6.4	4.0	12	9.5	10	6.2	21	88	193	94	22	7.6
11	6.2	4.4	12	9.5	10	5.8	25	97	208	87	21	7.2
12	6.2	4.0	12	9.5	9.5	6.2	29	92	209	80	18	7.2
13	6.4	4.0	12	9.5	8.5	*6.7	38	89	216	80	*18	6.7
14	6.4	4.4	12	9.5	8.5	7.2	47	88	240	76	17	6.7
15	7.9	4.4	11	9.5	8.5	7.2	54	*85	*270	72	16	*6.2
16	7.5	4.0	10	9.0	8.5	6.7	*59	89	305	73	16	5.8
17	7	4.4	10	8.5	8.5	6.2	64	101	319	73	15	5.8
18	6	6.2	*10	9.5	8.5	6.2	63	*128	301	*69	14	5.8
19	6	6.7	10	8.5	8.0	6.2	63	158	267	70	14	5.8
20	6	8.5	10	9.0	7.6	6.7	62	181	232	107	14	5.4
21	6	20	10	9.5	8.0	7.6	61	*194	207	96	14	5.8
22	6	15	9.5	10	8.0	7.2	59	227	189	68	14	5.4
23	6	12	10	9.0	7.6	7.2	62	277	177	62	13	4.9
24	6	11	10	9.0	7.2	7.6	65	315	174	57	13	4.9
25	6	10	9.5	9.5	7.6	7.6	63	373	171	53	12	4.9
26	6	10	9.5	10	7.2	8.5	63	*420	171	49	12	5.5
27	6	10	10	10	7.6	8.5	62	423	171	50	11	5.0
28	6	9.5	10	10	7	8.0	63	*426	176	64	10	5.5
29	6	9.5	9.5	*9.0	-	8.5	62	388	174	56	10	5.9
30	*5.8	10	9.0	b8.5	-	9.0	59	345	160	48	10	5.5
31	6.2	-	9.0	b7.5	-	8.5	-	292	-	44	10	-
Total	202.4	226.3	329.5	287.5	230.5	217.3	1,247	5,479	6,138	2,642	622	203.0
Mean	6.53	7.54	10.6	9.27	8.23	7.01	41.6	177	205	85.2	20.1	6.77
Ac-ft	401	449	654	570	457	431	2,470	10,870	12,170	5,240	1,230	403

Calendar year 1950: Max 436 Min 2.9 Mean 54.3 Ac-ft 39,300
Water year 1950-51: Max 426 Min 4.0 Mean 48.8 Ac-ft 35,340

Peak discharge (base, 310 cfs).--May 26 (9 p.m.) 505 cfs; June 16 (7 p.m.) 363 cfs.
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Feb. 28 to Mar. 5; discharge estimated on basis of range in stage and weather records. Indefinite stage-discharge relation Oct. 17-29 due to backwater from construction cofferdam.

North Fork Humboldt River at Devils Gate, near Halleck, Nev.

Location.--Lat 41°11', long. 115°29', in SE¼ sec. 13, T. 38 N., R. 57 E., on right bank 16 miles north of Halleck and 26 miles upstream from mouth.

Drainage area.--830 sq mi, approximately.

Records available.--November 1913 to September 1921, October 1943 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 5,368 ft above mean sea level,(U. S. G. S. plane table bench mark). Prior to October 1943, at site a quarter of a mile upstream at different datum.

Average discharge.--13 years (1914-19, 1943-51) 67.1 cfs.

Extremes.--Maximum discharge during year, 954 cfs Feb. 6 (gage height, 6.67 ft); minimum not determined, occurred during period of no gage-height record.
1913-21, 1943-51: Maximum discharge, 1,600 cfs Mar. 2 or 3, 1921; minimum, 1 cfs Aug. 20-28, Sept. 30, 1913.

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

Rating tables, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 21-30)

Oct. 1 to May 31				June 1 to Sept. 30	
1.1	5.5	3.0	163	1.5	4.6
1.4	16	4.0	347	1.7	14
1.8	38	6.0	778	2.2	51
2.3	78			3.0	139
				3.6	221

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.9	14	27		35	a60	227	267	208	22	13	
2	8.5	13	26		50		277	241	200	19	13	
3	8.5	13	27	30	62	a54	309	246	188	17	15	
4	8.5	13	36		71		*332	*210	168	14	16	
5	8.2	13	60		532	64	339	169	153	12	13	
6	8.5	*13	60		757	57	332	151	*133	11	13	
7	8.5	13	57		494	55	332	150	116	*9.9	*15	
8	8.5	13	67		416	*86	324	157	105	9.9	14	
9	8.5	13	73		339	263	*315	165	103	10	13	a4.5
10	9.2	19	68		328	150	330	163	100	9.4	12	
11	9.6	18	63	(*)	540	104	311	151	94	8.9	11	
12	*9.6	17	59		478	94	305	160	85	8.0	10	
13	9.6	14	55	25	309	148	296	181	84	8.0	9.4	
14	9.9	15	54		201	387	290	198	81	8.5	8.5	
15	10	15	53		168	413	284	188	77	8.9	7.6	
16	11	16	*51		154	431	279	160	73	8.0	7.2	
17	11	16	48		*133	318	282	130	68	8.0	6.3	*4.6
18	10	16	46		124	189	301	115	65	7.6	6.3	5.5
19	10	21	44		109	157	351	124	62	7.6	6.3	5.9
20	10	25	43		92	256	341	147	61	8.0	6.3	5.9
21	11	34	40		96	425	305	166	60	8.5	5.9	6.3
22	11	35			99	458	277	186	58	8.5	6.8	6.8
23	11	33			93	326	269	188	55	8.5	6.3	7.2
24	11	34			85	250	254	174	52	8.5	6.3	7.6
25	11	31			78	303	244	162	46	8.0	6.3	7.6
26	11	29	35	30	a70	351	250	158	40	7.6	5.9	7.6
27	12	28			a66	309	244	163	36	6.3	5.5	8.0
28	12	26			a64	239	229	176	31	6.8	5.9	8.0
29	12	25			-	225	256	188	28	7.2	5.5	7.6
30	12	25			-	254	294	203	24	8.0	5.0	8.0
31	13	-			-	231	-	214	-	10	5.0	-
Total	312.5	610	1,407	855	6,043	6,765	8,779	5,451	2,654	303.6	280.3	168.6
Mean	10.1	20.3	45.4	27.6	216	218	293	176	88.5	9.79	9.04	5.62
Ac-ft	620	1,210	2,790	1,700	11,990	13,420	17,410	10,810	5,260	602	556	334

Calendar year 1950: Max 252 Min 3.2 Mean 63.3 Ac-ft 45,820
Water year 1950-51: Max 757 Min - Mean 92.1 Ac-ft 66,700

Peak discharge (base, 170 cfs).--Feb. 6 (3:00 a.m.) 954 cfs (6.67 ft); Feb. 11 (11:00 p.m.) 602 cfs (5:20 ft); Mar. 9 (2:00 a.m.) 360 cfs (3.99 ft); Mar. 15 (5:30 a.m.) 502 cfs (4.69 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for Marys River above Hot Springs Creek, near Deeth, Nevada.

Note.--Stage-discharge relation affected by ice Dec. 20 to Feb. 2.

Humboldt River near Elko, Nev.

Location.--Lat 40°56', long. 115°38', in SE¼NE¼ sec. 11, T. 35 N., R. 56 E., on right bank 1 mile southeast of Ryndon, 6 miles downstream from North Fork, and 10 miles northeast of Elko.

Records available.--June 1895 to October 1902, October 1944 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,100 ft. Prior to Nov. 8, 1944, staff gage at site 11 miles downstream at different datum.

Average discharge.--12 years (1897-1902, 1944-51), 240 cfs.

Extremes.--Maximum discharge during year, 1,650 cfs Feb. 8 (gage height, 6.92 ft); minimum, 0.9 cfs Sept. 5-17.
1895-1902, 1944-51: Maximum discharge, 2,530 cfs June 9, 1945; no flow several days in August and September 1948.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 8 to Apr. 15, June 26 to July 20)

0.9	0.7	1.4	10.7	3.0	241
1.0	1.3	1.5	16	4.0	480
1.1	2.2	1.7	33	5.0	803
1.2	3.9	2.0	71	6.0	1,190
1.3	6.7	2.5	149	7.0	1,640

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	21	90	b122	b185	b255	480	904	1,370	156	32	1.1
2	1.7	27	86	b120	b180	b250	486	911	1,340	142	28	1.1
3	1.7	29	106	b126	b160	243	539	849	1,270	137	27	1.1
4	1.7	25	126	b130	234	258	570	*803	1,140	132	29	1.1
5	1.8	24	151	137	604	296	586	741	1,010	116	24	.9
6	1.8	*24	186	b115	867	277	602	664	*870	105	21	.9
7	1.7	24	195	b98	1,230	270	612	592	734	96	20	.9
8	1.7	24	208	b105	1,560	272	615	558	628	82	18	.9
9	1.8	23	229	b110	1,290	305	621	551	558	*74	*14	.9
10	1.7	19	229	b105	1,070	420	621	524	497	61	12	.9
11	1.7	18	215	b110	926	355	*650	521	455	52	9.5	.9
12	*1.7	20	200	*105	953	312	667	551	422	43	7.1	.9
13	1.7	24	189	b100	930	301	684	602	402	36	5.3	1.0
14	1.7	34	182	94	748	350	697	710	386	31	3.7	.9
15	1.8	29	175	91	599	*477	714	751	372	27	3.0	.9
16	1.8	34	170	b95	527	527	727	700	350	24	2.7	.9
17	1.7	36	164	b95	489	554	727	644	345	21	2.2	.9
18	1.8	42	161	b100	452	494	761	586	345	20	2.0	1.0
19	3.6	60	*161	b76	422	384	814	530	357	20	3.3	*1.1
20	3.9	79	156	b74	379	360	892	494	372	21	2.1	1.1
21	5.6	96	154	b90	364	428	900	486	364	21	1.7	1.1
22	6.7	114	149	b115	372	521	863	483	352	23	1.6	1.1
23	7.9	124	139	139	369	583	831	536	334	33	1.5	1.1
24	10	113	132	b150	360	518	796	554	309	42	1.4	1.1
25	9.1	105	130	b175	341	452	768	580	277	38	1.4	1.1
26	11	98	b128	b190	325	486	761	634	256	37	1.3	1.1
27	14	96	b126	b240	296	524	786	717	233	32	1.3	1.1
28	13	90	b124	b250	266	506	796	838	204	30	1.2	1.2
29	16	90	146	b210	-	452	817	1,040	182	28	1.2	1.2
30	15	90	142	b160	-	447	852	1,260	170	27	1.1	1.2
31	19	-	124	b190	-	477	-	1,350	-	30	1.1	-
Total	165.9	1,632	4,873	4,017	16,498	12,354	21,235	21,664	15,904	1,737	280.7	30.7
Mean	5.35	54.4	157	130	589	399	708	699	530	56.0	9.05	1.02
Ac-ft	329	3,240	9,670	7,970	32,720	24,500	42,120	42,970	31,550	3,450	557	61

Calendar year 1950: Max 1,210 Min 1.1 Mean 210 Ac-ft 152,000
Water year 1950-51: Max 1,560 Min 0.9 Mean 275 Ac-ft 199,100

Peak discharge (base, 550 cfs).--Feb. 8 (6:30 a.m.) 1,650 cfs (6.92 ft); Mar. 17 (12:30 p.m.) 570 cfs (4.16 ft); Mar. 23 (5:30 p.m.) 615 cfs (4.31 ft); Apr. 21 (5 to 6 a.m.) 907 cfs (5.22 ft); May 2 (3:30 to 4 a.m.) 930 cfs (5.34 ft); May 15 (2 a.m.) 765 cfs (4.89 ft); June 1 (1:15 a.m.) 1,390 cfs (6.46 ft).

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

South Fork Humboldt River near Lee, Nev.

Location.--Lat 40°34', long. 115°33', in SE¼ sec. 16, T. 31 N., R. 57 E., on left bank 400 ft downstream from Kleckner Creek and 2½ miles east of Lee.

Drainage area.--54 sq mi, approximately.

Records available.--February 1945 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,970 ft (from topographic map).

Average discharge.--6 years, 71.6 cfs.

Extremes.--Maximum discharge during year, 935 cfs May 27 (gage height, 3.81 ft); minimum, 4.4 cfs Sept. 20.
1945-51: Maximum discharge, that of May 27, 1951; minimum, 3.7 cfs Nov. 18, 1948.

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

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

0.7	3.4	1.5	78
.8	6.6	2.0	179
.9	11	2.5	338
1.0	17	3.0	547
1.2	36	3.6	831

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.3	8.4	15	b17	b17	b16	38	119	443	197	33	9.2
2	6.3	9.2	14	b18	*b18	b15	40	121	346	192	32	8.8
3	6.3	8.8	18	18	20	b16	*42	140	301	182	35	8.4
4	6.0	7.9	33	17	20	b16	49	165	273	165	35	7.9
5	6.0	7.5	32	17	22	17	54	174	263	146	31	7.5
6	6.0	7	27	b15	21	19	56	179	263	131	27	7.5
7	6.0	7	36	b14	23	18	67	177	*263	121	26	7.0
8	6.0	6.5	38	b15	26	19	75	169	260	115	*25	6.6
9	5.6	*6.2	36	b15	26	19	80	169	263	108	22	6.6
10	5.6	6	33	*b15	31	b18	95	179	280	100	22	6.3
11	5.6	7	31	14	35	b18	95	202	298	*95	21	6.0
12	6.0	8	29	b13	34	b19	104	202	305	88	20	6.3
13	*5.6	8	28	b13	32	*21	117	192	316	81	19	6.0
14	6.0	7.5	27	13	31	21	129	*184	365	75	18	5.6
15	8.4	7.5	26	13	29	22	131	172	414	70	17	5.3
16	7.0	7.5	25	12	27	23	140	174	*477	70	15	5.0
17	6.6	8	25	12	26	23	142	189	507	67	14	5.0
18	6.6	14	*24	12	27	b23	142	228	499	61	12	*5.0
19	6.6	26	23	b11	b25	b23	137	290	452	59	12	5.0
20	6.3	21	22	b12	b25	24	135	338	369	91	12	4.7
21	6.3	25	21	b13	25	27	133	373	323	90	12	5.3
22	6.3	24	21	15	24	28	131	406	287	68	12	5.3
23	6.6	19	21	17	24	29	131	482	270	59	11	5.3
24	7.0	17	20	19	b22	29	131	543	256	55	11	5.0
25	7.0	16	18	17	b21	33	129	662	244	47	10	5.0
26	6.6	15	18	17	b19	35	127	753	240	44	9.7	5.0
27	8.4	15	17	17	b18	36	127	777	234	43	8.8	5.0
28	7.9	14	18	17	b17	37	129	*802	234	44	8.4	5.3
29	7.9	14	18	b16	-	40	129	738	231	41	9.2	6.3
30	7.0	15	18	b16	-	40	123	610	214	40	9.2	5.6
31	8.8	-	b17	b16	-	37	-	552	-	36	9.2	-
Total	204.6	363.0	749	466	685	761	3,158	10,461	9,490	2,781	558.5	182.8
Mean	6.60	12.1	24.2	15.0	24.5	24.5	105	337	316	89.7	18.0	6.09
Ac-ft	406	720	1,490	924	1,360	1,510	6,260	20,750	18,820	5,520	1,110	363

Calendar year 1950: Max 636 Min 5.6 Mean 78.0 Ac-ft 56,460
Water year 1950-51: Max 802 Min 4.7 Mean 81.8 Ac-ft 59,230

Peak discharge (base, 450 cfs).-- May 27 (7 p.m.) 935 cfs (3.81 ft); June 17 (8 p.m.) 560 cfs (3.03 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 6 to Dec. 17; discharge estimated on basis of discharge measurement, recorded range in stage, and weather records.

Huntington Creek near Lee, Nev.

Location.--Lat 40°35', long. 115°43', in NE¼ sec. 12, T. 31 N., R. 55 E., on right bank 7 miles west of Lee.

Records available.--December 1948 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,290 ft (from river-profile map).

Extremes.--Maximum discharge during year, 382 cfs Feb. 5 (gage height, 3.78 ft); minimum, 2.4 cfs Sept. 11 (gage height, 1.22 ft).
1948-51: Maximum discharge, 652 cfs May 16, 1949 (gage height, 4.52 ft), from rating curve extended above 230 cfs; minimum, 1.0 cfs Aug. 10, 1949.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 8, May 28 to Aug. 30)

1.1	1.0	2.0	47
1.2	3.0	2.5	91
1.3	6.0	3.0	158
1.4	10	3.4	242
1.6	21	3.7	326

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	14	23	25	*25	44	59	147	223	13	4.5	3.0
2	4.8	13	23	26	32	.7	60	139	192	12	4.2	3.0
3	4.8	12	25	26	55	44	60	139	160	11	4.8	3.0
4	5.4	12	43	25	100	41	60	136	130	10	7.2	2.8
5	5.1	12	43	25	299	49	61	130	109	9.6	6.4	2.8
6	5.1	12	36	22	*263	49	63	138	91	9.2	5.7	2.8
7	4.8	12	48	.20	207	53	63	144	*74	9.2	5.1	3.0
8	5.4	12	52	22	130	61	65	*147	67	8.4	*4.5	2.8
9	5.1	*12	51	*22	113	68	67	136	60	8.0	3.9	2.6
10	5.1	12	47	21	101	65	68	120	47	7.6	3.6	2.8
11	5.4	13	44	20	96	66	72	115	46	*6.8	3.0	2.6
12	5.4	13	42	19	95	63	76	136	45	6.0	3.6	3.0
13	*5.4	14	41	19	84	*59	*76	153	44	5.7	3.9	3.6
14	5.7	13	39	19	75	62	76	140	41	6.0	3.6	3.6
15	6.8	12	38	19	72	61	81	128	36	6.0	3.6	3.9
16	6.0	12	36	18	69	59	86	109	36	6.0	4.2	3.9
17	5.7	12	36	18	66	47	92	98	37	6.8	3.9	3.6
18	5.7	22	*35	18	66	47	104	92	39	7.6	3.6	*3.3
19	5.7	41	36	17	63	47	128	89	39	7.2	3.9	3.3
20	6.0	31	34	18	55	48	120	96	37	8.8	4.2	3.3
21	6.0	34	31	19	63	49	110	152	35	13	4.2	3.3
22	6.0	32	31	22	61	49	103	190	33	12	4.8	3.6
23	8.0	28	30	25	58	47	100	169	32	11	4.5	3.6
24	8.4	25	28	27	55	46	95	165	29	10	4.5	3.6
25	8.8	24	26	25	54	46	85	178	26	8.8	4.8	3.6
26	8.4	23	26	24	53	47	89	198	24	7.6	4.5	3.6
27	10	23	25	24	48	47	102	258	21	6.8	4.2	3.6
28	10	22	26	24	44	46	102	311	19	6.4	4.2	3.9
29	10	22	26	23	-	46	122	311	17	6.0	3.9	5.4
30	9.6	23	26	23	-	52	147	296	15	5.4	3.6	4.8
31	14	-	25	23	-	57	-	260	-	5.1	3.9	-
Total	207.4	562	1,072	678	2,502	1,620	2,592	5,020	1,804	257.0	134.5	101.7
Mean	6.69	18.7	34.6	21.9	89.4	52.3	86.4	162	60.1	8.29	4.34	3.39
Ac-ft	411	1,110	2,130	1,340	4,960	3,210	5,140	9,960	3,580	510	267	202

Calendar year 1950: Max 223 Min 2.2 Mean 34.3 Ac-ft 24,850
Water year 1950-51: Max 311 Min 2.6 Mean 45.3 Ac-ft 32,820

Peak discharge (base, 200 cfs).--Feb. 5 (3 p.m.) 382 cfs (3.78 ft); May 29 (3 p.m.) 317 cfs (3.77 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 11, 12, 13-16, Dec. 21 to Feb. 4, Feb. 20.

South Fork Humboldt River above Dixie Creek, near Elko, Nev.

Location.--Lat 40°41', long. 115°49', in SW¼ sec. 5, T. 32 N., R. 55 E., 2 miles upstream from Dixie Creek and 10½ miles southwest of Elko.

Records available.--December 1948 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,140 ft (from river-profile map).

Extremes.--Maximum discharge during year, 1,240 cfs May 28 (gage height, 5.12 ft); minimum, 4.8 cfs Sept. 24 (gage height, 2.01 ft).
1948-51: Maximum discharge, that of May 28, 1951; minimum, 2.5 cfs Sept. 6, 1949.

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

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

2.0	4.5	2.6	42	4.0	458
2.1	7.7	2.8	70	4.5	765
2.2	12	3.0	108	5.1	1,200
2.4	24	3.5	244		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	26	48	b45	b48	72	124	288	*800	198	45	9.8
2	11	25	46	61	*b61	74	126	273	658	183	41	9.8
3	12	23	58	66	b68	70	122	269	529	172	40	9.4
4	12	23	106	66	b120	74	124	276	*448	156	54	8.6
5	12	22	104	64	b340	81	131	280	380	144	55	7.7
6	11	23	86	b42	b290	83	136	296	345	129	42	7.1
7	11	23	115	b42	b270	90	141	307	319	117	37	6.7
8	12	23	122	b48	212	104	148	*311	303	104	*35	6.4
9	13	22	117	*b61	172	117	154	300	296	90	31	6.1
10	*12	*20	104	b64	161	108	164	266	288	88	28	6.1
11	13	b19	96	b60	154	108	172	273	303	*88	26	5.5
12	12	b23	90	b58	146	*108	175	307	319	83	25	5.8
13	12	25	84	b56	131	110	*186	319	328	79	23	6.4
14	13	26	83	b57	117	108	198	300	353	74	22	6.4
15	10	25	79	b58	115	108	203	280	380	67	20	6.4
16	11	25	74	b58	106	108	215	251	428	58	19	6.1
17	14	26	72	b56	102	100	238	238	490	60	18	6.1
18	14	35	*70	b52	100	88	242	241	507	60	18	*5.8
19	14	84	70	b45	92	90	284	284	480	60	17	5.8
20	14	67	67	b35	83	92	266	336	433	64	16	5.5
21	15	81	b64	b38	98	92	255	458	376	115	18	5.1
22	15	79	b63	b40	92	92	241	524	336	94	19	5.8
23	16	62	b62	b42	86	90	231	570	300	77	17	6.4
24	18	55	b60	b40	79	90	222	620	280	75	15	6.1
25	18	51	b58	b40	77	92	209	711	269	68	15	6.1
26	18	48	b56	b41	74	94	218	885	244	61	14	6.4
27	19	47	b54	b43	61	96	238	1,060	218	60	13	7.1
28	21	47	b56	b41	66	96	231	1,160	225	60	12	7.4
29	20	47	60	b40	-	98	280	1,140	218	62	12	7.7
30	19	47	61	b41	-	108	296	1,060	209	58	10	8.6
31	25	-	b50	b43	-	117	-	951	-	51	9.8	-
Total	448	1,149	2,335	1,543	3,521	2,958	5,976	14,834	11,062	2,855	766.8	204.2
Mean	14.5	38.3	75.3	49.8	126	95.4	199	479	369	92.1	24.7	6.81
Ac-ft	889	2,280	4,630	3,060	6,980	5,870	11,850	29,420	21,940	5,660	1,520	405

Calendar year 1950: Max 772 Min 4.8 Mean 120 Ac-ft 86,730
Water year 1950-51: Max 1,160 Min 5.1 Mean 131 Ac-ft 94,500

Peak discharge (base, 400 cfs).--May 28 (2 p.m.) 1,240 cfs (5.12 ft); June 18 (11 p.m.) 547 cfs (4.14 ft).

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

South Fork Humboldt River near Elko, Nev.

Location.--Lat 40°43'15", long. 115°49'50", in NW¼ sec. 30, T. 33 N., R. 55 E., on right bank a quarter of a mile upstream from head of canyon, 1.5 miles downstream from highway bridge, 9 miles upstream from mouth, and 10 miles southwest of Elko.

Drainage area.--1,150 sq mi, approximately.

Records available.--August 1896 to September 1922, October 1923 to September 1932, October 1936 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,990 ft (from river-profile map). Prior to November 1913, staff gages at several sites about 1 mile upstream at various datums. November 1913 to February 1927, water-stage recorder near present site at different datum. March 1927 to September 1932, staff gage at site 1 mile upstream at different datum.

Average discharge.--43 years (1896-1903, 1904-9, 1910-18, 1923-26, 1927-32, 1936-51), 130 cfs.

Extremes.--Maximum discharge during year, 1,120 cfs May 29 (gage height, 4.50 ft); maximum gage height, 6.87 ft Feb. 4 (backwater from ice jam); minimum discharge, 3.2 cfs Sept. 11, 12, 20-22 (gage height, 0.95 ft).
1896-1922, 1923-32, 1936-51: Maximum discharge 2,400 cfs Jan. 26, 1914, from rating curve extended above 1,200 cfs; practically no flow during some periods in nearly every year since 1915.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Station is below all diversions except those of Hunter & Banks ranch, 3 miles downstream.

Revisions (water years).--W 1090: 1932.

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

0.9	2.3	1.4	28	3.5	623
1.0	3.8	1.6	52	4.0	851
1.1	7.8	2.0	124	4.5	1,100
1.2	13	2.5	256		
1.3	19	3.0	423		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.3	24	46	b45	b52	74	140	292	856	172	37	7.0
2	8.8	23	44	b70	b63	78	142	280	706	164	32	7.0
3	8.8	21	72	74	*b71	74	140	274	573	157	30	6.2
4	9.4	19	236	74	b150	80	142	280	*453	150	39	5.8
5	8.8	19	142	67	400	86	150	283	366	140	47	5.4
6	8.3	19	107	44	340	94	154	292	318	129	*36	4.6
7	8.3	20	231	b46	280	105	162	305	283	118	30	3.8
8	9.4	19	191	*b49	250	110	172	312	268	109	28	3.6
9	9.4	19	175	b64	200	120	180	299	256	99	25	3.6
10	8.8	*18	142	b66	180	115	186	268	247	*90	23	3.5
11	8.8	18	126	b64	160	110	*194	253	250	81	20	3.4
12	*8.8	b21	114	b62	150	*105	199	280	268	77	18	3.4
13	8.8	b23	103	b58	145	114	205	302	277	70	17	3.5
14	8.8	24	97	b60	135	114	213	292	289	62	16	3.6
15	8.3	24	92	b60	125	118	224	*274	318	56	14	*4.2
16	8.8	24	*84	b60	120	118	230	247	356	48	13	3.8
17	10	25	81	b58	110	107	244	230	405	48	12	3.6
18	10	34	79	b56	105	95	262	221	450	47	12	3.6
19	11	90	77	b50	100	97	286	236	438	46	12	3.5
20	11	72	76	b40	95	101	283	277	405	48	12	3.2
21	11	94	72	b41	100	105	271	359	362	88	24	3.2
22	11	88	69	b42	96	105	256	450	315	82	18	3.4
23	12	69	68	b44	92	99	244	500	283	86	14	3.5
24	14	58	b64	b43	86	103	236	548	259	61	12	3.6
25	14	52	b62	b42	80	107	221	615	239	56	12	3.5
26	14	48	b60	b43	78	109	221	728	224	52	11	3.4
27	17	47	b58	b45	66	111	239	885	205	48	10	3.6
28	17	46	b60	b43	70	109	236	1,030	188	49	8.8	3.6
29	16	44	61	b42	-	116	268	1,100	186	51	8.8	4.2
30	16	44	62	b42	-	126	292	1,090	180	47	7.8	4.6
31	21	-	b50	b45	-	136	-	985	-	43	7.4	-
Total	345.6	1,146	2,999	1,639	3,899	3,241	6,392	13,787	10,223	2,554	606.8	122.9
Mean	11.1	38.2	96.7	52.9	139	105	213	445	341	82.4	19.6	4.10
Ac-ft	685	2,270	5,950	3,250	7,730	6,430	12,680	27,350	20,280	5,070	1,200	244

Calendar year 1950: Max 802 Min 23 Mean 120 Ac-ft 87,150
Water year 1950-51: Max 1,100 Min 3.2 Mean 129 Ac-ft 93,140

Peak discharge (base, 410 cfs).--Dec. 7 (6 a.m.) 438 cfs (3.04 ft); Feb. 4 or 5 (time and discharge unknown); May 29 (11 p.m.) 1,120 cfs (4.50 ft); June 18 (7 p.m.) 469 cfs (3.12 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Feb. 5 to Mar. 11; discharge estimated on basis of weather records and records for station near Lee.

Humboldt River near Carlin, Nev.

Location.--Lat 40°43', long. 116°00', in sec. 28, T. 33 N., R. 53 E., on right bank 4½ miles southwest of Moleen, 5 miles upstream from Susie Creek, 5½ miles east of Carlin, and 15 miles southwest of Elko.

Drainage area.--4,310 sq mi, approximately.

Records available.--October 1943 to September 1951.

Gage.--Water-stage recorder.

Average discharge.--8 years, 368 cfs.

Extremes.--Maximum discharge during year, 2,000 cfs June 1, 2 (gage height, 5.57 ft); minimum, 11 cfs Sept. 25 (gage height, 0.76 ft).
1943-51: Maximum discharge, 3,640 cfs June 10, 1945 (gage height, 7.78 ft); minimum, 3.6 cfs Sept. 7, 1948.
High water of February 1943 reached a stage of 9.8 ft (discharge, 5,900 cfs, by slope-area method).

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

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

0.7	8.0	1.6	110	4.0	1,000
.8	13	2.0	198	5.0	1,600
1.0	28	2.5	351	5.6	2,020
1.3	62	3.0	545		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	34	131	178	291	391	625	1,090	1,960	348	69	18
2	19	33	127	178	270	387	643	1,110	1,990	337	62	17
3	19	31	135	173	245	365	638	1,130	1,940	351	61	16
4	20	23	288	198	398	348	648	1,140	1,820	317	62	16
5	19	29	314	217	1,250	358	684	1,120	1,700	295	66	16
6	18	39	257	180	1,310	406	710	1,080	1,540	270	*65	15
7	19	41	355	b140	1,130	417	742	*1,040	1,380	242	59	14
8	19	45	391	b150	1,270	417	760	1,000	1,230	217	54	14
9	19	45	406	b165	1,470	425	769	930	1,080	201	49	14
10	19	*44	376	b160	1,700	429	774	860	955	193	46	14
11	19	42	369	b162	1,520	469	787	823	850	164	42	14
12	19	38	355	*b163	1,350	509	800	828	805	148	39	14
13	*19	44	337	162	1,180	481	823	850	764	133	37	13
14	19	50	320	152	1,130	461	841	860	715	118	34	a13
15	19	47	301	152	1,100	465	855	865	715	105	32	a13
16	20	48	285	155	980	521	875	895	*724	*94	31	a13
17	19	52	270	157	832	581	900	930	760	84	29	a13
18	20	58	260	164	756	605	955	915	792	76	26	a13
19	21	94	*254	123	685	634	980	890	782	72	26	*12
20	22	125	251	b120	617	593	1,000	880	760	76	24	12
21	22	129	242	b142	613	533	1,020	915	728	86	23	12
22	22	159	234	b175	577	*529	1,040	975	684	92	26	12
23	23	152	225	220	549	557	1,060	1,000	634	90	26	12
24	23	152	220	231	525	613	1,040	1,030	601	79	25	12
25	24	152	212	263	509	656	1,020	1,120	561	75	24	12
26	26	144	201	285	497	630	1,000	1,240	521	72	23	12
27	28	140	190	362	453	597	1,000	1,400	489	72	22	12
28	28	135	186	387	417	601	1,010	1,560	429	70	21	12
29	28	131	198	311	-	625	1,070	1,760	402	75	20	12
30	28	129	214	248	-	638	1,090	1,870	365	79	19	12
31	32	-	212	298	-	621	-	*1,890	-	75	19	-
Total	671	2,385	8,116	6,171	23,623	15,862	26,159	33,996	28,676	4,706	1,161	404
Mean	21.6	79.5	262	199	844	512	872	1,097	956	152	37.5	13.5
Ac-ft	1,330	4,730	16,100	12,240	46,860	31,460	51,890	67,430	56,880	9,330	2,300	801

Calendar year 1950: Max 1,710 Min 14 Mean 331 Ac-ft 239,700
Water year 1950-51: Max 1,990 Min 12 Mean 416 Ac-ft 301,400

Peak discharge (base, 900 cfs).--Feb. 10 (4 to 6 a.m.) 1,730 cfs (5.19 ft); May 3 (6 to 10 a.m.) 1,150 cfs (4.26 ft); June 1 (10 p.m.) to June 2 (4 a.m.) 2,000 cfs (5.57 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Humboldt River at Palisade, Nev.

Location.--Lat 40°38', long. 116°12', in sec. 36, T. 32 N., R. 51 E., on right bank a quarter of a mile downstream from Southern Pacific Railroad bridge, half a mile downstream from Palisade, and three-quarters of a mile upstream from Pine Creek.

Drainage area.--5,010 sq mi, approximately.

Records available.--November 1902 to October 1906, July 1911 to September 1951.

Gage.--Water-stage recorder. Prior to Apr. 1, 1939, staff or chain gages (water-stage recorder Apr. 22 to June 3, 1935) at several sites within half a mile of present site at various datums.

Average discharge.--43 years (1903-6, 1911-51), 363 cfs.

Extremes.--Maximum discharge during year, 2,080 cfs Feb. 6 (gage height, 5.83 ft); minimum, 24 cfs Nov. 5.
1902-6, 1911-51: Maximum discharge, 6,250 cfs Feb. 26, 1943 (gage height, 9.92 ft); minimum, 2 cfs Aug. 25-28, 1931.

Remarks.--Records excellent. Diversion above station for irrigation of about 150,000 acres of hay and pasture land.

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

1.8	23	3.0	293
2.0	45	4.0	739
2.3	95	5.0	1,400
2.6	167	5.7	1,960

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	49	144	189	290	466	713	1,170	1,880	361	80	34
2	33	40	144	178	258	453	729	1,180	1,940	338	74	33
3	32	44	195	187	262	436	723	1,190	1,940	350	71	32
4	37	37	432	210	536	423	729	1,190	1,850	330	69	31
5	35	29	414	228	1,760	419	771	1,190	1,730	300	71	31
6	35	38	330	210	1,750	457	799	1,170	1,580	276	71	29
7	35	*44	444	146	1,370	471	833	1,120	1,410	251	69	29
8	35	45	497	164	1,510	475	862	1,090	1,270	228	66	29
9	37	49	506	175	1,580	497	880	1,030	1,130	213	62	29
10	37	48	449	164	1,900	484	886	942	975	204	59	29
11	37	45	432	162	1,900	488	904	880	874	187	56	28
12	37	43	414	163	1,660	547	916	868	816	170	53	28
13	37	46	369	164	1,390	538	936	862	766	157	51	28
14	37	58	373	164	1,280	528	956	886	708	144	48	28
15	39	55	353	170	1,250	533	956	880	703	129	48	28
16	39	76	330	181	1,140	580	942	898	697	119	45	28
17	39	76	326	181	982	623	962	930	718	*108	44	28
18	38	76	319	180	904	647	1,030	930	755	97	43	28
19	40	80	*297	149	739	667	1,050	904	755	91	41	28
20	40	115	290	140	708	667	1,060	904	739	89	41	27
21	40	178	279	160	713	627	1,050	930	713	95	41	26
22	41	181	268	195	692	*608	1,080	975	682	97	40	26
23	43	176	262	232	637	613	1,100	994	672	97	41	27
24	44	173	245	276	613	652	1,090	1,020	627	91	*40	27
25	44	175	235	304	584	715	1,070	1,080	584	86	39	27
26	41	175	222	323	575	*718	1,080	1,170	542	82	39	27
27	48	167	210	381	520	677	1,070	1,310	510	78	38	27
28	46	146	207	410	488	672	1,080	1,470	457	78	37	27
29	45	154	213	369	-	687	1,140	1,650	423	80	35	*27
30	45	154	225	258	-	729	*1,180	1,770	385	84	34	27
31	52	-	235	*290	-	718	-	*1,850	-	84	34	-
Total	1,220	2,772	9,659	6,703	27,991	17,813	28,577	34,433	28,831	5,094	1,580	853
Mean	39.4	92.4	312	216	1,000	575	953	1,111	961	164	51.0	28.4
Ac-ft	2,420	5,500	19,160	13,300	55,520	35,330	56,680	68,300	57,190	10,100	3,130	1,690

Calendar year 1950: Max 1,750 Min 25 Mean 381 Ac-ft 275,900
Water year 1950-51: Max 1,940 Min 26 Mean 453 Ac-ft 328,300

Peak discharge (base, 560 cfs).--Feb. 6 (2 a.m.) 2,080 cfs (5.83 ft); May 4 (6 to 8 a.m.) 1,210 cfs (4.74 ft); June 2 (1 to 2:30 p.m.) 1,960 cfs (5.70 ft).
* Discharge measurement made on this day.
Note.--Discharge computed from once-daily staff-gage readings Nov. 11, 12, 15-22, 24-30, Dec. 1-9, 13-19.

Pine Creek near Palisade, Nev.

Location.--Lat 40°35'30", long. 116°10'30", in SW¼ sec. 1, T. 31 N., R. 51 E., on left bank 1 mile upstream from mouth and 1½ miles southeast of Palisade.

Records available.--November 1902 to December 1904 (gage heights only), January 1912 to September 1914, January 1946 to September 1951.

Gage.--Water-stage recorder. Prior to Jan. 1, 1946, staff gages at site about ½ mile downstream at different datums. Jan. 1 to July 18, 1946, water-stage recorder at site 1,000 ft downstream at different datum.

Average discharge.--7 years (1912-14, 1946-51), 14.5 cfs.

Extremes.--Maximum discharge during year 358 cfs Feb. 5 (gage height, 3.62 ft); no flow on several days during year.
1912-14, 1946-51: Maximum discharge, 785 cfs Jan. 25, 26, 1914 (gage height about 4 ft, site and datum then in use, from statement by observer, water over top of gage); no flow on several days during 1951.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation, none below.

Revisions (water years).--W 1120: 1946 (calendar year mean).

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 11)

0.6	0	1.2	7.0	2.0	70
.7	0.4	1.4	15	2.5	141
.8	1.1	1.6	28	3.0	229
1.0	3.0	1.8	47	3.5	332

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	10	15	b16	b20	24	29	20	2	0.1	0.8	0
2	.6	9.7	15	16	21	25	28	22	2	.1	.5	0
3	.6	10	25	17	26	21	24	18	1.9	0	.6	0
4	.5	10	62	20	112	25	24	10	1.8	.1	.8	.2
5	.5	10	44	*19	315	29	24	5.8	1.7	.3	.8	.2
6	.6	10	35	b18	*190	32	22	5.0	1.9	1.5	.7	.2
7	2.0	*10	66	b17	135	36	22	3.4	1.8	.9	.7	.2
8	3.4	10	65	b18	109	49	20	2.8	1.5	.5	2.4	.2
9	3.3	9.7	70	19	78	50	16	2.8	1	.5	3.2	.3
10	3.3	b10	59	b18	73	30	20	2.8	.8	.5	2.8	.2
11	3.4	b10	45	17	68	25	17	3.3	.8	.5	2.7	.2
12	3.4	10	32	b17	58	22	15	3.9	1.5	.5	2.6	.2
13	3.6	11	27	b17	47	26	13	4.2	5	.5	2.1	1.2
14	3.6	11	24	17	40	27	11	3.9	4	.5	1.5	2.4
15	4.0	11	22	21	39	29	9.3	3.2	3.5	.5	1.5	2.4
16	4.2	11	20	20	35	28	8.9	3.4	*3.2	.5	.6	2.6
17	4.4	12	19	19	32	25	5.8	3.3	3.3	*.5	0	2.7
18	4.4	17	19	19	32	23	4.4	2.9	3.0	.5	0	2.9
19	4.5	35	*19	15	26	24	4.4	2.9	3.0	.6	0	3.2
20	5.5	42	17	b14	b25	25	4.2	3.0	3.2	1.0	0	1.6
21	6.0	40	17	b17	32	25	3.2	3.2	3.2	.8	2.1	0
22	6.8	29	17	22	32	*25	2.2	2.9	3.0	.8	1.1	0
23	6.8	19	17	30	32	24	2.2	2.8	1.5	.8	.8	0
24	7.0	16	17	41	30	24	2.2	2.3	.1	.6	*.8	0
25	8.1	15	17	55	29	24	2.3	1.6	.1	.6	.8	0
26	7.4	15	17	58	26	24	2.4	1.7	.1	.6	.8	0
27	8.9	15	17	*68	24	24	3.0	1.8	.1	.8	.9	.1
28	8.1	15	17	54	24	23	4.2	2.0	.1	.8	.4	.1
29	7.8	14	20	b26	-.	24	16	1.9	.1	.9	0	*0
30	7.8	15	19	b20	-	26	*19	1.9	.1	.9	0	0
31	10	-	b17	b18	-	29	-	*2.0	-	.9	0	-
Total	141.1	462.4	892	763	1,710	847	378.7	150.7	55.3	18.6	32.0	21.1
Mean	4.55	15.4	28.8	24.6	61.1	27.3	12.6	4.86	1.84	0.60	1.03	0.70
Ac-ft	280	917	1,770	1,510	3,390	1,680	751	299	110	37	63	42

Calendar year 1950: Max 70 Min 0.1 Mean 11.2 Ac-ft 8,140
Water year 1950-51: Max 315 Min 0 Mean 15.0 Ac-ft 10,850

Peak discharge (base, 50 cfs).--Dec. 7 (1 a.m.) 88 cfs (2.26 ft); Jan. 27 (3:30 p.m.) 79 cfs (2.07 ft); Feb. 5 (2 a.m.) 358 cfs (3.62 ft); Mar. 8 (12 p.m.) 71 cfs (2.01 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record June 1-15; discharge estimated on basis of recorded range in stage and weather records.

Humboldt River near Argenta, Nev.

Location.--Lat 40°40', long. 116°40', in NW¼ sec. 2, T. 32 N., R. 47 E., on left bank 2½ miles east of Argenta and 15½ miles east of Battle Mountain.

Records available.--February 1946 to September 1951.

Gage.--Water-stage recorder.

Average discharge.--5 years, 273 cfs.

Extremes.--Maximum discharge during year, 1,630 cfs Feb. 12 (gage height, 8.16 ft); minimum, 1.4 cfs Sept. 25, 30.
1946-51: Maximum discharge, 1,780 cfs Apr. 27, 28, 1946 (gage height, 8.58 ft); minimum, 0.5 cfs Oct. 11, 1948.

Remarks.--Records good. Many diversions above station for irrigation.

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

1.6	1.4	2.5	50	6.0	861
1.8	6.6	3.0	110	7.0	1,200
2.0	16	4.0	287	8.0	1,570
2.2	26	5.0	548	8.2	1,640

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	39	162	235	258	562	734	993	1,350	389	60	11
2	13	42	162	244	296	539	737	1,000	1,410	364	51	9.8
3	13	39	167	214	302	516	747	1,020	1,460	330	57	8.8
4	13	37	186	218	327	504	744	1,050	1,520	316	51	7.5
5	14	37	364	231	525	493	747	1,070	1,540	305	49	6.3
6	13	33	391	242	1,030	493	773	1,070	1,520	274	49	5.6
7	14	30	344	205	1,310	513	792	1,060	1,470	252	51	5.3
8	13	34	412	174	*1,370	522	815	1,030	1,400	229	50	5.0
9	14	37	454	184	1,410	539	831	1,000	1,250	209	48	5.0
10	13	39	513	200	1,440	548	848	962	1,110	193	46	4.7
11	14	42	484	211	1,500	519	861	901	972	174	44	3.7
12	14	42	454	204	1,610	522	881	844	864	160	43	3.0
13	14	45	431	211	1,560	562	894	802	789	147	42	2.8
14	15	*46	407	205	1,470	560	911	782	*725	136	*38	2.6
15	16	47	391	*223	1,370	565	925	773	677	119	31	2.4
16	16	56	374	196	1,330	562	925	*760	665	106	23	2.2
17	16	56	354	198	1,240	589	884	760	649	103	25	2.0
18	18	61	337	200	1,110	625	891	773	649	93	24	1.8
19	18	83	320	198	1,010	643	*925	773	665	91	23	1.8
20	*19	116	*307	130	897	668	948	744	662	*87	22	1.6
21	20	154	298	110	818	*671	938	744	646	88	21	1.6
22	20	191	291	166	805	646	911	753	625	83	22	1.6
23	22	188	283	231	766	631	901	785	595	84	22	1.6
24	24	188	272	260	721	637	887	798	583	88	22	*1.6
25	20	181	264	300	687	668	891	812	554	87	22	1.6
26	18	181	258	320	662	715	887	854	528	81	20	1.6
27	20	176	250	349	634	721	894	911	496	75	20	1.6
28	21	171	240	402	589	687	901	982	470	67	16	1.6
29	27	167	235	418	-	690	931	1,070	431	63	15	1.6
30	32	164	240	268	-	712	969	1,170	399	61	14	1.6
31	35	-	248	245	-	741	-	1,270	-	60	13	-
Total	551	2,722	9,893	7,192	27,047	18,563	25,923	28,316	26,674	4,914	1,040	108.9
Mean	17.8	90.7	319	232	966	599	864	913	889	159	33.5	3.63
Ac-ft	1,090	5,400	19,620	14,270	53,650	36,820	51,420	56,160	52,910	9,750	2,060	216

Calendar year 1950: Max 1,320 Min 2.7 Mean 334 Ac-ft 242,000
Water year 1950-51: Max 1,610 Min 1.6 Mean 419 Ac-ft 303,400

Peak discharge (base, 400 cfs).--Dec. 10 (3 p.m.) 528 cfs (4.93 ft); Jan. 29 (9 a.m.) 448 cfs (4.65 ft); Jan. 31 (11:45 a.m.) 610 cfs (5.21 ft) (release from ice jam); Feb. 12 (2 p.m.) 1,630 cfs (8.16 ft); May 6 (6:30 a.m.) 1,080 cfs (6.63 ft); June 5 (11 a.m.) 1,550 cfs (7.95 ft).
* Discharge measurement made on this day.

Rock Creek near Battle Mountain, Nev.

Location.--Lat 40°51', long. 116°36', in NE¼ sec. 17, T. 34 N., R. 48 E., on left bank at mouth of canyon, 22 miles northeast of Battle Mountain.

Records available.--March 1918 to September 1925 (fragmentary October 1923 to September 1925), March 1927 to May 1929 (fragmentary), January 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,600 ft. Prior to Jan. 3, 1946, at different datum.

Average discharge.--10 years (1918-23, 1946-51), 29.3 cfs.

Extremes.--Maximum discharge during year, 1,200 cfs Feb. 4 (gage height, 4.08 ft); no flow Aug. 12 to Sept. 30.

1918-25, 1927-29, 1946-51: Maximum discharge, 2,240 cfs Feb. 11, 1921; no flow at times during July, August, September, and October nearly every year.

Revisions.--The maximum discharge for water year 1950 has been revised to 363 cfs Mar. 31, 1950 (gage height, 2.74 ft), superseding that published in Water-Supply Paper 1180.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Several irrigation diversions in valleys upstream. Station is above all diversions in Boulder Flat and is below all tributaries. Flow slightly affected by small reservoir in Squaw Valley, 30 miles upstream.

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

0.2	0	0.9	9.8	1.8	94
.3	.1	1.0	14	2.0	132
.4	.4	1.1	18	2.2	178
.5	.9	1.2	24	2.5	269
.6	2.0	1.3	32	3.0	484
.7	3.9	1.4	41	3.5	774
.8	6.5	1.6	64	3.7	911

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	1.4	3.0	4.4	11	32	108	107	24	1.1	0.2	
2	.4	1.2	b2.8	8.5	9.8	34	105	101	24	.8	.1	
3	.4	1.1	4.7	7.2	10	24	108	75	22	.8	.1	
4	.4	1.1	135	8.2	526	29	112	63	18	1.4	.1	
5	.4	1.1	67	7.8	868	36	118	58	16	1.9	.2	
6	.4	1.1	41	5.5	404	34	118	59	18	1.4	.2	
7	.5	1.0	32	3.5	269	34	126	60	16	.8	.1	
8	.6	1.0	52	3.7	403	44	124	64	14	.6	.3	
9	.5	.8	51	5.2	252	75	122	68	13	.4	.3	
10	.6	.8	37	4.7	338	65	120	62	12	.4	.1	
11	.6	.7	26	4.9	353	54	122	46	12	.3	.1	
12	.6	1.0	22	4.9	342	63	116	52	12	.3	0	
13	.6	1.2	19	3.1	242	88	114	53	14	.3	0	
14	.6	*1.3	18	4.7	186	183	114	53	*15	.2	*0	
15	.7	1.2	16	4.4	*164	208	118	51	15	.1	0	
16	.8	.9	16	5.2	145	202	114	*46	13	.1	0	
17	.8	1.3	14	*6.2	130	145	112	42	9.5	.2	0	
18	.7	2.2	12	5.7	126	103	125	43	8.5	.1	0	
19	.7	6.8	12	b4.5	107	101	*130	44	6.0	.1	0	
20	*.7	9.1	*11	b4.2	103	108	120	43	4.7	*.4	0	
21	.7	8.8	9.5	9.5	101	*128	110	42	4.4	.6	0	
22	.8	13	8.8	13	72	141	101	40	3.5	.6	0	
23	.8	6.2	b8.4	13	67	130	98	39	2.8	.4	0	
24	.8	4.2	b8	17	64	114	92	38	2.6	.3	0	
25	.9	3.3	b7.8	24	56	120	86	37	2.2	.2	0	
26	.8	2.8	b7.8	25	52	130	99	36	2.0	.1	0	
27	1.2	2.6	b8.4	30	46	126	86	35	1.7	.1	0	
28	1.3	2.6	b9	48	34	116	81	34	1.4	.2	0	
29	1.0	2.4	b10	19	-	108	143	29	1.3	.2	0	
30	.8	2.6	b8	17	-	116	136	27	1.1	.2	0	
31	1.7	-	b6	16	-	116	-	24	-	.2	0	
Total	22.2	84.8	683.2	338.0	5,480.8	3,007	3,378	1,571	309.7	14.8	1.8	0
Mean	0.72	2.83	21.9	10.9	173	96.4	112	50.7	10.3	0.48	0.06	0
Ac-ft	44	168	1,350	670	10,870	5,960	6,700	3,120	614	29	3.6	0

Calendar year 1950: Max 228 Min 0 Mean 27.9 Ac-ft 20,210
Water year 1950-51: Max 868 Min 0 Mean 40.8 Ac-ft 29,530

Peak discharge (base, 75 cfs).--Dec. 4 (12 m.) 322 cfs (2.64 ft); Feb. 4 (12 p.m.) 1,200 cfs (4.08 ft); Feb. 8 (11 a.m.) 455 cfs (2.90 ft); Mar. 9 (10:30 p.m.) 108 cfs (1.85 ft); Mar. 14 (9 p.m.) 273 cfs (2.48 ft); Apr. 29 (8 p.m.) 173 cfs (2.18 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record May 17-25, Aug. 15 to Sept. 30; discharge estimated on basis of engineers' notes.

Humboldt River at Battle Mountain, Nev.

Location.--Lat 40°39', long. 116°56', in SE¼ sec. 8, T. 32 N., R. 45 E., on left bank 1 mile northeast of Battle Mountain. Reese River, when flowing, enters Humboldt River several miles below station.

Records available.--July 1896 to December 1897 (gage heights only), March 1921 to April 1924, January 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,600 ft (from topographic map). Prior to Mar. 1, 1921, staff gage at approximately same site at different datum. Mar. 1, 1921, to Apr. 19, 1924, staff gage at site 900 ft downstream at different datum.

Average discharge.--6 years (1921-22, 1946-51), 293 cfs.

Extremes.--Maximum discharge during year, 1,370 cfs Feb. 15 (gage height, 8.16 ft); minimum, 1.2 cfs Sept. 23, 25.
1921-24, 1946-51: Maximum discharge observed, 1,560 cfs June 19, 20, 1921, May 11-13, 1922; no flow Sept. 8 to Oct. 22, 1948, Sept. 21-26, 1949.

Remarks.--Records good. Records do not include flow in secondary channels or ditches, much of which is used for irrigation. Many diversions above station for irrigation.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 27 to Mar. 10, July 7-31)

1.1	0.8	1.8	22	5.0	523
1.2	1.7	2.0	36	6.0	771
1.3	3.1	2.5	82	7.0	1,030
1.4	5.3	3.0	145	8.0	1,290
1.6	12	4.0	309	8.3	1,370

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.1	35	145	230	203	642	844	992	1,040	374	63	14
2	8.8	38	146	224	227	606	841	1,020	1,080	353	63	12
3	9.1	38	152	206	261	570	844	1,040	1,130	327	61	11
4	10	37	156	208	321	551	849	1,050	1,170	303	57	9.8
5	10	35	238	216	447	551	841	1,060	1,190	295	53	8.4
6	9.8	35	362	229	609	544	857	1,060	1,230	283	54	7.5
7	10	33	329	227	855	565	883	1,060	1,250	256	53	6.7
8	11	32	347	184	1,030	580	904	1,050	1,260	232	53	5.9
9	11	34	436	182	1,160	587	924	*1,030	1,240	211	52	5.1
10	12	36	458	197	1,220	612	943	1,010	1,210	197	50	4.6
11	11	40	456	200	1,270	594	956	969	1,120	180	48	4.2
12	11	42	427	202	1,290	582	974	909	974	169	46	4.0
13	12	42	404	194	1,330	604	989	865	833	155	46	4.0
14	12	*44	387	209	1,360	629	995	828	*745	144	*44	3.3
15	12	44	374	*213	1,370	634	997	820	669	133	37	3.0
16	13	46	353	211	1,360	646	1,000	807	632	120	35	2.7
17	13	51	339	203	1,310	686	989	*800	612	114	32	2.3
18	13	53	323	208	1,270	722	966	805	602	109	30	2.1
19	15	69	311	214	1,200	742	961	813	609	102	23	1.7
20	16	83	*297	141	1,100	753	979	797	619	*99	23	1.5
21	17	115	289	149	992	*768	987	781	616	96	21	1.4
22	18	146	281	156	935	753	940	784	599	95	21	1.3
23	18	156	270	227	914	727	909	789	575	89	23	1.2
24	*20	159	263	276	872	732	891	807	551	90	21	*1.3
25	22	159	254	299	820	750	891	802	530	93	24	1.3
26	19	156	249	319	774	789	901	810	507	88	22	1.3
27	16	158	240	345	742	815	906	815	476	81	21	1.3
28	19	152	230	378	704	805	914	859	443	78	20	1.3
29	20	151	224	414	-	789	932	896	425	71	17	1.3
30	28	146	224	319	-	805	956	940	383	68	15	1.3
31	32	-	230	196	-	831	-	1,000	-	66	15	-
Total	456.8	2,365	9,194	7,176	25,946	20,964	27,763	28,068	24,320	5,071	1,163	126.8
Mean	14.7	78.8	297	231	927	676	925	905	811	164	37.6	4.23
Ac-ft	906	4,690	18,240	14,230	51,460	41,580	55,070	55,670	48,240	10,060	2,310	252

Calendar year 1950: Max 1,140 Min 1.6 Mean 302 Ac-ft 219,000
Water year 1950-51: Max 1,370 Min 1.2 Mean 418 Ac-ft 302,700

* Discharge measurement made on this day.

Humboldt River near Valmy, Nev.

Location.--Lat 40°48', long. 117°04', in NE¼NW¼ sec. 30, T. 34 N., R. 44 E., on left bank 3½ miles east of Valmy and 13 miles northwest of Battle Mountain.

Records available.--March 1950 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,440 ft (from topographic map).

Extremes.--1950: Maximum discharge during period March to September, 910 cfs June 15, 16 (gage height, 6.57 ft); minimum, 1.0 cfs Sept. 28.
1950-51: Maximum discharge during water year, 1,050 cfs Feb. 18, 19, June 11, 12, (gage height, 7.12 ft); no flow Sept. 26-30.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Diversions above station for irrigation.

Rating table, Mar. 1, 1950, to Sept. 30, 1951 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 1 to Aug. 6, Sept. 16-26, Oct. 2-24, 1950)

1.2	0	2.1	39	4.0	449
1.3	.1	2.3	76	5.0	643
1.5	1.7	2.5	140	6.0	837
1.7	7.6	2.7	193	7.1	1,050
1.9	19	3.0	256		

Discharge, in cubic feet per second, 1950-51

1950

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							482	603	669	686	137	22
2							485	609	686	674	127	21
3							515	607	701	645	124	20
4							548	603	719	597	118	19
5						a380	579	601	736	557	111	19
6							597	603	751	527	105	19
7							595	618	769	503	95	19
8							591	634	790	482	89	18
9						*389	595	641	811	465	82	18
10						380	599	657	821	463	79	17
11						374	613	663	835	465	74	16
12						362	624	651	*856	449	69	16
13						349	630	643	879	438	67	15
14						333	639	624	897	430	72	13
15						322	*643	601	908	415	69	12
16						310	643	521	910	389	65	11
17						308	647	467	908	372	63	10
18						303	653	449	908	359	61	9.2
19						299	655	445	897	337	56	8.1
20						304	657	*451	875	310	51	7.0
21						310	651	477	835	279	46	6.0
22						333	657	492	808	258	44	5.4
23						347	659	507	767	238	40	3.9
24						359	651	505	738	*219	38	2.8
25						370	643	515	729	206	36	2.5
26						374	645	533	729	195	34	2.2
27						411	635	554	727	183	31	*2.6
28						453	634	597	717	170	30	1.4
29						471	624	626	705	160	28	1.5
30						484	611	639	695	154	25	1.3
31						486	-	651	-	146	23	
Total						11,471	18,403	17,787	23,776	11,771	2,089	338.9
Mean						370	613	574	793	380	67.4	11.3
Ac-ft						22,750	36,500	35,280	47,160	23,350	4,140	672

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

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

Discharge, in cubic feet per second, of Humboldt River near Valmy, Nev., 1950-51--Continued

1950-51

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	30	165	230	204	717	734	802	800	440	56	14
2	3.0	34	160	232	195	680	746	815	827	415	54	13
3	4.2	36	162	232	217	643	751	833	856	391	52	12
4	4.7	36	168	228	267	618	753	850	883	362	51	12
5	5.4	34	173	221	327	603	755	858	914	339	50	11
6	6.0	33	242	228	430	593	757	862	939	324	46	9.8
7	7.3	32	324	220	515	587	759	869	959	310	45	8.1
8	7.6	32	318	225	618	591	765	875	985	283	46	7.3
9	7.6	31	337	225	690	595	777	877	1,010	264	45	7.3
10	8.1	34	405	220	744	597	788	869	1,030	240	44	7.3
11	7.6	36	426	211	798	605	796	860	1,040	223	42	6.6
12	7.6	39	424	236	841	603	802	846	1,040	206	40	5.7
13	7.6	41	411	223	869	597	809	825	999	195	38	5.4
14	7.6	42	391	208	895	605	815	798	929	178	37	5.0
15	9.2	43	378	220	*943	622	821	767	827	168	37	4.4
16	9.8	44	366	*226	987	628	825	748	746	157	31	4.1
17	9.8	*44	349	211	1,020	632	829	*736	690	140	29	3.6
18	10	48	333	206	1,050	647	835	727	*653	127	27	2.8
19	10	54	322	215	*1,050	669	833	723	632	121	25	2.0
20	11	102	*310	206	1,030	684	825	725	618	114	25	1.5
21	11	134	297	193	999	695	813	719	585	108	*23	1.1
22	12	151	291	170	953	703	804	711	583	102	22	.9
23	13	170	285	173	906	*701	802	707	573	98	22	.7
24	*13	176	277	211	866	690	*788	707	557	89	21	.3
25	14	178	269	260	841	688	753	711	538	*89	20	**.1
26	16	178	262	279	809	690	750	711	521	89	19	0
27	19	176	256	295	775	703	767	715	501	86	19	0
28	16	176	244	316	744	717	788	717	477	76	18	0
29	14	170	242	341	-	725	806	730	451	72	18	0
30	19	168	236	329	-	723	804	751	436	65	16	0
31	23	-	236	238	-	727	-	775	-	61	15	-
Total	315.5	2,502	9,059	7,228	20,583	20,278	23,650	24,219	22,599	5,932	1,033	146.0
Mean	10.2	83.4	292	233	735	654	788	781	753	191	33.3	4.87
Ac-ft	626	4,960	17,970	14,340	40,830	40,220	46,910	48,040	44,820	11,770	2,050	290

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 1,050 Min 0 Mean 377 Ac-ft 272,800

* Discharge measurement made on this day.
** Field estimate made on this day.
Note.--No gage-height record Oct. 28 to Nov. 16, Jan. 7-10, 15; discharge estimated on basis of records for other Humboldt River stations.

Humboldt River at Comus, Nev.

Location.--Lat 41°00', long. 117°19', in SE¼ sec. 14, T. 36 N., R. 41 E., on left bank at Comus section house of Southern Pacific Railroad, 9 miles northeast of Golconda, and 32 miles northwest of Battle Mountain.

Records available.--September 1917 to June 1923, May 1925 to May 1926, February 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,350 ft (from topographic map). Prior to February 1946, inclined staff gage at site half a mile downstream at different datum.

Average discharge.--10 years (1917-22, 1946-51), 255 cfs.

Extremes.--Maximum discharge during year, 1,030 cfs Feb. 21 (gage height, 7.15 ft); minimum, 0.1 cfs for several days in October and September.
1917-23, 1925-26, 1946-51: Maximum discharge, 2,700 cfs June 24-26, 1921 (gage height, 10.9 ft, site and datum then in use), based on discharge measurement made 5 miles downstream; no flow during periods in 1918, 1919, and 1920.

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

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 4 to Jan. 12, July 2-29)

1.5	0.1	2.0	23	5.0	548
1.6	.5	2.2	44	6.0	738
1.7	1.7	2.5	86	7.1	1,010
1.8	6.5	3.3	221		
1.9	14	4.0	347		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	3.6	151	b230	b210	781	706	755	680	416	60	5.5
2	.1	7.2	146	b235	b200	739	706	761	695	402	56	4.6
3	.1	12	153	b230	b210	698	715	750	717	383	54	3.6
4	.2	18	167	225	b250	673	724	759	746	360	52	2.7
5	.2	18	162	221	b300	662	728	777	777	338	50	1.7
6	.2	25	160	219	b360	629	731	794	801	320	47	1.2
7	.1	25	216	b210	410	601	733	803	827	309	44	1.0
8	.1	25	271	b220	466	585	735	816	854	297	42	.7
9	.1	24	279	b215	523	579	737	823	880	273	41	.4
10	.1	22	293	b215	563	577	742	834	922	255	38	.3
11	.1	23	324	212	596	574	753	841	947	235	38	.2
12	.1	24	340	226	640	581	764	836	961	221	35	.1
13	.1	26	345	b220	654	585	777	827	982	206	34	.1
14	.1	30	343	b210	671	579	783	819	993	194	31	.1
15	.1	31	342	b230	*698	583	792	801	980	180	30	.1
16	.1	32	333	b230	755	592	801	772	936	168	28	.1
17	.1	*34	322	b225	803	592	808	*742	847	155	25	.1
18	.1	39	313	230	834	599	814	720	*757	141	24	.1
19	.1	50	304	234	889	610	821	709	691	133	21	.1
20	.1	57	*297	b210	945	629	819	702	651	126	19	.1
21	.1	96	291	b180	975	647	805	691	612	119	*18	.1
22	.1	116	280	b160	993	656	797	682	583	110	18	.1
23	.1	128	279	b180	950	*665	794	676	538	104	17	.1
24	*.1	134	273	235	920	671	*770	680	525	97	16	.1
25	.1	141	268	243	927	671	759	662	514	*89	14	*.1
26	.1	150	262	*271	871	669	748	658	498	88	12	.1
27	.3	151	255	286	834	667	728	660	483	84	12	.1
28	1.5	151	250	295	810	669	726	658	470	83	9.5	.1
29	3.6	151	246	b320	-	682	742	658	446	77	8.8	.1
30	3.6	150	244	b300	-	702	748	660	454	72	8.0	.1
31	2.7	-	235	b240	-	706	-	669	-	64	6.5	-
Total	14.6	1,893.8	8,144	7,157	18,257	19,853	22,806	22,995	21,767	6,099	908.8	23.8
Mean	0.47	63.1	263	231	652	640	760	742	726	197	29.3	0.79
Ac-ft	29	3,760	16,150	14,200	36,210	39,380	45,240	45,610	43,170	12,100	1,800	47

Calendar year 1950: Max 887 Min 0.1 Mean 253 Ac-ft 183,100
Water year 1950-51: Max 993 Min 0.1 Mean 356 Ac-ft 257,700

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

Little Humboldt River near Paradise Valley, Nev.

Location.--Lat 41°25', long. 117°22', in SE¼ sec. 20, T. 41 N., R. 41 E., on right bank 3½ miles downstream from Bullshead Ranch and 9½ miles southeast of Paradise Valley.

Drainage area.--1,030 sq mi, approximately.

Records available.--October 1921 to June 1928 (fragmentary), October 1943 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,470 ft (from river-profile map). Prior to Nov. 21, 1946, at site 1 mile downstream at different datum.

Average discharge.--8 years (1943-51), 20.8 cfs.

Extremes.--Maximum discharge during year, 129 cfs Mar. 24 (gage height, 2.65 ft); minimum, 4.7 cfs Aug. 11.
1921-28, 1943-51: Maximum discharge, 500 cfs Feb. 23, 1927 (gage height, 12.1 ft, site and datum then in use), from rating curve extended above 150 cfs; minimum, that of Aug. 11, 1951.

Remarks.--Records good. Bullshead Ranch diverts water for irrigation above station. Station is above all diversions in Paradise Valley.

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

1.6	4.7
1.7	9.7
1.9	23
2.2	53
2.7	131

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.7	8.2	8.7	13	11	23	90	122	36	7.2	6.2	5.7
2	6.7	8.2	8.7	10	12	25	82	118	32	6.7	6.2	5.7
3	6.2	8.2	9.7	12	12	23	76	106	35	6.7	6.2	5.7
4	6.2	7.7	12	15	23	21	78	101	31	6.7	6.2	5.7
5	6.2	7.7	12	17	23	23	84	91	29	6.2	6.7	5.2
6	6.2	7.7	15	15	44	25	94	82	27	6.2	6.2	5.2
7	6.2	7.7	18	10	75	29	104	72	24	6.2	6.2	5.2
8	6.2	7.7	20	10	79	34	111	73	23	6.2	6.2	5.2
9	6.2	7.7	20	11	91	35	110	76	22	6.2	6.2	5.2
10	6.7	7.7	23	12	110	32	108	79	20	6.2	5.7	5.2
11	6.7	7.2	24	12	106	27	110	80	20	6.2	5.2	5.2
12	6.7	7.2	24	13	110	28	113	78	18	6.2	5.2	5.7
13	6.7	7.2	24	13	*115	32	113	79	19	6.7	5.2	5.7
14	6.7	7.7	*24	14	106	38	108	84	17	6.2	5.2	5.7
15	6.7	*7.2	23	13	87	50	104	84	16	6.2	5.2	5.7
16	6.7	7.2	22	14	72	62	104	82	15	6.2	5.2	5.2
17	7.2	7.2	21	15	62	75	106	73	13	6.2	5.2	5.7
18	6.7	7.2	20	15	56	96	117	66	*12	6.2	5.2	5.7
19	7.2	7.2	20	16	45	91	113	65	9.7	6.2	5.2	5.7
20	7.2	7.2	18	14	40	75	113	62	9.2	6.2	5.7	5.7
21	7.2	7.7	18	12	34	70	110	64	8.7	6.2	6.2	5.7
22	7.2	7.7	17	15	35	85	108	66	8.2	6.2	5.7	5.7
23	7.2	7.7	15	*17	40	117	106	64	7.7	6.2	*5.7	5.7
24	7.2	7.7	15	17	39	124	103	*55	7.2	6.2	5.7	5.7
25	7.2	8.2	15	18	40	101	101	52	7.7	5.7	5.7	5.7
26	7.7	8.7	15	19	34	93	*113	51	8.7	5.7	5.2	*5.7
27	7.7	8.7	15	22	25	94	110	49	8.2	*6.2	5.2	5.7
28	8.2	8.7	13	22	23	*94	108	47	8.2	6.2	5.2	5.7
29	8.2	8.2	15	20	-	94	117	45	7.7	6.7	5.2	5.7
30	8.2	8.2	17	13	-	94	115	45	7.2	6.7	5.2	5.7
31	8.2	-	16	11	-	91	-	40	-	6.2	5.7	-
Total	216.2	232.5	538.1	450	1,549	1,901	3,129	2,251	507.4	195.2	175.2	167.0
Mean	6.97	7.75	17.4	14.5	55.3	61.3	104	72.6	16.9	6.30	5.65	5.57
Ac-ft	429	461	1,070	893	3,070	3,770	6,210	4,460	1,010	387	348	331

Calendar year 1950: Max 84 Min 5.7 Mean 21.3 Ac-ft 15,440
Water year 1950-51: Max 124 Min 5.2 Mean 31.0 Ac-ft 22,440

Peak discharge (base, 35 cfs).--Feb. 13 (9 a.m.) 120 cfs (2.64 ft); Mar. 19 (2 a.m.) 104 cfs (2.52 ft); Mar. 24 (8 a.m.) 129 cfs (2.65 ft); May 1 (7 p.m.) 126 cfs (2.67 ft).
* Discharge measurement made on this day.

Martin Creek near Paradise Valley, Nev.

Location.--Lat 41°32'00", long. 117°25'40", in NW¼SW¼ sec. 12, T. 42 N., R. 40 E., on right bank 0.6 mile upstream from Humboldt County Fish Hatchery and 7 miles northeast of Paradise Valley.

Drainage area.--172 sq mi.

Records available.--October 1921 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,700 ft (from extension of river-profile map). Prior to Oct. 28, 1938, at site 100 ft upstream at different datum. Oct. 28, 1938, to Feb. 25, 1943, at site 90 ft downstream at datum 0.53 ft lower.

Average discharge.--29 years (1921-26, 1927-51), 28.3 cfs.

Extremes.--Maximum discharge during year, 470 cfs Feb. 7 (gage height, 3.98 ft); minimum, 4.9 cfs Aug. 11 to Aug. 19.
1921-51: Maximum discharge, 9,000 cfs Jan. 21, 1943 (gage height, 11.1 ft, datum then in use), by slope-area determination of peak flow; minimum, 1.8 cfs Feb. 6, 1945.

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

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

1.1	3.8	1.5	21
1.2	6.0	2.0	80
1.3	9.2	2.5	156
1.4	14	2.9	227

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.0	7.6	9.7	10	15	18	66	116	68	13	5.1	5.6
2	7.0	7.6	8.6	14	16	19	76	106	60	12	5.1	5.3
3	7.0	7.9	21	14	16	13	93	102	57	11	5.1	5.3
4	7.0	7.9	54	14	87	19	109	102	53	11	5.3	5.3
5	7.0	7.9	22	11	100	18	120	100	54	10	5.3	5.3
6	6.6	7.6	17	10	68	15	126	104	49	9.7	5.3	5.3
7	7.0	7.6	39	9.5	*200	18	122	105	47	8.9	5.3	5.3
8	6.6	7.6	40	10	221	20	129	108	44	8.6	5.3	5.3
9	6.6	7.6	33	11	146	18	130	108	42	8.2	5.1	5.3
10	6.6	6.6	27	12	199	13	145	114	40	7.6	5.1	5.3
11	6.6	7.6	24	12	160	13	122	129	39	7.6	4.9	5.3
12	6.6	7.9	22	11	104	18	121	127	39	7.3	4.9	5.3
13	6.6	7.9	20	11	*74	49	124	120	38	7.0	4.9	5.3
14	7.0	8.2	*23	12	58	69	135	110	36	7.0	4.9	5.3
15	6.6	*7.9	23	13	53	101	135	98	36	6.6	4.9	5.3
16	6.6	7.9	20	12	44	99	130	94	35	6.3	4.9	5.3
17	7.0	8.2	18	13	38	57	140	100	33	6.3	4.9	5.3
18	7.0	8.6	18	13	36	50	161	115	*31	6.0	4.9	5.3
19	7.0	9.2	18	9.7	24	68	161	124	29	5.8	4.9	5.3
20	7.0	10	16	8.6	31	116	150	129	27	5.8	5.3	5.3
21	6.6	19	15	11	30	128	142	127	24	5.8	5.6	5.3
22	7.3	14	15	17	31	100	129	124	22	5.8	5.3	5.3
23	7.3	12	15	*15	28	80	122	127	20	5.8	*5.6	5.3
24	7.3	10	13	17	20	87	121	*124	19	5.6	5.6	5.6
25	7.6	9.7	14	18	26	102	118	124	18	5.6	5.6	5.6
26	7.6	9.2	14	20	17	97	*120	124	17	5.6	5.3	*5.6
27	8.9	9.2	12	22	15	91	118	118	15	*5.6	5.3	5.6
28	8.6	8.9	14	15	14	*80	170	112	15	5.3	5.3	5.6
29	8.2	8.9	14	10	-	83	159	98	14	5.3	5.3	5.8
30	7.9	9.2	13	9.7	-	77	129	90	13	5.3	5.3	5.8
31	7.9	-	11	13	-	67	-	76	-	5.1	5.3	-
Total	221.6	269.4	623.3	398.5	1,871	1,803	3,823	3,455	1,034	226.5	160.9	161.8
Mean	7.15	8.98	20.1	12.9	66.8	58.2	127	111	34.5	7.31	5.19	5.39
Ac-ft	440	534	1,240	790	3,710	3,580	7,580	6,850	2,050	449	319	321

Calendar year 1950: Max 174 Min 5.1 Mean 36.1 Ac-ft 26,140
Water year 1950-51: Max 221 Min 4.9 Mean 38.5 Ac-ft 27,860

Peak discharge (base, 100 cfs).--Feb. 4 (7:30 p.m.) 367 cfs (3.56 ft); Feb. 7 (10 p.m.) 470 cfs (3.98 ft); Feb. 10 (8 p.m.) 390 cfs (3.66 ft); Mar. 15 (9 p.m.) 236 cfs (2.92 ft); Mar. 20 (11 p.m.) 238 cfs (2.91 ft); Apr. 28 (8 p.m.) 250 cfs (2.96 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 6-12 and May 7, 8; discharge estimated on basis of recorded range in stage and weather records.

Cottonwood Creek at Paradise Valley, Nev.

Location.--Lat 41°31'00", long. 117°32'30", in NW¼ sec. 25, T. 42 N., R. 39 E., on right bank at highway bridge, 300 ft west of Paradise Valley post office.

Drainage area.--62 sq mi, approximately.

Records available.--October 1944 to September 1951 (discontinued).

Gage.--Water-stage recorder.

Average discharge.--7 years, 10.1 cfs.

Extremes.--Maximum discharge during year, 720 cfs Feb. 7 (gage height, 3.06 ft); minimum, 0.1 cfs on several days in September.
1944-51: Maximum discharge, 794 cfs Mar. 19, 1950 (gage height, 3.16 ft); no flow Oct. 8, 1948, Nov. 16, 1949.

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

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

0.1	0.1	0.9	22
.2	.4	1.1	40
.3	1.8	1.3	65
.5	5.5	1.7	133
.7	11	2.3	298

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.3	0.4	b4.2	b12	14	30	61	28	2.9	0.6	0.3
2	.2	.3	.3	4.6	b13	13	32	50	24	2.9	.6	.3
3	.1	.3	37	4.9	13	b12	39	47	20	2.9	.8	.3
4	.1	.3	127	5.8	99	15	52	44	18	2.7	.8	.3
5	.1	.2	30	5.8	206	14	57	46	14	2.7	.8	.3
6	.1	.2	18	b5	115	15	66	47	12	1.7	.8	.3
7	.1	.2	48	b4.5	296	18	76	47	10	1.5	.6	.3
8	.1	.2	78	b4.8	233	35	81	50	10	1.4	.6	.3
9	.2	.2	32	5.1	156	25	89	47	9.3	1.1	.6	.2
10	.2	.2	22	5.1	166	b16	93	44	8.3	.9	.5	.2
11	.2	.2	18	5.5	137	b14	82	50	7.8	.9	.5	.2
12	.1	.2	16	5.3	*102	25	73	48	6.2	1.1	.5	.2
13	.1	.2	14	b4.8	*75	60	69	48	5.8	1.1	.5	.2
14	.2	.2	*20	b5	60	58	71	44	5.8	1.1	.5	.2
15	.2	*.2	17	5.5	51	51	73	35	5.3	1.1	.4	.2
16	.2	.2	14	6.0	42	48	72	34	4.4	.8	.4	.2
17	.2	.3	13	8.7	37	32	79	34	3.6	.8	.4	.2
18	.3	.3	12	13	34	27	93	40	*3.6	.8	.4	.1
19	.3	.3	11	b10	25	28	89	44	3.6	.6	.4	.1
20	.2	3.1	10	b8	27	38	79	45	3.6	.6	.4	.1
21	.2	5.3	9.0	10	26	52	76	47	3.6	.6	.4	.2
22	.2	.9	8.7	55	26	48	69	51	3.4	.6	.3	.2
23	.2	.2	8.3	*50	27	42	60	55	3.2	.6	*.3	.2
24	.2	.2	8.0	82	27	45	53	*53	3.2	.8	.4	.1
25	.2	.2	7.8	57	25	48	53	51	3.1	.6	.3	.1
26	.2	.2	7.5	55	18	46	*52	46	3.4	.5	.4	*.1
27	.3	.2	7.0	50	b15	50	44	47	3.8	.5	.4	.1
28	.3	.2	6.5	b25	b12	*46	85	47	3.4	*.6	.3	.1
29	.3	.2	5.5	b18	-	46	79	41	3.2	.6	.3	.1
30	.3	.2	5.8	b10	-	37	65	37	3.1	.6	.4	.1
31	.3	-	4.7	b11	-	31	-	32	-	.5	.4	-
Total	6.1	15.4	616.5	544.6	2,075	1,049	2,031	1,412	236.7	36.1	15.0	5.8
Mean	0.20	0.51	19.9	17.6	74.1	33.8	67.7	45.5	7.89	1.16	0.48	0.19
Ac-ft	12	31	1,220	1,080	4,120	2,080	4,030	2,800	469	72	30	12

Calendar year 1950: Max 184 Min 0.1 Mean 12.9 Ac-ft 9,340
Water year 1950-51: Max 296 Min 0.1 Mean 22.0 Ac-ft 15,960

Peak discharge (base, 50 cfs).--Dec. 4 (12:30 a.m.) 294 cfs (2.30 ft); Dec. 7 (6 a.m.) 139 cfs (1.74 ft); Jan. 24 (12:30 a.m.) 104 cfs (1.55 ft); Feb. 7 (6 p.m.) 720 cfs (3.06 ft); Mar. 8 (6:30 p.m.) 108 cfs (1.56 ft); Mar. 13 (8 p.m.) 148 cfs (1.75 ft); Apr. 28 (2 p.m.) 119 cfs (1.56 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Humboldt River near Rose Creek, Nev.

Location.--Lat 40°52', long. 118°00', in NW¼ sec. 36, T. 35 N., R. 35 E., on right bank 5½ miles southwest of Rose Creek and 15½ miles southwest of Winnemucca.

Records available.--April 1948 to September 1951.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during year, 747 cfs Mar. 2 (gage height, 4.90 ft); minimum, 28 cfs Oct. 26.
1948-51: Maximum discharge, that of Mar. 2, 1951; minimum, 6.5 cfs Sept. 2, 1949.

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

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

2.0	28
2.5	112
3.0	212
4.0	460
5.0	750

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	31	107	b240	b170	738	600	606	609	436	120	56
2	37	31	108	b225	b180	744	600	624	600	414	118	57
3	37	31	112	241	b200	741	606	708	580	401	114	66
4	37	31	120	261	b230	738	612	693	561	398	110	62
5	36	31	123	265	258	732	618	687	550	433	105	59
6	34	32	135	b250	270	723	624	690	547	430	101	56
7	34	32	144	b220	306	705	627	681	564	396	96	53
8	34	36	162	b205	336	681	627	675	592	380	92	53
9	34	38	162	227	359	666	627	672	624	367	90	51
10	34	38	187	241	383	645	630	669	645	344	89	49
11	34	40	230	225	414	624	624	690	645	336	85	48
12	32	40	254	b210	438	609	618	693	660	326	83	46
13	32	40	258	b200	468	597	612	696	717	323	81	46
14	32	43	284	199	480	589	612	684	717	303	80	45
15	32	43	306	208	*485	586	606	678	687	284	78	43
16	32	*43	313	210	502	586	589	678	639	272	74	42
17	32	45	310	210	513	580	597	672	606	261	73	40
18	32	48	313	216	524	575	630	708	609	247	71	40
19	32	53	313	b230	541	569	639	696	*615	225	66	40
20	31	54	310	b210	558	552	627	630	583	212	64	37
21	31	59	308	180	589	558	603	566	538	204	*69	37
22	31	57	301	202	600	564	561	575	550	197	71	37
23	31	59	296	210	624	572	510	*586	606	187	66	37
24	31	61	291	221	645	578	513	603	600	180	66	36
25	31	71	286	*234	675	583	547	538	575	*172	64	36
26	32	74	281	243	690	586	572	538	603	166	62	36
27	32	80	277	252	*705	*592	*583	530	580	158	62	*36
28	31	92	272	258	723	597	639	530	510	156	61	34
29	31	99	270	b260	-	597	642	561	474	148	59	34
30	31	105	265	b220	-	594	618	612	455	129	57	34
31	31	-	263	b180	-	600	-	606	-	122	56	-
Total	1,018	1,537	7,361	6,953	12,866	19,401	18,113	19,775	17,841	8,607	2,483	1,344
Mean	32.8	51.2	237	224	460	626	604	638	595	278	80.1	44.8
Ac-ft	2,020	3,050	14,600	13,790	25,520	38,480	35,930	39,220	35,390	17,070	4,920	2,670

Calendar year 1950: Max 681 Min - Mean 208 Ac-ft 150,200
Water year 1950-51: Max 744 Min 31 Mean 321 Ac-ft 232,700

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

Humboldt-Lovelock Irrigation, Light & Power Co.'s feeder canal near Imlay, Nev.

Location.--Lat 40°40', long. 118°12', in NE¼ sec. 1, T. 32 N., R. 33 E., on left bank 3 miles northwest of Imlay and 9 miles downstream from head gates.

Records available.--October 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,170 ft (from topographic map).

Extremes.--Maximum discharge during year, 60 cfs May 20 (gage height, 2.79 ft); no flow most of year.
1946-51: Maximum discharge, 102 cfs Feb. 27, Mar. 9, 1947; maximum gage height, 3.50 ft Feb. 9, 1947 (affected by ice); no flow for long periods.

Remarks.--This canal diverts water from Humboldt River in NW¼ sec. 29, T. 33 N., R. 35 E., for storage in Taylor-Pitt Reservoir near Humboldt. Water is released during irrigation season about 3 miles west of Humboldt, and conveyed through Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal to Rye Patch Reservoir, from which it is later released and carried in natural river channel to Lovelock district for irrigation.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	36			
2								0	35			
3								0	35			
4								0	30			
5								0	26			
6								*0	24			
7								0	22			
8								0	24			
9								0	27			
10								0	32			
11								1.5	36			
12								14	38			
13								17	39			
14								19	46			
15								22	48			
16								22	44			
17								23	38			
18								45	30			
19								58	*28			
20								58	17			
21								46	5.5			
22								32	1.5			
23								*32	.4			
24								35	.1			
25								38	0			
26								27	0			
27								24	0			
28								22	0			
29								21	0			
30								24	0			
31								33	0			
Total	0	0	0	0	0	0	0	613.5	662.5	0	0	0
Mean	0	0	0	0	0	0	0	19.8	22.1	0	0	0
Ac-ft	0	0	0	0	0	0	0	1,220	1,310	0	0	0

Calendar year 1950: Max 0 Min 0 Mean 0 Ac-ft 0
Water year 1950-51: Max 58 Min 0 Mean 3.50 Ac-ft 2,530

* Discharge measurement made on this day.

Humboldt River near Imlay, Nev.

Location.--Lat 40°41'30", long. 118°12'10", in SW¼ sec. 25, T. 33 N., R. 33 E., on right bank 1 mile upstream from old Calahan Dam and 4 miles northwest of Imlay.

Drainage area.--13,500 sq mi, approximately.

Records available.--June 1935 to September 1941, April 1945 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,130 ft (from topographic map). Prior to Apr. 28, 1945, at site 1 mile downstream at different datum.

Average discharge.--12 years, 130 cfs.

Extremes.--Maximum discharge during year, 736 cfs Mar. 4 (gage height, 5.90 ft); minimum, 29 cfs Oct. 26.
1935-41, 1945-51: Maximum discharge 2,220 cfs May 31, June 1, 1945 (gage height, 10.49 ft); no flow at times in several years.

Remarks.--Records good except those for periods of ice effect, which are fair. Humboldt-Lovelock Irrigation, Light & Power Co.'s feeder canal diverts water from river above station to the Pitt-Taylor Reservoirs. This water is ordinarily released during the irrigation season through Rye Patch Reservoir to Humboldt River for irrigation in Lovelock district. Flow also affected by many other diversions above station for irrigation.

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

1.4	26	4.0	360
2.0	79	5.0	550
3.0	203	5.9	736

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	31	114	b235	b160	698	616	625	548	435	123	52
2	35	31	116	b225	b170	715	618	612	554	420	119	51
3	35	31	123	b230	b180	726	620	623	552	396	117	51
4	35	30	128	234	b210	730	627	673	538	385	114	58
5	34	30	130	250	b240	728	629	688	522	391	111	59
6	33	30	136	b240	b260	719	635	686	510	420	106	54
7	34	30	141	b215	283	707	637	690	508	420	103	52
8	34	30	159	b200	302	694	639	684	518	382	99	49
9	32	31	172	211	328	677	639	679	538	369	93	47
10	32	33	171	217	350	667	642	673	562	355	91	46
11	31	35	190	230	371	646	639	662	582	331	88	44
12	31	39	222	b210	401	631	639	673	590	323	86	43
13	30	40	241	b200	425	618	633	677	596	312	82	43
14	30	40	252	196	452	604	627	677	629	307	80	41
15	30	41	*270	199	*463	598	625	665	644	291	77	39
16	30	42	284	197	465	592	618	658	625	272	75	37
17	30	*42	294	204	471	590	600	652	594	262	73	35
18	30	45	294	209	480	586	604	616	566	256	71	35
19	30	57	296	210	492	582	616	639	*566	242	71	34
20	30	57	297	b190	508	576	631	635	602	223	65	32
21	30	64	296	b170	528	562	620	594	578	213	61	32
22	30	62	292	190	560	566	600	542	534	202	*64	32
23	30	58	288	195	570	572	558	*540	540	195	68	32
24	30	58	283	206	598	578	510	546	586	186	63	32
25	30	60	276	*218	616	586	518	554	586	179	61	32
26	30	69	273	232	644	594	554	514	566	*171	59	32
27	32	76	268	241	*669	*600	*576	510	584	166	58	*32
28	*32	80	268	253	686	604	592	498	556	161	57	32
29	32	97	265	b235	-	612	642	490	488	158	55	32
30	31	105	260	b240	-	614	644	508	458	152	54	32
31	32	-	258	b160	-	614	-	544	-	135	53	-
Total	980	1,474	7,057	6,642	11,882	19,584	18,348	19,027	16,820	8,710	2,497	1,222
Mean	31.6	49.1	228	214	424	632	612	614	561	281	80.5	40.7
Ac-ft	1,940	2,920	14,000	13,170	23,570	38,840	36,390	37,740	33,360	17,280	4,950	2,420

Calendar year 1950: Max 639 Min 30 Mean 203 Ac-ft 147,200
Water year 1950-51: Max 730 Min 30 Mean 313 Ac-ft 226,600

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

Rye Patch Reservoir near Rye Patch, Nev.

Location.--Lat 40°28'15", long. 118°18'20", in NE¼ sec. 18, T. 30 N., R. 33 E., at control works at left end of Rye Patch Dam and 2 miles northwest of Rye Patch.

Drainage area.--13,700 sq mi, approximately.

Records available.--February 1936 to September 1951.

Gage.--Mercury indicating gage. Datum of gage is at mean sea level (Southern Pacific Railroad datum).

Extremes.--Maximum contents during year, 131,600 acre-ft June 19 to July 2 (elevation, 4,128.30 ft); minimum, 27,610 acre-ft Oct. 31, Nov. 1 (elevation, 4,111.15 ft).
1936-51: Maximum contents, 196,900 acre-ft Apr. 9, 1946 (elevation, 4,134.62 ft); minimum since operation began, 1,760 acre-ft Oct. 16, 1937.

Remarks.--Reservoir is formed by earth-fill, rock-faced dam; storage began Feb. 20, 1936. Capacity, 179,100 acre-ft between elevations 4,072.5 (sill of trash-rack structure) and 4,133.0 ft (top of spillway gates). Dead storage negligible. Elevation of spillway (gate sill) is 4,116 ft. Water is used for irrigation on Humboldt project.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28,890	27,610	31,250	44,560	56,030	79,100	110,000	125,500	128,700	131,600	115,600	97,890
2	29,030	27,750	31,250	44,560	56,320	80,570	111,200	124,600	128,700	131,600	114,800	97,890
3	29,170	27,890	31,400	45,470	56,900	80,570	112,600	126,000	128,700	130,600	114,300	97,480
4	-	27,890	31,710	45,700	57,470	80,570	113,900	126,000	127,800	128,700	113,400	97,480
5	-	27,890	32,170	46,380	57,760	82,790	114,800	126,900	127,800	128,700	112,600	97,080
6	-	28,180	32,470	47,070	58,630	83,530	115,600	126,900	127,800	128,700	112,100	96,670
7	29,170	28,180	32,780	47,070	59,200	85,750	116,500	126,900	127,800	128,700	111,700	96,270
8	29,170	28,320	33,240	47,520	59,510	86,490	117,400	127,400	127,800	127,800	110,800	95,860
9	-	e28,320	33,570	47,750	59,830	88,820	e118,300	127,800	127,800	127,800	110,000	95,460
10	-	28,320	33,900	48,200	60,450	89,590	119,200	127,800	127,800	127,800	109,100	95,050
11	-	28,320	34,220	48,730	61,380	91,140	119,200	128,300	127,800	127,400	108,700	94,240
12	-	28,320	34,710	48,990	62,000	91,920	119,600	128,300	128,700	126,000	108,300	93,850
13	-	28,460	35,200	49,510	62,940	93,460	119,600	127,400	129,200	125,500	107,800	93,080
14	29,170	28,460	35,690	49,770	63,560	93,850	120,500	127,400	129,700	125,100	107,800	92,300
15	29,030	28,460	36,170	49,770	64,490	94,650	121,900	128,700	130,100	124,600	107,400	91,530
16	28,750	28,460	36,680	50,300	65,420	96,270	121,900	128,700	130,600	124,200	106,600	90,750
17	-	28,600	37,200	50,820	65,760	97,080	122,300	e129,000	131,100	123,200	105,700	89,980
18	-	28,600	37,720	51,350	e66,760	97,890	122,300	129,200	131,100	122,300	105,700	89,980
19	-	28,750	38,410	51,610	67,750	98,290	122,800	129,200	131,600	121,900	104,900	89,590
20	-	29,170	38,930	52,130	69,080	98,700	122,800	130,100	131,600	121,400	104,000	89,200
21	28,750	29,460	39,620	52,390	70,400	99,910	122,800	e130,600	131,600	120,500	103,600	88,430
22	28,600	29,460	39,990	52,920	71,070	101,100	123,200	131,100	131,600	120,000	103,200	87,650
23	28,600	29,740	40,570	53,180	71,400	101,500	e123,200	131,100	131,600	120,000	102,300	87,260
24	28,600	29,890	40,950	53,440	72,420	102,300	123,200	131,100	131,600	119,600	101,500	86,880
25	28,460	30,030	41,720	54,020	74,170	103,200	123,200	131,100	131,600	119,200	101,100	86,490
26	28,320	30,330	41,720	54,300	75,230	104,500	123,200	131,100	131,600	118,700	100,700	86,120
27	28,040	30,330	42,500	54,880	76,630	105,300	122,800	131,100	131,600	117,800	99,910	85,750
28	28,040	30,640	42,880	e55,260	77,690	106,100	122,800	e130,800	131,600	116,100	99,100	85,750
29	28,040	30,640	43,270	e55,650	-	107,000	123,200	130,600	131,600	116,100	98,700	85,380
30	27,750	30,940	43,650	56,030	-	108,300	124,600	130,600	131,600	116,100	98,290	85,380
31	27,610	-	e44,100	56,030	-	109,100	-	130,100	-	115,600	97,890	-

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

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,111.65	29,030	-
Oct. 31	4,111.15	27,610	-1,420
Nov. 30	4,112.30	30,940	+3,330
Dec. 31	4,116.25	e44,100	+13,160
Calendar year 1950	-	-	+10,860
Jan. 31	4,118.45	56,030	+11,930
Feb. 28	4,121.80	77,690	+21,660
Mar. 31	4,125.80	109,100	+31,410
Apr. 30	4,127.55	124,600	+15,500
May 31	4,128.15	130,100	+5,500
June 30	4,128.30	131,600	+1,500
July 31	4,126.55	115,600	-16,000
Aug. 31	4,124.45	97,890	-17,710
Sept.30	4,122.85	85,380	-12,510
Water year 1950-51	-	-	+56,350

e Elevation affected by wind; contents interpolated.

Humboldt River near Rye Patch, Nev.

Location.--Lat 40°27'33", long. 118°18'30", in NE¼ sec. 18, T. 30 N., R. 33 E., on left bank 1,000 ft downstream from Rye Patch Dam and 1½ miles northwest of Rye Patch.

Drainage area.--13,700 sq mi, approximately.

Records available.--January 1896 to December 1909, September 1910 to September 1922, September 1924 to September 1932 (fragmentary), October 1935 to September 1941, October 1943 to September 1951. Prior to October 1935, published as "near Oreana."

Gage.--Water-stage recorder. Altitude of gage is 4,050 ft (from topographic map). Prior to Oct. 1, 1935, at site 7 miles downstream at different datum. Oct. 1, 1935, to Oct. 13, 1945, at site half a mile downstream at different datum.

Average discharge.--37 years (1899-1909, 1910-16, 1917-22, 1930-32, 1935-41, 1943-51), 202 cfs.

Extremes.--Maximum daily discharge during year, 577 cfs July 19; minimum daily, 0.6 cfs Nov. 9, Dec. 5, 8, 9.
1896-1922, 1924-32, 1935-41, 1943-51: Maximum discharge, 3,050 cfs May 12, 1897 (gage height, 12.0 ft, site and datum then in use); practically no flow during some periods in 1905, 1915, 1918-20, 1931-32, 1935-41, 1943-45.

Remarks.--Records good. Flow completely regulated by Rye Patch Reservoir (see preceding page) and slightly regulated by Humboldt (Pitt-Taylor) Reservoirs. Many diversions above station for irrigation.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 8 to Sept. 16)

0.8	0	1.3	16
0.9	.8	1.5	34
1.0	2.3	2.0	108
1.1	4.6	3.0	316
1.2	9.0	4.0	599

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.3	1.6	0.7	1.0	1.2	1.7	16	314	555	435	344	83
2	1.6	1.0	.7	1.0	1.2	1.8	16	328	534	455	354	36
3	1.4	1.0	.7	1.0	1.2	2.0	21	370	516	443	327	93
4	1.4	1.0	.7	1.0	1.2	2.2	16	381	498	432	314	154
5	1.4	1.0	.6	1.0	1.2	1.8	23	410	429	464	299	192
6	18	.8	.7	1.0	1.4	1.8	59	472	375	472	324	184
7	9.1	.8	.7	1.0	1.4	1.7	98	513	372	507	324	184
8	35	.7	.6	1.1	1.4	1.8	158	481	383	543	306	200
9	38	.6	.6	1.1	1.4	1.7	184	501	367	513	297	234
10	49	.7	.7	*1.1	1.4	1.7	182	516	312	464	285	251
11	49	.7	.8	1.1	1.4	1.8	192	504	283	466	232	267
12	49	.7	.8	1.1	1.4	2.2	236	459	283	472	214	314
13	49	.7	.8	1.2	1.4	2.0	265	446	271	487	256	316
14	33	.8	.8	1.2	1.6	32	204	429	238	452	265	318
15	24	.8	.8	1.2	1.7	47	236	390	236	461	238	331
16	28	.8	.8	1.2	1.7	46	311	362	297	510	227	299
17	44	*.8	.8	1.2	1.8	46	290	365	375	552	223	280
18	44	.8	.8	1.2	1.6	46	287	389	378	549	254	254
19	45	.7	.8	1.2	1.6	66	269	389	*399	577	276	240
20	47	.7	1.0	1.2	1.6	69	341	394	397	546	271	232
21	59	.7	1.0	1.2	1.6	50	391	416	370	481	278	217
22	44	.7	1.0	1.2	1.6	41	432	432	370	441	*304	192
23	31	.7	1.0	1.2	1.6	37	469	*362	408	416	302	153
24	31	.7	1.1	1.4	1.7	13	501	341	461	362	274	139
25	35	.7	1.1	1.4	1.7	3.0	507	372	464	357	265	122
26	56	.7	1.1	1.4	1.7	2.8	484	464	481	*331	265	100
27	54	.7	1.1	1.4	*1.7	*2.8	*469	507	481	321	243	*69
28	*53	.7	1.1	1.2	1.7	3.0	487	543	481	273	221	45
29	125	.8	1.0	1.4	-	6.3	251	522	501	269	219	44
30	132	.8	1.0	1.8	-	16	309	540	469	287	210	44
31	45	-	.8	1.2	-	16	-	555	-	336	198	-
Total	1,241.2	23.9	26.2	36.9	42.1	567.1	7,704	13,467	11,984	13,674	8,409	5,587
Mean	40.0	0.80	0.85	1.19	1.50	18.3	257	434	399	441	271	186
Ac-ft	2,460	47	52	73	84	1,120	15,280	26,710	23,770	27,120	16,680	11,080

Calendar year 1950: Max 605 Min 0.6 Mean 160 Ac-ft 116,000
Water year 1950-51: Max 577 Min 0.6 Mean 172 Ac-ft 124,500

* Discharge measurement made on this day.

Pyramid Lake near Nixon, Nev.

Location.--Lat 39°50'30", long. 119°28'00", in SE¼SE¼ sec. 24, T. 23 N., R. 22 E., at southwest corner of concrete bridge No. 296 B, 150 ft southwest of milepost 297, 6 miles west of Nixon, and 11.5 miles south along Southern Pacific Railroad from station at Sutcliffe.

Records available.--1867 to 1925 (occasional elevations in some years), June 1926 to September 1951.

Gage.--Bench mark N21 of United States Coast and Geodetic Survey at elevation of 3,940.04 ft above mean sea level, datum of 1929. Prior to January 1934, elevations were determined from bench mark No. 1 of General Land Office, referred to general adjustment of 1912 (to convert these records to the datum of 1929, add 0.56 ft).

Extremes.--1926-51: Maximum elevation observed, 3,848.5 ft, June 1926; minimum observed, 3,801.43 ft Nov. 15, 1950.

Elevation, in feet, above mean sea level, water year 1950-51

Nov. 15.....3,801.43	Feb. 26.....3,805.27	July 19.....3,804.85
Dec. 10.....3,803.10	Mar. 9.....3,805.44	Aug. 23.....3,804.23
29.....3,804.01	Apr. 1.....3,805.45	28.....3,804.04
Jan. 19.....3,804.46	June 8.....3,805.35	Sept.20.....3,803.88

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Truckee River near Truckee, Calif.

Location.--Lat 39°17'30", long. 120°12'30", in SW¼NE¼ sec. 28, T. 17 N., R. 16 E., on left bank 1.4 miles upstream from Donner Creek and 2.5 miles southwest of Truckee.

Drainage area.--548 sq mi.

Records available.--December 1944 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,920 ft (from topographic map).

Average discharge.--6 years (1945-51), 289 cfs.

Extremes.--Maximum discharge during year, 6,480 cfs Nov. 20 (gage height, 7.62 ft), from rating curve extended above 2,300 cfs on basis of slope-area determination of peak flow; minimum daily, 30 cfs (estimated) Feb. 19-21.
1944-51: Maximum discharge, that of Nov. 20, 1950; minimum, 11 cfs Jan. 27, 1948.

Remarks.--Records excellent except those for period of high water, Nov. 17 to Feb. 13, which are fair, and those for period of no gage-height record, which are poor. Flow regulated by Lake Tahoe.

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

Oct. 1 to Nov. 17		Nov. 18 to Sept. 30			
1.1	32	0.9	30	2.7	705
1.3	67	1.0	41	3.7	1,490
1.6	144	1.3	93	4.7	2,350
2.0	296	1.7	204	6.0	3,990
2.2	394	2.2	416		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	320	157	131	1,360	1,460		151	188	478	452	421	431
2	320	170	113	1,350	1,280		154	178	467	426	421	431
3	320	194	2,010	1,350	860		156	194	467	354	421	431
4	*330	194	*1,170	1,350	912		168	219	472	350	421	426
5	330	194	*601	1,340	960		191	204	472	345	421	397
6	330	194	730	972	928	a80	201	211	488	340	421	322
7	325	194	1,070	665	1,010		215	204	615	336	426	322
8	325	194	*1,670	692	879		234	*211	615	336	426	322
9	325	190	856	698	521		257	234	608	336	421	322
10	325	167	578	692	521		280	260	621	336	421	322
11	325	52	494	798	521	a90	276	314	652	331	421	322
12	325	48	411	1,240	505	a95	272	264	692	331	426	*322
13	325	*52	350	1,100	405	*a100	288	241	705	340	426	327
14	325	50	542	692	a100	104	314	219	719	354	426	327
15	325	46	613	596		114	314	219	*726	354	426	327
16	325	67	882	596	a40	121	322	241	740	*350	426	331
17	325	152	1,060	567		126	305	288	705	350	426	331
18	325	2,590	1,120	766		124	280	314	692	354	426	272
19	301	1,990	1,150	1,160		132	272	336	685	411	426	*204
20	274	*3,920	1,170	1,160	a30	148	260	327	679	406	*426	204
21	270	2,760	1,220	1,180		162	257	340	659	406	426	204
22	270	820	1,270	1,470	a60	162	253	322	639	402	*426	201
23	274	*511	1,410	1,490	a70	162	257	331	627	*402	426	201
24	283	372	1,400	1,570		168	249	*322	621	402	426	201
25	315	293	1,380	1,540		168	234	345	608	411	426	201
26	366	237	1,370	1,520	a80	165	215	382	578	426	426	204
27	315	204	1,350	1,520		168	211	397	406	426	426	204
28	287	184	*1,350	1,490		168	260	350	387	426	426	201
29	278	162	1,360	1,490	-	178	215	314	382	421	426	215
30	343	164	1,380	1,470	-	171	197	272	402	421	431	194
31	198	-	1,370	*1,460	-	156	-	447	-	421	431	-
Total	9,624	16,522	31,581	35,344	11,642	3,782	7,258	8,688	17,607	11,756	13,171	8,719
Mean	310	551	1,019	1,140	416	122	242	280	587	379	425	291
Ac-ft	19,090	32,770	62,640	70,100	23,090	7,500	14,400	17,230	34,920	23,320	26,120	17,290

Calendar year 1950: Max 3,920 Min 17 Mean 349 Ac-ft 252,700
Water year 1950-51: Max 3,920 Min 30 Mean 481 Ac-ft 348,500

Peak discharge (base, 700 cfs).--Nov. 20 (10:30 p.m.) 6,480 cfs (7.62 ft); Dec. 3 (6 p.m.) 3,840 cfs (5.89 ft); Dec. 8 (10 a.m.) 2,150 cfs (4.48 ft); Dec. 22 (8 p.m.) 1,420 cfs (3.62 ft); Jan. 12 (2 p.m.) 1,240 cfs (3.40 ft); Jan. 23 (4 p.m.) 1,620 cfs (3.85 ft); June 16 (7:30 p.m.) 775 cfs (2.80 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of unpublished record for Truckee River at Tahoe.

Little Truckee River near Hobart Mills, Calif.

Location.--Lat 39°30', long. 120°16', in sec. 14, T. 19 N., R. 15 E., on right bank half a mile upstream from Independence Creek and 7½ miles northwest of Hobart Mills.

Drainage area.--33 sq mi, approximately.

Records available.--December 1946 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 6,330 ft (from topographic map).

Extremes.--Maximum discharge during year, 7,010 cfs Nov. 20 (gage height, 7.53 ft), from rating curve extended above 1,100 cfs on basis of slope-area determination of peak flow; minimum, 2.5 cfs Oct. 1-3.
1946-51: Maximum discharge, that of Nov. 20, 1950; minimum, 1.1 cfs Aug. 19, 20, 23, 24, 1949.

Remarks.--Records good except those above 1,500 cfs, which are poor. One transmountain diversion to Sierra Valley above station.

Rating table, water year 1950-51 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 21 to Mar. 20, May 19-27, July 7 to Sept. 30)

1.0	1.6	1.3	7.5	1.6	26	2.5	170	5.0	1,065
1.1	2.8	1.4	12	1.8	49	3.0	280	6.0	2,070
1.2	4.7	1.5	18	2.0	80	4.0	600	6.6	3,270

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	40	110	70	60	52	85	176	176	4.5	3.8	3.0
2	3.2	39	91	72	50	54	85	162	157	4.3	3.8	3.0
3	3.6	54	832	66	55	50	94	180	153	4.1	3.6	3.0
4	*5.5	58	*920	64	95	37	111	192	151	4.3	2.7	3.0
5	6.4	49	*377	58	112	31	134	172	149	3.8	3.4	3.0
6	7.2	39	414	56	99	46	151	170	143	3.6	3.6	2.8
7	6.7	32	888	54	132	46	162	160	136	3.4	3.6	2.7
8	5.8	30	*958	49	136	56	180	*172	125	3.4	3.8	2.7
9	5.5	28	674	44	125	50	213	205	118	3.4	3.6	2.8
10	5.5	22	376	45	121	56	249	249	107	3.8	3.6	2.7
11	5.5	22	338	42	116	56	263	426	106	4.0	3.8	2.7
12	5.3	20	307	60	109	49	270	293	100	3.8	3.4	*2.8
13	5.3	*19	240	77	94	*49	290	224	106	3.8	3.4	3.0
14	5.3	19	*456	55	85	60	317	194	119	4.0	3.8	3.2
15	5.3	21	328	41	80	62	296	196	*134	4.0	4.0	3.2
16	5.3	17	240	55	75	69	317	238	145	4.1	3.8	3.4
17	5.3	70	200	40	70	69	331	301	128	*4.0	4.1	3.4
18	5.3	675	176	35	70	64	306	364	106	4.3	5.8	7.9
19	5.3	1,380	166	67	69	67	285	394	97	4.3	5.3	*5.3
20	5.3	*3,130	149	92	69	74	273	388	92	4.1	4.0	3.6
21	5.3	2,850	138	69	70	88	278	382	77	4.3	*4.1	3.4
22	5.3	658	125	130	66	90	278	388	49	4.3	*3.6	3.2
23	5.8	343	114	118	61	87	288	379	35	*4.1	3.4	3.4
24	11	*244	107	111	69	88	273	*373	27	4.1	3.2	3.2
25	31	204	104	111	58	92	242	400	18	4.0	2.8	3.2
26	57	176	95	95	55	97	220	442	13	3.8	3.0	3.2
27	52	155	82	88	55	97	211	472	9.2	3.6	3.0	3.2
28	29	136	*78	87	54	99	233	442	6.7	3.8	3.0	3.2
29	32	122	80	74	-	111	200	367	5.3	3.8	2.8	3.4
30	93	*129	74	70	-	107	186	288	5.0	3.6	3.0	3.4
31	54	-	69	*70	-	90	-	211	-	3.8	3.0	-
Total	480.7	10,781	9,306	2,165	2,310	2,143	6,821	9,000	2,793.2	122.0	111.8	100.0
Mean	15.5	359	300	69.8	82.5	69.1	227	290	93.1	3.94	3.61	3.33
Ac-ft	953	21,380	18,460	4,290	4,580	4,250	13,530	17,850	5,540	242	222	198

Calendar year 1950: Max 3,130 Min 2.2 Mean 143 Ac-ft 103,600
Water year 1950-51: Max 3,130 Min 2.7 Mean 126 Ac-ft 91,500

Peak discharge (base, 500 cfs).--Nov. 20 (10 p.m.) 7,010 cfs (7.53 ft); Dec. 3 (10 p.m.) 1,740 cfs (5.75 ft); Dec. 8 (5 p.m.) 1,120 cfs (5.09 ft); Dec. 14 (9:30 a.m.) 581 cfs (3.95 ft); May 11 (3 a.m.) 526 cfs (3.88 ft).

* Discharge measurement made on this day.

Truckee River at Reno, Nev.

Location.--Lat 39°32', long. 119°47', in sec. 12, T. 19 N., R. 19 E., on left bank 0.5 mile east of Reno and 5 miles upstream from Steamboat Creek.

Drainage area.--1,070 sq mi, approximately.

Records available.--July 1906 to September 1919, January 1947 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,440 ft (from topographic map). Prior to January 1947, staff gage at site 1 mile upstream at different datum.

Average discharge.--17 years, 820 cfs.

Extremes.--Maximum discharge during year, 19,900 cfs at 1 a.m. Nov. 21; maximum gage height, 13.83 ft at 3 a.m. Nov. 21; minimum, 100 cfs July 15.
1906-19, 1947-51: Maximum discharge, that of Nov. 21, 1950; maximum gage height, that of Nov. 21, 1950; minimum observed, 18 cfs July 2, 3, 1912.

Remarks.--Records good. Flow regulated by Lake Tahoe, Boca Reservoir, Donner and Independence Lakes, and by several power plants. Many diversions above station.

Rating tables, water year 1950-51, except periods when rate of change in stage was used as a factor (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 18				Nov. 19 to Sept. 30			
1.8	139	4.0	1,350	1.9	93	6.0	2,860
2.2	265	4.5	1,770	2.2	168	8.0	5,430
2.6	440	5.0	2,220	2.5	282	11.0	11,400
3.0	650	5.5	2,670	3.0	530	12.1	14,200
3.5	970			4.0	1,120		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	276	390	2,170	1,760	2,040	993	813	735	999	300	154	194
2	191	390	1,900	1,750	2,040	975	813	699	873	300	151	200
3	*185	395	k5,410	1,600	1,520	818	789	687	813	230	165	197
4	170	410	*k6,580	1,600	1,640	603	747	789	807	190	146	190
5	179	362	*k3,440	1,560	1,850	574	705	831	795	184	157	187
6	191	328	k3,030	1,440	1,790	574	741	867	753	168	151	187
7	188	349	k4,400	1,060	1,920	568	711	843	807	157	162	187
8	182	376	*k4,670	1,440	*2,110	603	711	831	*825	135	165	187
9	188	362	k4,000	1,460	1,510	699	819	849	789	135	157	190
10	179	336	k4,250	1,440	1,450	663	915	*885	789	125	148	184
11	173	362	k4,060	*1,440	1,560	669	849	1,100	807	125	148	178
12	161	358	3,200	1,620	1,440	687	737	1,030	867	118	148	174
13	181	362	2,500	1,440	1,330	705	627	963	867	111	154	176
14	167	362	2,720	1,070	850	735	693	903	903	108	160	181
15	173	*358	2,730	891	651	753	609	891	939	106	151	187
16	207	381	2,760	873	*591	765	645	903	987	125	151	184
17	197	410	2,770	861	558	783	675	945	1,000	138	157	200
18	204	k2,870	2,750	849	519	771	597	1,050	921	140	165	247
19	200	k6,320	2,760	1,280	470	795	563	1,080	885	*146	168	227
20	200	k7,450	2,670	1,330	552	837	514	1,100	1,010	138	181	*197
21	191	*k14,100	2,640	1,520	519	885	502	1,100	1,050	148	197	187
22	207	*k4,980	*2,520	2,260	603	909	475	1,080	921	157	219	184
23	217	*3,090	2,220	2,180	609	*903	475	1,170	885	154	*211	187
24	244	2,550	2,140	2,150	783	903	460	1,170	771	146	219	184
25	288	2,300	2,090	2,040	885	915	497	1,170	777	146	197	184
26	435	2,040	2,050	1,980	969	885	465	1,320	681	151	187	190
27	700	1,980	1,990	2,030	951	855	450	1,390	530	151	178	187
28	455	2,090	1,880	2,180	987	837	780	1,440	396	143	187	190
29	440	2,080	1,880	2,130	-	885	753	1,240	282	135	194	215
30	612	2,040	1,880	2,080	-	909	693	1,120	269	138	197	238
31	490	-	1,790	2,040	-	831	-	993	-	146	187	-
Total	8,051	60,181	91,850	49,354	32,697	24,287	19,823	31,174	23,998	4,794	5,312	5,802
Mean	260	2,006	2,963	1,592	1,168	783	661	1,006	800	155	171	193
Ac-ft	15,970	119,400	182,200	97,890	64,850	48,170	39,320	61,830	47,600	9,510	10,540	11,510

Calendar year 1950: Max 14,100 Min 145 Mean 917 Ac-ft 663,900
Water year 1950-51: Max 14,100 Min 106 Mean 979 Ac-ft 708,800

Peak discharge (base, 1,600 cfs).--Nov. 21 (1 a.m.) 19,900 cfs (13.55 ft); Dec. 3 (10 p.m.) 11,000 cfs (10.82 ft); Dec. 8 (7 p.m.) 5,370 cfs (7.96 ft); Jan. 22 (10:30 p.m.) 2,480 cfs (5.62 ft); May 28 (4:30 a.m.) 1,620 cfs (4.65 ft); June 20 (6 p.m.) 1,740 cfs (4.80 ft).

* Discharge measurement made on this day.
k Computed by using rate of change in stage as a factor.

Franktown Creek at Franktown, Nev.

Location.--Lat 39°16', long. 119°51', in sec. 9, T. 16 N., R. 19 E., on right bank half a mile west of Franktown and 3 miles upstream from Washoe Lake.

Drainage area.--14 sq mi, approximately.

Records available.--April 1948 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 5,200 ft (from topographic map). Gage destroyed by flood Dec. 3 or 4, 1950; re-established May 21, 1951, at same site at different datum.

Extremes.--Maximum discharge during year, 800 cfs Dec. 3 or 4 (gage height unknown), by slope-area determination of peak flow; minimum not determined.
1948-51: Maximum discharge, that of Dec. 3 or 4, 1950; minimum, 0.2 cfs Feb. 7, 8, 9, 1949 (flow dammed by snowslide).

Remarks.--Records good except those for periods of no gage-height record, which are fair. Small diversions on tributaries above station for irrigation. During summer, flow sometimes supplemented by diversion from North Creek, a tributary to Lake Tahoe.

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

Oct. 1-31		May 21 to Sept. 30	
1.0	4.7	1.2	5.6
1.2	8.7	1.4	10
1.4	14	1.6	18
1.6	21	2.0	38
1.9	35		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.7							-	30	16		8.3
2	6.9							-	28	17		8.1
3	*6.9							-	26	17		7.8
4	6.7							-	26	17		
5	6.7							-	26	17		
6	6.9		†66					-	26	16		
7	6.9							-	26	14	a7.5	
8	6.7							-	26	14		a7.0
9	6.7							-	24	14		
10	6.5							-	24	14		
11	6.3							-	24	14		
12	6.3							-	24	12		
13	6.3							-	24	11		
14	6.3							-	23	11	7.6	6.0
15	6.7							-	22	10	7.1	5.8
16	7.2							-	22	10	7.1	5.8
17	7.4							-	22	9.6	7.1	5.8
18	7.8							-	*22	10	7.1	6.7
19	7.6							-	22	9.6	7.1	
20	7.6							-	24	9.6	8.1	
21	7.8							*30	30	9.4	8.6	
22	8.3	†58						30	27	8.8	9.4	a7.0
23	8.3							32	23	8.3	9.4	
24	12							31	20	*7.4	9.1	
25	17							30	20	7.4	8.6	
26	21							30	19	7.1	8.1	
27	20							34	18	7.6	*7.8	7.4
28	18							*35	*17	7.6	7.8	7.4
29	15							33	16	7.6	8.1	7.8
30	*34							32	17	7.6	8.6	7.8
31	a15	-						30	-	7.8	8.6	-
Total	313.5							-	698	349.4	242.8	210.7
Mean	10.1							-	23.3	11.3	7.83	7.02
Ac-ft	622							-	1,380	693	482	418

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

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

McDermitt Creek near McDermitt, Nev.

Location.--Lat 41°58', long. 117°50', in SE¼SE¼ sec. 8, T. 47 N., R. 37 E., on left bank 6½ miles southwest of McDermitt.

Records available.--October 1948 to September 1951.

Gage.--Water-stage recorder and concrete control.

Extremes.--Maximum discharge during year, 401 cfs Feb. 7 (gage height, 4.03 ft); minimum, 1.1 cfs Aug. 17.
1948-51: Maximum discharge, that of Feb. 7, 1951; minimum, 0.5 cfs Jan. 13, 1949.

Revisions.--The maximum discharge for the water year 1949 has been revised to 248 cfs Apr. 12, 1949 (gage height, 3.44 ft), and that for the water year 1950 has been revised to 346 cfs Mar. 20, 1950 (gage height, 3.83 ft). They supersede those published in Water-Supply Paper 1180.

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

Revisions.--Peak discharges for the water years 1949-50 have been revised as follows. They supersede figures published in Water-Supply Paper 1180:

1949: Apr. 12 (1:50 a.m.) 248 cfs; Apr. 19 (8 a.m.) 187 cfs.
1950: Mar. 20 (12:30 a.m.) 346 cfs; Mar. 30 (11:50 p.m.) 300 cfs.

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

1.6	1.0	2.1	13
1.7	1.7	2.2	20
1.8	2.8	2.4	40
1.9	4.7	2.7	86
2.0	7.8	3.4	236

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.9	4.7	6.2	5.0	b9	b35	86	81	35	4.4	2.5	2.0
2	2.9	5.0	4.7	8.2	b10	30	107	76	32	4.0	2.1	1.8
3	2.9	5.8	4.7	8.2	22	b24	126	66	28	4.2	2.1	1.6
4	*3.1	5.2	11	9.8	34	17	141	63	27	4.2	2.1	1.5
5	3.1	5.0	11	5.5	125	16	154	60	28	4.0	2.1	1.5
6	3.1	5.0	10	6.2	104	16	149	55	27	5.2	2.4	1.4
7	3.4	5.0	15	7.8	*150	18	141	57	24	6.5	2.4	1.3
8	3.2	5.0	31	8.2	215	27	136	61	22	7.4	2.3	1.3
9	3.1	4.7	41	8.5	149	28	132	60	20	7.8	2.1	1.3
10	3.1	3.4	29	9.4	188	22	147	58	19	8.9	1.9	1.2
11	3.2	2.2	22	10	209	20	124	74	19	8.5	1.7	1.2
12	3.1	2.9	19	9.4	128	25	116	81	18	8.2	1.5	1.3
13	2.9	5.0	17	7.4	*94	48	113	74	19	7.4	1.5	1.4
14	2.9	5.2	*15	8.5	71	104	112	71	17	6.5	1.4	1.5
15	2.9	4.7	17	9.4	63	128	109	60	15	6.2	1.3	1.4
16	3.1	*4.4	15	8.5	52	168	107	52	14	5.5	1.3	1.3
17	3.2	5.2	14	9.8	48	90	109	52	13	5.2	1.1	1.3
18	3.4	5.5	12	8.9	43	76	116	60	13	5.2	1.3	1.2
19	3.4	5.8	13	9.4	32	81	113	58	12	5.2	1.5	1.2
20	3.4	6.5	12	8.2	b30	116	104	57	*11	5.0	2.7	1.2
21	3.4	9.8	10	11	b30	187	96	55	10	4.2	2.7	1.2
22	3.6	8.5	9.8	b12	35	130	85	52	8.9	3.8	2.4	1.3
23	3.6	6.8	9.8	b12	32	104	78	52	8.5	3.4	*2.3	1.5
24	3.8	6.5	9.4	*b13	26	107	78	*52	8.2	3.2	2.4	1.5
25	3.8	6.8	11	b13	31	130	78	49	7.4	3.2	2.5	1.5
26	4.0	6.5	11	b12	27	112	*76	52	6.8	3.2	2.0	*1.5
27	5.2	6.2	8.5	b11	31	113	73	55	6.2	*3.1	1.8	1.6
28	5.8	5.8	9.8	b11	28	*96	115	60	5.8	3.1	1.6	1.6
29	4.7	5.8	11	b10	-	107	138	49	5.2	2.8	1.5	1.8
30	4.4	6.2	11	b9	-	105	98	43	4.7	2.8	1.7	1.8
31	4.7	-	8.9	b8	-	81	-	39	-	2.8	2.1	-
Total	109.3	165.1	429.8	288.3	2,016	2,361	3,357	1,834	484.7	155.1	60.3	43.2
Mean	3.53	5.50	13.9	9.30	72.0	76.2	112	59.2	16.2	5.00	1.95	1.44
Ac-ft	217	327	852	572	4,000	4,680	6,660	3,640	961	308	120	86

Calendar year 1950: Max 118 Min 1.0 Mean 18.3 Ac-ft 13,270
Water year 1950-51: Max 215 Min 1.1 Mean 31.0 Ac-ft 22,420

Peak discharge (base, 150 cfs).--Feb. 7 (11:30 p.m.) 401 cfs (4.03 ft); Feb. 11 (1 a.m.) 367 cfs (3.90 ft); Mar. 16 (1 a.m.) 367 cfs (3.90 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

East Fork Quinn River near McDermitt, Nev.

Location.--Lat 41°59', long. 117°35', in sec. 9, T. 47 N., R. 39 E., on right bank 1 mile downstream from South Fork and 7 miles east of McDermitt.

Records available.--October 1948 to September 1951.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during year, 380 cfs Apr. 17 (gage height, 4.60 ft); minimum, 0.4 cfs Aug. 18.
1948-51: Maximum discharge, 394 cfs Mar. 31, 1950 (gage height, 4.70 ft); minimum, that of Aug. 18, 1951.

Remarks.--Records good.

Rating table, water year 1950-51, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-4)

0.9	0.5	1.7	29
1.0	1.4	1.9	41
1.2	5.8	2.5	88
1.3	8.8	3.5	206
1.5	18	3.9	267

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	4.0	5.3	7.9	b10	23	73	80	31	5.0	1.0	
2	2.7	4.0	5.3	8.8	b15	25	84	73	28	4.8	1.0	
3	2.7	3.7	12	8.8	18	20	102	69	26	4.5	1.0	
4	*2.7	3.5	35	8.5	34	24	128	67	25	4.2	1.0	
5	3.0	3.5	26	4.8	61	25	145	65	28	4.5	.9	
6	3.0	3.2	26	4.8	52	24	142	64	25	4.2	1.0	
7	3.0	3.2	53	5.0	*143	23	142	65	24	4.2	1.0	
8	2.8	3.2	74	6.7	255	22	141	65	22	4.2	1.0	
9	2.8	2.8	54	7.9	224	22	145	61	20	4.0	1.0	
10	2.8	2.5	39	8.2	257	15	139	58	19	3.7	1.0	
11	2.8	2.8	34	8.5	199	16	125	64	18	4.0	.9	a0.9
12	2.7	3.2	29	8.2	140	23	115	65	17	3.7	.9	
13	2.7	3.5	26	7.0	*102	30	111	64	16	3.2	.9	
14	2.7	3.7	*25	7.9	*76	40	109	59	14	2.8	.7	
15	2.8	3.5	24	8.2	66	54	107	54	14	2.5	.7	
16	2.8	*3.7	21	7.6	57	73	103	52	13	2.1	.7	
17	2.8	4.5	19	8.2	51	54	160	52	12	1.9	.6	
18	3.0	4.5	18	7.6	47	46	148	55	11	1.6	.6	
19	3.0	5.3	16	6.4	37	48	121	55	10	1.4	.8	
20	3.0	7.0	15	5.0		75	112	53	*9.6	1.4	1.0	
21	3.0	10	14	8.5	b35	111	102	52	9.2	1.4	.9	1.1
22	3.0	8.5	13	12		97	93	49	8.5	1.4	.9	.9
23	3.0	7.6	12	14		81	89	47	8.2	1.3	*.9	1.0
24	2.8	7.0	12	(*)	33	83	84	*44	7.9	1.2	1.0	1.1
25	2.8	6.4	11	23	33	92	80	42	7.3	1.2	.9	1.0
26	3.5	6.1	10		28	88	*81	40	7.0	1.1	.8	*1.0
27	4.8	5.8	9.2		27	86	76	39	6.4	*1.1	.7	1.0
28	4.2	5.5	9.6	b20	25	*77	85	37	6.1	1.1	.6	1.0
29	3.7	5.3	11	b15	-	80	88	36	5.5	1.1	a.9	1.0
30	3.5	5.5	10	b12	-	79	83	34	5.3	1.1	a.9	1.1
31	3.7	-	7.6	b10	-	72	-	33	-	1.0	a.9	-
Total	94.5	143.0	676.0	329.5	2,130	1,628	3,313	1,693	454.0	80.9	27.1	28.2
Mean	3.05	4.77	21.8	10.6	76.1	52.5	110	54.6	15.1	2.61	0.87	0.94
Ac-ft	187	284	1,340	654	4,220	3,230	6,570	3,360	900	160	54	56

Calendar year 1950: Max 188 Min 0.5 Mean 20.5 Ac-ft 14,860
Water year 1950-51: Max 257 Min 0.6 Mean 29.0 Ac-ft 21,020

Peak discharge (base, 100 cfs).--Feb. 7 (12 p.m.) 378 cfs (4.56 ft); Apr. 5 (8 p.m.) 186 cfs (3.39 ft); Apr. 17 (7 p.m.) 380 cfs (4.60 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for nearby stations, recorded range in stage, and weather records.

b Stage-discharge relation affected by ice.

Quinn River near McDermitt, Nev.

Location.--Lat 41°47', long. 117°48', in SW¼ sec. 15, T. 45 N., R. 37 E., on left bank 1½ miles above Flat Creek and 15½ miles (revised) south of McDermitt.

Records available.--October 1948 to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,240 ft (from river-profile map).

Extremes.--Maximum discharge during year, 219 cfs Apr. 29 (gage height, 3.63 ft); minimum, 0.4 cfs Jan. 28.
1948-51: Maximum discharge, that of Apr. 29, 1951; minimum, 0.2 cfs Dec. 22, 1948.

Remarks.--Records good.

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

1.4	0.7	1.7	5.5	2.6	72
1.5	1.6	1.9	13	3.0	122
1.6	3.2	2.2	32	3.6	214

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	0.8	1.0	0.9	0.6	25	109	187	25	1.3	1.2	0.7
2	.8	.8	1.0	.8	.6	20	105	171	23	1.3	1.2	.7
3	*.8	.7	1.2	.7	.7	17	106	146	21	1.2	1.2	.7
4	.9	.7	1.0	.9	3.5	18	119	132	20	1.2	1.3	.7
5	.9	.7	1.0	.8	6.0	11	139	114	18	1.2	1.4	.7
6	.9	.7	1.0	.8	15	15	156	102	18	1.2	1.4	.7
7	.9	.7	1.1	.8	17	20	164	94	17	1.2	1.4	.7
8	.8	.7	1.0	.8	22	27	164	91	15	1.2	1.3	.7
9	.8	.8	1.0	.8	39	25	157	88	13	1.2	1.0	.8
10	.8	.7	.9	.8	40	20	152	84	11	1.2	.9	.8
11	.8	.7	.9	.8	62	26	151	85	9.8	1.2	.8	.7
12	.8	.7	.9	.8	84	26	146	108	9.0	1.2	.7	.8
13	.8	.7	.9	.8	*76	40	144	118	7.7	1.2	.7	.9
14	.8	.8	*1.0	.8	68	51	133	130	7.0	1.2	.7	.8
15	.9	.8	1.0	.8	62	59	129	117	5.5	1.3	.6	.8
16	.9	*.8	.9	.8	50	70	132	99	5.0	1.3	.7	.8
17	.9	.8	.9	.9	45	86	140	86	4.1	1.2	.7	.8
18	.9	.9	.9	.8	40	87	172	90	3.4	1.2	.6	.8
19	.9	.9	.9	.8	31	85	185	86	3.2	1.2	.7	.9
20	.9	1.0	.9	.7	30	84	177	75	*3.0	1.2	.7	.9
21	.9	.9	.8	.8	30	96	160	67	2.7	1.1	.7	.9
22	.8	.8	.8	.8	35	119	150	59	2.6	1.1	.7	.9
23	.8	.8	.8	.8	35	128	138	51	2.4	1.1	*.7	.9
24	.8	.8	.8	*.9	36	130	129	*40	2.2	1.0	.7	.9
25	.8	.8	.8	1.5	33	133	133	34	2.1	1.1	.7	.9
26	.9	.9	.8	1.4	28	139	*139	31	1.9	1.1	.7	*.8
27	.9	.9	.8	.8	29	139	139	30	2.1	*1.1	.7	.7
28	.9	.8	.9	.7	29	*135	171	29	1.8	1.2	.7	.7
29	.8	.8	.9	.6	-	133	214	28	1.4	1.2	.7	.8
30	.8	.9	.9	.6	-	128	211	26	1.4	1.2	.7	.7
31	.8	-	.9	.6	-	118	-	26	-	1.2	.7	-
Total	26.2	23.8	28.6	25.6	947.4	2,210	4,464	2,624	259.3	36.8	26.9	23.6
Mean	0.85	0.79	0.92	0.83	33.8	71.3	149	84.6	8.64	1.19	0.87	0.79
Ac-ft	52	47	57	51	1,880	4,380	8,850	5,200	514	73	53	47

Calendar year 1950: Max 59 Min 0.6 Mean 6.31 Ac-ft 4,570
Water year 1950-51: Max 214 Min 0.6 Mean 29.3 Ac-ft 21,200

* Discharge measurement made on this day.

Twentymile Creek near Adel, Oreg.

Location.--Lat 42°04', long. 119°57' in NW¼ (corrected) sec. 25, T. 40 S., R. 23 E., on left bank 2 miles downstream from Twelvemile Creek and 8 miles southwest of Adel.

Drainage area.--194 sq mi, including 46 sq mi in Cowhead Lake area.

Records available.--March 1910 to July 1916, December 1917 to September 1919, March 1921 to June 1922 (published as Twentymile Creek near Warner Lake), September 1940 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,560.43 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to June 30, 1922, staff gage or water-stage recorder at site three-quarters of a mile downstream at various datums. Sept. 21, 1940, to Nov. 30, 1944, water-stage recorder at site 1½ miles upstream at different datum.

Average discharge.--16 years (1910-15, 1918-19, 1940-44, 1945-51), 43.4 cfs.

Extremes.--Maximum discharge during year, 2,340 cfs Feb. 7 (gage height, 9.8 ft, from flood mark); minimum, 2.4 cfs Aug. 5-8 but may have been lower during period of no gage-height record.

1910-16, 1917-19, 1921-22, 1940-51: Maximum discharge, 3,000 cfs Dec. 27, 1942 (gage height, 4.28 ft, site and datum then in use), from rating curve extended above 400 cfs by logarithmic plotting; minimum, 0.9 cfs Aug. 19, 23, 24, 1942.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of 240 acres above station.

Revisions (water years).--W 1090: 1945.

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

Oct. 1 to Feb. 7				Feb. 8 to Sept. 30			
0.3	2.3	1.5	116	0.4	1.8	1.5	71
.4	4.4	2.0	187	.5	3.2	2.0	133
.5	8.0	4.0	531	.6	5.4	3.0	291
.7	23	6.0	1,020	.7	8.8	4.0	475
1.0	53	8.0	1,640	1.0	27	6.0	950

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	5.5	5.1	b5.2	a50	a10	45	72	*62	a9.0	a2.6	3.2
2	4.0	5.5	4.4	b5.0	a70	a9.5	66	71	55	a8.2	a2.5	2.8
3	4.0	6.6	13	b4.8	a100	a9.0	99	64	53	a7.6	a2.5	2.8
4	4.0	5.8	127	b4.6	a200	a10	120	66	51	a7.2	a2.5	2.8
5	4.4	5.1	51	b4.5	782	a13	118	58	51	a6.8	a2.4	*2.7
6	4.4	5.1	40	b5.0	758	a16	98	150	50	a6.4	a2.4	2.7
7	4.2	4.8	81	b6.0	1,480	a20	98	277	47	a6.0	a2.4	2.7
8	4.2	4.4	54	7.3	*838	a16	90	156	43	a5.7	*2.4	2.7
9	4.0	4.8	40	7.3	515	a13	86	81	40	5.4	2.5	2.7
10	4.0	*4.2	27	b6.2	429	a12	94	*80	39	a5.0	2.7	2.8
11	4.0	4.2	*18	b5.8	335	a15	80	141	38	a4.8	2.7	2.7
12	4.0	5.1	17	b5.5	221	a20	80	109	38	a4.6	2.7	2.8
13	3.8	4.8	14	b5.3	122	a30	81	130	38	a4.5	2.7	2.8
14	3.8	5.1	35	b5.2	76	a40	a85	170	34	a4.3	2.7	2.8
15	3.8	4.8	41	b5.0	64	a90	a90	86	33	a4.1	2.8	2.8
16	4.0	5.1	24	b5.0	51	a200	a100	83	34	a3.9	2.8	2.8
17	4.2	5.8	17	b5.0	42	a180	a110	88	30	a3.8	2.8	2.8
18	4.4	9.4	14	b5.0	29	a160	a110	95	26	a3.7	2.8	3.0
19	4.8	7.6	14	b5.0	23	a180	a105	102	24	a3.5	2.8	3.0
20	4.4	6.6	12	b5.5	24	a250	a100	104	22	a3.4	2.8	2.8
21	4.4	8.7	11	b7.0	21	a200	a95	104	22	a3.3	2.8	2.7
22	4.4	7.6	10	b9.0	19	a150	a90	110	*21	a3.2	2.8	2.7
23	4.4	5.8	9.4	12	19	126	*86	123	a18	a3.1	3.0	2.7
24	4.4	5.8	8.7	*39	16	146	90	125	a16	a3.0	3.2	2.7
25	4.8	5.5	b8.0	78	16	178	86	127	a15	a2.9	3.2	2.7
26	6.2	5.5	b7.5	170	a14	178	84	127	a13	a2.9	3.0	2.5
27	6.9	5.1	b7.0	171	a13	165	86	133	a12	a2.8	3.0	2.5
28	5.5	5.1	b6.5	a50	a11	109	116	125	a11	a2.8	2.8	2.5
29	5.1	5.1	b6.2	a35	-	81	102	95	a10	a2.7	3.5	2.5
30	5.5	5.5	b5.8	a30	-	*39	79	84	a9.5	a2.6	3.7	2.7
31	5.5	-	b5.5	a35	-	50	-	72	-	a2.6	3.5	-
Total	139.5	170.0	734.1	744.2	6,338	2,715.5	2,769	3,408	955.5	139.8	87.0	82.4
Mean	4.50	5.67	23.7	24.0	226	87.6	92.3	110	31.8	4.51	2.81	2.75
Ac-ft	277	337	1,460	1,480	12,570	5,390	5,490	6,760	1,900	277	173	163

Calendar year 1950: Max 623 Min 2.0 Mean 50.9 Ac-ft 36,870
Water year 1950-51: Max 1,480 Min 2.4 Mean 50.1 Ac-ft 36,280

Peak discharge (base, 400 cfs).--Feb. 7 (6 p.m.) 2,340 cfs (9.8 ft); May 13 (9 p.m.) 401 cfs (3.61 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Deep Creek above Adel and Camas Creek near Lakeview.

b Stage-discharge relation affected by ice.

Camas Creek near Lakeview, Oreg.

Location.--Lat 42°13', long. 120°06', in N½ sec. 2, T. 39 S., R. 22 E., on left bank 0.2 mile downstream from Blue Creek and 12 miles east of Lakeview.

Drainage area.--63 sq mi, approximately.

Records available.--September 1912 to May 1915, December 1949 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 5,472.41 ft above mean sea level (Oregon State Highway Department construction survey bench mark). Sept. 11, 1912, to May 9, 1915, water-stage recorder or staff gage at site 500 ft upstream at different datum.

Extremes.--Maximum discharge during year, 394 cfs Apr. 10 (gage height, 3.53 ft; minimum, 4.2 cfs Sept. 18-21, 28, but may have been less during period of no gage-height record Sept. 8-20.
1912-14, 1949-51: Maximum discharge, 454 cfs Apr. 10, 1914 (gage height, 4.47 ft, site and datum then in use); minimum, 2 cfs Sept. 17-23, 1913.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversion for irrigation of about 1,200 acres above station.

Revisions.--W 410: Drainage area.

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

0.5	3.5	1.2	26	2.5	151
.7	7.4	1.5	44	3.0	250
.9	13	2.0	88	3.5	385

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	12	b13	b15	b30	b23	96	156	58	12	5.6	5.2
2	5.6	20	b11	14	b40	b22	123	138	51	11	5.4	5.2
3	5.9	15	10	b9.7	50	b20	172	142	47	11	4.9	5.0
4	7.2	12	14	b9.5	73	b25	227	159	44	11	5.0	4.9
5	8.7	10	b17	b9.0	84	b32	278	135	41	11	5.2	4.7
6	8.4	8.7	34	b9.0	73	b39	315	180	38	10	5.2	*4.7
7	6.5	8.2	104	b10	b117	b50	300	197	36	9.7	5.0	4.5
8	5.9	8.2	97	b11	148	b40	308	157	34	9.5	*4.9	a4.5
9	5.4	7.7	116	12	127	b30	320	140	32	9.2	5.0	a4.5
10	5.4	*5.6	106	12	*123	b25	337	*136	30	9.0	4.9	a4.4
11	5.2	6.3	*86	12	133	b25	300	245	28	8.7	4.9	a4.4
12	5.0	6.7	97	b12	111	b26	302	207	28	8.4	5.0	a4.4
13	*5.4	7.2	65	11	103	b27	*315	189	26	8.2	5.0	a4.4
14	5.0	7.9	90	b10	81	b28	322	165	24	7.9	5.0	a4.3
15	4.9	7.0	87	b9	71	b35	312	142	22	7.7	5.2	a4.3
16	5.2	6.7	64	b8	64	b49	308	133	21	7.7	5.2	a4.3
17	6.3	7.2	51	b7	57	b40	322	127	19	7.4	5.0	a4.3
18	6.7	15	44	*b6.5	54	b42	325	122	19	7.2	5.0	a4.2
19	6.1	19	46	b7	b50	b53	298	116	17	7.0	5.2	a4.2
20	5.6	37	40	b8	46	79	272	110	17	6.7	5.0	a4.2
21	5.6	59	b30	b10	46	104	238	104	*15	6.7	5.2	4.2
22	5.6	26	b24	b20	40	109	216	97	15	6.7	5.2	4.4
23	5.6	18	b25	30	38	104	199	91	15	*6.5	5.2	4.4
24	5.9	15	b19	37	b35	116	189	*87	14	6.5	5.6	4.4
25	6.7	b14	b19	41	b30	126	167	82	14	6.3	5.4	4.4
26	11	13	b20	41	b26	118	161	77	14	6.1	4.7	4.4
27	15	13	b19	b35	b25	122	185	79	13	5.9	4.9	4.7
28	9.2	11	19	b25	b24	118	225	72	13	5.6	5.0	4.4
29	17	10	20	b20	-	127	218	65	12	5.6	6.1	4.9
30	20	b12	b19	b15	-	*109	165	65	12	5.6	5.9	5.2
31	15	-	b14	b20	-	94	-	64	-	5.6	5.4	-
Total	236.4	418.4	1,420	495.7	1,899	1,959	7,515	3,979	769	247.4	160.2	136.0
Mean	7.63	13.9	45.8	16.0	67.8	63.2	250	128	25.6	7.98	5.17	4.53
Ac-ft	469	830	2,820	983	3,770	3,890	14,910	7,890	1,530	491	318	270

Calendar year 1950: Max 285 Min 3.0 Mean 47.4 Ac-ft 34,330
Water year 1950-51: Max 337 Min 4.2 Mean 52.7 Ac-ft 38,170

Peak discharge (base, 200 cfs).--Apr. 10 (3 a.m.) 394 cfs (3.53 ft); Apr. 29 (12:30 a.m.) 272 cfs (3.09 ft); May 6 (11 p.m.) 252 cfs (3.01 ft); May 11 (12 m.) 290 cfs (3.16 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Deep Creek above Adel and Drake Creek near Adel.

b Stage-discharge relation affected by ice.

Drake Creek near Adel, Oreg.

Location.--Lat 42°12', long. 120°00', near center of sec. 9, T. 39 S., R. 23 E., on left bank 400 ft downstream from highway bridge, 700 ft downstream from Parsnip Creek, 1 mile upstream from mouth, and 6½ miles west of Adel.

Drainage area.--47 sq mi, approximately.

Records available.--March to May 1915, December 1922 to May 1923, December 1949 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 5,076.42 ft above mean sea level (Oregon State Highway Department construction survey bench mark). Prior to May 9, 1923, staff gage at highway bridge at different datum. Dec. 16, 1949, to June 21, 1951, water-stage recorder 900 ft upstream at different datum.

Extremes.--Maximum discharge during year, 750 cfs Feb. 10 (gage height, 4.1 ft), from rating curve extended above 30 cfs by logarithmic plotting; minimum, 3.1 cfs Aug. 22 (due to temporary dam upstream).
1915, 1922-23, 1949-51: Maximum discharge, that of Feb. 10, 1951; minimum, 2.5 cfs Jan. 3-4, 12-14, 1950.

Remarks.--Records good except those above 100 cfs, which are fair, and those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 620 acres above station.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.0	6.2	5.8	b6.0	b6.0	a11	15	15	*8.0	8.1	7.3	8.1
2	6.0	6.2	b6.0	5.8	b6.0	a11	18	14	7.7	8.1	7.3	7.7
3	6.0	6.2	6.2	b5.8	6.2	a11	27	13	7.7	10	7.3	7.7
4	6.2	6.2	7.3	6.0	16	a11	34	13	7.7	8.6	7.0	7.3
5	6.8	6.2	6.0	b6.0	58	a15	32	13	7.7	8.6	7.0	*7.7
6	6.2	6.0	7.7	b6.0	70	a20	29	18	7.4	8.1	7.3	7.3
7	6.0	5.8	9.0	b6.5	252	a30	26	28	7.4	8.1	6.7	7.0
8	6.0	5.8	a8.0	b7.5	116	a25	24	17	7.4	8.1	*7.0	7.0
9	6.0	5.5	6.5	8.3	72	a20	24	13	7.4	8.1	7.3	7.0
10	6.0	*b5.8	6.0	6.5	102	a18	26	*11	7.4	7.7	7.3	7.0
11	6.0	b6.2	*6.0	5.8	68	a16	22	14	7.4	8.1	7.3	7.0
12	5.8	6.0	6.2	6.0	53	a15	20	14	7.7	7.7	7.3	7.0
13	*6.0	6.5	5.8	b6.0	38	a18	*20	14	7.7	7.7	7.0	7.0
14	6.0	7.0	9.3	6.0	a30	a20	21	19	8.0	7.3	7.0	7.0
15	5.8	5.8	10	5.5	a25	a25	20	12	8.0	7.3	6.7	7.0
16	6.0	7.0	8.0	b6.0	a22	a35	21	11	8.0	7.3	7.0	7.0
17	6.0	7.0	6.5	b6.2	a20	a35	24	9.7	8.0	7.0	7.0	7.0
18	6.0	7.7	6.2	*b6.2	a19	a30	23	9.7	8.4	7.0	7.0	7.3
19	6.0	6.8	6.2	b6.5	a18	a50	21	9.3	*8.4	7.0	7.3	7.3
20	6.0	6.5	6.0	b7.0	a17	196	19	8.9	a8.0	7.0	7.3	7.0
21	5.8	6.0	5.8	9.0	a16	*140	18	8.4	a8.0	7.0	7.7	7.0
22	5.8	6.0	5.5	7.0	a15	65	17	8.0	7.3	7.0	7.3	6.7
23	5.8	5.5	5.8	6.8	a14	*42	15	7.4	*8.1	*7.3	7.7	6.7
24	5.5	6.0	5.8	b6.5	a14	45	17	8.4	8.1	7.3	8.1	7.0
25	5.8	5.8	5.5	b6.5	a13	49	16	8.9	8.1	7.3	7.7	7.0
26	6.5	5.8	b5.2	7.0	a13	29	14	7.7	8.6	7.3	7.7	7.0
27	7.7	5.8	b5.2	b6.5	a12	26	15	8.4	8.1	7.3	7.7	7.0
28	6.5	5.8	5.8	b6.0	a12	18	23	7.0	8.1	7.3	8.1	7.0
29	6.5	6.0	5.8	b5.5	-	21	20	7.0	8.1	7.3	9.0	7.3
30	6.5	6.2	5.8	a5.5	-	*17	15	7.4	8.1	7.3	8.6	7.3
31	6.2	-	b5.8	a6.0	-	14	-	8.4	-	7.3	8.1	-
Total	189.4	185.3	200.7	197.9	1,123.2	1,078	636	363.6	236.0	236.6	230.1	214.4
Mean	6.11	6.18	6.47	6.38	40.1	34.8	21.2	11.7	7.87	7.63	7.42	7.15
Ac-ft	376	368	398	393	2,230	2,140	1,260	721	468	469	456	425

Calendar year 1950: Max 240 Min 2.5 Mean 12.6 Ac-ft 9,110
Water year 1950-51: Max 252 Min 5.2 Mean 13.4 Ac-ft 9,700

Peak discharge (base, 150 cfs).--Feb. 7 (4 p.m.) 503 cfs (3.48 ft); Feb. 10 (12 m.) 750 cfs (4.1 ft); Mar. 20 (9 p.m.) 383 cfs (2.21 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Camas Creek near Lakeview and Deep Creek above Adel.

b Stage-discharge relation affected by ice.

Deep Creek above Adel, Oreg.

Location.--Lat 42°11', long. 119°59', in E½ sec. 15, T. 39 S., R. 23 E., on right bank a third of a mile downstream from Drake Creek and 5 miles west of Adel.

Drainage area.--249 sq mi.

Records available.--September 1922 to September 1923 and October 1932 to September 1951 in reports of Geological Survey. September 1922 to September 1923 and October 1929 to September 1941 in reports of State engineer.

Gage.--Water-stage recorder. Datum of gage is 4,966.7 ft above mean sea level (Oregon State Highway Department construction survey bench mark). Prior to Dec. 21, 1922, staff gage and Dec. 21, 1922, to Sept. 30, 1923, and Oct. 10, 1929, to June 29, 1933, water-stage recorder, at same site and datum.

Average discharge.--23 years (1922-23, 1929-51), 106 cfs.

Extremes.--Maximum discharge during year, 1,420 cfs Feb. 10 (gage height, 4.75 ft); minimum, 11 cfs Aug. 15 (gage height, 0 52 ft).

1922-23, 1929-51: Maximum discharge, 5,030 cfs Dec. 11, 1937 (gage height, 7.5 ft, from floodmark), from rating curve extended above 1,200 cfs on basis of velocity-area studies; minimum, 1.7 cfs July 20, 27-29, 1934.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 5,500 acres above station.

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

Oct. 1 to Feb. 10				Feb. 11 to Sept. 30			
0.6	15	2.0	198	0.5	10	2.0	190
.8	27	3.0	485	.7	19	2.5	310
1.1	54	4.0	940	.9	32	3.0	470
1.5	106			1.2	62	4.0	950
				1.5	101		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	37	b38	b50	b65	b32	218	452	280	36	14	14
2	a17	52	b42	b45	b75	b30	272	407	245	34	14	15
3	a18	55	47	38	b90	b30	370	394	210	33	14	15
4	a20	41	129	b35	b110	b32	477	428	198	28	13	14
5	a25	35	116	b30	b180	35	569	379	206	27	13	*15
6	a23	33	126	b30	379	b40	621	491	194	26	13	15
7	a22	29	295	b35	802	b45	630	581	184	24	12	14
8	a21	29	238	b40	795	b40	634	442	172	23	*12	14
9	a20	28	232	b45	605	b35	670	394	164	22	12	14
10	a19	*26	220	b42	657	b30	735	*397	154	21	12	14
11	a18	27	180	b40	466	b40	656	670	143	21	12	14
12	a18	29	*211	b38	343	b50	661	648	141	20	12	14
13	18	29	163	b35	265	73	700	585	139	20	12	14
14	a18	31	198	b33	235	112	745	533	134	18	12	14
15	a18	24	222	b31	206	299	730	456	126	18	12	14
16	a19	30	170	b30	186	328	745	446	118	18	12	14
17	a20	33	136	29	170	260	794	456	112	17	12	14
18	a19	91	122	*28	139	a250	854	460	101	16	12	14
19	a18	106	122	b28	116	a300	794	432	94	16	12	14
20	a17	94	119	b28	b100	450	725	470	83	16	13	14
21	a17	159	100	b35	b90	525	661	449	*75	16	13	14
22	a17	91	88	45	b80	394	597	449	70	16	13	14
23	a17	63	85	47	b70	308	*581	466	64	16	13	14
24	a18	61	80	62	b60	313	577	474	62	16	13	14
25	a20	56	75	b75	b50	349	537	463	58	16	13	14
26	a30	52	72	90	b45	290	491	449	55	15	12	14
27	a50	49	69	b80	b40	292	521	460	46	14	12	14
28	37	48	69	b70	b35	272	621	455	45	14	12	14
29	41	43	69	b60	-	285	609	373	42	14	14	14
30	52	b40	66	b50	-	*255	480	352	40	14	14	16
31	47	-	55	b55	-	235	-	325	-	14	14	-
Total	731	1,521	3,954	1,380	6,454	6,029	18,275	14,216	3,755	619	393	426
Mean	23.6	50.7	128	44.5	230	194	609	459	125	20.0	12.7	14.2
Ac-ft	1,450	3,020	7,840	2,740	12,800	11,960	36,250	28,200	7,450	1,230	780	845

Calendar year 1950: Max 668 Min 11 Mean 150 Ac-ft 108,800
Water year 1950-51: Max 854 Min 12 Mean 158 Ac-ft 114,600

Peak discharge (base, 600 cfs).--Feb. 7 (8 p.m.) 1,260 cfs (4.51 ft); Feb. 10 (1:30 p.m.) 1,420 cfs (4.75 ft); Mar. 15 (9 p.m.) 836 cfs (3.81 ft); Mar. 20 (11 p.m.) 794 cfs (3.74 ft); Apr. 18 (8 a.m.) 944 cfs (3.99 ft); Apr. 29 (4:30 a.m.) 695 cfs (3.55 ft); May 7 (4 a.m.) 680 cfs (3.52 ft); May 11 (4 p.m.) 818 cfs (3.78 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Camas Creek near Lakeview, Drake Creek near Adel, and Twentymile Creek near Adel.

b Stage-discharge relation affected by ice.

Honey Creek near Plush, Oreg.

Location.--Lat 42°25', long. 119°55', in NW¼ sec. 29, T. 36 S., R. 24 E., on right bank at mouth of canyon, 1 mile northwest of Plush, and 4 miles downstream from Twelvemile Creek.
Drainage area.--156 sq mi.
Records available.--May to December 1909 (gage heights only), January 1910 to September 1914, March to May 1915, March to August 1921, March to June 1922, and October 1949 to September 1951 in reports of Geological Survey. April 1930 to September 1941 in reports of State engineer. October 1941 to September 1949 in files of State engineer.
Gage.--Water-stage recorder. Prior to Feb. 23, 1910, staff gage at wagon bridge at Plush at different datum. Feb. 24, 1910, to Jan. 12, 1912, staff gage; Jan. 13, 1912, to May 16, 1915, water-stage recorder; Mar. 15 to Apr. 6, 1921, staff gage; Apr. 7 to Aug. 31, 1921, water-stage recorder; and Mar. 19 to June 30, 1922, staff gage; all at site half a mile upstream from present gage at different datums.
Average discharge.--21 years (1910-14, 1930-41, 1945-51), 23.8 cfs.
Extremes.--Maximum discharge during year, 852 cfs Feb. 7 (gage height, 7.05 ft), from rating curve extended above 120 cfs by logarithmic plotting; minimum, 0.1 cfs Aug. 4-10, 14, Sept. 14-16.
1909-15, 1921-22, 1930-51: Maximum discharge, about 3,840 cfs Apr. 15, 1915 (gage height, 9.20 ft, site and datum then in use), from rating curve extended above 2,300 cfs by logarithmic plotting (flood caused by failure of storage dam on Snyder Creek); maximum discharge due to natural causes, 2,240 cfs Feb. 24, 1910 (gage height, 6.30 ft, site and datum then in use); no flow at times.
Remarks.--Records good except those for periods of backwater from beaver dam, which are fair, and those for periods of ice effect or no gage-height record, which are poor. About 2,300 acres are irrigated above station.
Revisions.--W 410: Drainage area.

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

Oct. 1 to Feb. 7				Feb. 8 to Sept. 30			
0.4	0.5	1.5	42	0.2	0.1	0.9	10
.5	1.1	2.0	76	.3	.2	1.5	38
.6	2.4	3.0	166	.4	.4	2.0	70
.7	4.2	4.0	282	.5	.9	3.0	155
.9	11	5.0	429	.6	2.0	4.0	266
1.1	20			.7	3.5		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	5.5	7.8	b7.5	16	a9	46	107	62	6.2	0.3	0.2
2	1.2	4.0	4.5	b7.0	16	a8	52	88	53	5.6	.3	.2
3	1.5	5.2	7.4	b6.5	14	a8.5	67	83	48	5.6	.2	.3
4	1.6	4.5	17	b6.0	24	a7	91	88	45	5.3	.2	.2
5	2.1	4.2	16	b6.0	76	a8	119	83	36	5.0	.2	.3
6	2.3	4.0	16	b6.5	88	a10	134	108	34	4.7	.1	**.3
7	2.1	3.8	59	b7.0	392	a15	137	127	36	4.4	.1	.3
8	1.9	3.7	41	b9.0	154	a13	135	100	33	4.4	**.1	.3
9	2.0	3.5	38	15	87	a11	145	84	32	4.1	.1	.4
10	1.9	*3.3	37	13	74	a9	177	*83	28	4.1	.1	.4
11	1.9	2.8	30	12	66	a11	143	141	26	3.8	.2	.4
12	1.6	3.7	*34	11	55	a13	148	143	26	3.8	.2	.4
13	1.5	3.8	28	b9.0	*41	a16	170	154	26	3.5	.2	.4
14	1.4	4.0	46	b8.0	40	22	185	165	26	3.2	.1	.1
15	1.2	4.0	65	b6.5	36	87	181	121	24	2.8	.2	.1
16	1.2	4.0	44	b5.5	30	114	187	103	22	2.4	.2	.2
17	1.5	4.5	30	4.8	30	90	217	96	20	2.3	.2	.2
18	1.6	8.5	24	4.2	24	78	209	96	17	a2.0	.2	.4
19	2.0	15	22	5.5	20	88	199	93	15	a1.6	.2	.3
20	2.1	15	21	6.4	b18	134	174	89	14	a1.4	.2	.4
21	2.0	26	20	7.8	b17	142	154	87	12	a1.1	.2	.5
22	1.9	18	19	7.8	b15	87	142	84	11	a.9	.2	.6
23	1.9	11	18	8.8	b14	62	136	84	10	.8	.2	.8
24	2.0	9.9	16	*12	b13	58	124	87	9.6	.8	.2	.8
25	2.0	9.6	16	19	b12	68	114	82	9.3	.8	.2	.6
26	2.3	9.2	15	30	b11	60	107	82	8.2	.8	.2	.8
27	4.5	8.5	13	37	a10	60	117	82	7.6	.6	.2	.8
28	4.8	7.8	b11	27	a9.5	54	136	79	6.5	.5	.2	.9
29	5.5	7.4	b10	13	-	55	135	84	6.5	.3	.2	1.1
30	9.2	8.1	b9	14	-	*52	114	76	6.2	.4	.2	1.3
31	7.8	-	7.8	16	-	46	-	72	-	.4	.2	-
Total	77.5	222.5	742.5	348.8	1,402.5	1,494.5	4,195	3,051	709.9	83.6	5.8	14.0
Mean	2.50	7.42	24.0	11.3	50.1	48.2	140	98.4	23.7	2.70	0.19	0.47
Ac-ft	154	441	1,470	692	2,780	2,960	8,320	6,050	1,410	166	12	28

Calendar year 1950: Max 152 Min 0.2 Mean 24.5 Ac-ft 17,740
Water year 1950-51: Max 392 Min 0.1 Mean 33.8 Ac-ft 24,480

Peak discharge (base, 150 cfs).--Feb. 7 (5 p.m.) 852 cfs (7.05 ft); Mar. 15 (10 p.m.) 340 cfs (4.57 ft); Mar. 20 (12 p.m.) 330 cfs (4.50 ft); Apr. 10 (6:30 a.m.) 216 cfs (3.58 ft); Apr. 17 (6:30 a.m.) 264 cfs (3.98 ft); Apr. 29 (4:30 a.m.) 158 cfs (3.03 ft); May 11 (3 p. m.) 187 cfs (3.32 ft); May 14 (3 a.m.) 196 cfs (3.40 ft).
* Discharge measurement made on this day.
** Field estimate made on this day.
a No gage-height record; discharge estimated on basis of records for Twentymile Creek near Adel and Deep Creek above Adel.
b Stage-discharge relation affected by ice.
Note.--Backwater from beaver dam Oct. 1-9, Nov. 21, 22, Dec. 6-25, Aug. 11 to Sept. 30.

Chewaucan River above Conn ditch, near Paisley, Oreg.

Location.--Lat 42°41', long. 120°35', in SW¼ sec. 27, T. 33 S., R. 18 E., on right bank at bridge 20 ft downstream from former power plant of Paisley Electric Co., 700 ft upstream from diversion dam of Conn ditch, a quarter of a mile downstream from Mill Creek, and 2½ miles west of Paisley.

Drainage area.--275 sq mi.

Records available.--April 1912 to September 1921, May 1924 to September 1951. November 1912 to September 1914, published as "above Mill Creek near Paisley." October 1914 to September 1921, published as "near Paisley."

Gage.--Water-stage recorder. Datum of gage is 4,504.9 ft above mean sea level (river-profile survey). Apr. 3 to July 13, 1912, reference point at present site at different datum. Nov. 6, 1912, to Sept. 30, 1914, staff gage and Oct. 1, 1914, to Sept. 30, 1921, water-stage recorder at various sites about half a mile upstream above Mill Creek at various datums.

Average discharge.--36 years (1912-21, 1924-51), 122 cfs.

Extremes.--Maximum discharge during year, 1,040 cfs Apr. 17, 18 (gage height, 4.16 ft); minimum, 28 cfs Aug. 16-19; minimum gage height, 1.52 ft Aug. 17, 18.
1912-21, 1924-51: Maximum discharge, 1,680 cfs Dec. 11, 1937 (gage height, 4.93 ft); no flow part of each day Dec. 7, 1929, Dec. 12, 1932 (result of freeze-up).

Remarks.--Records good except those for periods of ice effect, which are poor. Diversions for irrigation of about 2,500 acres above station.

Revisions.--W 860: Drainage area.

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

Oct. 1 to Feb. 7				Feb. 8 to Sept. 30			
1.5	25	2.5	177	1.5	26	3.0	345
1.7	42	3.0	325	1.7	43	3.5	580
2.0	80	3.5	555	2.0	81	4.1	990
				2.4	157		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31	90	b75	b80	b75	b55	280	552	412	74	34	34
2	31	118	67	b77	b85	b52	*321	525	373	71	34	33
3	32	128	80	b75	103	b50	373	515	353	68	32	33
4	45	98	101	b73	118	b55	439	530	341	64	32	32
5	51	88	136	70	166	b60	515	500	317	64	36	*32
6	58	79	218	b65	205	b65	552	592	302	64	37	34
7	41	73	465	b75	524	b60	574	598	280	62	34	32
8	37	73	300	b90	520	b55	610	536	267	60	33	32
9	33	69	269	114	466	b50	664	536	246	58	32	32
10	32	48	228	103	466	b50	721	547	234	55	31	32
11	31	63	225	94	495	b60	707	*652	222	53	30	31
12	31	67	294	82	381	b80	735	634	219	52	30	31
13	30	*60	220	79	284	120	798	616	213	51	30	31
14	30	58	467	b75	267	162	854	569	202	48	*30	31
15	30	54	349	b70	*240	356	889	547	190	47	29	30
16	32	65	262	b68	202	357	910	542	182	45	28	30
17	38	62	218	66	204	246	974	564	170	45	28	31
18	65	116	198	b64	174	222	*990	580	160	44	28	32
19	42	114	193	b62	136	270	974	598	146	43	28	29
20	37	105	191	b60	b120	345	903	610	141	*41	29	29
21	36	168	162	b70	b110	398	840	616	132	41	31	29
22	33	109	b150	b80	b100	345	784	610	126	41	32	29
23	33	85	b140	96	b90	298	770	622	116	40	32	30
24	35	b80	b130	126	b80	333	721	622	*111	39	32	30
25	38	b80	b120	*144	b70	357	688	604	104	38	31	30
26	54	88	b110	157	b65	325	670	592	100	38	30	31
27	83	88	b105	140	b60	337	664	592	94	36	29	31
28	107	91	b100	103	b57	329	749	569	89	36	28	31
29	164	85	b95	79	-	345	658	536	84	36	37	33
30	175	b80	b90	b60	-	317	586	490	78	35	37	35
31	109	-	85	b65	-	288	-	448	-	35	36	-
Total	1,622	2,582	5,843	2,662	5,863	6,442	20,913	17,644	6,004	1,524	980	940
Mean	52.3	86.1	188	85.9	209	208	697	569	200	49.2	31.6	31.3
Ac-ft	3,220	5,120	11,590	5,280	11,630	12,780	41,480	35,000	11,910	3,020	1,940	1,860

Calendar year 1950: Max 765 Min 24 Mean 154 Ac-ft 111,400
Water year 1950-51: Max 990 Min 28 Mean 200 Ac-ft 144,800

Peak discharge (base, 500 cfs).--Dec. 7 (7:30 a.m.) 510 cfs (3.41 ft); Dec. 14 (2 p.m.) 622 cfs (3.62 ft); Feb. 7 (4 p.m.) 934 cfs (4.08 ft); Mar. 15 (5 p.m.) 682 cfs (3.67 ft); Mar. 20 (11:30 p.m.) 542 cfs (3.43 ft); Apr. 17 (7 to 9 a.m.) 1,040 cfs (4.16 ft); Apr. 18 (8:30 a.m.) 1,040 cfs (4.16 ft); May 6 (6 to 9 p.m.) 721 cfs (3.73 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Ana River near Summer Lake, Oreg.

Location.--Lat 43°00', long. 120°45', in SE¼ sec. 6, T. 30 S., R. 17 E., on left bank 300 ft downstream from Ana River Reservoir and 2 miles northeast of Summer Lake Post Office.

Records available.--June to September 1951 in reports of Geological Survey. October 1929 to September 1939 in reports of State engineer.

Gage.--Water-stage recorder. Altitude of gage is 4,160 ft (from plans of Ana River Reservoir Dam). Prior to June 18, 1951, at site 80 ft downstream at different datum.

Extremes.--Maximum discharge during period June 18 to Sept. 30, 86 cfs June 24, 25, Sept. 30 (gage height, 2.88 ft); minimum, 30 cfs June 18-24.
1929-39, 1951: Maximum discharge, 186 cfs Sept. 15, 1936 (gage height, 3.87 ft, site and datum then in use); minimum, 5 cfs Apr. 29, 1937.

Remarks.--Records good. Flow regulated to some extent by Ana River Reservoir. Summer Lake Canal diverts from reservoir 300 ft upstream for irrigation of about 5,000 acres along west side of Summer Lake.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	83	49	45
2							†84		-	55	44	46
3									-	48	45	49
4									-	46	46	*53
5									-	46	50	55
6									-	*45	49	61
7									-	39	*40	60
8									-	42	37	60
9									-	51	37	60
10									-	54	*37	61
11									-	59	37	61
12									-	57	37	61
13									-	57	36	*61
14		†85							-	56	35	61
15									-	56	35	61
16									-	56	35	61
17									-	56	34	61
18									*30	56	34	61
19									30	56	34	61
20									30	58	34	61
21									30	57	34	61
22									30	57	35	61
23									30	57	35	61
24									57	56	36	61
25									85	56	36	61
26									85	56	37	61
27									83	56	37	61
28									83	55	37	61
29									83	55	38	61
30									83	*54	42	74
31		-					-		-	53	45	-
Total									-	1,686	1,197	1,783
Mean									-	54.4	38.6	59.4
Ac-ft									-	3,340	2,370	3,540
(‡)									-	2,040	2,630	1,460
Adjusted for diversion in Summer Lake Canal												
Mean									-	87.5	81.3	84.0
Cfsm									-	-	-	-
In.									-	-	-	-
Ac-ft									-	5,380	5,000	5,000

Observed

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

Calendar year	: Mean	Cfsm	In.	Ac-ft
Water year	: Mean	Cfsm	In.	Ac-ft

* Discharge measurement made on this day.
† Result of discharge measurement.
‡ Diversion in Summer Lake Canal, in acre-feet.
Note.--Figures of daily discharge do not include water diverted in Summer Lake Canal.

Silver Creek near Silver Lake, Oreg.

Location.--Lat 43°07', long. 121°04', in SW¼ sec. 28, T. 28 S., R. 14 E., on right bank 1½ miles downstream from diversion dam of Silver Lake Irrigation District, 1½ miles southwest of town of Silver Lake, and 3 miles upstream from Bridge Creek.

Drainage area.--221 sq mi.

Records available.--December 1904 to March 1907, January 1909 to September 1951.

Gage.--Water-stage recorder and, since Sept. 15, 1932, concrete control. Datum of gage is 4,361.28 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to May 24, 1932, staff, inclined gage, or water-stage recorder at practically same location at datum 1.00 ft higher or staff gages at diversion dam outlets 1½ miles upstream at different datum.

Average discharge.--39 years (1905-6, 1909-27, 1929-41, 1943-51), including Silver Lake Irrigation District Canal, 24.3 cfs.

Extremes.--Maximum discharge during year, 357 cfs Apr. 18 (gage height, 4.74 ft); minimum, 2.4 cfs Oct. 1, 13, 17, 18.
1904-7, 1909-51: Maximum discharge, 1,800 cfs Mar. 20, 1907 (gage height, 10.08 ft, present datum), from rating curve extended above 700 cfs; no flow at times in 1931, 1932, 1934, 1937.

Remarks.--Records good except those for periods of ice effect, which are poor. Flow regulated by reservoir (capacity, 800 acre-ft) above diversion dam 1½ miles upstream from station and by Thompson Valley Reservoir (capacity, 17,400 acre-ft 11 miles upstream from station, both of which are owned by the Silver Lake Irrigation District. No water was diverted upstream from station by Silver Lake Irrigation District Canal during year; canal out of repair.

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

1.6	2.0	1.9	12	3.0	106
1.7	4.2	2.2	31	4.0	238
1.8	7.4	2.5	55	4.8	367

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	14	7.4	29	26	*38	78	*172	70	42	27	22
2	2.7	12	7.4	30	27	b40	*84	162	68	44	27	22
3	2.7	10	8.3	30	27	b40	94	151	66	47	27	22
4	2.7	9.2	8.3	30	27	37	105	148	65	48	27	*22
5	3.1	8.3	8.3	b25	28	b37	119	145	64	49	26	22
6	3.3	7.4	12	b25	30	b37	124	146	62	*49	26	21
7	3.3	7.1	40	25	42	b36	128	176	61	48	25	20
8	3.3	7.1	57	25	60	37	132	191	60	48	25	19
9	3.3	6.4	65	26	69	b32	143	187	60	47	25	19
10	3.3	6.4	69	27	82	b34	152	178	58	47	*25	19
11	3.1	5.8	61	28	88	b34	160	174	57	47	25	19
12	3.1	5.8	61	b26	85	34	182	172	57	45	25	19
13	3.1	5.8	59	25	75	35	222	164	57	44	24	19
14	3.1	*5.5	65	25	68	b34	268	155	57	43	24	19
15	2.9	5.2	80	25	63	40	306	145	54	42	23	19
16	2.9	5.8	69	b25	57	55	340	136	53	41	23	19
17	2.9	5.5	62	25	55	53	352	129	52	41	23	19
18	2.9	5.8	57	24	52	50	345	123	52	40	23	18
19	2.9	11	*53	23	b46	50	326	*118	51	40	23	17
20	2.9	12	50	23	48	56	314	113	50	39	23	16
21	3.1	11	46	23	46	68	284	106	50	39	23	16
22	3.1	10	42	24	45	73	262	102	48	39	22	16
23	3.1	8.8	40	25	b42	69	241	97	48	38	23	15
24	3.1	7.9	38	28	b42	70	224	92	*46	38	23	14
25	3.1	7.4	37	b31	b40	77	209	87	46	38	23	14
26	3.5	7.1	34	35	b42	76	195	84	45	37	22	13
27	4.0	7.1	33	b32	b38	79	188	81	44	34	22	13
28	7.9	7.1	32	b32	b38	81	187	79	44	29	22	12
29	12	7.1	32	b30	-	87	196	77	44	28	22	12
30	22	7.1	32	b27	-	84	187	76	43	*28	22	12
31	19	-	31	25	-	81	-	74	-	28	22	-
Total	144.1	236.7	1,296.7	833	1,388	1,654	6,147	4,040	1,632	1,267	742	529
Mean	4.65	7.89	41.8	26.9	49.6	53.4	205	130	54.4	40.9	23.9	17.6
Ac-ft	286	469	2,570	1,650	2,750	3,280	12,190	8,010	3,240	2,510	1,470	1,050

Calendar year 1950: Max 80 Min 2.5 Mean 23.1 Ac-ft 16,710
Water year 1950-51: Max 352 Min 2.7 Mean 54.5 Ac-ft 39,480

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

Silvies River near Burns, Oreg.

Location.--Lat 43°43', long. 119°11', in NW¼ sec. 31, T. 21 S., R. 30 E., on left bank 1 mile downstream from dam site for proposed lower Silvies Reservoir, 5 miles downstream from Emigrant Creek, and 11 miles northwest of Burns.

Drainage area.--934 sq mi.

Records available.--May 1903 to July 1906, December 1908 to September 1951.

Gage.--Water-stage recorder. Prior to Dec. 1, 1911, and June 24, 1917, to Apr. 6, 1922, staff gage at site 3 miles downstream at different datums. Dec. 1, 1911, to June 20, 1917, water-stage recorder at site 1¾ miles downstream at different datum. Apr. 7, 1922, to Oct. 1, 1941, water-stage recorder at site 400 ft upstream at present datum.

Average discharge.--38 years (1903-5, 1909-12, 1917-21, 1922-51), 150 cfs.

Extremes.--Maximum discharge during year, 2,180 cfs Apr. 8 (gage height, 13.12 ft); minimum recorded, 8 cfs Oct. 1.
1903-6, 1908-51: Maximum discharge, 4,730 cfs Apr. 15, 1904 (gage height, 17.12 ft, site and datum then in use); no flow July 19 to Sept. 22, 1934.

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation above station primarily with flood water.

Revisions.--W 860: Drainage area.

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

0.4	7	1.5	54	10.0	1,120
.6	12	2.0	89	12.0	1,610
1.0	26	4.0	293	13.0	2,100

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8	37	*23	64	45	125	904	891	159	42	17	13
2	9	44	25	74	50	*120	968	873	150	40	16	11
3	10	56	30	81	70	110	1,070	768	150	40	15	10
4	*11	50	40	70	90	110	1,270	690	145	45	14	10
5	14	49	45	65	121	120	*1,540	658	140	50	13	10
6	16	50	56	55	137	130	1,830	621	135	60	11	10
7	17	47	79	50	176	141	1,980	595	130	55	*10	10
8	17	44	91	55	300	115	2,090	571	130	50	10	10
9	15	42	98	65	600	100	*2,080	530	125	48	10	10
10	17	35	99	60	700	90	1,950	504	120	45	11	10
11	15	32	93	*59	600	100	1,830	495	*116	42	12	10
12	*15	40	91	55	500	120	1,710	572	110	40	12	10
13	15	38	87	50	400	140	1,660	608	100	38	12	10
14	15	37	89	60	350	168	1,650	603	*95	36	12	10
15	15	36	95	60	*340	210	1,630	595	90	35	11	10
16	17	38	97	55	300	450	1,560	552	85	33	10	9
17	20	39	90	65	280	*380	1,490	485	80	32	10	9
18	19	39	88	60	260	350	1,400	437	75	30	9	9
19	25	41	85	60	250	300	1,310	398	70	29	9	9
20	25	43	83	55	220	500	1,220	369	68	28	9	9
21	24	41	80	65	210	900	1,110	334	65	27	9	9
22	24	38	74	82	190	800	1,010	313	62	26	9	9
23	24	37	73	83	180	600	938	291	60	25	9	9
24	24	38	68	86	170	*700	872	258	58	25	9	9
25	24	44	57	91	160	821	796	236	55	24	9	10
26	24	40	55	95	150	841	730	207	52	23	9	10
27	30	35	50	90	140	908	680	201	50	22	9	10
28	30	30	60	75	130	877	721	194	48	22	9	11
29	34	28	74	60	-	*918	936	183	45	21	9	12
30	39	25	76	50	-	988	911	165	44	20	10	13
31	36	-	75	40	-	*928	-	162	-	19	15	-
Total	628	1,193	2,226	2,035	7,119	13,160	39,826	14,359	2,812	1,072	339	301
Mean	20.3	39.8	71.8	65.6	254	425	1,328	463	93.7	34.6	10.9	10.0
Ac-ft	1,250	2,370	4,420	4,040	14,120	26,100	78,990	28,480	5,580	2,130	672	597

Calendar year 1950: Max 1,120 Min 5 Mean 152 Ac-ft 110,200
Water year 1950-51: Max 2,090 Min 8 Mean 233 Ac-ft 168,700

* Discharge measurement made on this day.

Note.--No gage-height record Feb. 8-14, Mar. 15-24, June 2 to Sept. 30; discharge estimated on basis of records for Malheur River near Drewsey and Silver Creek near Riley except June 2, 11, 14, July 29, Aug. 7, 8, Sept. 2, 24-28 when discharge is based on staff-gage readings. Stage-discharge relation affected by ice Nov. 26 to Dec. 5, Dec. 26, 27, Jan. 5-21, Jan. 27 to Feb. 4, Feb. 15 to Mar. 6, Mar. 8-13.

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Donner und Blitzen River near Frenchglen, Oreg.

Location.--Lat 42°47', long. 118°52', in NW¼ sec. 20, T. 32 S., R. 32½ E., on left bank 1½ miles upstream from upper diversions for Malheur Migratory Waterfowl Refuge, 2 miles downstream from Fish Creek, and 3½ miles southeast of Frenchglen.

Drainage area.--180 sq mi, approximately.

Records available.--December 1937 to September 1951 in reports of Geological Survey. May 1910 to September 1921 (published as "near Diamond") and July 1929 to September 1930 in reports of State engineer.

Gage.--Water-stage recorder and concrete control. Datum of gage is 4,254 ft above mean sea level (surveys of U. S. Fish and Wildlife Service). Prior to December 1937, staff gages at several sites downstream at various datums.

Average discharge.--21 years (1911-13, 1914-16, 1917-21, 1938-51), 123 cfs.

Extremes.--Maximum discharge during year, 2,420 cfs Feb. 7 (gage height, 5.58 ft), from rating curve extended above 1,100 cfs by velocity-area studies and logarithmic plotting; minimum, 14 cfs Jan. 29, 30 (gage height, 1.68 ft).
1910-21, 1937-51: Maximum discharge, 2,870 cfs May 5, 1942 (gage height, 5.85 ft), from rating curve extended as described above; minimum, 8 cfs (ice jam upstream) Jan. 14, 1940.

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

Revisions.--W 330: Drainage area (former site). W 860: Drainage area (present site).

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

1.8	19	2.5	86	3.5	425
2.0	30	2.8	149	4.0	730
2.2	47	3.1	245	4.6	1,230

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	40	a40	47	b50	*b55	123	223	a250	119	49	42
2	39	74	a35	51	63	56	149	206	a240	114	47	41
3	39	68	a40	47	59	45	183	216	a230	108	46	41
4	38	50	a45	51	b150	57	223	220	a220	114	46	40
5	41	46	*52	b30	312	42	249	206	a250	104	46	39
6	42	44	87	b25	395	49	261	220	a310	90	46	39
7	41	43	149	b28	1,150	49	281	223	a490	88	45	39
8	40	43	76	b40	523	51	298	216	a420	88	44	38
9	39	42	63	b50	362	51	321	238	a380	86	*44	39
10	38	b35	63	55	372	b40	334	281	a360	83	43	38
11	38	b40	59	51	231	b45	312	415	a330	78	42	38
12	37	42	63	*b45	190	54	330	370	a310	76	42	39
13	37	41	59	b40	127	58	357	370	a290	74	41	40
14	37	42	66	51	102	93	380	339	a280	72	41	38
15	38	39	68	45	90	226	375	308	*277	70	41	37
16	38	40	62	b38	80	223	357	326	281	67	40	36
17	38	42	57	47	77	152	344	357	234	66	40	36
18	39	42	57	b35	72	125	330	380	206	64	40	39
19	*38	a40	57	b30	b60	308	321	405	193	64	41	38
20	38	a45	56	b30	b65	708	308	a380	183	63	41	36
21	37	a40	51	b45	66	450	273	a360	174	61	41	36
22	37	a34	50	57	62	245	257	a350	157	58	41	39
23	37	a32	51	82	64	166	257	a340	152	57	44	39
24	38	a37	49	155	59	193	245	a330	149	56	44	39
25	38	a45	49	132	b45	206	231	a310	139	54	42	*38
26	39	a59	b45	125	b49	166	238	a300	135	52	41	38
27	41	a70	b48	97	b48	155	238	a300	139	51	39	37
28	39	a47	51	63	b45	132	281	a300	130	50	42	38
29	38	a40	59	31	-	152	257	a290	125	49	42	39
30	38	a49	66	b23	-	147	238	a280	119	49	42	39
31	38	-	48	b25	-	127	-	a260	-	49	42	-
Total	1,194	1,351	1,821	1,671	4,968	4,626	8,351	9,319	7,153	2,274	1,325	1,155
Mean	38.5	45.0	58.7	53.9	177	149	278	301	238	73.4	42.7	38.5
Ac-ft	2,370	2,680	3,610	3,310	9,850	9,180	16,560	18,480	14,190	4,510	2,630	2,290

Calendar year 1950: Max 570 Min 18 Mean 106 Ac-ft 76,660
Water year 1950-51: Max 1,150 Min 23 Mean 124 Ac-ft 89,660

Peak discharge (base, 650 cfs).--Feb. 7 (7 p.m.) 2,420 cfs (5.58 ft); Mar. 20 (7 p.m.) 2,020 cfs (5.28 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 Bridge Creek near Frenchglen.
b Stage-discharge relation affected by ice.

Bridge Creek near Frenchglen, Oreg.

Location.--Lat 42°50', long. 118°51', in NW¼ sec. 33, T. 31 S., R. 32½ E., on right bank at mouth of canyon, 1,000 ft upstream from road crossing, and 3½ miles northeast of Frenchglen.

Drainage area.--30 sq mi, approximately.

Records available.--March 1911 to September 1916, December 1937 to September 1951.

Gage.--Water-stage recorder and concrete control. Datum of gage is 4,184.93 ft above mean sea level (surveys of U. S. Fish & Wildlife Service). Mar. 18, 1911, to Sept. 30, 1916, staff gage at site half a mile upstream at different datum. Dec. 21, 1937, to May 17, 1938, staff gage at site 1,000 ft downstream at different datum. May 18, 1938, to Aug. 22, 1939, staff gage at present site and datum.

Average discharge.--17 years (1912-16, 1938-51), 14.0 cfs.

Extremes.--Maximum discharge during year, 72 cfs Jan. 24 (gage height, 1.63 ft); minimum, 7.6 cfs Mar. 11-13 (gage height, 0.94 ft).
1911-16, 1937-51: Maximum discharge, 332 cfs Feb. 22, 1943 (gage height, 2.55 ft), from rating curve extended above 55 cfs by logarithmic plotting; minimum observed, 7 cfs Feb. 24, 25, 1912, Dec. 30, 1937, to Jan. 4, 1938.

Remarks.--Records good. No regulation or diversion above station. Low-water flow is maintained by large springs.

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

Oct. 1 to Mar. 14				Mar. 15 to Sept. 30	
0.9	6.3	1.2	22	1.0	8.6
1.0	10	1.3	29	1.1	13
1.1	15	1.4	39	1.2	18
				1.3	25

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	10	11	9.2	8.8	*8.8	11	18	15	10	11	9.5
2	12	10	11	9.2	8.8	8.8	11	18	14	10	11	9.5
3	12	10	11	9.7	8.8	8.4	12	17	13	10	12	9.5
4	12	10	10	9.7	14	8.4	12	17	13	10	11	9.5
5	12	10	*10	9.2	20	8.4	14	17	13	10	11	9.9
6	11	10	10	9.2	19	8.4	15	17	13	10	11	9.9
7	11	10	11	9.2	25	8.4	16	17	13	10	11	9.9
8	11	10	11	9.2	20	8.0	16	17	12	10	11	9.9
9	11	10	11	9.2	18	8.0	17	17	12	10	*11	9.9
10	11	10	10	9.2	17	8.0	17	17	11	10	11	9.9
11	11	10	10	9.7	15	8.0	18	17	11	10	11	9.9
12	11	10	10	*9.2	13	7.6	18	20	11	11	11	9.9
13	11	10	10	9.2	12	8.0	19	20	10	11	11	10
14	11	10	9.7	9.2	11	8.8	19	20	10	11	10	10
15	11	10	9.7	9.7	11	12	19	20	*9.9	11	10	10
16	11	10	9.7	9.2	10	17	19	20	9.9	11	10	11
17	11	10	9.7	9.7	11	13	19	20	9.9	11	10	11
18	11	10	9.2	9.7	10	11	19	20	9.9	11	10	11
19	*11	10	9.2	9.7	9.7	12	19	20	9.9	11	9.8	11
20	11	10	9.2	9.2	10	17	19	20	9.9	11	9.8	11
21	11	10	9.2	9.2	9.7	16	19	20	9.9	11	9.8	11
22	11	11	9.2	9.7	9.2	15	19	20	9.9	11	9.8	11
23	10	11	9.2	16	9.2	14	19	19	9.9	11	9.8	11
24	10	11	9.2	37	9.2	13	19	18	9.9	11	9.8	11
25	10	11	9.2	18	9.2	12	18	18	9.9	11	9.8	*11
26	10	11	9.2	15	9.2	12	18	18	9.9	11	9.8	11
27	10	11	9.2	11	9.2	12	18	17	9.9	11	9.8	11
28	10	11	9.2	9.7	8.8	12	19	17	9.9	11	9.8	11
29	10	11	10	9.2	-	11	20	17	9.9	11	9.8	11
30	10	11	11	9.2	-	11	19	16	9.9	11	9.8	11
31	10	-	9.7	8.8	-	11	-	15	-	11	9.8	-
Total	337	309	306.7	340.3	345.8	337.0	517	564	329.4	330	319.8	312.2
Mean	10.9	10.3	9.89	11.0	12.4	10.9	17.2	18.2	11.0	10.6	10.3	10.4
Ac-ft	668	613	608	675	686	668	1,030	1,120	653	655	635	619

Calendar year 1950: Max 23 Min 9.2 Mean 12.2 Ac-ft 8,830
Water year 1950-51: Max 37 Min 7.6 Mean 11.9 Ac-ft 8,630

Peak discharge (base, 30 cfs).--Jan. 24 (3 p.m.) 72 cfs (1.63 ft); Feb. 7 (2 p.m.) 42 cfs (1.42 ft).
* Discharge measurement made on this day.

Silver Creek near Riley, Oreg.

Location.--Lat 43°41', long. 119°39', in E½ sec. 1, T. 22 S., R. 25 E., on right bank 0.4 mile downstream from Rough Creek, 1.4 miles upstream from Nicoll Creek, and 14 miles northwest of Riley.

Drainage area.--228 sq mi.

Records available.--June to September 1951.

Gage.--Water-stage recorder. Altitude of gage is 4,450 ft (by barometer).

Extremes.--Maximum discharge during period, 20 cfs June 12, 13 (gage height, 2.06 to 2.07 ft); minimum, 0.9 cfs Sept. 13 (gage height, 1.38 ft).

Remarks.--Records good. Diversions above station for irrigation of about 500 acres.

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1									-	6.6	2.7	2.9
2									-	6.3	2.5	2.4
3									-	6.3	2.4	2.3
4									-	6.3	2.3	2.2
5									-	7.0	2.3	2.0
6									-	8.2	2.4	2.0
7									-	7.0	*2.4	2.3
8									-	6.6	2.4	2.0
9									-	6.0	2.4	1.8
10									-	5.8	2.4	1.9
11									-	5.5	2.3	1.9
12									*20	5.2	2.3	1.8
13									20	5.0	2.3	1.7
14									18	4.8	2.3	1.8
15									16	4.6	2.2	1.8
16									14	4.4	2.0	1.7
17									14	4.2	2.0	1.7
18									12	4.0	1.8	1.7
19									12	3.8	1.9	1.5
20									11	3.8	1.8	1.5
21									11	3.7	1.8	1.5
22									10	3.5	1.8	1.6
23									9.8	3.3	2.2	1.6
24									9.4	3.3	2.3	1.7
25									9.4	3.2	2.0	1.9
26									9.0	3.0	2.0	2.3
27									8.2	2.9	1.9	2.3
28									7.8	2.7	2.0	2.0
29									7.4	2.7	2.3	*2.3
30									7.0	2.7	2.5	3.2
31									-	2.7	2.9	-
Total									-	145.1	68.8	59.3
Mean									-	4.68	2.22	1.98
Ac-ft									-	288	136	118

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

* Discharge measurement made on this day.

Trout Creek near Denio, Oreg.

Location.--Lat 42°10', long. 118°28', in SW¼ sec. 26, T. 39 S., R. 36 E., on right bank 0.4 mile upstream from bridge at mouth of canyon, 5 miles east of Trout Creek Ranch, and 14 miles northeast of Denio.

Drainage area.--79 sq mi, approximately.

Records available.--March 1911 to March 1912, April 1922 to November 1923, April 1925 to September 1951.

Gage.--Water-stage recorder. Datum of gage is 4,351.59 ft above mean sea level, datum of 1929. Mar. 25, 1911, to Mar. 31, 1912, staff gage at bridge 0.4 mile downstream at different datum. Apr. 28, 1922, to June 14, 1932, at site 10 ft upstream at datum 0.50 ft higher.

Average discharge.--20 years (1922-23, 1932-51), 13.9 cfs.

Extremes.--Maximum discharge during year, 88 cfs May 11 (gage height, 2.98 ft); minimum, 2.2 cfs Aug. 10.
1911-12, 1922-23, 1925-51: Maximum discharge, 343 cfs Aug. 1, 1933 (gage height, 5.26 ft), from rating curve extended above 125 cfs; probably no flow at times.
Maximum stage known, 6.0 ft (caused by cloudburst) sometime between 1922 and 1932.

Remarks.--Records fair except those for periods of ice effect, which are poor. Diversions for irrigation of about 800 acres above station.

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

1.4	2.0	1.8	5.9	2.2	20
1.6	3.1	1.9	8.3	2.6	47
1.7	4.1	2.0	12	3.0	91

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	4.8	5.5	4.5	b4.5	8.6	20	52	36	8.3	2.7	3.1
2	2.9	5.4	4.5	7.1	b5	9.9	21	47	31	8.3	2.6	3.0
3	3.1	5.5	6.4	6.1	b6	7.8	*22	47	31	8.3	2.4	3.0
4	3.1	5.2	8.3	5.9	b7	7.3	27	47	29	9.3	2.5	2.9
5	3.3	5.0	6.9	4.3	b7.5	7.1	31	47	33	8.6	2.6	2.9
6	*3.7	4.8	6.9	4.0	8.1	7.8	32	49	30	7.8	*2.6	2.8
7	3.8	5.0	8.6	b4.5	8.9	10	29	50	28	7.3	2.6	2.5
8	3.7	4.6	8.9	b5	12	11	33	49	25	7.1	2.4	2.4
9	3.5	4.6	8.3	b6	12	9.3	38	52	24	7.6	2.4	2.5
10	3.9	3.6	8.1	b7	13	6.4	43	56	22	7.8	2.2	2.6
11	3.9	4.1	7.8	b6	15	8.6	41	81	23	8.9	2.8	2.6
12	3.7	4.6	8.1	b5	16	8.9	41	79	21	8.1	2.8	2.8
13	3.6	4.6	8.1	*b6	15	9.6	41	76	19	6.6	2.9	2.9
14	3.5	5.0	8.3	6.9	14	11	45	64	16	5.5	2.9	2.8
15	3.5	4.8	8.3	6.4	14	14	51	59	16	4.6	2.8	2.8
16	3.6	4.5	7.6	5.5	12	*18	53	58	16	4.5	2.7	2.7
17	3.7	4.8	7.6	6.9	12	15	60	65	15	4.1	2.7	2.6
18	*3.7	5.0	7.1	6.1	12	15	60	70	14	3.9	2.6	2.7
19	3.8	5.2	6.9	4.8	b8	17	*62	71	14	3.8	2.6	2.7
20	3.8	5.2	6.6	5.5	b9	19	63	67	13	3.7	2.7	2.7
21	3.8	7.1	6.4	8.3	b10	21	63	65	12	3.5	2.8	2.7
22	3.9	5.9	6.1	7.3	11	21	60	*63	12	3.3	2.9	2.9
23	3.9	5.5	6.1	6.6	b10	20	61	65	11	3.2	3.1	2.9
24	3.9	5.7	6.6	8.3	b8	21	61	63	10	3.1	3.2	2.9
25	4.0	5.5	6.4	7.6	9.9	21	57	62	9.6	3.0	3.1	*2.8
26	4.0	5.5	5.4	7.3	6.4	22	55	60	8.6	2.9	3.0	2.8
27	4.5	5.5	b5.0	7.6	9.3	21	54	62	8.1	2.8	2.8	2.9
28	4.6	5.4	5.7	5.0	8.3	21	74	63	8.3	2.7	2.8	2.9
29	4.1	5.4	6.4	b4.5	-	21	62	51	7.8	2.7	3.0	2.9
30	4.1	5.7	6.4	b3.5	-	22	53	49	8.6	2.8	3.1	3.0
31	4.6	-	4.6	b4	-	21	-	43	-	2.9	3.4	-
Total	116.0	153.5	213.9	183.5	283.9	453.3	1,413	1,832	552.0	167.0	85.7	83.7
Mean	3.74	5.12	6.90	5.92	10.1	14.6	47.1	59.1	18.4	5.39	2.76	2.79
Ac-ft	230	304	424	364	563	899	2,800	3,630	1,090	331	170	166

Calendar year 1950: Max 73 Min 2.2 Mean 10.8 Ac-ft 7,840
Water year 1950-51: Max 81 Min 2.2 Mean 15.2 Ac-ft 10,970

Peak discharge (base, 50 cfs).--Apr. 28 (2 to 4 p.m.) 84 cfs (2.95 ft); May 11 (1 to 3 p.m.) 88 cfs (2.98 ft).

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

Measurements of streamflow in the Great Basin made at points other than gaging stations are given in the following table:

Miscellaneous discharge measurements in the Great Basin during water year October 1950 to September 1951

Great Salt Lake basin†

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
1950				
Dec. 7	Bear River.....	Great Salt Lake	N½ sec. 14, T. 9 N., R. 7 E., 1 mile above Rees Ranch and 2 miles east of Woodruff, Utah.	112
1951				
July 10	Kennedy Canal.....	Big Creek.....	S½ sec. 1, T. 10 N., R. 6 E., 2½ miles southwest of Randolph, Utah.	17.1
10	Big ditch.....	....do.....	....do.....	23.3
10	Spring Hollow.....	Randolph Creek....	NE¼ sec. 30, T. 11 N., R. 6 E., 4 miles west of Randolph, Utah.	3.4
10	New Canyon Springs	....do.....	E½ sec. 23, T. 11 N., R. 6 E., 2 miles west of Randolph, Utah.	.8
10	Randolph Creek....	Bear River.....	W½ sec. 24, T. 11 N., R. 6 E., 300 ft below reservoir on Randolph Creek and 1½ miles west of Randolph, Utah.	4.8
10	....do.....	....do.....	W½ sec. 24, T. 11 N., R. 6 E., 800 ft below reservoir and 1½ miles west of Randolph, Utah.	1.9
1950				
Oct. 12	South Fork Otter Creek.	Otter Creek.....	SW¼ sec. 10, T. 11 N., R. 6 E., 1¾ miles above Middle Fork Otter Creek and 4½ miles northwest of Randolph, Utah.	4.4
Nov. 10	....do.....	....do.....	....do.....	4.0
Dec. 7	....do.....	....do.....	....do.....	4.3
1951				
Jan. 25	....do.....	....do.....	....do.....	3.9
Feb. 22	....do.....	....do.....	....do.....	4.1
Apr. 11	....do.....	....do.....	....do.....	4.0
May 11	....do.....	....do.....	....do.....	5.2
24	....do.....	....do.....	....do.....	4.8
June 6	....do.....	....do.....	....do.....	5.0
20	....do.....	....do.....	....do.....	4.8
July 12	....do.....	....do.....	....do.....	4.5
25	....do.....	....do.....	....do.....	4.0
Sept. 6	....do.....	....do.....	....do.....	4.2
1950				
Oct. 12	Middle Fork Otter Creek.	....do.....	SW¼ sec. 3, T. 11 N., R. 6 E., 1½ miles above South Fork Otter Creek and 5 miles northwest of Randolph, Utah.	4.8
Nov. 10	....do.....	....do.....	....do.....	5.2
Dec. 8	....do.....	....do.....	....do.....	4.4
1951				
Jan. 25	....do.....	....do.....	....do.....	5.2
Feb. 22	....do.....	....do.....	....do.....	4.6
Apr. 11	....do.....	....do.....	....do.....	5.4
May 11	....do.....	....do.....	....do.....	6.6
24	....do.....	....do.....	....do.....	5.7
June 7	....do.....	....do.....	....do.....	5.4
20	....do.....	....do.....	....do.....	5.2
July 12	....do.....	....do.....	....do.....	4.9
25	....do.....	....do.....	....do.....	4.6
Sept. 6	....do.....	....do.....	....do.....	4.7
1950				
Oct. 12	North Fork Otter Creek.	....do.....	NE¼ sec. 3, T. 11 N., R. 6 E., 3 miles above mouth and 5¼ miles northwest of Randolph, Utah.	4.3
Nov. 10	....do.....	....do.....	....do.....	4.4
Dec. 8	....do.....	....do.....	....do.....	4.3
1951				
Jan. 25	....do.....	....do.....	....do.....	3.8
Feb. 22	....do.....	....do.....	....do.....	4.2
Apr. 11	....do.....	....do.....	....do.....	3.9
May 11	....do.....	....do.....	....do.....	4.4
24	....do.....	....do.....	....do.....	4.4
June 7	....do.....	....do.....	....do.....	4.0
20	....do.....	....do.....	....do.....	5.8
July 12	....do.....	....do.....	....do.....	5.5
25	....do.....	....do.....	....do.....	5.2
Sept. 6	....do.....	....do.....	....do.....	4.4
Aug. 3	Sublette Creek....	Bear River.....	Sec. 7, T. 24 N., R. 118 W., above diversions, 5 miles east of Cokeville, Wyo.	1.6
14	....do.....	....do.....	....do.....	1.8
3	....do.....	....do.....	SE¼ sec. 21, T. 24 N., R. 119 W., at U. S. Highway 30S, 3 miles south of Cokeville, Wyo.	6.5
14	....do.....	....do.....	....do.....	2.9
3	Tuffed Creek.....	Smiths Fork.....	SW¼ sec. 33, T. 27 N., R. 118 W., near mouth, ½ mile below Smiths Fork near Border, Wyo. gaging station.	.5
14	....do.....	....do.....	....do.....	.5
3	Howland Creek.....	....do.....	SW¼ sec. 16, T. 26 N., R. 118 W., near mouth, 11 miles northeast of Cokeville, Wyo.	5.3
14	....do.....	....do.....	....do.....	5.0
3	Hawkins Creek.....	....do.....	SW¼ sec. 28, T. 26 N., R. 118 W., near mouth, 10 miles northeast of Cokeville, Wyo.	e.5

† Includes discharge measurements made in the water year October 1949 to September 1950.
e Field estimate.

Miscellaneous discharge measurements in the Great Basin during water year October 1950 to September 1951--Continued

Great Salt Lake basin--Continued†

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
Aug. 14	Hawkins Creek.....	Smiths Fork.....	SW¼ sec. 28, T. 26 N., R. 118 W., near mouth, 10 miles northeast of Cokeville, Wyo.	e0.3
3	Chapple Creek.....	....do.....	E½ sec. 5, T. 25 N., R. 118 W., near mouth, 8 miles northeast of Cokeville, Wyo.	e.5
14	....do.....	....do.....	....do.....	.4
Sept.12	Muddy Creek.....	....do.....	SE¼ sec. 31, T. 26 N., R. 118 W., 1 mile above mouth and 8 miles northeast of Cokeville, Wyo.	e.8
12	Mill Creek.....	....do.....	S½ sec. 31, T. 26 N., R. 118 W., 1 mile above mouth and 8 miles northeast of Cokeville, Wyo.	e1.5
12	Corral Creek.....	....do.....	SW¼ sec. 7, T. 25 N., R. 118 W., 1 mile above mouth and 6 miles northeast of Cokeville, Wyo.	e2.0
Aug. 3	Grade Creek.....	....do.....	SW¼ sec. 10, T. 25 N., R. 118 W., above diversions, 8 miles northeast of Cokeville, Wyo.	4.5
14	....do.....	....do.....	....do.....	4.1
3	Pine Creek.....	....do.....	SW¼ sec. 34, T. 25 N., R. 118 W., above diversions, 5½ miles east of Cokeville, Wyo.	21.8
14	....do.....	....do.....	....do.....	21.7
20	....do.....	....do.....	....do.....	24.2
3	Pine Creek Spring.	....do.....	SW¼ sec. 31, T. 25 N., R. 118 W., at road crossing, 3 miles northeast of Cokeville, Wyo.	19.1
14	....do.....	....do.....	....do.....	13.1
20	....do.....	....do.....	....do.....	13.3
3	Spring Creek.....	....do.....	Sec. 2, T. 24 N., R. 119 W., above diversions, 3 miles east of Cokeville, Wyo.	10.8
14	....do.....	....do.....	....do.....	4.4
20	....do.....	....do.....	....do.....	7.3
1950 Apr. 21	Dalton Canal.....	Thomas Fork.....	NE¼SE¼ sec. 9, T. 14 S., R. 46 E., in Idaho, 50 ft downstream from head and 1½ miles northwest of Border, Wyo.	17.0
May 10	....do.....	....do.....	....do.....	12.1
1949 Nov. 3	Thomas Fork.....	Bear River.....	NE¼SE¼ sec. 9, T. 14 S., R. 46 E., in Idaho, immediately downstream from Dalton Canal and 1½ miles northwest of Border, Wyo.	33.0
Dec. 1	....do.....	....do.....	....do.....	28.9
1950 Jan. 27	....do.....	....do.....	....do.....	35.0
Apr. 21	....do.....	....do.....	....do.....	370
May 10	....do.....	....do.....	....do.....	386
July 26	....do.....	....do.....	....do.....	87.3
Aug. 9	....do.....	....do.....	....do.....	83.5
Sept.19	....do.....	....do.....	....do.....	39.5
Oct. 11	....do.....	....do.....	SW¼ sec. 10, T. 14 S., R. 46 E., at U. S. Highway 30S, 1½ miles west of Border, Wyo.	47.2
Dec. 7	....do.....	....do.....	....do.....	53.3
Oct. 4	Bear River.....	Great Salt Lake...	SW¼ sec. 21, T. 14 S., R. 46 E., at possible gaging station site below Thomas Fork, 3 miles southwest of Border, Wyo.	357
4	....do.....	....do.....	....do.....	356
Nov. 9	....do.....	....do.....	....do.....	417
1951 July 19	....do.....	....do.....	....do.....	480
Aug. 15	....do.....	....do.....	....do.....	399
Sept. 7	....do.....	....do.....	....do.....	351
1950 June 2	North Preston-Whitney Canal.	Worm Creek.....	NE¼NE¼ sec. 18, T. 15 S., R. 40 E., ¾ mile downstream from head and 3½ miles northeast of Preston, Idaho.	50.2
1949 Nov. 7	Pole Creek.....	East Fork Little Bear River.	NW¼ sec. 17, T. 9 N., R. 2 E., at mouth, 3.6 miles east of Avon, Utah.	3.5
1950 Feb. 23	....do.....	....do.....	....do.....	2.7
Mar. 15	....do.....	....do.....	....do.....	3.1
June 5	....do.....	....do.....	....do.....	5.7
Oct. 11	....do.....	....do.....	....do.....	2.9
Nov. 13	....do.....	....do.....	....do.....	2.1
11	Malad River.....	Bear River.....	Sec. 10, T. 14 S., R. 35 E., at springs, at flow line and 1 mile upstream from dam on Samaria Reservoir No. 2, 5¾ miles northwest of Malad City, Idaho, and 8¾ miles upstream from Little Malad River.	10.7
Dec. 10	....do.....	....do.....	....do.....	11.3
1951 Feb. 5	....do.....	....do.....	....do.....	12.7
Mar. 8	....do.....	....do.....	....do.....	15.0
Apr. 19	....do.....	....do.....	....do.....	16.8
May 20	....do.....	....do.....	....do.....	15.5
June 16	....do.....	....do.....	....do.....	14.6

† Includes discharge measurements made in the water year October 1949 to September 1950.
e Field estimate.

Miscellaneous discharge measurements in the Great Basin during water year October 1950 to September 1951--Continued

Great Salt Lake basin--Continued†

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
July 20	Malad River.....	Bear River.....	Sec. 10, T. 14 S., R. 35 E., at springs, at flow line and 1 mile upstream from dam on Samaria Reservoir No. 2, 5⅞ miles northwest of Malad City, Idaho, and 8¾ miles upstream from Little Malad River.	14.1
Aug. 26 1950	....do.....	....do.....	....do.....	13.6
Apr. 21	....do.....	....do.....	Near ¼ corner on sec. line between secs. 11 and 14, T. 10 N., R. 3 W., at road bridge, 1 mile west of Bear River City, Utah.	140
24	....do.....	....do.....	....do.....	147
May 3	....do.....	....do.....	....do.....	205
11	....do.....	....do.....	....do.....	234
June 1	....do.....	....do.....	....do.....	129
26	....do.....	....do.....	....do.....	103
1951 Aug. 21	....do.....	....do.....	N½ sec. 14, T. 10 N., R. 3 W., 1½ miles above mouth and 1 mile west of Bear River City, Utah.	23.3
1950 Aug. 17	....do.....	....do.....	SE¼ sec. 14, T. 10 N., R. 3 W., 1 mile upstream from highway bridge and 1 mile southwest of Bear River City, Utah.	11.2
1	....do.....	....do.....	NE¼ sec. 24, T. 10 N., R. 3 W., 20 ft below bridge on Highway 30S and 1 mile south of Bear River City, Utah.	21.3
July 28	....do.....	....do.....	SW¼ sec. 19, T. 10 N., R. 2 W., 500 ft upstream from mouth and 2 miles southeast of Bear River City, Utah.	47.2
Sept. 5	....do.....	....do.....	....do.....	18.4
7	Weber River.....	Great Salt Lake...	Lat 41°08', long. 111°54', in sec. 25, T. 5 N., R. 1 W., Utah, 600 ft upstream from highway bridge at mouth of canyon.	161
7	....do.....	....do.....	Lat 41°08', long. 111°55', in sec. 26, T. 5 N., R. 1 W., Utah, 500 ft upstream from old Uinta Bridge.	132

† Includes discharge measurements made in the water year October 1949 to September 1950.

Mojave River basin, Calif.

Dec. 28	Mojave River.....	Soda Lake.....	At Afton.....	2.5
29	Salt Spring.....	....do.....	Near Baker.....	.1

Warner Lake basin, Oreg.

June 21	Deep Creek.....	Warner Lake.....	Sec. 4, T. 40 S., R. 22 E., about 0.6 mile below former gaging station at Big Valley and 12 miles southeast of Lakeview.	45.3
Oct. 13	Parsnip Spring....	Camas Creek.....	NW¼ sec. 2, T. 39 S., R. 22 E., at mouth, ¼ mile below gaging station on Camas Creek and 12 miles east of Lakeview.	1.10
Feb. 10	....do.....	....do.....	....do.....	2.34
Aug. 8	....do.....	....do.....	....do.....	1.32
June 21	Crane Creek.....	....do.....	Sec. 13, T. 39 S., R. 22 E., below Sagehen Creek, 14 miles east of Lakeview.	e.6

e Field estimate.

Pyramid and Winnemucca Lakes basin, Calif.

Nov. 21	Truckee River.....	Pyramid and Winnemucca Lakes.	At site of former gaging station at Farad.	‡15,700

‡ Flow at crest stage; computed by slope-area determination of peak discharge.

Abert Lake basin, Oreg.

Apr. 2	Chewaucan River...	Abert Lake.....	NE¼ sec. 13, T. 35 S., R. 20 E., at highway crossing, 4 miles north of Valley Falls.	329
June 23	....do.....	...do.....	Sec. 21, T. 35 S., R. 21 E., at mouth at Clarks ranch, below dam, 2½ miles northeast of Valley Falls.	45.1

Malheur and Harney Lakes basin, Oreg.

Oct. 13	Silvies River.....	Malheur Lake.....	Sec. 23, T. 17 S., R. 31 E., at highway bridge 4 miles northwest of Silvies.	4.70
Dec. 1	....do.....	....do.....	....do.....	12.4
Oct. 13	....do.....	....do.....	SE¼ sec. 14, T. 19 S., R. 31 E., 1,300 ft below former gaging station and 8 miles south of Silvies.	5.33
Feb. 15	Foley Slough (distributary of Silvies River).	Silvies River.....	NE¼ sec. 26, T. 22 S., R. 30 E., at head of Foley Slough.	92.8
Mar. 17	....do.....	....do.....	....do.....	103
24	....do.....	....do.....	....do.....	211
June 19	Donner und Blitzen River.	Malheur Lake.....	SW¼ sec. 2, T. 27 S., R. 31 E., at former gaging station 2 miles southwest of Voltage.	42.0
Aug. 9	....do.....	....do.....	....do.....	28.2

Miscellaneous discharge measurements in the Great Basin during water year October 1950 to September 1951--Continued

Alvord Lake basin, Oreg.

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
Apr. 3	Spring Creek.....	Wildhorse Creek...	SW¼ sec. 23, T. 35 S., R. 33 E., at road crossing, 1½ miles north of Andrews.	1.44
3	Wildhorse Creek..	Alvord Lake.....	SE¼ sec. 23, T. 35 S., R. 33 E., at road crossing, 1¾ miles northeast of Andrews.	11.0
18	....do.....	....do.....	....do.....	25.2
May 12	....do.....	....do.....	....do.....	20.8
22	....do.....	....do.....	....do.....	45.0
June 13	....do.....	....do.....	....do.....	20.8
May 13	Juniper Creek....	Wildhorse Creek...	NW¼ sec. 3, T. 36 S., R. 33 E., at road crossing, 1¼ miles southwest of Andrews.	.42
13	Miranda Creek....	....do.....	SW¼ sec. 3, T. 36 S., R. 33 E., at road crossing, 2 miles southwest of Andrews.	.65
13	Carlson Creek....	....do.....	SE¼ sec. 16, T. 36 S., R. 33 E., at road crossing, 3¾ miles southwest of Andrews.	1.30
Apr. 18	Wildhorse Creek return irrigation water.	Alvord Lake.....	Sec. 14, T. 36 S., R. 33 E., 4 miles south of Andrews.	9
18	Willow Creek.....	Trout Creek.....	Sec. 8, T. 39 S., R. 35 E., 5½ miles southeast of Fields.	9.2
May 22	....do.....	....do.....	....do.....	4.93
June 13	Blair ditch.....	Wildhorse Creek...	SE¼ sec. 23, T. 35 S., R. 33 E., 100 ft below intake and 1¾ miles northeast of Andrews.	2.36
Apr. 3	Stonehouse Creek ditch.	Stonehouse Creek..	SE¼ sec. 15, T. 35 S., R. 33 E., at road crossing, 2½ miles north of Andrews.	1.49
May 13	....do.....	....do.....	....do.....	1.04
June 13	....do.....	....do.....	....do.....	.91
Sept.29	....do.....	....do.....	....do.....	.53
May 13	Spring Creek ditch.	Spring Creek.....	SE¼ sec. 22, T. 35 S., R. 33 E., at road crossing, 1½ miles north of Andrews.	.52
13	Andrews ditch....	Andrews Creek.....	NE¼ sec. 34, T. 35 S., R. 33 E., at road crossing, ¼ mile south of Andrews.	2.01

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