Surface Water Supply of the United States 1952

Part 10. The Great Basin

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

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

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PREFACE

This report was prepared by the Geological Survey in cooperation with the States of California, Idaho, Nevada, Oregon, Utah, and Wyoming, and with other agencies, by personnel of the Water Resources Division, C. G. Paulsen, chief, under the general direction of J. V. B. Wells, chief, Surface Water Branch, and B. J. Peterson, chief, Annual Reports Section.

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

F. M. Bell----------Denver, Colo.
R. C. Briggs----------San Francisco, Calif.
T. R. Newell----------Boise, Idaho
K. N. Phillips----------Portland, Oreg.
M. T. Wilson----------Salt Lake City, Utah

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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, 1952. 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 12,600 gaging stations in the 48 States and at many others in the Territories of Alaska and Hawaii. On September 30, 1952, the Geological Survey and cooperating organizations were maintaining 6,700 gaging stations, including those in Alaska and Hawaii. Miscellaneous discharge measurements were made at many other points in the 1952 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, F. B. Durkee, director, 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, 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 3 gaging stations in Utah, 2 in California, and 5 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: 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, under the direction of 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.

DOWNSTREAM ORDER OF LISTING GAGING STATIONS

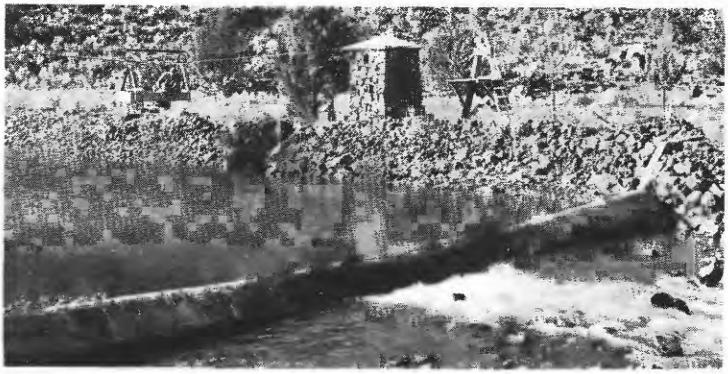
Beginning with the series of reports for the water year ending September 30, 1951, the order of listing gaging-station records was changed. In this report, in a downstream direction along the main stem all stations on a tributary entering above a main-stem station are listed before that station. If a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

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

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information 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, UTAH POWER & LIGHT CO. TAILRACE NEAR LOGAN, 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, Ogeechee River to Pearl River.
3. Ohio River basin, in two volumes:
A, Ohio River basin except Cumberland and Tennessee River basins.
B, Cumberland and Tennessee River basins.
4. St. Lawrence River basin.
5. Hudson Bay and upper Mississippi River basins.
6. Missouri River basin, in two volumes:
A, Missouri River basin above Sioux City, Iowa.
B, Missouri River basin below Sioux City, Iowa.
7. Lower Mississippi River basin.
8. Western Gulf of Mexico basins.
9. Colorado River basin.
10. The Great Basin.
11. Pacific slope basins in California.
12. Pacific slope basins in Washington and upper Columbia River basin.
13. Snake River basin.
14. Pacific slope basins in Oregon and lower Columbia River basin.

Water-supply papers and other publications of the Geological Survey containing data on the water resources of the United States may be purchased or consulted as follows:

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

2. Sets of the reports may be consulted in the libraries of the principal cities in the United States.

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

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

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.

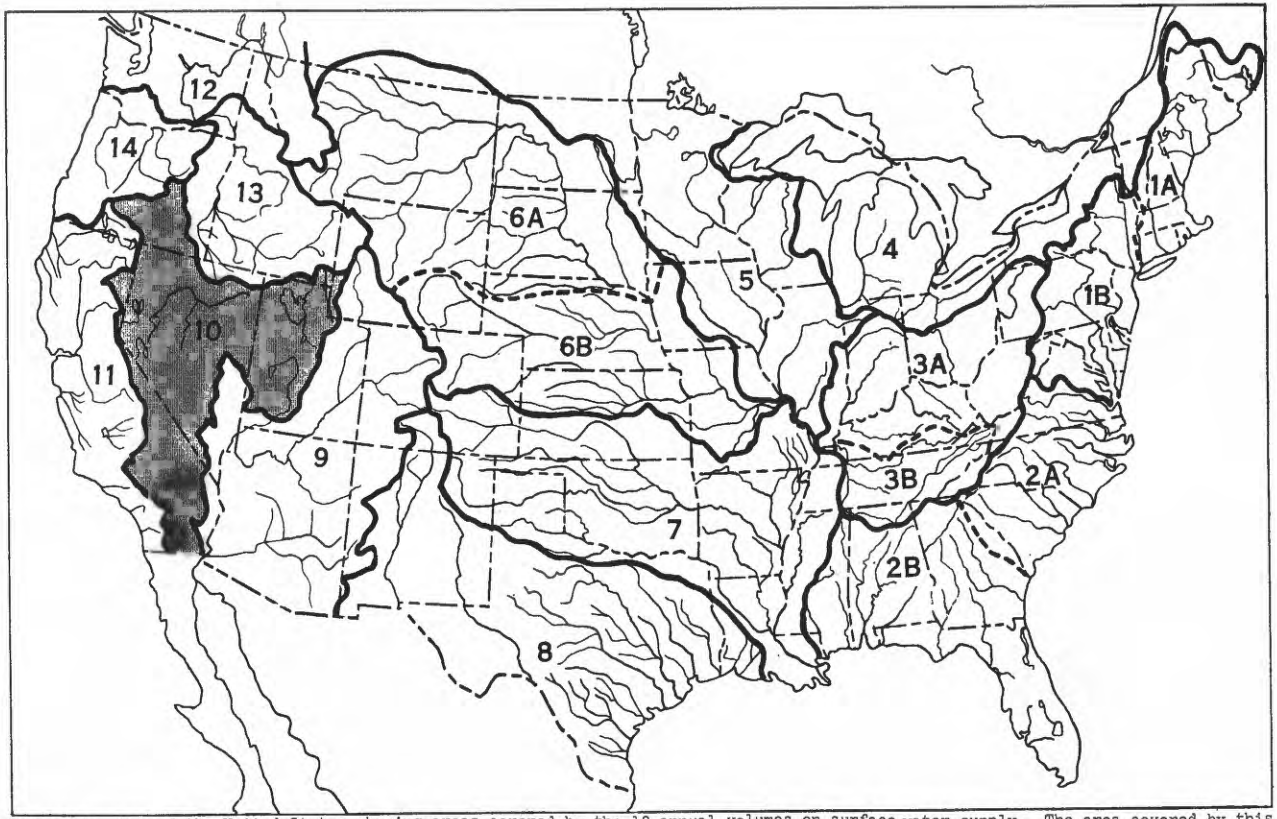


Figure 2.--Map of the United States showing areas covered by the 18 annual volumes on surface water supply. The area covered by this report is shaded.

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, 1899-1952

Year	W.S.P.	Year	W.S.P.	Year	W.S.P.	Year	W.S.P.	Year	W.S.P.
1899	38, a39	1911	310	1923	570	1933	750	1943	980
1900	51	1912	330	1924	590	1934	765	1944	1010
1901	66, 75	1913	360	1925	610	1935	790	1945	1040
1902	85	1914	390	1926	630	1936	810	1946	1060
1903	100	1915	410	1927	650	1937	830	1947	1090
1904	133, b134	1916	440	1928	670	1938	860	1948	1120
1905	176, b177	1917	460	1929	690	1939	880	1949	1150
1906	212, b213	1918	480	1930	705	1940	900	1950	1180
1907-8	250, b251	1919-20	510	1931	720	1941	930	1951	1214
1909	270, b271	1921	530	1932	735	1942	960	1952	1244
1910	290	1922	550						

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 compilations of records of discharge

State	Period	Report	Issued by
Oregon....	1878-1914	Bull. 4, Water resources of the State of Oregon.	office of the State Engineer
Do.....	1914-24	Bull. 7, Water resources of the State of Oregon.	Do.
Do.....	1924-30	Bull. 8, Water resources of the State of Oregon.	Do.
Do.....	1930-36	Bull. 9, Water resources of the State of Oregon.	Do.
Do.....	1936-41	Bull. 10, Water resources of the State of Oregon.	Do.
Utah.....	1889-1905	5th biennial report.	Do.
Do.....	1906-10	7th biennial report.	Do.
Do.....	1911-16	10th biennial report.	Do.

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.
1137-H.....	Floods of November-December in western Nevada.

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 1951 to September 1952 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.	1898-1952a	Salt Lake City.
Cottonwood Creek.	....do.....	1898-1952a	Do.
Donner Creek.....	Above Cold Creek, near Truckee, Calif.....	1929-52	Federal Court Watermaster for Truckee River.
Emigration Creek.	Salt Lake City, Utah, near mouth of canyon.	1898-1952a	Salt Lake City.

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.

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

Stream	Location	Period	Collected by
Ephraim Creek....	Near Ephraim, Utah.....	1914-52	Intermountain Forest & Range Experiment Station.
Little Cottonwood Creek.	Salt Lake City, Utah, near mouth of canyon.	1898-1952a	Salt Lake City.
Little Truckee River.	Above Boca Reservoir, near Boca, Calif.....	1942-52	Washoe County Water Conservation District.
Do.....	Below Boca Reservoir, near Boca, Calif.....	1942-52	Do.
Mill Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1952a	Salt Lake City.
Otter Creek Outlet.	Antimony, Utah, at former Geological Survey gaging station near Coyote.	1920-52b	Sevier River water commissioner.
Parleys Creek....	Salt Lake City, Utah, near mouth of canyon.	1898-1952a	Salt Lake City.
Sevier River.....	Delta, Utah, at former Geological Survey gaging station.	1920-52b	Sevier River water commissioner.
Truckee River....	At Derby Dam, Nev.....	1907-10c, 1926-52	Federal Court Watermaster for Truckee River.
Do.....	At Farad, Calif.....	1938-52d	Truckee-Carson Irrigation District.
Do.....	At Pyramid Dam, Nev.....	1928-52	Federal Court Watermaster for Truckee River.
Do.....	At Tahoe, Calif.....	1895-96, 1900-52d	Federal Court Watermaster for Truckee River and Truckee-Carson Irrigation District.
Do.....	At Vista, Nev.....	1899-1907c, 1927-52	Federal Court Watermaster for Truckee River.
Walker River.....	Near Wabuska, Nev.....	1902-8c, 1920-34c, 1940-52	Walker River Irrigation District.
West Walker River	Near Hudson, Nev.....	1921-25c, 1941-52	Do.
Wildhorse Creek..	SE¼ sec. 34, T. 34 S., R. 33 E., in canyon above all diversions, 5½ miles north of Andrews, Oreg.	1950-52	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 Published in the annual reports of Sevier River water commissioner.
c Published in water-supply papers by the Geological Survey.
d Records prior to 1944 published in water-supply papers by the Geological Survey.

HYDROLOGIC CONDITIONS

Streamflow during the 1952 water year was above normal in most of the Great Basin although drought conditions prevailed in the extreme southern portion of areas covered by this report during the months of October, November, July, August, and September. Floods in Nevada and Utah in May and June will be described in a chapter of Water-Supply Paper 1260, now in preparation. For three key gaging stations in the area covered by this report, a comparison of the monthly and yearly mean discharge during the 1952 water year with the median for the 25-year period 1921-45 is shown in figure 3 on the opposite page.

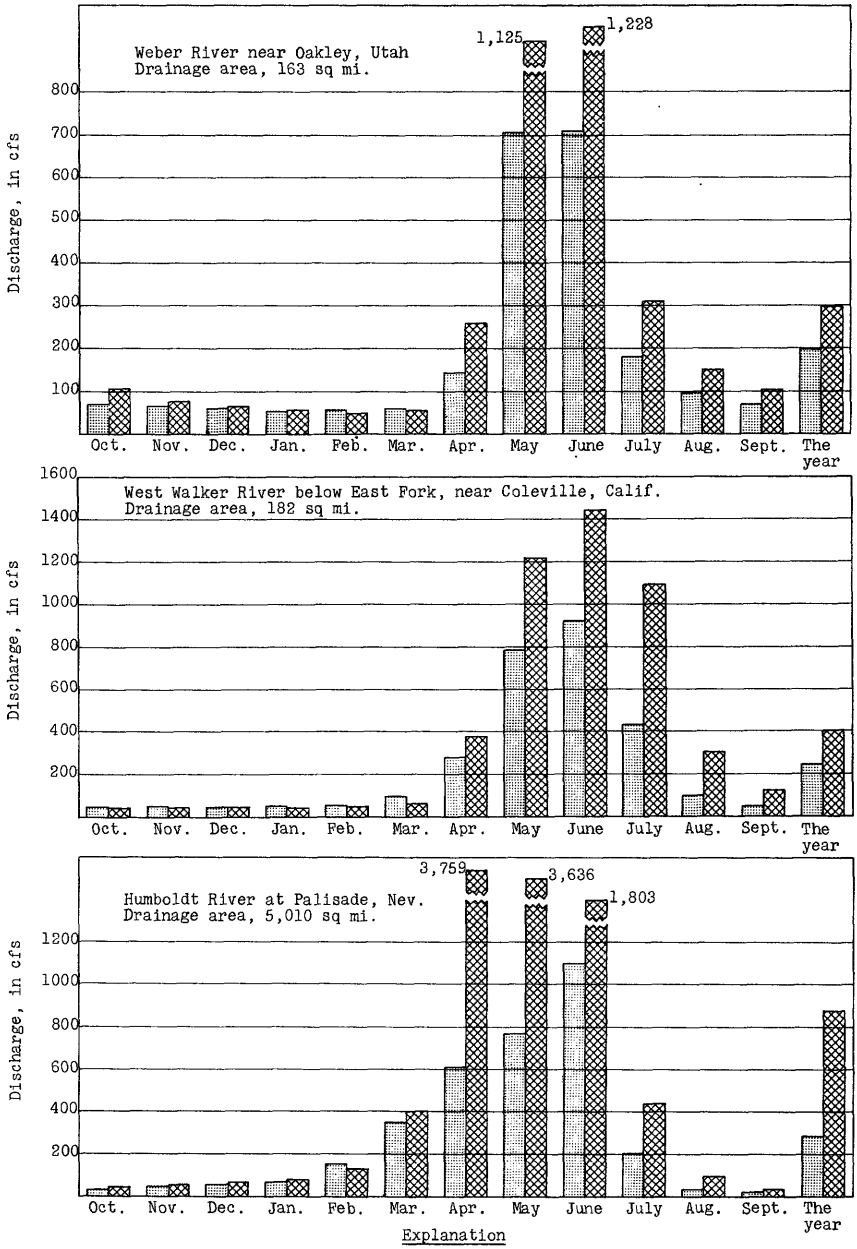


Figure 3.--Comparison of discharge at three key gaging stations during 1952 water year with median discharge for 25-year period.

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 1952 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, 4,201.1 ft June 15 at Midlake gage; minimum, 4,198.35 ft Nov. 1 at Boat Harbor gage.
1851-1952: 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 effects 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 1951-52

Day	Boat Harbor	Midlake
Oct. 1	11.55	+0.4
15	11.55	.4
Nov. 1	11.45	.35
15	11.5	.35
Dec. 1	11.65	.4
15	11.8	.6
Jan. 1	11.9	.65
15	12.0	.65
Feb. 1	12.3	1.1
15	12.5	1.25
Mar. 1	12.6	1.4
15	12.8	1.6
Apr. 1	13.15	1.85
15	13.45	2.1
May 1	13.7	2.5
15	13.95	2.75
June 1	14.05	2.9
15	13.95	3.0
July 1	13.85	2.8
15	13.7	2.75
Aug. 1	13.5	2.4
15	13.35	2.25
Sept. 1	13.0	1.9
15	12.8	1.65

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 abandoned forest road bridge, 300 ft downstream from new road bridge, three-quarters of a mile downstream from head, and 25 miles southeast of Evanston.

Records available.--October 1949 to September 1952 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, 39 cfs June 15, 20; no flow Nov. 15 to May 31.

1949-52: Maximum daily discharge, that of June 15, 20, 1952; no flow during winter and at other times each year.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Canal diverts from East Fork Bear River for irrigation of lands in Hilliard Flat area, Wyoming.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	b5.0							a0.5	34	22	12
2	6.5	4.4							a1.0	34	21	11
3	8.5	.8							a1.5	35	19	11
4	8.0	b.7							a1.7	34	18	10
5	8.2	b.7							a1.8	35	17	10
6	10	**.6							*6.0	35	16	10
7	8.7								10	35	17	11
8	8.7								7.0	*27	16	11
9	*9.0								4.8	17	19	10
10	9.6	a.5							3.5	35	28	9.6
11	20								2.4	33	22	12
12	15								1.4	32	19	17
13	12								*14	29	17	14
14	10	a.2							37	28	17	13
15	10	a.2							39	28	18	12
16	10	0							37	29	17	11
17	9.4	0							38	29	16	11
18	8.8	0							38	29	16	10
19	8.7	0							38	27	16	10
20	8.8	0							39	25	15	10
21	8.0	0							38	22	15	10
22	8.7	0							38	22	15	9.8
23	b8.0	0							*38	21	15	9.6
24	7.8	0							38	21	15	9.4
25	7.3	0							36	23	14	9.2
26	7.4	0							37	23	*14	8.9
27	7.2	0							36	27	16	8.8
28	6.6	0							35	26	16	*8.8
29	6.5	0							32	*24	15	8.7
30	6.5	0							33	22	13	8.7
31	5.8	-							-	23	12	-
Total	275.1	16.1	0	0	0	0	0	0	682.6	864	526	317.5
Mean	8.87	0.54	0	0	0	0	0	0	22.8	27.9	17.0	10.6
Ac-ft	546	32	0	0	0	0	0	0	1,350	1,710	1,040	630

Calendar year 1951: Max 31 Min 0 Mean 6.85 Ac-ft 4,960
Water year 1951-52: Max 39 Min 0 Mean 7.33 Ac-ft 5,310

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

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 1952.

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

Average discharge.--10 years, 201 cfs.

Extremes.--Maximum discharge during year, 2,340 cfs June 7 (gage height, 4.35 ft); minimum, 17 cfs Nov. 6, but may have been less during periods of ice effect or no gage-height record.
1942-52: Maximum discharge, that of June 7, 1952; minimum, 16 cfs Apr. 11, 1951, 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. Diversions above station for irrigation of land in drainage basin below station.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 4 to June 9)

Oct. 1 to June 9				June 10 to Sept. 30			
1.2	34	2.7	750	1.1	46	2.2	378
1.3	49	3.3	1,240	1.3	69	2.7	683
1.5	92	3.7	1,590	1.5	108	3.3	1,140
1.8	194	4.2	2,060	1.8	198	4.1	1,840
2.2	400						

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	36					48	*638	1,390	610	195	71
2	48	50					44	782	1,420	616	181	69
3	75	66	56				44	1,110	1,580	590	164	65
4	68	60					44	1,360	1,540	578	148	61
5	73	55			(*)		48	1,340	1,740	590	149	57
					46							
6	82	*44					57	1,380	*1,870	590	143	56
7	75	64					64	1,310	1,910	565	152	64
8	80	62					68	1,120	1,960	*540	149	65
9	*82	60					62	872	2,020	515	167	61
10	85	53	47	42			58	782	*1,780	474	254	53
11	225	51					62	898	1,490	416	218	61
12	141	57					57	1,060	1,480	394	167	124
13	106	64					64	1,220	*1,380	352	152	93
14	87	75					70	1,340	1,260	332	140	86
15	82	70				44	66	*1,230	1,170	308	137	81
16	87	60					64	1,010	980	289	121	76
17	78						73	790	941	285	108	69
18	78						92	690	972	280	104	68
19	82				43		104	660	988	271	99	66
20	82		*56				115	814	933	263	97	66
21	75						118	847	849	250	93	69
22	64						121	698	775	237	93	65
23	70	56					141	660	*797	225	88	62
24	73						182	675	918	225	90	61
25	70			46			243	782	790	250	78	60
26	70						330	906	797	237	*78	57
27	73					*46	413	872	782	225	108	57
28	66		46		44	46	510	1,060	603	218	108	*59
29	62					46	586	*1,250	590	*188	113	57
30	64				-	46	593	1,320	610	191	84	56
31	57	-			-	44	-	1,360	-	210	76	-
Total	2,494	1,711	1,595	1,350	1,280	1,372	4,541	30,836	36,315	11,314	4,064	2,015
Mean	80.5	57.0	51.5	43.5	44.1	44.3	151	995	1,210	365	131	67.2
Ac-ft	4,950	3,390	3,160	2,680	2,540	2,720	9,010	61,160	72,030	22,440	8,060	4,000

Calendar year 1951: Max 1,660 Min - Mean 203 Ac-ft 147,300
Water year 1951-52: Max 2,020 Min - Mean 270 Ac-ft 196,100

Peak discharge (base, 1,100 cfs).--May 4 (8 p.m.) 1,590 cfs (3.60 ft); June 7 (2 a.m.) 2,340 cfs (4.35 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 2-4, Nov. 14 to Mar. 28 (no gage-height record Nov. 24 to Mar. 26; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby stations on Bear River).

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., in Utah, 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 1952. July 1942 to September 1948 at site 1½ miles downstream, published as "near Evanston"; records not equivalent at times because of diversions between sites for irrigation.

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

Extremes.--Maximum discharge during year, 626 cfs May 3 (gage height, 4.27 ft); minimum, 0.9 cfs Nov. 11, result of freezeup.
1949-52: Maximum discharge, that of May 3, 1952; minimum, that of Nov. 11, 1951.

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

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	5	2.0	138
.8	12	2.5	216
1.0	22	3.0	315
1.3	50	3.5	433
1.6	86		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.4	5.3	11					*230	300	61	24	8.8
2	11	7.4	12					315	309	54	20	8.4
3	19	11	12				9.5	398	342	50	16	8.0
4	15	12	11					433	311	46	14	7.7
5	16	11					11	374	344	44	13	7.4
6	18	*9.6		9	*9		13	*351	*365	41	12	7.4
7	17	15					15	322	355	38	13	8.8
8	18	12					17	263	313	*36	13	9.2
9	*20	12					16	181	304	35	13	8.8
10	21	10	10			9	15	162	*288	40	25	7.7
11	56	10					15	191	238	38	23	9.2
12	33	9.2					15	221	225	33	16	21
13	21	9.2					17	267	196	34	13	16
14	17	9.0					20	298	175	38	12	12
15	17	8.5					20	*258	155	31	12	11
16	19	8.5					20	188	129	27	11	10
17	16	9.0					22	166	120	24	11	9.6
18	16	9.5					31	154	115	22	9.6	9.2
19	18	10					44	135	107	22	8.8	9.2
20	19	10	(*)		8		53	173	98	20	9.6	9.2
21	17	11		10			54	186	87	20	10	9.2
22	12	11					63	156	81	18	11	8.8
23	14	11					82	166	81	17	11	8.8
24	13	11	11				113	188	*118	16	12	8.4
25	14	12				9.5	148	196	121	17	7.7	8.4
26	14	13					197	211	142	18	*8.0	8.0
27	14	13				(*)	240	199	148	17	12	8.0
28	12	13					244	251	100	21	12	*8.4
29	11	12					214	*307	77	*18	16	8.0
30	12	12			-		189	300	68	16	11	8.0
31	10	-			-		-	304	-	22	9.2	-
Total	538.4	317.2	332	300	242	286.0	1,926.0	7,544	5,812	934	408.9	282.6
Mean	17.4	10.6	10.7	9.7	8.3	9.23	64.2	243	194	30.1	13.2	9.42
Ac-ft	1,070	629	659	595	480	567	3,820	14,960	11,530	1,850	811	561

Calendar year 1951: Max 333 Min - Mean 33.8 Ac-ft 24,490
Water year 1951-52: Max 433 Min - Mean 51.7 Ac-ft 37,530

Peak discharge (base, 250 cfs).--May 3 (9:45 p.m.) 626 cfs (4.27 ft); May 14 (11:45 p.m.) 406 cfs (3.39 ft); June 6 (11:50 p.m.) 483 cfs (3.70 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 14-25, Dec. 4 to Apr. 13 (no gage-height record Mar. 18-26).

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 1½ 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 1952.

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

Average discharge.--6 years, 235 cfs.

Extremes.--Maximum discharge during year, 2,220 cfs June 7 (gage height, 5.12 ft); minimum, 34 cfs Sept. 11.
1946-52: Maximum discharge, 2,220 cfs June 7, 1952; maximum gage height, 5.30 ft June 2, 1950; minimum discharge, 5.5 cfs Sept. 16, 1948.

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

Rating tables, water year 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 1 to June 7)

Oct. 1 to May 28				May 29 to Sept. 30			
1.4	38	2.9	463	1.1	32	2.5	452
1.7	79	3.5	800	1.4	68	3.1	798
2.0	147	4.3	1,340	1.7	138	3.8	1,290
2.4	266	4.9	1,780	2.0	235	4.8	2,080

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	79					68	1,010	1,600	532	174	60
2	49	43					72	1,160	1,690	538	153	58
3	65	110	70				78	1,400	1,860	510	122	51
4	73	103					87	1,740	1,860	484	109	44
5	87	81			72		97	1,770	1,970	489	99	43
6	96	*73			(*)		110	1,680	*2,020	505	87	43
7	116	83					120	1,670	2,030	489	92	39
8	121	87					122	1,490	2,010	*452	92	40
9	134	79					119	*1,190	1,990	427	87	43
10	*131	71	64	66			118	1,010	*1,900	393	181	36
11	260	73					128	1,090	1,660	369	257	36
12	228	79					145	1,220	1,500	346	178	61
13	167	71					168	1,360	1,350	312	138	72
14	137	90					185	*1,500	1,200	304	119	61
15	126	88					210	1,540	1,110	265	109	65
16	137	71				68	225	1,280	911	242	97	60
17	131	71					256	1,100	818	224	87	54
18	124				66		300	979	805	197	79	49
19	126						349	900	805	187	74	49
20	131						398	986	760	168	72	47
21	131		(*)				468	1,140	697	153	70	49
22	110		69				550	1,010	638	133	74	53
23	100						632	965	632	92	68	51
24	121	70					*710	958	*772	68	68	50
25	114			72			698	993	811	70	63	49
26	110						870	1,110	785	106	58	46
27	112						993	1,050	831	106	*72	39
28	105				68	(*)	*1,060	*1,110	621	111	81	*41
29	96						1,040	1,380	549	*92	89	41
30	96				-		1,020	1,530	549	135	78	38
31	88	-			-		-	1,580	-	178	63	-
Total	3,666	2,262	2,099	2,118	1,982	2,108	11,396	38,901	36,734	8,677	3,190	1,468
Mean	118	75.4	67.7	68.3	68.3	68	380	1,250	1,220	280	103	48.9
Ac-ft	7,270	4,490	4,160	4,200	3,930	4,180	22,600	77,160	72,860	17,210	6,330	2,910

Calendar year 1951: Max 1,870 Min - Mean 221 Ac-ft 159,900
Water year 1951-52: Max 2,030 Min 36 Mean 313 Ac-ft 227,300

Peak discharge (base, 1,100 cfs).--May 5 (6 p.m.) 1,980 cfs (5.02 ft); May 15 (9 a.m.) 1,680 cfs (4.52 ft); June 7 (12 m.) 2,200 cfs (5.12 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 18 to Apr. 15.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 7,070 ft (from river-profile map). Prior to June 16, 1948, at datum 2.00 ft higher. June 16, 1948, to Aug. 20, 1952, at datum 1.00 ft higher.

Average discharge.--10 years, 25.5 cfs.

Extremes.--Maximum discharge during year, 1,220 cfs Apr. 23 (gage height, 5.93 ft, present datum); minimum, 0.8 cfs Sept. 10, but may have been less during period of ice effect or no gage-height record.
1942-52: Maximum discharge, 1,220 cfs Apr. 23, 1952; maximum gage height, 6.01 ft, present datum, Apr. 21, 1948; 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 and return flows from irrigated areas.

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

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	4.8	8	7			12	328	82	36	91	3.6
2	4.0	4.0					12	356	76	26	44	3.4
3	5.8	4.8					14	405	68	25	26	3.0
4	5.6	5.6					16	426	70	24	18	2.0
5	6.6	5.4	*7				20	345	66	24	18	1.1
6	8.6	*5.4		7	*9.5		25	*285	60	23	15	1.0
7	10	5.8					30	272	60	20	14	1.1
8	12	5.8				9.5	25	221	50	*22	12	1.1
9	*14	6.0					23	*150	43	22	13	1.2
10	16	5.8	6				*22	104	*38	26	37	1.0
11	42	6.2					22	134	32	41	57	1.1
12	24	9.9					22	148	28	43	32	2.5
13	16	12					25	167	20	39	22	2.6
14	9.9	7.8					35	*169	17	62	14	2.2
15	8.0						50	159	13	40	10	1.8
16	13						50	136	14	30	8.5	1.8
17	13	7	8				70	185	13	23	7.3	1.7
18	9.5						112	154	11	21	6.6	1.7
19	8.6						165	116	8.8	24	6.3	1.5
20	11				8.5		311	142	7.6	17	6.0	1.5
21	13			8			501	199	8.8	14	5.6	1.2
22	9.5					10	723	174	9.7	13	5.4	1.1
23	8.9		8				*795	224	17	12	4.9	1.1
24	8.3						728	150	*80	11	4.9	1.1
25	8.0						728	128	197	10	4.3	1.0
26	7.5	8					768	148	227	13	*3.6	1.0
27	6.9						625	140	204	27	4.1	1.0
28	6.6					*10	*505	*126	118	36	4.5	*1.0
29	6.4					10	450	108	71	*23	5.4	1.0
30	6.0		8		-	11	*375	108	50	31	4.7	1.0
31	5.6	-			-	12	-	90	-	124	3.8	-
Total	325.5	211.3	227	238	256.5	305.5	7,259	5,997	1,759.9	902	508.9	47.4
Mean	10.5	7.04	7.3	7.7	8.84	9.85	242	193	58.7	29.1	16.4	1.58
Ac-ft	646	419	450	472	509	606	14,400	11,890	3,490	1,790	1,010	94

Calendar year 1951: Max 276 Min - Mean 23.3 Ac-ft 16,830
Water year 1951-52: Max 795 Min 1.0 Mean 49.3 Ac-ft 35,780

Peak discharge (base, 300 cfs).--Apr. 23 (5:10 p.m.) 1,220 cfs (4.93 ft); May 23 (2 a.m.) 371 cfs (3.01 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 15 to Apr. 17 (no gage-height record most of winter; discharge estimated on basis of 4 discharge measurements, weather records, gage heights, and records for stations on nearby streams).

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 6,920 ft (from river-profile map). February 1943 to September 1945 at site 500 ft upstream at different datum.

Average discharge.--5 years, 16.5 cfs.

Extremes.--Maximum discharge during year, 477 cfs Apr. 28 (gage height, 7.04 ft); no flow Oct. 1.
1943-45, 1949-52: Maximum discharge, that of Apr. 28, 1952; 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.7					4.0	*305	59	12	2.6	1.3
2	.2	.5					7.0	331	54	11	2.6	1.3
3	.2	.5					10	372	52	10	2.4	1.3
4	.3	.7					13	386	52	9.5	2.4	1.3
5	1.0	.9					15	331	*48	9.1	2.6	1.3
6	1.9	.7					20	*265	45	8.4	2.4	1.3
7	3.0	*.5					25	232	45	*8.0	2.6	1.3
8	*1.5	.5					30	*198	39	7.6	2.6	1.3
9	.6	.5					35	*158	33	8.0	3.3	1.3
10	.4	.5					35	128	28	8.0	9.1	1.3
11	.7	.6					32	132	24	7.6	12	1.3
12	.7	1.8				1.5	30	140	22	8.4	3.3	1.3
13	.5	1.5					30	141	20	7.6	1.6	1.2
14	.5	1.3					35	*141	18	7.3	1.5	1.0
15	.5							126	17	6.2	1.4	1.0
16	.5		1.0	1.0	1.0			125	17	5.6	1.3	1.0
17	.7						45	147	16	4.8	1.4	.9
18	.6							109	16	4.6	1.4	1.0
19	.6							93	14	4.8	1.4	1.0
20	.7							95	13	4.3	1.5	1.0
21	1.0						56	133	13	4.3	1.4	1.2
22	1.0	1.0					88	122	12	4.3	1.5	1.3
23	.9						150	145	*12	4.3	1.3	1.2
24	.8					2.0	*218	114	16	3.8	1.4	1.2
25	.8					2.5	220	104	24	3.8	*1.3	1.2
26	.8					*2.6	240	108	28	3.8	1.3	1.2
27	.8					2.8	344	99	28	4.0	1.3	1.2
28	.8					3.0	397	*82	20	*3.9	1.3	1.2
29	.8					3.0	*386	78	16	3.3	1.3	**1.2
30	.8				-	3.5	351	71	14	2.8	1.3	1.2
31	.8	-			-	4.0	-	64	-	2.6	1.3	-
Total	24.4	27.2	31.0	31.0	29.0	57.9	3,041.0	5,071	815	193.7	74.1	35.8
Mean	0.79	0.91	1.0	1.0	1.0	1.87	101	164	27.2	6.25	2.39	1.19
Ac-ft	48	54	61	61	58	115	6,030	10,060	1,620	384	147	71

Calendar year 1951: Max 102 Min 0 Mean 10.8 Ac-ft 7,810
Water year 1951-52: Max 397 Min 0 Mean 25.8 Ac-ft 18,720

Peak discharge (base, 100 cfs).--Apr. 28 (3:30 a.m.) 477 cfs (7.04 ft); May 17 (5 a.m.) 178 cfs (5.58 ft); May 23 (2 p.m.) 169 cfs (5.48)ft).

* Discharge measurement made on this day.

** Field estimate made on this day.

Note.--Stage-discharge relation affected by ice Nov. 15 to Mar. 25, Mar. 30 to Apr. 20 (no gage-height record Dec. 21 to Mar. 25; discharge estimated on basis of weather records 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 1952.

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

Average discharge.--39 years, 239 cfs.

Extremes.--Maximum discharge during year, 2,840 cfs May 4 (gage height, 6.50 ft); minimum, 21 cfs Sept. 10.
1913-52: 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 table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 9 to June 27)

1.0	19	3.0	495
1.2	40	4.0	890
1.5	86	5.0	1,330
1.9	171	6.0	2,150
2.4	305	6.5	2,840

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	99					113	2,040	1,930	523	248	58
2	43	68					125	*2,120	1,930	492	173	58
3	51	94					135	2,360	1,980	461	128	58
4	78	128	105				152	2,640	2,200	428	101	53
5	84	109	(*)				172	2,720	2,120	409	86	47
6	103	92			107		200	2,600	2,320	409	79	44
7	124	*81					225	2,470	2,410	390	72	41
8	122	101					240	2,340	2,460	*368	74	38
9	133	97					254	1,830	2,310	335	72	39
10	*135	92		90			*270	1,380	2,190	314	128	33
11	200	88					276	1,370	2,070	314	338	32
12	254	101					305	1,510	1,680	314	224	37
13	181	86					344	1,700	1,520	296	155	53
14	153	86					396	*1,910	1,300	305	116	50
15	135					100	390	2,070	1,160	270	99	50
16	141						362	1,950	982	234	88	50
17	148						418	1,700	831	203	78	46
18	139				96		534	1,440	777	178	74	41
19	130		90				675	1,210	764	155	72	39
20	133	94				(*)	877	1,220	*731	133	69	39
21	148						1,080	1,510	671	120	66	38
22	135						1,220	1,380	593	101	69	39
23	118						1,570	1,450	559	92	68	37
24	128						*1,800	1,300	*703	79	66	37
25	124			107			2,170	1,240	998	72	*63	37
26	124						2,430	1,360	1,000	74	58	39
27	124	105					2,580	1,380	1,140	74	58	*37
28	126				100		2,630	*1,380	856	*176	72	34
29	118						*2,470	1,560	655	120	79	34
30	116					-	2,250	1,840	574	83	78	34
31	113	-		(*)	-	107	-	1,920	-	232	66	-
Total	3,889	2,892	2,880	2,994	2,910	3,107	26,663	54,880	41,414	7,754	3,217	1,272
Mean	125	96.4	92.9	96.6	100	100	889	1,770	1,380	250	104	42.4
Ac-ft	7,710	5,740	5,710	5,940	5,770	6,160	52,890	108,900	82,140	15,380	6,380	2,520

Calendar year 1951: Max 2,080 Min 19 Mean 276 Ac-ft 200,000
Water year 1951-52: Max 2,720 Min 28 Mean 420 Ac-ft 305,200

Peak discharge (base, 1,200 cfs).--May 4 (6 p.m.) 2,840 cfs (6.50 ft); May 15 (9 p.m.) 2,220 cfs (5.90 ft); June 8 (3 a.m.) 2,580 cfs (6.22 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 15 to Apr. 7 (no gage-height record Jan. 12-30, Feb. 26 to Mar. 19; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby stations on Bear River).

Chapman Canal at State line, near Evanston, Wyo.

Location.--Lat 41°24', long. 111°02', in SE¼ sec. 36, T. 17 N., R. 121 W., on right bank at highway bridge, 6½ miles downstream from headgates and 10 miles northwest of Evanston.

Records available.--October 1945 to September 1952. 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.

Gage.--Water-stage recorder. Prior to Oct. 11, 1946, staff gage at same site and datum.

Average discharge.--7 years (1945-52), 15.3 cfs.

Extremes.--Maximum daily discharge during year, 122 cfs June 27; no flow about half of time. 1942-52: Maximum daily discharge observed, 129 cfs Apr. 14, 1946; no flow at times each year.

Remarks.--Records good. Canal diverts water from Bear River in NW¼ sec. 36, 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	21					0	95	76	69	12	0
2	0	19					0	64	75	*58	12	0
3	0	12					0	86	73	49	10	.2
4	0	10					0	107	73	48	9.7	.2
5	0	*12	(*)				0	107	*78	49	*9.7	.1
6	0	12					.2	103	89	55	10	.1
7	0	14					.4	100	90	47	10	0
8	*0	13					.2	*94	93	*49	12	0
9	0	12					0	66	96	50	13	0
10	0	13					0	27	94	46	15	0
11	0	12					0	17	92	46	23	0
12	0	16					0	22	79	48	11	0
13	0	22					.6	31	89	48	7.1	0
14	0	13					1.2	41	82	50	3.6	.1
15	0	12					.6	53	77	47	3.2	0
16	0	8.8					.2	65	79	41	3.2	0
17	0	13					.8	40	74	36	3.2	0
18	0	18					1.6	24	70	32	2.8	0
19	0	18					2.2	16	77	31	3.0	0
20	0	22					.8	*22	*80	30	*3.0	.1
21	0	21					1.4	38	80	25	2.6	.1
22	0	19					3.8	37	71	20	2.6	0
23	0	20					6.7	39	69	*18	2.6	.1
24	0	16					16	38	*83	16	2.2	0
25	0	.8					*31	44	112	14	1.1	0
26	0	0					27	54	118	12	.8	0
27	0	0					42	63	122	8.2	.4	0
28	0	.0				(*)	79	48	108	11	.3	0
29	0	0					109	41	86	10	.2	0
30	0	0					108	62	75	*9.1	.2	0
31	3.2	-		(*)			-	62	-	9.7	.1	-
Total	3.2	369.6	0	0	0	0	432.7	1,706	2,560	1,082.0	189.6	1.0
Mean	0.10	12.3	0	0	0	0	14.4	55.0	85.3	34.9	6.12	0.03
Ac-ft	6	733	0	0	0	0	858	3,380	5,080	2,150	376	2

Calendar year 1951: Max 83 Min 0 Mean 13.3 Ac-ft 9,660
Water year 1951-52: Max 122 Min 0 Mean 17.3 Ac-ft 12,590

* Discharge measurement made on this day.

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 1952.

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

Average discharge.--10 years, 247 cfs.

Extremes.--Maximum discharge during year, 3,010 cfs Apr. 28 (gage height, 5.32 ft); minimum, 17 cfs Nov. 15.
1942-52: Maximum discharge, that of Apr. 28, 1952; maximum gage height, 5.98 ft Mar. 21, 1951 (ice jam); no flow at times each year 1942-49.

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, 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 tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 13		Apr. 14 to Sept. 30			
1.1	22	1.1	23	3.1	745
1.3	43	1.3	47	3.8	1,240
1.6	95	1.6	98	4.6	2,060
1.9	175	2.0	206	5.2	2,760
2.1	244	2.5	395		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	89			(*)		122	2,170	1,620	439	239	54
2	39	66					139	1,960	1,620	400	213	50
3	*43	72					155	2,010	*1,630	373	146	48
4	63	81	105				175	2,240	1,680	355	118	47
5	83	*102					195	2,680	1,810	331	*94	44
6	91	87			110		220	2,760	1,810	323	79	39
7	106	72					250	*2,570	1,930	307	70	35
8	116	59					270	2,440	2,020	296	69	33
9	118	77					300	2,270	2,100	*274	70	*30
10	126	72					350	1,850	1,980	250	69	28
11	134	68		90			380	1,400	1,850	250	187	28
12	237	75					450	1,400	1,760	256	267	30
13	208	85					600	1,510	1,480	253	181	32
14	169	72					732	1,650	1,300	236	133	43
15	148	59				100	700	1,780	1,110	236	105	44
16	137	70					667	2,000	1,010	203	90	43
17	145						726	1,880	778	169	79	43
18	145					(*)	764	1,650	*680	136	70	39
19	134		90				957	1,360	615	120	67	38
20	134						1,110	1,180	609	98	*65	35
21	137	76	(*)		100		1,250	*1,300	566	81	62	34
22	142						1,400	1,460	503	72	60	34
23	129						1,550	1,360	449	*62	62	35
24	116						1,650	1,360	*537	56	64	34
25	129			110			*1,900	1,220	778	43	59	34
26	123						2,280	1,220	901	44	58	33
27	121	105					2,540	1,300	1,010	59	54	*34
28	123						2,720	1,240	929	79	52	33
29	118						2,640	1,300	628	141	60	32
30	111				-	104	*2,410	1,440	486	100	65	32
31	109	-			-	110	-	1,580	-	102	62	-
						115						
Total	3,757	2,444	2,880	3,030	3,000	3,129	29,602	53,540	36,179	6,144	3,069	1,118
Mean	121	81.5	92.9	97.7	103	101	987	1,727	1,206	198	99.0	37.3
Ac-ft	7,450	4,850	5,710	6,010	5,950	6,210	58,710	106,200	71,760	12,190	6,090	2,220

Calendar year 1951: Max 2,010 Min 18 Mean 265 Ac-ft 192,200
Water year 1951-52: Max 2,760 Min 23 Mean 404 Ac-ft 293,400

Peak discharge (base, 1,300 cfs).--Apr. 28 (3 a.m.) 3,010 cfs (5.32 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 17 to Apr. 13 (no gage-height record Jan. 25-31, Mar. 5-17, Apr. 21-25; discharge estimated on basis of 3 discharge measurements, weather records, and records for nearby stations on Bear River).

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 each year 1950-52 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 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							36	699	1,000	668	152	43
2							41	633	1,010	632	155	36
3							47	598	1,010	608	98	37
4							57	627	1,030	586	60	38
5							68	737	1,070	559	46	36
6							80	836	1,080	531	39	33
7							89	830	1,120	520	35	28
8							96	807	1,150	516	32	29
9							104	777	1,180	492	31	28
10							111	698	1,190	466	30	35
11							122	551	1,170	463	52	40
12							135	488	1,130	423	105	50
13							150	510	1,050	362	67	46
14							164	543	992	346	46	47
15							184	580	938	320	36	48
16							203	672	842	270	33	44
17							230	722	766	235	30	42
18							272	690	712	197	28	41
19							306	624	685	168	25	36
20							333	641	664	129	23	33
21							349	726	680	107	27	31
22							326	813	668	87	29	28
23							320	798	636	70	32	27
24							376	826	697	55	37	33
25							451	806	786	48	34	38
26							576	803	865	44	34	34
27							683	826	901	57	35	32
28							787	826	859	77	31	33
29							814	855	715	120	36	30
30							777	925	639	87	43	30
31							-	971	-	77	45	-
Total							8,287	22,438	27,235	9,320	1,506	1,096
Mean							276	724	908	301	48.6	36.5
Ac-ft							16,440	44,510	54,020	18,490	2,990	2,170

Calendar year	: Max	Min	Mean Ac-ft
The period	: Max -	Min -	Mean - Ac-ft 138,600

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 1952 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, 460 cfs May 30 (gage height, 5.28 ft); minimum, 7.5 cfs Nov. 2.
1949-52: Maximum discharge, 528 cfs May 25, 1950 (gage height, 5.72 ft); minimum, 2.9 cfs Mar. 29, 1951 (ice jam upstream).

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

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	15	12		12		*18	160	276	45	24	18
2	19	12	13		12		16	187	266	*44	23	17
3	17	14	12	b9	12		16	234	249	40	22	17
4	*16	14	14		12		17	278	212	38	21	16
5	16	12	13		12		22	292	*215	38	21	16
						10						
6	16	11	*13				30	*296	207	38	*21	16
7	16	*12					44	296	184	*38	20	16
8	16	12					42	257	162	37	21	16
9	16	12	b11	9			39	211	145	35	21	*16
10	16	12					38	180	133	35	23	16
					b11							
11	19	12					37	193	117	34	22	18
12	17	12	12				36	256	106	34	21	18
13	17	12	12			11	41	311	97	33	20	17
14	16	13	b12				45	363	88	31	19	17
15	16		12				41	376	83	*31	19	16
16	16	b11	12		b12		37	292	76	*29	18	16
17	16		12		12		38	212	72	28	18	16
18	16		12		12	12	51	177	68	27	18	16
19	16		12		b11		65	165	*66	27	*18	15
20	16	12	b12		b10		80	*196	61	26	17	15
21	17	12	12	11	b10	11	83	293	58	24	17	16
22	16	b11	10				*69	249	57	24	18	16
23	16	b11	12			10	76	199	56	24	18	16
24	16	12	b12				88	191	61	*23	19	15
25	16	12	b11			11	102	264	57	22	17	15
						10						
26	17	b11	12			12	125	373	54	22	18	15
27	16	12	12			13	154	379	52	22	19	15
28	16	12	12			14	169	355	49	22	18	15
29	16	12	12			15	167	403	47	22	17	*15
30	16	12	12		-	16	*160	420	46	22	17	15
31	16	-	b11	*12	-	17	-	314	-	27	18	-
Total	507	359	368	318	317	354	1,946	8,372	3,420	942	603	481
Mean	16.4	12.0	11.9	10.3	10.9	11.4	64.9	270	114	30.4	19.5	16.0
Ac-ft	1,010	712	730	631	629	702	3,860	16,610	6,780	1,870	1,200	954

Calendar year 1951: Max 347 Min - Mean 42.0 Ac-ft 30,450
Water year 1951-52: Max 420 Min - Mean 49.1 Ac-ft 35,690

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 6-30, Feb. 22 to Mar. 31; discharge estimated on basis of weather records and records for stations on nearby streams.

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 1952.

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

Extremes.--Maximum discharge during year, 102 cfs May 16 (gage height, 3.19 ft); practically no flow at times during period January to March.
1949-52: Maximum discharge, 172 cfs May 22, 1950 (gage height, 3.73 ft); practically no flow at times during period January to March 1952.

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 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 16-25)

0.6	0.3	1.4	14
.7	.4	1.7	29
.8	.8	2.2	58
.9	2.1	2.9	92
1.1	5.8		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	1.4		0.4			*0.5	18	42	9.9	30	0.6
2	1.1	b1.4		.4			.5	21	44	*9.4	28	.6
3	1.2	1.4	b1.0				.5	24	40	9.2	26	.6
4	*1.2	1.4					.6	25	36	8.5	25	.5
5	1.2	1.4					.7	30	*31	7.8	24	.5
6	1.1	b1.4	*.9				.9	*36	27	7.6	*24	.5
7	1.1	*b1.3	.6	b.3			1.8	36	29	*7.1	25	.5
8	1.1	1.3	.6				2.3	34	27	6.9	25	.5
9	1.1	1.3	.6				7.6	30	26	6.9	24	*.5
10	1.2	1.3	.6				3.3	28	25	6.5	25	.5
11	1.4	1.3	.6				3.3	28	23	7.3	24	.6
12	1.2	1.4	.6	.3			4.0	30	22	15	14	.6
13	1.2	1.4	.6				4.4	33	21	15	14	.6
14	1.1	1.4	.6				5.0	39	20	15	13	.6
15	1.1		.6		0.4	0.5	4.6	49	19	16	12	.6
16	1.3		.6				4.0	90	18	16	12	.5
17	1.3		.5				5.0	82	17	16	11	.5
18	1.3		.5				6.7	70	16	18	9.9	.4
19	1.4		.5				7.6	65	*16	28	*8.2	.4
20	1.4		.5				9.2	*64	16	28	.9	.4
21	1.4		.4	.4			9.2	61	15	28	.6	.4
22	1.6	b1.0	.4				*8.5	60	14	28	.7	.4
23	1.6		.4				9.0	58	14	28	.7	.4
24	1.6		.5				9.7	58	18	29	.8	.4
25	1.4		.5				10	58	17	28	.9	.4
26	1.6		.5				12	51	15	28	5.8	.4
27	1.4		.4				14	32	14	28	3.6	.4
28	1.4		.4				15	33	13	27	.8	.4
29	1.4		.4				16	32	11	27	.7	*.4
30	1.4		.4		-		*15	46	10	28	.6	.4
31	1.4	-	.4	(*)	-		-	48	-	28	.6	-
Total	40.0	35.1	18.6	11.4	11.6	15.5	190.9	1,369	656	561.1	390.8	14.5
Mean	1.29	1.17	0.60	0.37	0.4	0.5	6.36	44.2	21.9	18.1	12.6	0.48
Ac-ft	79	70	37	23	23	31	379	2,720	1,300	1,110	775	29

Calendar year 1951: Max 74 Min 0.4 Mean 9.61 Ac-ft 6,950
Water year 1951-52: Max 90 Min - Mean 9.06 Ac-ft 6,580

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 12 to Mar. 31, June 6-18; discharge estimated on basis of 2 discharge measurements, weather records, and records for stations on nearby streams.

Big Creek near Randolph, Utah

Location.--Lat 41°37', long. 111°15', in SE¼ 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 1952. March 1939 to September 1944 (fragmentary), at site a quarter of a mile downstream; records not equivalent at times because of two small diversions between sites for irrigation.

Gage.--Water-stage recorder. Altitude of gage is 6,390 ft (from topographic map). Prior to Oct. 1, 1949, water-stage recorder at site a quarter of a mile downstream at different datum.

Extremes.--Maximum discharge during year, 128 cfs May 7 (gage height, 2.05 ft); minimum, 5.3 cfs Mar. 23 (result of freezeup).
1949-52: Maximum discharge, 146 cfs May 18, 1950 (gage height, 2.46 ft); minimum, 1.6 cfs Mar. 12, 1951 (ice jam upstream).

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 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 15, Feb. 1-5, Aug. 3-8)

0.4	12	1.1	46
.6	19	1.5	77
.8	28	2.0	123

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	26			*15		14	59	82	*46	32	30
2	29	b25			14		14	*70	*83	45	31	30
3	*28	b25	b20				14	86	82	45	31	30
4	28	25			b14		14	102	78	45	31	30
5	28	25				b11	15	109	79	45	31	30
6	26	b25	(*)	11			16	118	79	44	30	30
7	26	b25					18	122	77	43	*30	30
8	26	*25					19	*121	72	43	30	30
9	26	25	b16				18	112	70	43	30	30
10	26	25				b12	18	104	68	43	31	*30
11	28	25					18	103	66	*42	30	31
12	26	29			b12		19	108	64	43	30	31
13	26	26	•			12	20	111	62	42	30	29
14	26	25	16				20	115	59	41	29	29
15	26	b23					19	112	59	40	30	29
16	26					13	19	108	58	38	29	29
17	26					13	21	93	*56	38	30	28
18	26					*14	23	83	55	37	*30	28
19	26					b14	25	81	54	36	30	28
20	26					b13	26	86	54	36	30	28
21	26					13	27	94	52	35	30	27
22	26			14		b12	26	87	52	34	31	27
23	26	b20				b11	*26	81	51	34	31	26
24	26		18			b11	28	83	55	33	31	26
25	26				b11	b12	31	85	54	*32	30	26
26	26					14	38	88	52	32	30	26
27	26					14	44	*88	51	32	31	26
28	25					13	52	87	49	32	31	26
29	25					14	56	88	47	32	31	26
30	25				-	15	57	89	47	33	30	*25
31	25	-			-	14	-	84	-	33	30	-
Total	815	679	548	398	349	381	755	2,957	1,867	1,197	941	851
Mean	26.3	22.6	17.7	12.8	12.0	12.3	25.2	95.4	62.2	38.6	30.4	28.4
Ac-ft	1,620	1,350	1,090	789	692	756	1,500	5,870	3,700	2,370	1,870	1,690

Calendar year 1951: Max 98 Min - Mean 30.7 Ac-ft 22,190
Water year 1951-52: Max 122 Min - Mean 32.1 Ac-ft 23,300

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 13 to Jan. 31, Mar. 11-17; discharge computed on basis of weather records and records for stations on nearby streams.

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.

Records available.--October 1949 to September 1952.

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

Extremes.--Maximum discharge during year, 10 cfs Apr. 17 (gage height, 1.18 ft); minimum, 0.9 cfs July 27.
1949-52: Maximum discharge, 32 cfs Mar. 21, 1951 (gage height, 1.44 ft); 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 above station for irrigation.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*6.1	5.8	5.8	5.2	a5.5	5.4	5.0	4.2	4.0	*5.4	3.4	6.1
2	6.1	5.6	5.8		a5.5	5.4	4.8	*3.6	*6.1	7.3	2.4	5.6
3	6.1	6.1	5.6		5.4	5.4	5.0	2.8	8.7	7.3	3.1	5.0
4	5.8	6.3	5.8		5.6	5.4	5.2	2.6	8.7	7.3	3.0	4.0
5	5.6	6.1	*5.8	b4.5	5.4	5.4	5.4	2.1	8.7	7.3	3.0	4.0
6	6.1	5.8	5.8		5.6	5.4	5.6	2.0	8.7	7.3	3.0	4.4
7	6.1	6.1	5.4		*5.6	5.4	6.3	2.4	8.4	7.1	3.1	3.4
8	6.1	*6.1	5.0	4.6	5.4	5.6	6.3	4.0	8.4	7.1	3.1	2.2
9	6.1	6.1	5.4	4.6	5.4	5.6	*6.3	3.3	5.6	7.1	4.0	2.6
10	6.3	6.1	5.4	4.6	5.4	5.6	6.6	3.6	4.6	5.2	2.1	*2.2
11	6.6	6.1	5.4	4.4	5.4	5.6	7.1	4.0	5.8	3.1	2.6	3.4
12	6.1	6.6	5.4	4.4	5.6	5.4	7.3	4.2	5.6	3.4	4.6	4.4
13	6.1	5.6	5.4	4.4	5.6	5.6	7.3	4.0	7.8	4.6	3.1	6.6
14	6.1	5.6	5.0	4.4	5.4	5.6	7.3	4.0	7.8	4.0	3.8	6.1
15	5.4	5.4	5.4	4.4	5.4	5.6	7.1	4.0	7.8	4.0	3.8	6.1
16	2.6	5.0	5.4		5.4	5.6	7.8	6.6	7.6	5.8	2.4	5.8
17	2.6	5.0	5.4		5.6	5.6	8.4	6.8	*7.6	3.4	2.4	5.8
18	3.1	5.0	5.4	a4.5	5.4	*5.6	8.1	7.1	7.3	6.3	*3.4	5.2
19	4.6	5.0	5.4		5.4	5.4	8.1	5.4	6.1	7.3	4.8	5.0
20	6.3	5.0	5.4		5.4	5.4	7.8	3.4	*3.8	7.3	4.4	5.2
21	6.3	5.2	5.2		5.4	5.2	7.6	2.4	3.3	*5.0	4.8	4.6
22	6.3	5.6			5.8	5.2	*7.3	2.4	3.3	4.8	5.0	3.6
23	6.3	5.6	b5		5.6	5.2	7.1	3.1	4.4	6.8	4.8	3.6
24	6.3	5.6			5.6	5.0	7.1	3.0	4.8	6.8	5.0	3.6
25	6.3	5.6		a5	5.6	5.2	7.1	2.4	4.4	5.2	7.1	3.6
26	6.3	5.6	5.2		5.6	5.2	6.8	3.0	3.8	2.4	7.1	3.6
27	6.1	5.6	5.2		5.6	5.0	6.3	2.4	3.8	1.1	5.8	3.8
28	6.1	5.6	5.2		5.6	5.0	5.2	2.6	3.4	1.0	6.6	4.4
29	6.1	5.8	5.4		5.4	5.2	3.6	2.8	3.1	1.1	6.8	*5.4
30	6.3	5.8	5.4		-	5.0	3.8	4.0	4.0	2.4	6.6	5.4
31	6.1	-	b5.2		-	5.0	-	2.8	-	3.0	6.6	-
Total	178.4	170.4	166.2	145.5	159.6	166.2	194.7	111.0	177.4	157.2	131.7	134.7
Mean	5.75	5.68	5.36	4.69	5.50	5.36	6.49	3.58	5.91	5.07	4.25	4.49
Ac-ft	354	338	330	289	317	330	386	220	352	312	261	267

Calendar year 1951: Max 15 Min 2.1 Mean 5.53 Ac-ft 4,000
Water year 1951-52: Max 8.7 Min 1.0 Mean 5.17 Ac-ft 3,760

* 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.

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 1952 (discontinued) 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, 144 cfs May 26; no flow at times. 1949-52: Maximum daily discharge, that of May 26, 1952; no flow at times each year.

Remarks.--Records good except those for period of ice effect, 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	2.0					0	78	118	*62		0
2	*0	1.8					0	77	*118	59		0
3	0	1.8					0	76	116	*55		0
4	0	1.8					0	74	114	52	(*)	0
5	0	1.8					0	74	112	48		0
6	0	1.8					0	74	112	44		0
7	1.0	1.8					0	77	110	38		0
8	1.2	**1.7					0	81	108	37		0
9	1.2	1.2					*0	81	103	36		0
10	1.5	1.5					6	80	99	33		*0
11	2.4	1.8					12	78	95	*32		0
12	2.5	1.8					18	76	94	37		.4
13	3.0	1.8					24	81	92	42		3.2
14	5.6	1.7					30	85	89	44		4.6
15	5.0	1.7	1				36	85	84	45		4.8
16	6.4	1.6					42	88	76	41		4.8
17	3.7	1.6					48	*88	70	38		5.0
18	2.4	1.5					54	92	65	37		4.8
19	2.4	1.5					60	100	59	34	(*)	4.5
20	2.5	1.4					68	114	55	27		2.5
21	2.5	1.4					68	120	*54	20		.6
22	2.7	1.3					67	122	59	16		0
23	2.9	1.3					66	129	60	10		0
24	2.5	1.2					66	133	62	6.4		0
25	2.4	1.2					72	141	64	*3.2		.4
26	2.2	1.1					71	*144	64	1.7		.9
27	2.2	1.1					71	140	65	.4		2.2
28	2.0	1.0					74	134	65	0		1.5
29	2.0	1.0					75	130	63	0		.8
30	2.0	1.0					77	127	63	0		.9
31	2.0	-					-	123	-	0		-
Total	66.2	45.2	31	0	0	0	1,105	3,102	2,508	898.7	0	41.9
Mean	2.14	1.51	1	0	0	0	36.8	100	83.6	29.0	0	1.40
Ac-ft	131	90	61	0	0	0	2,190	6,150	4,970	1,780	0	83

Calendar year 1951: Max 116 Min 0 Mean 22.1 Ac-ft 16,020
Water year 1951-52: Max 144 Min 0 Mean 21.3 Ac-ft 15,460

* Discharge measurement made on this day.
** Field estimate made on this day.
Note.--Stage-discharge relation affected by ice Nov. 12 to Apr. 19 (no gage-height record Nov. 29 to Apr. 9; discharge computed on basis of 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 1952.

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

Average discharge.--8 years (1944-52), 252 cfs.

Extremes.--Maximum discharge during year, 2,660 cfs May 8 (gage height, 8.80 ft); minimum, 60 cfs Sept. 30.
1943-52: Maximum discharge, that of May 8, 1952; minimum, 14 cfs July 16, 1948.

Remarks.--Records good except those for period 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 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 12-15, May 23-27)

2.0	61	5.8	909
2.5	136	7.0	1,390
3.5	318	8.0	1,990
4.6	508	8.8	2,660

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	61	168					152	2,510	1,210	723	136	99
2	*65	160	140				156	2,420	*1,270	544	143	96
3	68	148					168	2,260	1,350	425	184	91
4	73	156					184	2,130	1,420	369	184	85
5	81	139					200	2,050	1,440	341	170	82
6	90	148				125	220	2,130	1,450	312	163	80
7	98	150					250	2,440	1,460	290	151	78
8	101	*143					275	2,610	1,460	265	141	77
9	107	141					300	2,560	1,480	*246	136	71
10	114	136	130	125	135		330	2,470	1,540	229	133	65
11	118	144					*360	2,320	1,590	224	138	64
12	125	151					399	2,110	1,580	222	139	68
13	138	156					438	*1,860	1,570	280	199	66
14	190	143					552	1,690	1,540	291	215	65
15	197	141					723	1,640	1,460	291	192	64
16	193						869	1,750	1,300	282	170	65
17	183					(*)	1,020	1,900	1,080	252	155	71
18	179					135	1,250	2,020	*837	235	139	75
19	184						1,420	1,990	623	220	131	75
20	183						1,500	1,840	508	228	125	74
21	183						1,560	1,640	*425	215	122	74
22	181						1,570	1,420	361	193	118	75
23	184	140					1,670	1,260	*347	175	117	75
24	184		125	135			*1,750	1,280	387	156	112	75
25	177				130		1,750	1,340	425	138	107	75
26	174						1,830	*1,330	513	130	104	70
27	177		(*)				1,930	1,290	693	122	*107	64
28	175					150	2,130	1,220	878	117	106	62
29	174						2,370	1,210	997	117	102	62
30	174			(*)	-		*2,470	1,240	957	*117	99	61
31	172	-			-		-	1,230	-	136	99	-
Total	4,503	4,324	3,990	3,995	3,870	4,180	29,796	57,160	32,151	7,885	4,337	2,204
Mean	145	144	129	129	133	135	993	1,844	1,072	254	140	73.5
Ac-ft	8,930	8,580	7,910	7,920	7,680	8,290	59,100	113,400	63,770	15,640	8,600	4,370

Calendar year 1951: Max 1,840 Min 55 Mean 281 Ac-ft 203,700
Water year 1951-52: Max 2,610 Min 61 Mean 433 Ac-ft 314,200

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 16 to Mar. 29. No gage-height record Mar. 11-16, Mar. 30 to Apr. 11, Apr. 19-21, June 12,13; discharge estimated on basis of 3 discharge measurements and records for nearby Bear River stations.

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 1952.

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.--9 years, 24.4 cfs.

Extremes.--Maximum discharge during year, 359 cfs Apr. 21 (gage height, 4.43 ft); minimum, 3.8 cfs Nov. 2, but may have been less during periods of ice effect or no gage-height record.
1943-52: 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 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 24-29)

1.5	5.5	2.6	85
1.6	9.0	3.1	140
1.7	14	3.8	225
1.9	26	4.2	307
2.2	49		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	7.6					14	*148	65	28	19	15
2	12	7.6	b9			a9	b25	139	*63	27	18	15
3	13	7.6					b20	145	62	26	18	15
4	12	8.6				(*)	b18	153	61	24	18	15
5	12	9.4	b7				b25	141	55	24	18	15
6	14	9.4		a6	a8	b9	b35	126	54	24	17	15
7	12	8.6	b6				b40	113	51	22	16	15
8	11	*9.4			(*)		b45	112	47	22	17	14
9	10	9.4					*35	115	44	22	18	14
10	9.9	9.9					39	106	44	*22	17	13
11	9.9	9.0					36	96	41	22	18	13
12	9.4	9.0	a6				39	92	38	22	15	16
13	9.9	9.0					47	90	38	23	14	16
14	9.9	8.6					52	89	35	22	14	15
15	9.9	9.0					51	87	34	21	14	14
16	*9.4	6.9					38	113	*33	20	14	13
17	9.9	b7.5					72	*144	33	19	14	13
18	9.4	b8.0				a9	*127	108	33	20	14	13
19	9.4	b8.5					175	96	30	19	14	12
20	9.9	b9.0			a7		219	93	28	18	14	11
21	9.9			a7			302	110	29	18	11	11
22	8.6						148	99	30	*18	13	11
23	9.0		a7				*138	99	29	18	13	11
24	9.0						*181	90	49	18	13	10
25	9.0						*202	84	*61	17	13	9.9
26	9.0	b9.0					195	82	49	19	13	9.4
27	9.0		(*)				191	79	68	35	*20	9.0
28	8.6					a10	200	75	49	56	16	8.6
29	8.3					a11	180	73	38	25	16	8.3
30	8.3				-	a12	173	71	31	*20	15	*8.3
31	8.3	-			-	*14	-	67	-	20	15	-
Total	310.9	262.0	215	207	213	290	3,062	3,235	1,322	711	479	378.5
Mean	10.0	8.73	6.9	6.7	7.3	9.4	102	104	44.1	22.9	15.5	12.6
Ac-ft	617	520	426	411	422	575	6,070	6,420	2,620	1,410	950	751

Calendar year 1951: Max 314 Min - Mean 28.5 Ac-ft 20,610
Water year 1951-52: Max 302 Min - Mean 29.2 Ac-ft 21,190

Peak discharge (base, 200 cfs).--Apr. 21 (11 a.m.) 359 cfs (4.43 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 4 discharge measurements, weather records, and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

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 3¼ miles south of Cokeville.

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

Records available.--April 1948 to September 1952.

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

Extremes.--Maximum discharge during year, 2,620 cfs May 10 (gage height, 9.90 ft); minimum, 79 cfs Sept. 30.
1948-52: Maximum discharge, that of May 10, 1952; minimum, 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 Collette Creek Branch of Smiths Fork.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 7 to June 15)

Oct. 1 to Apr. 13				Apr. 14 to Sept. 30			
3.2	86	5.0	358	3.2	77	7.0	860
3.6	135	6.0	575	3.7	145	8.2	1,270
4.2	222	7.0	833	4.3	238	9.3	2,000
4.6	286			5.0	370	9.8	2,700
				6.0	587		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	88	192					185	*2,400	1,430	857	166	122
2	94	190					185	2,490	1,380	890	168	122
3	97	190	165			(*)	185	2,510	*1,350	908	172	119
4	102	190					195	2,420	1,330	714	206	112
5	108	180				140	215	2,340	1,330	594	206	108
6	114	182					240	2,230	1,350	526	195	103
7	122	184					265	2,170	1,380	482	188	101
8	128	*172	154				290	2,190	1,400	423	178	99
9	132	163					320	2,510	1,410	*388	170	98
10	136	159		140			370	2,610	1,420	343	165	94
11	144	156			155		430	2,520	1,430	296	166	92
12	145	169					500	2,420	1,440	303	172	98
13	152	172	145				600	2,300	1,480	305	175	95
14	162	166					709	2,140	1,490	349	240	92
15	206					160	840	*1,960	1,500	339	248	91
16	*219						932	1,880	1,500	339	230	88
17	216						1,060	1,820	1,500	323	212	87
18	208						1,190	1,850	1,420	296	195	91
19	206		(*)				1,260	1,940	1,150	277	180	96
20	212	160					1,280	2,080	831	298	165	96
21	211						1,450	2,130	625	269	155	95
22	211					175	1,560	2,120	559	252	154	94
23	206		140				1,670	1,990	*497	233	150	94
24	211						1,800	1,850	501	214	145	92
25	211			150	145		*1,800	1,720	528	196	138	91
26	204						1,850	1,640	555	180	130	92
27	202					185	1,900	1,630	615	170	130	91
28	204	165					1,950	1,590	680	162	*132	85
29	204			(*)			2,000	1,550	742	163	130	82
30	203				-		2,140	1,500	799	*148	127	*80
31	198	-			-		-	1,460	-	148	123	-
Total	5,256	5,050	4,560	4,460	4,405	5,030	29,371	63,960	33,622	11,385	5,311	2,900
Mean	170	168	147	144	152	162	979	2,060	1,120	367	171	96.7
Ac-ft	10,430	10,020	9,040	8,850	8,740	9,980	58,260	126,900	66,690	22,540	10,530	5,750

Calendar year 1951: Max 1,770 Min 75 Mean 329 Ac-ft 237,800
Water year 1951-52: Max 2,610 Min 80 Mean 479 Ac-ft 347,700

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 2, Nov. 15 to Apr. 13. No gage-height record Aug. 10-28; discharge estimated on basis of records for stations near Randolph, Utah, and at Border, Wyo.

Smiths Fork near Border, Wyo.

Location.--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 1952.

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

Average discharge.--10 years, 204 cfs.

Extremes.--Maximum discharge during year, 976 cfs May 8 (gage height, 3.91 ft); minimum, 44 cfs Mar. 13, but may have been less during periods of ice effect.
1942-52: Maximum discharge, 1,360 cfs May 29, 1951 (gage height, 4.56 ft); 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 or no gage-height record, which are fair. One small diversion for irrigation of about 150 acres above station.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

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

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	111	82	79		69		59	766	832	345	188	116
2	125	82	80		69		58	a800	832	331	182	114
3	125	89	77		68		59	a850	*838	325	191	111
4	123	91	79		68		58	a940	808	314	179	109
5	116	84	80		65		62	a930	832	308	171	107
						b58						
6	114	87	82			(*)	68	a920	850	301	168	105
7	109	*86	77				75	a910	850	294	168	105
8	105	87	b72				80	*910	832	288	163	103
9	105	82	b70				80	796	802	*278	160	103
10	103	84	b70		b60		84	710	760	278	163	101
11	103	84	b75			59	87	678	700	304	152	109
12	105	87	b80			58	91	700	666	281	150	120
13	105	86	b80			56	97	760	635	268	144	111
14	103	86	b75			62	107	832	595	262	144	105
15	101	80	b75			58	111	*844	571	252	144	103
				b65								
16	*101	75	b80			58	107	784	538	243	137	101
17	99	b75	b80			58	120	705	506	240	132	99
18	99	b76	b77			58	147	656	493	237	132	99
19	99	b80	*b75			58	179	635	475	230	130	97
20	101	b85	b76			59	227	656	458	227	127	97
21	101	89	b80			59	265	688	445	221	130	95
22	97	86	b80			b58	249	650	428	215	137	95
23	97	b82	b80		b55	b56	265	620	416	209	130	95
24	99	b76	b78			b58	318	625	*454	206	125	93
25	99	b80				58	393	650	416	200	120	93
26	97	b80				58	493	683	400	200	123	93
27	95	80	b75			56	590	700	393	194	*125	93
28	93	79				56	694	738	374	191	120	93
29	93	79				58	766	808	359	185	120	91
30	91	79		(*)	-	59	772	856	352	*182	118	*89
31	87	-			-	59	-	838	-	185	116	-
Total	3,201	2,478	2,382	2,015	1,709	1,799	6,761	23,638	17,910	7,794	4,489	3,045
Mean	103	82.6	76.8	65	58.9	58.0	225	763	597	251	145	102
Ac-ft	6,350	4,920	4,720	4,000	3,390	3,570	13,410	46,890	35,520	15,460	8,900	6,040

Calendar year 1951: Max 1,310 Min - Mean 245 Ac-ft 177,300
Water year 1951-52: Max 940 Min - Mean 211 Ac-ft 153,200

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and records for station at Cokeville.
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 1952 (discontinued).

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.--10 years, 200 cfs.

Extremes.--Maximum discharge during year, 1,320 cfs May 4 (gage height, 5.63 ft); minimum, 54 cfs Aug. 14.
1942-52: Maximum discharge, 1,320 cfs May 4, 1952; maximum gage height, 5.77 ft May 29, 1951; minimum discharge, 25 cfs Aug. 22, 1949.

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

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 29 to May 3)

Oct. 1 to May 3				May 4 to Sept. 30			
2.4	83	4.5	643	1.8	49	3.4	454
2.7	139	5.0	855	2.1	87	4.2	752
3.2	258	5.6	1,180	2.4	150	5.0	1,070
3.8	423			2.8	260	5.6	1,310

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	106	111						1,010	791	248	75	84
2	113	113						1,040	791	237	72	75
3	117	127			a90		a85	1,140	*810	220	72	72
4	119	117				(*)		1,270	772	203	74	69
5	121	110	b105					1,280	736	195	69	69
6	123	108		b90			a90	1,230	740	181	68	69
7	127	*108			a85		a100	*1,200	744	179	63	69
8	125	110					a110	1,170	729	176	69	68
9	123	106					a110	1,100	713	171	71	66
10	123	106			b85		a120	1,000	683	*179	62	64
11	127	106					*133	938	629	209	59	68
12	125	115					145	930	584	209	56	81
13	123	113					158	938	551	198	56	91
14	123	110			a85		176	962	518	192	55	89
15	123	106				a85	185	990	486	187	56	87
16	*125	b100					174	*982	434	181	60	86
17	125	b96					190	898	396	176	58	84
18	123	b96	a100				224	826	379	168	57	84
19	123	b100					268	783	363	160	57	82
20	123	b110					322	783	343	155	57	82
21	125	b115		a90			397	818	312	140	57	82
22	123	b110					360	795	296	126	57	82
23	121				a80		360	744	287	124	57	80
24	123						417	721	*343	126	57	75
25	127						506	732	334	120	56	75
26	129	b105					605	768	302	94	57	74
27	125						700	*752	296	100	62	74
28	121		(*)				800	740	284	126	*68	78
29	117						*905	764	266	113	71	78
30	117		b100				966	807	257	*86	76	78
31	115	-			-		-	814	-	81	91	-
Total	3,780	3,233	3,135	2,790	2,420	2,635	8,946	28,925	15,169	5,060	1,975	2,315
Mean	122	108	101	90	83.4	85	298	933	506	163	63.7	77.2
Ac-ft	7,500	6,410	6,220	5,530	4,800	5,230	17,740	57,370	30,090	10,040	3,920	4,590

Calendar year 1951: Max 1,260 Min - Mean 252 Ac-ft 182,400
Water year 1951-52: Max 1,280 Min - Mean 220 Ac-ft 159,400

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 3 discharge measurements, weather records, and records for station near Border.
b Stage-discharge relation affected by ice.

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 1952.

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

Average discharge.--15 years, 433 cfs.

Extremes.--Maximum discharge during year, 3,680 cfs May 11 (gage height, 8.89 ft); minimum daily, 191 cfs Sept. 11.
1937-52: Maximum discharge, that of May 11, 1952; minimum daily, 30 cfs Aug. 18-22, 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.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	178	5.5	1,460
2.4	330	7.0	2,170
3.4	602	8.9	3,690
4.4	980		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	236	328	295	265	280	265	370	3,090	2,260	1,150	285	247
2	245	310	295	250	280	270	355	*3,350	2,200	1,180	292	240
3	251	310	295	245	285	270	345	3,510	2,170	1,210	285	234
4	252	320	295	240	285	265	340	3,570	2,150	1,100	301	230
5	274	328	295	240	290	*255	352	3,610	2,100	940	318	221
6	278	*292	290	240	280	250	373	3,640	2,070	836	311	217
7	283	292	285	240	280	260	408	*3,590	2,080	741	301	213
8	290	311	275	230	285	255	477	3,560	2,080	659	292	207
9	290	301	265	230	280	255	536	3,550	*2,080	615	292	199
10	290	292	255	230	285	270	625	3,640	2,070	*570	288	193
11	299	290	245	235	285	275	704	3,660	2,020	539	283	191
12	301	301	240	235	285	280	816	3,640	2,000	542	274	207
13	301	316	240	235	290	280	936	3,590	1,970	506	269	209
14	304	311	225	235	290	280	1,070	*3,520	1,940	530	288	209
15	332	290	210	240	290	275	1,200	3,430	1,910	539	330	209
16	*361	260	215	240	285	280	1,260	3,370	1,860	545	316	209
17	368	242	230	235	285	290	1,380	3,270	*1,800	533	306	209
18	364	230	250	240	285	300	*1,480	3,100	1,780	506	301	207
19	356	255	255	260	285	300	1,620	2,990	1,660	481	272	217
20	361	260	260	260	285	300	1,700	2,970	1,390	472	258	215
21	359	270	255	260	290	300	1,800	3,040	1,100	451	253	223
22	359	270	260	260	280	310	1,870	3,110	940	420	240	217
23	354	270	255	260	270	315	1,910	3,090	844	396	236	215
24	354	255	250	260	265	300	2,000	2,930	*888	373	232	211
25	359	240	250	260	260	300	2,100	2,700	928	352	232	207
26	352	255	245	265	255	305	2,210	2,540	936	330	228	205
27	344	280	250	270	255	310	2,330	*2,460	1,000	316	230	201
28	342	290	*260	*275	255	320	*2,460	2,410	1,070	313	*238	201
29	342	290	270	270	255	330	2,620	2,360	1,110	316	242	199
30	340	295	275	270	-	340	*2,810	2,320	1,120	294	242	195
31	337	-	280	275	-	350	-	2,300	-	*288	249	-
Total	9,888	8,554	8,065	7,750	8,080	8,955	38,457	97,910	49,526	18,043	8,482	6,357
Mean	319	285	260	250	279	289	1,282	3,158	1,651	582	274	212
Ac-ft	19,610	16,970	16,000	15,370	16,030	17,760	76,280	194,200	98,230	35,790	16,820	12,610

Calendar year 1951: Max 2,290 Min 210 Mean 627 Ac-ft 453,700
Water year 1951-52: Max 3,660 Min 191 Mean 738 Ac-ft 535,700

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 2-4, Nov. 16 to Apr. 3 (no gage-height record Jan. 7-28, Mar. 27 to Apr. 2; discharge computed on basis of 1 discharge measurement, 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 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 1952.

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 discharge during year, 848 cfs May 4 (gage height, 6.53 ft); minimum, 6.0 cfs Nov. 9, but may have been less during period of ice effect or no gage-height record.

1949-52: 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 ice effect or no gage-height record, which are fair. No diversions above station.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 26, Apr. 29 to May 9)

Oct. 1 to Apr. 26				Apr. 27 to Sept. 30			
1.9	11	3.0	135	2.0	13	4.0	308
2.1	22	3.9	307	2.2	23	5.0	515
2.4	50			2.5	49	6.1	780
				3.0	121		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	16	17	17	16		a15	630	140	60	38	19
2	34	16	19	b15	17		15	637	133	59	32	19
3	32	19	18	b13	17	a15	15	702	*130	57	32	18
4	28	20	19	b13	17		16	768	126	55	34	17
5	28	19	19	b14	14	*16	17	705	121	53	29	17
6	26	*14	17	b15		15	20	642	121	51	28	17
7	23	15	15	b16		16	24	591	118	50	28	17
8	22	17	16	b16		15	29	*529	110	49	26	17
9	21	17	17	b17		14	28	475	105	48	26	17
10	21	17	18	b17		15	28	423	104	*47	28	16
11	28	17	18	b17		15	31	406	100	53	27	22
12	24	21	a18	b17			*37	394	98	50	26	30
13	24	19	a17	b17			41	385	93	47	25	22
14	23	19	a16	b17			47	*368	88	45	24	19
15	*22	14	a17	b17			50	338	87	42	24	19
16	22	13	a19	b17			49	308	86	40	23	18
17	21	16	a19	b17	a15		61	278	82	39	22	18
18	21	17	*19	b17			76	256	80	37	22	17
19	21	17	19	b17			98	240	76	38	21	17
20	23	18	18	b17			130	238	74	38	21	17
21	23	20	19	b17		a15	150	235	74	35	21	17
22	23	19	18	b17			129	225	74	34	22	17
23	22	17	18	a17			147	204	72	34	21	17
24	23	17	19	a18			161	193	*100	33	21	16
25	25	18	17	a19			237	187	86	32	20	16
26	24	18	b16	a19			305	184	80	32	19	16
27	22	18	b17	a18			427	175	80	32	20	17
28	21	19	19	*14			508	164	72	31	*19	17
29	21	18	20	13			*589	157	65	29	19	17
30	20	18	20	15	-		*630	148	61	28	20	16
31	20	-	18	16	-		-	145	-	*34	18	-
Total	733	523	556	506	441	466	4,130	11,331	2,836	1,312	756	539
Mean	23.6	17.4	17.9	16.3	15.2	15.0	138	366	94.5	42.3	24.4	18.0
Ac-ft	1,450	1,040	1,100	1,000	875	924	8,190	22,470	5,630	2,600	1,500	1,070

Calendar year 1951: Max 620 Min 13 Mean 73.1 Ac-ft 52,930
Water year 1951-52: Max 768 Min - Mean 65.9 Ac-ft 47,850

Peak discharge (base, 150 cfs).--May 4 (1:30 a.m.) 848 cfs (6.53 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for stations on nearby streams.
b Stage-discharge relation affected by ice.

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 1952 (discontinued).

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

Average discharge.--10 years, 60.6 cfs.

Extremes.--Maximum discharge during year, 890 cfs May 5 (gage height, 7.29 ft); minimum, 1.2 cfs Sept. 28, may have been less during period of no gage-height record on Sept. 29 or Sept. 30.
1942-52: Maximum discharge, 1,070 cfs May 19, 1950 (gage height, 7.62 ft); minimum, that of Sept. 28, 1952.

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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	26	b22	b21	b18		20	650	150	51	26	15
2	19	29	b23	b19			21	*661	143	48	25	14
3	20	24	b23	b17	b19		21	694	138	40	25	13
4	23	26	23	b17			22	773	138	38	27	13
5	24	27	24	b18	18	b19	23	864	140	55	28	12
6	24	*26	23	b19		(*)	24	812	126	66	29	11
7	24	25	b20				26	749	126	48	30	11
8	24	25	b20	b20			32	705	114	67	30	11
9	24	26	b21				37	650	110	26	32	9.5
10	24	24					39	586	77	*25	36	8.8
11	25	24	b23				39	506	55	26	38	9.4
12	24	25				b18	*43	455	59	26	37	9.4
13	24	26					55	429	54	25	32	9.0
14	26	25	b21				58	*410	53	24	26	8.7
15	27	25	b21				65	392	54	24	22	8.5
16	*28	b17		b22		17	64	372	53	23	22	8.1
17	28	b20				18	75	350	48	22	22	7.8
18	27	b20			b18	18	93	328	45	22	20	7.5
19	27	b20	b24			18	126	303	46	22	20	7.2
20	26	b21				18	154	288	43	20	20	6.7
21	27	b23				18	176	281	33	20	22	6.3
22	29	b23	a24			18	182	275	32	18	22	5.8
23	28	b21	a23			21	178	262	37	17	21	5.2
24	29	b21	a22	b23		19	193	242	*45	22	21	4.6
25	29		a21	b25		19	220	208	55	18	20	4.0
26	28	b23	a20	b25		20	236	207	58	33	19	2.5
27	28		a21	24		20	271	*202	65	30	19	1.7
28	28		*23	*21		20	*320	190	67	30	*18	1.2
29	28		24	b16		20	393	177	82	28	17	a1.7
30	28	b22	24	b17	-	20	546	158	54	27	16	a1.7
31	27	-	22	b18	-	20	-	154	-	*26	16	-
Total	796	706	701	648	525	583	3,752	13,333	2,280	967	758	235.3
Mean	25.7	23.5	22.6	20.9	18.1	18.8	125	430	76.0	31.2	24.5	7.84
Ac-ft	1,580	1,400	1,390	1,290	1,040	1,160	7,440	26,450	4,520	1,920	1,500	467

Calendar year 1951: Max 510 Min 17 Mean 81.8 Ac-ft 59,240
Water year 1951-52: Max 864 Min 1.2 Mean 69.1 Ac-ft 50,160

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of weather records and records for station near Wyoming-Idaho State line.
b Stage-discharge relation affected by ice.

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 1952.

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.--36 years, 531 cfs.

Extremes.--Maximum discharge during year, 4,440 cfs May 7 (gage height, 11.04 ft); minimum daily, 220 cfs Dec. 15, 16.
1913-16, 1919-52: Maximum discharge, that of May 7, 1952; 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. Four discharge measurements were made by Geological Survey in addition to those made by power company.

Rating table, water year 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 17 to Dec. 11, May 3-25, June 17 to July 13)

3.0	179	6.0	1,320	10.0	2,990
3.5	328	7.0	1,690	11.0	4,170
4.0	508	8.0	2,080	11.2	4,540
5.0	904	9.0	2,480		

Discharge, in cubic feet per second, Water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	274	360	290	285	300	300	410	3,110	2,500	1,300	338	267
2	286	290	312	275	305	280	390	3,440	2,460	1,330	342	264
3	286	290	302	260	310	275	385	3,840	2,410	1,340	348	258
4	293	380	306	240	310	260	395	4,070	2,380	1,340	345	255
5	309	400	*315	235	310	270	410	4,240	2,340	1,160	359	249
6	315	375	322	240	295	*275	440	4,390	2,290	1,000	373	246
7	322	*318	296	245	310	280	475	4,430	2,280	896	373	267
8	325	345	290	250	325	295	560	*4,410	2,270	784	352	264
9	331	366	274	250	310	295	630	4,350	2,260	716	338	252
10	331	352	252	255	310	295	695	4,310	2,260	660	338	243
11	342	348	252	260	300	300	765	4,370	*2,230	633	338	240
12	348	352	240	265	300	310	850	4,350	2,180	611	331	249
13	348	362	250	275	320	310	965	4,300	2,120	592	*325	252
14	352	369	235	285	310	300	1,080	4,170	2,080	573	322	252
15	362	362	220	285	300	310	1,200	4,030	2,030	592	352	252
16	402	348	220	285	295	295	1,300	3,940	1,990	592	369	252
17	423	293	230	295	315	310	1,410	3,830	*1,910	588	355	255
18	427	331	250	295	295	310	1,520	3,700	1,860	588	348	255
19	420	315	260	295	295	320	1,660	3,530	1,810	573	335	*264
20	416	302	270	295	295	340	1,760	3,410	1,660	569	312	267
21	420	342	255	300	295	340	1,900	3,360	1,380	576	290	264
22	420	296	270	*310	300	320	2,090	3,380	1,130	546	283	267
23	412	299	270	310	285	305	*2,140	3,410	1,010	500	270	264
24	410	283	260	315	300	310	2,200	3,410	1,010	481	264	264
25	405	286	290	325	290	310	2,300	3,290	*1,080	423	264	261
26	395	315	250	325	285	320	2,400	3,080	1,090	398	258	255
27	390	309	270	325	285	335	2,490	2,880	1,150	384	258	252
28	390	296	275	325	295	350	2,590	2,780	1,200	369	255	249
29	375	290	280	310	310	360	2,720	2,660	1,270	369	261	249
30	410	290	310	305	-	380	2,880	2,590	1,290	362	267	249
31	390	-	330	290	-	400	-	2,530	-	*348	267	-
Total	11,329	9,864	8,446	8,810	8,755	9,660	41,010	113,610	54,930	21,193	9,830	7,677
Mean	365	329	272	284	302	312	1,367	3,665	1,831	684	317	256
Ac-ft	22,470	19,560	16,750	17,470	17,370	19,160	81,340	225,300	109,000	42,040	19,500	15,230

Calendar year 1951: Max 2,490 Min 220 Mean 758 Ac-ft 548,800
Water year 1951-52: Max 4,430 Min 220 Mean 834 Ac-ft 605,200

* Discharge measurement made on this day.
Note.--No gage-height record Oct. 24 to Nov. 7, Apr. 6-21; discharge estimated on basis of 2 discharge measurements and records for nearby stations. Stage-discharge relation affected by ice Dec. 12 to Apr. 5.

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 1⅝ miles downstream from head at Stewart Dam.

Records available.--October 1945 to September 1952 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.--30 years, 310 cfs.

Extremes.--Maximum discharge during year, 4,180 cfs May 7 (gage height, 8.62 ft); minimum daily, 135 cfs Sept. 10.
1945-52: Maximum discharge, that of May 7, 1952; minimum daily, 16 cfs Sept. 13, 1948.

Remarks.--Records good except those for periods of ice effect or no gage-height record, 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 irrigation 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. 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	214	321	286	b245	281	b270	409	2,780	2,060	824	249	195
2	217	257	289	a246	285	b265	403	2,960	2,020	982	231	212
3	231	254	292	a241	283	a265	406	3,270	1,990	1,020	237	205
4	251	339	286	a236	281	a255	431	3,510	1,980	1,020	240	186
5	254	354	295	a231	283	240	454	3,790	1,940	922	246	168
6	251	336	292	a230	b285	b249	486	3,960	1,920	802	267	160
7	260	304	b280	a229	b285	256	519	4,140	1,860	722	276	160
8	266	324	b270	a228	b290	b262	620	4,130	1,790	636	269	168
9	269	336	b260	a230	b285	b265	705	4,010	1,740	554	262	152
10	251	327	b250	a232	b285	269	744	3,930	1,700	535	274	135
11	269	315	234	229	b285	269	802	3,900	1,740	529	278	141
12	272	324	228	229	b285	278	863	3,960	1,640	507	278	147
13	274	333	234	240	b285	b277	970	3,920	1,570	507	262	147
14	274	345	b220	231	a285	276	1,070	3,770	1,560	474	251	145
15	274	330	203	235	a280	b280	1,170	3,590	1,540	477	256	145
16	306	254	206	251	b280	285	1,320	3,540	1,520	474	278	150
17	342	237	228	b260	b280	285	1,410	3,460	1,500	471	260	156
18	345	223	240	b255	b280	b295	1,540	3,340	1,420	465	226	156
19	345	266	246	253	b275	b300	1,660	3,200	1,410	417	229	156
20	342	251	254	246	b275	b295	1,750	3,030	1,310	378	226	160
21	354	274	240	b248	b270	b295	1,840	2,960	1,080	370	207	158
22	360	277	248	249	b270	b290	1,920	2,930	870	344	190	156
23	366	274	251	251	b265	b290	2,000	2,940	698	316	180	160
24	369	257	243	246	b260	290	2,050	2,930	570	290	174	158
25	366	231	269	256	b255	285	2,070	2,900	616	256	172	156
26	366	272	234	265	b255	290	2,220	2,780	629	249	178	152
27	357	274	237	269	b255	b305	2,270	2,590	670	249	178	150
28	351	283	248	b280	b260	b325	2,330	2,420	712	260	166	149
29	333	280	260	b280	a270	339	2,500	2,300	758	285	182	149
30	366	283	266	b280	-	355	2,630	2,190	772	269	188	164
31	342	-	292	278	-	378	-	2,130	-	246	190	-
Total	9,437	8,735	7,881	7,679	8,013	8,878	39,562	101,260	41,585	15,850	7,100	4,796
Mean	304	291	254	248	276	286	1,319	3,266	1,386	511	229	160
Ac-ft	18,720	17,330	15,630	15,230	15,890	17,610	78,470	200,800	82,480	31,440	14,080	9,510

Calendar year 1951: Max 2,030 Min 142 Mean 640 Ac-ft 463,500
Water year 1951-52: Max 4,140 Min 135 Mean 713 Ac-ft 517,200

a No gage-height record (stage-discharge relation probably affected by ice); discharge estimated on basis of 10 discharge measurements and weather records.
b Stage-discharge relation affected by ice.

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 1952 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.--30 years, 76.6 cfs.

Extremes.--Maximum daily discharge during year, 35 cfs June 30; minimum daily, 12 cfs Apr. 5.
1923-52: Maximum daily discharge, 3,050 cfs June 3, 1923; minimum daily, 1 cfs on several days in 1931, 1934, 1940, 1948.

Remarks.--Records good. Discharge measurements generally made once each week. 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.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	17	20	15	14	13	14	26	30	34	13	15
2	16	16	19	15	14	13	13	26	29	26	13	15
3	16	16	20	16	14	13	18	26	29	26	14	15
4	16	16	19	16	15	13	13	28	28	25	14	15
5	16	16	19	16	15	13	12	30	28	24	14	15
6	16	a16	18	17	15	14	13	32	28	22	14	14
7	15	a17	18	17	15	15	17	34	28	22	15	14
8	15	17	18	16	15	17	18	34	28	21	16	14
9	15	17	18	15	15	15	14	34	28	20	16	13
10	15	16	17	14	15	15	15	32	29	19	16	14
11	15	16	16	14	15	14	19	32	27	19	16	14
12	16	16	16	14	15	15	19	33	28	18	16	13
13	16	17	16	14	14	15	20	32	33	18	16	14
14	16	17	16	14	14	16	21	32	32	18	16	14
15	16	18	16	14	15	16	21	32	33	18	16	14
16	16	18	16	14	14	17	19	32	34	18	16	14
17	17	18	16	14	14	16	19	30	34	18	16	15
18	17	18	16	14	14	17	18	30	32	17	16	14
19	16	20	16	14	14	17	18	30	32	18	16	14
20	16	19	16	14	14	17	19	28	31	17	15	14
21	18	19	16	14	14	17	20	27	30	17	15	14
22	18	19	16	14	14	17	20	26	29	16	15	14
23	18	a20	16	13	14	18	20	27	26	16	16	14
24	17	a20	16	13	14	18	22	28	34	16	15	14
25	17	a20	15	14	a14	18	26	28	32	15	15	14
26	17	a19	16	14	14	19	28	28	33	15	15	14
27	18	a19	16	15	13	16	26	28	33	14	15	14
28	17	19	16	16	13	15	26	28	34	14	15	14
29	17	19	16	15	13	16	27	32	34	13	15	14
30	17	19	16	14	-	21	27	31	35	13	15	14
31	17	-	16	14	-	16	-	30	-	13	15	-
Total	508	534	521	453	413	492	582	926	921	580	470	424
Mean	16.4	17.8	16.8	14.6	14.2	15.9	19.4	29.9	30.7	18.7	15.2	14.1
Ac-ft	1,010	1,060	1,030	899	819	976	1,150	1,840	1,830	1,150	932	841

Calendar year 1951: Max 42 Min 15 Mean 22.1 Ac-ft 15,980
Water year 1951-52: Max 35 Min 12 Mean 18.6 Ac-ft 13,500

a No gage-height record; discharge estimated on basis of 4 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 1952.

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

Average discharge.--9 years (1943-52), 25.0 cfs.

Extremes.--Maximum discharge during year, 164 cfs May 4 (gage height, 2.33 ft); minimum, 2.3 cfs Mar. 5 (caused by ice jam upstream).
1942-52: Maximum discharge, 224 cfs May 18, 1950 (gage height, 2.91 ft); minimum, 1.4 cfs Feb. 22, 1951 (caused by ice jam upstream).

Remarks.--Records good except those for period of ice effect, which are fair. One small diversion above station for irrigation.

Rating tables, water year 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 2		Apr. 2 to Sept. 30			
0.7	6.8	0.2	5.5	1.0	55
1.0	12	.3	9.0	1.4	85
1.2	15	.5	19	1.9	126
1.5	21	.7	32	2.3	161

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	13	13	11	10	9.7	8.0	139	69	35	24	14
2	20	12	13	9.6	10	9.4	8.0	142	68	34	22	14
3	19	13	12	b7	10	8.9	8.0	148	67	34	21	14
4	18	13	13	b7	10	8.8	8.0	156	*66	32	22	13
5	18	*13	13	b6	10	*8.9	8.6	149	64	31	19	13
6	17	13	13	b7	9.3	8.2	9.4	141	64	31	19	13
7	16	13	11	b8	9.3	8.6	10	132	63	30	19	13
8	16	13	9.6	10	9.6	8.6	13	124	60	29	18	13
9	16	13	9.7	10	9.4	8.5	13	*121	58	28	18	13
10	16	13	12	10	9.6	8.6	13	111	57	28	18	13
11	18	13	13	10	9.3	8.6	14	107	55	*32	18	15
12	17	14	13	10	10	8.5	17	104	53	28	17	18
13	16	15	13	10	9.9	8.5	18	103	52	28	16	16
14	15	15	13	10	9.6	8.5	21	100	49	26	16	15
15	*15	14	12	10	9.6	8.0	21	98	48	26	16	15
16	15	12	12	10	11	8.3	21	*94	47	24	16	15
17	14	12	*12	9.3	10	8.3	26	90	45	24	15	14
18	14	11	12	10	10	8.3	31	87	44	24	15	14
19	14	12	12	10	10	8.2	39	84	43	24	15	13
20	15	14	12	10	10	8.0	44	86	42	23	15	13
21	15	15	12	10	9.7	7.7	53	90	42	23	15	13
22	14	14	12	10	10	7.7	51	83	41	22	15	13
23	14	13	12	10	9.7	7.7	57	78	40	21	15	13
24	14	13	12	10	12	8.0	73	76	49	21	15	13
25	14	13	11	10	8.3	8.0	85	75	*45	21	14	12
26	14	14	11	9.9	10	8.3	96	75	44	21	14	12
27	14	13	11	9.6	10	8.2	109	74	44	21	14	12
28	14	13	11	9.4	9.7	8.2	122	73	41	21	14	12
29	14	13	12	*9.4	8.9	8.3	*139	72	38	21	*14	12
30	14	13	12	9.4	-	8.5	146	71	36	21	15	12
31	13	-	11	11	-	8.3	-	71	-	*22	14	-
Total	480	395	370.3	293.6	284.9	260.3	1,282.0	3,154	1,534	806	518	405
Mean	15.5	13.2	11.9	9.47	9.82	8.40	42.7	102	51.1	26.0	16.7	13.5
Ac-ft	952	783	734	582	565	516	2,540	6,260	3,040	1,600	1,030	803

Calendar year 1951: Max 128 Min 9.1 Mean 32.4 Ac-ft 23,440
Water year 1951-52: Max 156 Min 6 Mean 26.7 Ac-ft 19,400

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

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 1952. 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.

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 year, 1,291,000 acre-ft June 29 to July 1 (gage height, 21.80 ft); minimum, 954,900 acre-ft Mar. 29 to Apr. 2 (gage height, 16.97 ft).
1921-52: 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. 39). 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.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,104	1,075	1,057	1,025	989.9	967.9	954.9	1,035	1,254	1,291	1,255	1,182
2	1,102	1,073	1,057	1,024	989.2	967.9	954.9	1,040	1,258	1,290	1,253	1,178
3	1,099	1,072	1,056	1,022	989.2	967.2	955.5	1,047	1,262	1,290	1,252	1,173
4	1,098	1,071	1,056	1,020	988.5	966.5	955.5	1,054	1,265	1,289	1,249	1,169
5	1,097	1,069	1,055	1,019	987.2	965.8	955.5	1,059	1,269	1,289	1,245	1,167
6	1,096	1,068	1,054	1,018	985.8	965.2	955.5	1,065	1,273	1,289	1,243	1,165
7	1,095	1,067	1,054	1,016	984.4	964.5	956.2	1,071	1,276	1,289	1,242	1,162
8	1,094	1,067	1,052	1,015	983.0	963.8	957.6	1,078	1,279	1,288	1,240	1,159
9	1,094	1,066	1,050	1,015	982.3	963.1	959.0	1,085	1,282	1,287	1,238	1,157
10	1,093	1,065	1,048	1,014	981.6	962.4	960.4	1,092	1,284	1,287	1,236	1,155
11	1,093	1,065	1,046	1,013	981.0	961.7	962.4	1,101	1,286	1,287	1,235	1,152
12	1,092	1,065	1,044	1,011	980.3	961.7	963.8	1,109	1,288	1,287	1,234	1,148
13	1,092	1,065	1,044	1,010	979.6	961.0	965.8	1,118	1,289	1,286	1,231	1,146
14	1,091	1,065	1,043	1,009	978.9	960.4	968.6	1,126	1,289	1,286	1,230	1,145
15	1,090	1,065	1,042	1,008	978.2	959.7	972.7	1,134	1,289	1,286	1,227	1,143
16	1,090	1,065	1,042	1,006	977.5	959.0	977.5	1,143	1,289	1,285	1,224	1,141
17	1,089	1,065	1,040	1,005	976.8	957.6	981.6	1,153	1,289	1,283	1,222	1,140
18	1,088	1,065	1,039	1,004	976.1	956.9	987.2	1,163	1,289	1,281	1,220	1,138
19	1,088	1,064	1,039	1,002	975.4	956.9	993.4	1,172	1,288	1,280	1,217	1,136
20	1,087	1,063	1,038	1,000	974.7	956.9	999.6	1,180	1,288	1,278	1,214	1,135
21	1,086	1,065	1,038	998.9	974.0	956.9	1,005	1,189	1,287	1,276	1,211	1,134
22	1,085	1,065	1,036	997.5	973.4	956.9	1,011	1,196	1,287	1,273	1,209	1,132
23	1,085	1,065	1,035	996.1	972.7	956.2	1,016	1,207	1,287	1,272	1,207	1,130
24	1,084	1,062	1,035	994.8	972.0	956.2	1,021	1,215	1,287	1,270	1,205	1,129
25	1,083	1,061	1,035	994.1	971.3	956.2	1,024	1,122	1,287	1,268	1,202	1,127
26	1,083	1,061	1,033	993.4	970.6	955.5	1,026	1,229	1,287	1,267	1,199	1,124
27	1,083	1,060	1,032	992.7	969.9	955.5	1,028	1,236	1,287	1,265	1,196	1,122
28	1,082	1,060	1,031	992.0	968.6	955.5	1,031	1,238	1,289	1,263	1,193	1,121
29	1,081	1,059	1,029	991.3	968.6	954.9	1,032	1,243	1,291	1,262	1,192	1,119
30	1,080	1,058	1,028	990.6	-	954.9	1,033	1,248	1,291	1,259	1,189	1,117
31	1,078	-	1,026	989.9	-	954.9	-	1,251	-	1,257	1,187	-

Monthly elevation and contents, water year October 1951 to September 1952

Date	Elevation (feet)†	Contents thousands of acre-feet)	Change in contents during month (thousands of acre-feet)
Sept.30	5,919.16	1,106	-
Oct. 31	5,918.75	1,078	-28.0
Nov. 30	5,918.48	1,058	-20.0
Dec. 31	5,918.01	1,026	-32.0
Calendar year 1951	-	-	-98.0
Jan. 31	5,917.48	989.9	-36.1
Feb. 29	5,917.17	968.6	-21.3
Mar. 31	5,916.97	954.9	-13.7
Apr. 30	5,918.11	1,033	+78.1
May 31	5,921.23	1,251	+218
June 30	5,921.80	1,291	+40.0
July 31	5,921.32	1,257	-34.0
Aug. 31	5,920.31	1,187	-70.0
Sept.30	5,919.31	1,117	-70.0
Water year 1951-52	-	-	+11.0

† 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 1952 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.--30 years, 347 cfs.

Extremes.--Maximum daily discharge during year, 1,440 cfs Aug. 23; maximum gage height, 19.77 ft Feb. 6; minimum daily discharge, 16 cfs Apr. 12-26.
1922-52: 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. One discharge measurement made by Geological Survey in addition to those made by the power company.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,190	593	783	944	967	902	600	a18	521	990	1,300	1,340
2	673	587	789	934	990	880	528	a18	528	950	1,270	1,360
3	569	593	783	a980	1,010	849	534	a19	526	752	1,250	1,410
4	585	598	789	a980	1,020	846	554	a19	534	770	1,190	1,350
5	598	606	792	a975	1,120	834	549	a20	557	854	1,130	1,170
6	606	617	783	a975	1,080	864	495	a20	616	967	1,100	1,150
7	604	617	b800	a970	987	893	388	a20	830	1,000	1,100	1,130
8	598	604	880	970	947	899	484	a21	855	1,030	1,090	1,100
9	598	601	a900	977	928	902	481	a21	827	1,010	1,090	1,080
10	601	612	a950	994	938	909	b380	a21	774	997	1,080	1,020
11	617	620	a1,020	997	938	902	162	a22	994	1,030	1,080	987
12	606	642	b1,040	1,010	938	893	a16	a22	1,060	1,030	1,060	984
13	598	631	b970	1,020	977	890	a16	a22	1,140	1,030	1,110	967
14	590	625	b890	1,040	997	915	a16	a22	1,170	987	1,220	954
15	582	620	1,010	1,040	938	906	a16	a22	1,200	990	1,190	941
16	587	606	1,000	1,040	928	899	a16	a22	1,210	1,040	1,170	938
17	596	604	1,020	1,030	938	b780	a16	a22	1,210	1,040	1,160	928
18	598	579	b1,000	1,030	944	324	a16	a22	1,240	1,060	1,200	922
19	593	622	921	1,040	931	334	a16	a22	1,240	1,040	1,350	906
20	593	733	807	1,010	938	418	a16	b50	1,300	1,020	1,360	909
21	598	730	b840	994	934	670	a16	b150	1,270	1,020	1,380	909
22	598	684	b840	990	915	980	a16	b360	1,220	1,070	1,400	909
23	612	672	b840	994	893	990	a16	462	1,240	1,090	1,440	890
24	612	675	b880	994	893	977	a16	469	1,310	1,090	1,420	880
25	601	678	b920	994	893	879	a16	472	1,190	1,140	1,400	868
26	590	670	930	951	893	584	a16	469	906	1,250	1,400	877
27	587	712	939	890	906	b560	a17	464	524	1,230	1,400	855
28	585	783	975	896	909	568	a17	467	445	1,210	1,390	855
29	572	786	952	896	922	758	a17	436	429	1,220	1,380	786
30	582	783	924	922	-	b760	a18	445	666	1,280	1,370	683
31	604	-	902	967	-	b700	-	474	-	1,320	1,370	-
Total	19,123	19,483	27,869	30,444	27,612	24,465	5,464	5,113	27,532	32,507	38,850	30,058
Mean	617	649	899	982	952	789	182	165	918	1,049	1,253	1,002
Ac-ft	37,930	38,640	55,280	60,380	54,770	48,530	10,840	10,140	54,610	64,480	77,060	59,620

Calendar year 1951: Max 1,550 Min 27 Mean 871 Ac-ft 630,500
Water year 1951-52: Max 1,440 Min 16 Mean 788 Ac-ft 572,300

a No gage-height record; discharge estimated on basis of 9 discharge measurements, records of headgate changes, and field notes.
b Stage-discharge relation affected by ice.

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 1952 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.--30 years, 542 cfs.

Extremes.--Maximum discharge during year, 1,580 cfs June 25 (gage height, 5.15 ft); maximum gage height, 6.43 ft Jan. 5 (backwater from ice); minimum discharge, 364 cfs May 18. 1922-52: 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. Three discharge measurements were obtained by Geological Survey in addition to those obtained by power company.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,420	711	862	995	1,030	1,000	750	660	872	1,230	*1,330	1,390
2	1,000	692	867	985	1,060	975	680	634	877	1,340	1,310	1,390
3	724	715	857	1,030	1,080	945	692	616	857	1,150	1,280	1,430
4	688	720	862	1,030	1,090	*947	670	598	862	1,060	1,260	1,420
5	688	720	867	1,030	1,190	935	674	612	877	1,060	1,180	1,280
6	688	*724	*862	1,030	1,150	965	688	607	909	1,160	1,140	1,170
7	688	724	909	1,020	1,060	1,000	581	674	1,000	1,190	1,120	1,150
8	688	724	930	1,020	1,020	1,000	660	688	1,140	1,250	1,100	1,130
9	688	724	960	1,030	1,000	1,010	734	678	1,050	1,250	1,100	1,120
10	688	724	980	1,050	1,010	1,020	821	603	975	1,230	1,080	1,090
11	706	729	1,030	1,050	1,010	1,010	811	552	1,140	1,220	1,070	1,040
12	701	739	1,090	1,060	1,020	1,010	782	515	1,170	1,230	1,060	1,030
13	697	743	1,110	1,070	1,060	1,000	898	499	1,260	1,230	1,050	1,010
14	692	743	1,050	1,090	1,070	1,010	1,010	487	1,310	1,190	1,160	981
15	692	739	960	1,090	1,020	1,010	953	467	1,320	1,150	1,190	976
16	688	711	1,080	1,100	1,010	1,030	930	471	*1,340	1,200	1,180	970
17	688	739	1,070	1,080	1,020	1,050	1,060	426	1,370	1,190	1,160	*958
18	692	811	1,090	1,090	1,030	665	1,070	372	1,390	1,150	1,150	953
19	711	821	1,080	1,100	1,020	425	976	437	1,400	1,150	1,270	947
20	715	862	1,000	1,070	1,020	430	872	448	1,450	1,120	1,350	947
21	715	826	890	1,050	1,020	545	802	503	1,470	1,090	1,350	941
22	715	792	920	1,050	1,000	885	*753	724	1,450	1,100	1,390	941
23	715	767	920	1,050	980	1,050	683	925	1,440	1,150	1,430	930
24	720	792	920	*1,050	980	1,090	620	914	1,540	1,150	1,420	925
25	715	836	960	1,050	980	1,120	590	909	1,570	1,130	1,410	914
26	706	763	1,000	1,010	985	950	573	872	1,380	1,240	1,380	909
27	711	767	1,010	950	1,000	790	581	846	1,040	1,270	1,390	898
28	697	831	1,020	955	1,000	690	607	836	914	1,250	1,390	893
29	697	857	1,050	955	1,020	805	625	836	826	*1,230	1,390	882
30	692	862	1,030	985	-	905	660	836	831	1,280	1,390	763
31	711	-	1,000	995	-	890	-	831	-	1,330	1,390	-
Total	22,736	22,908	30,236	32,120	29,935	28,157	22,806	20,076	35,030	36,970	38,870	31,378
Mean	733	764	975	1,036	1,032	908	760	648	1,168	1,193	1,254	1,046
Ac-ft	45,100	45,440	59,970	63,710	59,380	55,850	45,240	39,820	69,480	73,330	77,100	62,240

Calendar year 1951: Max 1,740 Min 303 Mean 1,060 Ac-ft 767,400
Water year 1951-52: Max 1,570 Min 372 Mean 960 Ac-ft 696,700

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 8 to Apr. 2 (no gage-height record Jan. 5-24, Feb. 22 to Mar. 4; discharge estimated on basis of 2 discharge measurements, records for stations below Stewart Dam, near Montpelier, and at Alexander, Bear Lake outlet canal near Paris, and Soda Reservoir elevations). No gage-height record June 7-10; discharge estimated as explained above.

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 1952.

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.--12 years (1940-52), 31.6 cfs.

Extremes.--Maximum discharge during year, 60 cfs May 15 (gage height, 2.22 ft); minimum daily, 26 cfs Mar. 26 to Apr. 6.
1911-14, 1939-52: Maximum discharge observed, 162 cfs June 8, 1912; minimum daily, 18 cfs on many days February to May 1941.

Remarks.--Records good. No diversions above station. At one time a small storage reservoir was operated about 1.5 miles above station but dam is now breached and no longer operative.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

1.8	25
2.0	41
2.2	60

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	35	34	32	30	28	26	42	57	43	*41	36
2	40	35	34	31	30	28	*26	42	56	43	40	36
3	39	35	34	31	30	28	26	46	56	43	40	36
4	39	35	34	31	30	28	26	50	*55	43	40	36
5	39	*35	34	31	29	28	26	55	54	43	40	36
6	38	35	34	31	29	28	26	56	54	43	40	35
7	38	35	34	31	29	28	27	57	54	43	40	35
8	38	35	34	31	29	28	27	57	53	43	40	35
9	37	35	33	31	29	28	27	*56	52	43	40	35
10	38	35	33	31	29	28	27	54	52	43	40	35
11	37	35	33	31	29	28	27	55	51	*43	40	36
12	37	35	33	31	29	27	28	56	50	43	40	35
13	37	35	33	31	29	27	28	57	50	42	40	35
14	36	35	33	31	29	27	28	58	49	42	39	35
15	*36	35	33	31	29	27	28	59	48	42	39	36
16	36	34	33	31	29	27	28	*59	47	42	38	36
17	36	34	*33	31	29	27	28	58	47	42	38	36
18	35	34	33	31	28	27	29	57	46	42	38	36
19	36	34	33	31	28	27	30	56	46	42	37	36
20	35	34	33	31	28	27	30	57	45	42	37	36
21	36	34	33	31	28	27	30	58	45	42	39	36
22	35	34	33	31	28	27	30	57	45	42	38	36
23	35	34	33	31	28	27	30	55	45	42	38	36
24	35	34	33	31	28	27	31	55	46	42	38	36
25	35	34	33	30	28	27	31	55	*45	42	38	36
26	36	34	32	30	28	26	31	56	45	42	38	35
27	36	34	32	30	28	26	31	57	45	42	38	35
28	36	34	32	30	28	26	31	57	44	41	37	35
29	36	34	32	*30	28	26	*35	56	44	41	*37	35
30	35	34	32	30	-	26	40	57	44	41	36	35
31	35	-	32	30	-	26	-	57	-	41	36	-
Total	1,136	1,035	1,025	955	833	842	868	1,707	1,470	1,310	1,200	1,067
Mean	36.6	34.5	33.1	30.8	28.7	27.2	28.9	55.1	49.0	42.3	38.7	35.6
Ac-ft	2,250	2,050	2,030	1,890	1,650	1,670	1,720	3,390	2,920	2,600	2,380	2,120

Calendar year 1951: Max 73 Min 28 Mean 38.3 Ac-ft 27,710
Water year 1951-52: Max 59 Min 26 Mean 36.7 Ac-ft 26,670

* Discharge measurement made on this day.
Note.--No gage-height record Mar. 15 to Apr. 1; discharge estimated on basis of long established steady streamflow pattern.

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 1952.

Gage.--Water-stage recorder.

Average discharge.--37 years (1911-16, 1919-29, 1921-52), 769 cfs.

Extremes.--Maximum daily discharge during year, 1,750 cfs June 20; minimum daily, 366 cfs May 16, 17.
1911-16, 1919-52: 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. One discharge measurement made by Geological Survey in addition to those made by power company.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,110	1,050	1,160	1,360	1,360	1,150	1,200	1,310	763	1,110	1,230	1,450
2	1,150	994	1,040	1,230	1,390	1,150	1,190	1,320	1,220	1,180	1,220	1,440
3	1,040	966	1,110	1,210	1,290	1,170	1,050	1,260	909	1,200	1,230	1,420
4	969	909	971	1,180	1,310	1,190	960	1,210	940	1,090	1,250	1,420
5	960	953	950	1,210	1,330	1,170	950	1,270	982	1,200	1,220	1,440
6	968	975	1,130	1,200	1,310	1,210	950	1,280	1,110	1,210	1,260	1,450
7	748	965	1,330	1,260	1,380	1,180	1,100	1,310	979	1,240	1,250	1,480
8	927	971	1,420	1,250	1,120	1,180	1,130	1,170	1,020	1,290	1,230	1,480
9	946	942	1,390	1,260	923	1,180	1,040	1,250	1,520	1,350	1,260	1,280
10	976	939	1,180	1,300	629	*1,190	1,120	1,210	1,400	1,140	1,230	1,070
11	948	728	862	1,280	1,080	1,200	1,120	1,160	1,360	1,250	1,260	1,090
12	1,010	776	*1,020	1,240	1,040	1,210	1,160	737	*1,270	1,270	1,240	1,100
13	1,040	838	1,170	1,200	1,200	1,240	1,100	749	1,430	1,280	1,220	1,130
14	865	937	1,320	1,310	1,220	1,200	1,160	697	1,440	1,280	1,220	1,080
15	1,100	954	1,280	1,350	1,130	1,180	1,200	598	1,150	1,280	1,220	1,210
16	721	985	1,210	1,300	988	1,180	1,230	366	1,470	1,280	1,270	1,170
17	909	715	1,130	1,280	1,180	1,170	1,260	366	1,520	1,290	1,490	1,010
18	866	822	1,050	1,340	1,200	1,200	1,220	654	1,470	1,300	1,560	1,000
19	974	935	985	1,310	1,200	1,210	1,220	757	1,620	1,320	1,540	1,060
20	863	863	980	1,230	1,200	1,220	1,170	832	1,750	1,330	1,550	1,070
21	594	916	1,200	1,350	1,170	1,230	1,230	1,020	1,420	1,320	1,560	1,080
22	952	886	1,020	1,370	1,170	1,230	1,280	1,140	1,570	1,310	1,550	*1,090
23	946	963	1,040	1,130	1,200	1,230	1,330	1,230	1,490	1,310	1,540	1,090
24	908	972	875	1,170	1,190	1,230	1,330	1,380	*1,470	1,330	1,550	1,080
25	941	830	843	1,330	1,220	1,240	1,310	1,310	1,440	1,340	1,550	1,060
26	1,020	912	1,040	1,330	1,180	1,200	1,290	1,400	1,360	1,280	1,500	1,060
27	1,010	1,040	1,070	1,240	1,220	1,220	*1,190	1,470	1,240	1,340	1,520	1,040
28	838	1,080	1,080	*1,280	1,160	1,110	1,240	1,470	1,210	1,310	1,510	1,000
29	984	1,130	1,190	1,140	1,200	793	1,300	1,540	1,180	1,320	1,510	1,210
30	974	1,200	1,120	1,060	-	1,160	1,350	1,590	1,190	1,290	1,490	1,160
31	1,020	-	1,210	1,200	-	1,230	-	1,500	-	1,240	1,430	-
Total	29,277	28,146	34,376	38,900	34,190	36,653	35,380	34,556	38,893	39,280	42,660	35,720
Mean	944	938	1,109	1,255	1,179	1,182	1,179	1,115	1,296	1,267	1,376	1,191
Ac-ft	58,070	55,830	68,180	77,160	67,810	72,700	70,180	68,540	77,140	77,910	84,610	70,850

Calendar year 1951: Max 1,810 Min 356 Mean 1,263 Ac-ft 914,300
Water year 1951-52: Max 1,750 Min 366 Mean 1,169 Ac-ft 849,000

* Discharge measurement made on this day.
Note.--No gage-height record Apr. 4-13, 24-27; discharge estimated on basis of Soda plant output.

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.

Records available.--October 1945 to September 1952 in reports of Geological Survey. January 1922 to September 1945 available in files of Salt Lake City district office, Geological Survey.

Average discharge.--30 years, 787 cfs.

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

Extremes.--Maximum daily discharge during year, 2,650 cfs May 5; minimum daily, 205 cfs June 1.
1922-52: 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. Three discharge measurements were made by Geological Survey in addition to those made by power company.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

1.7	203	4.0	1,220
2.0	290	5.0	1,930
3.0	676	5.9	2,660

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,700	1,500	1,520	1,450	1,310	1,380	1,450	2,370	a205	1,210	1,120	1,580
2	1,070	619	1,230	1,470	1,610	1,520	1,470	2,210	a795	1,160	1,150	1,540
3	1,600	1,370	1,140	1,170	1,630	1,510	1,300	2,180	*a775	1,390	744	1,530
4	1,550	1,080	1,150	1,110	1,390	1,400	1,190	1,500	599	546	1,230	1,410
5	1,440	1,060	*1,340	1,230	1,580	1,180	1,400	2,650	1,170	1,460	1,420	1,520
6	1,050	1,210	1,310	1,200	1,700	1,130	1,350	2,400	1,010	1,160	1,190	1,100
7	752	1,060	1,270	1,400	1,400	1,520	a1,680	2,380	858	1,220	1,140	1,250
8	1,250	1,470	1,860	1,710	1,430	1,340	a1,470	1,840	435	1,050	1,190	1,510
9	*1,310	1,350	1,170	1,660	1,390	1,340	a1,800	2,070	1,130	1,180	1,090	1,540
10	1,040	1,270	1,190	1,570	1,140	1,530	a1,500	2,060	1,290	960	671	1,580
11	1,370	808	1,620	1,460	1,020	1,400	a1,680	1,440	1,120	1,040	1,240	*1,080
12	1,210	1,340	1,110	1,770	1,320	1,510	a2,220	1,340	985	1,240	1,540	1,160
13	1,330	1,310	1,640	1,480	1,480	1,410	a1,600	1,250	1,280	1,150	1,200	1,520
14	766	1,480	1,270	1,660	1,350	1,380	1,790	1,900	1,080	1,010	1,120	604
15	1,050	931	1,180	1,590	1,430	1,230	*1,840	960	863	1,240	1,120	1,010
16	1,590	926	1,400	1,670	1,030	1,560	1,730	503	1,400	1,380	959	1,200
17	1,080	770	1,650	1,510	1,410	1,450	2,200	909	1,240	1,570	689	1,420
18	1,220	758	1,420	1,510	1,470	1,530	2,020	641	1,020	1,230	1,510	1,230
19	1,010	1,070	1,330	1,550	1,500	1,490	2,080	1,310	1,420	1,100	1,580	1,380
20	903	1,460	1,320	1,530	1,480	1,510	1,410	923	937	1,210	1,730	1,290
21	1,200	1,410	1,170	1,580	1,420	1,310	2,210	1,500	1,210	1,050	1,280	304
22	1,050	879	1,410	1,590	1,490	1,280	2,180	1,550	1,090	*1,080	1,280	1,280
23	1,160	1,230	1,210	1,410	1,320	1,600	2,140	1,320	1,300	1,010	1,500	1,440
24	1,150	*1,020	1,380	1,610	1,450	1,640	2,150	1,740	1,260	1,080	1,370	1,590
25	1,220	1,220	1,000	1,600	1,450	1,130	2,170	1,670	1,300	1,180	1,460	987
26	1,070	1,360	1,080	1,670	*1,180	1,630	2,100	1,710	1,340	1,220	1,560	1,070
27	1,410	993	1,380	1,240	1,390	1,510	1,860	1,390	1,120	1,150	1,820	1,130
28	1,050	1,630	1,270	1,500	1,800	1,280	2,450	1,570	1,550	1,310	1,820	999
29	1,520	1,500	1,440	1,530	1,360	1,170	2,320	1,950	1,100	1,390	1,230	1,250
30	1,500	1,200	1,410	1,400	-	1,030	2,260	2,020	1,230	1,120	930	1,520
31	1,290	-	1,470	1,400	-	1,580	-	a1,780	-	1,350	1,690	-
Total	37,911	35,284	41,340	46,230	40,930	43,480	55,020	51,036	32,112	36,446	39,573	38,024
Mean	1,223	1,176	1,334	1,491	1,411	1,403	1,834	1,646	1,070	1,176	1,277	1,267
Ac-ft	75,200	69,980	82,000	91,700	81,180	86,240	109,100	101,200	63,690	72,290	78,490	75,420

Calendar year 1951: Max 2,350 Min 145 Mean 1,433 Ac-ft 1,038,000
Water year 1951-52: Max 2,650 Min 205 Mean 1,359 Ac-ft 986,500

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of Oneida powerplant records.

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 1952.

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.--13 years (1939-52), 33.4 cfs.

Extremes.--Maximum discharge during year, 773 cfs Apr. 27 (gage height, 3.83 ft); minimum, 3.3 cfs Oct. 1, but may have been less during periods of ice effect or no gage-height record.
1938-52: Maximum discharge, that of Apr. 27, 1952; 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	9.0	13				18	436	72	9.6	7.0	5.9
2	4.4	8.0	14				19	449	67	9.4	6.8	5.9
3	10	8.5	b11			11	18	455	65	9.2	6.6	5.7
4	12	9.0	15				*21	445	*60	10	6.6	5.7
5	10	9.5	15	b8.5	12		27	*361	54	9.4	6.4	6.3
6	8.7	9.5	b13				35	319	52	9.6	6.3	6.3
7	8.4	9.5	b11				48	294	51	9.4	6.4	6.4
8	8.1	9.5	b9.0			12	71	266	48	8.9	6.1	6.6
9	7.8	9.5	b9.0				74	240	44	8.7	5.7	5.9
10	*8.1	9.5	b9.5				76	205	32	8.1	5.9	5.9
11	10	10	b10				79	202	28	12	6.4	6.4
12	9.2	13	*10	10		*12	104	200	26	12	6.4	*7.2
13	9.2	12	10			11	119	205	22	13	*6.4	7.0
14	8.7	*11	b10			b10	136	*198	18	10	6.4	6.6
15	8.7	8.1	b10			b10	109	178	17	9.2	6.4	6.6
16	9.0	b7.5	10		11	13	88	154	17	8.7	6.3	6.4
17	8.7	b7.0	9.8			13	109	135	16	8.1	6.3	6.3
18	8.7	b7.0	9.5			12	*178	126	13	7.8	7.2	6.3
19	8.7	b7.5	9.8	11		b11	274	121	12	7.8	6.8	6.1
20	8.7	8.1	b10			b10	364	*135	12	7.8	7.0	6.3
21	9.0	9.2	b10			b10	334	148	12	*7.6	7.4	6.3
22	9.0	10	11			b11	352	135	12	6.3	4.5	5.7
23	8.4	9.2	b11	*12		b12	429	119	12	5.5	4.5	5.9
24	8.4	9.5	11	12		13	493	113	22	5.3	4.6	5.7
25	8.7	11	b10	12	10	14	*449	108	20	5.7	4.3	5.7
26	10	11	b10	12		14	*525	105	*15	6.1	4.5	5.5
27	9.8	12	b11	12		b13	611	98	14	6.4	4.6	5.5
28	9.5	13	b11	b12		b15	567	90	13	6.1	4.8	6.1
29	9.5	13	11	b12		b18	*529	85	11	6.1	6.3	6.1
30	9.5	14	11	12	-	21	442	81	10	6.4	7.0	5.9
31	9.5	-	10	12	-	20	-	77	-	6.8	6.1	-
Total	271.7	294.6	335.6	323.0	320	389	6,698	6,283	867	257.0	188.0	184.2
Mean	8.76	9.82	10.8	10.4	11.0	12.5	223	203	28.9	8.29	6.06	6.14
Ac-ft	539	584	666	641	635	772	13,290	12,460	1,720	510	373	365

Calendar year 1951: Max 257 Min 3.3 Mean 31.9 Ac-ft 23,080
Water year 1951-52: Max 611 Min 3.3 Mean 44.8 Ac-ft 32,560

Peak discharge (base, 150 cfs).--Apr. 27 (11:15 a.m.) 773 cfs (3.83 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 30 to Nov. 13, Jan. 9-22, Jan. 30 to Mar. 10; discharge estimated on basis of weather records and records for stations on nearby streams.

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 headgates and 3½ miles northeast of town of Mink Creek.

Records available.--October 1949 to September 1952 (discontinued).

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

Extremes.--Maximum daily discharge during year, 31 cfs June 21; no flow Oct. 2 to May 26. 1949-52: Maximum daily discharge, 32 cfs 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. Landslides in vicinity of Riverdale on latter canal made its continued use too costly and hazardous. Water now routed through Glendale Reservoir.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.0	0	0.4	3.8	1.0	16
.1	.5	.6	7.2	1.3	24
.2	1.3	.8	11	1.6	34

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.7							0	21	30	29	25
2	0							0	23	29	29	25
3	0							0	23	29	29	25
4	0							0	23	30	29	24
5	0							0	*25	30	29	24
6	0							0	28	30	29	25
7	0							0	29	30	29	25
8	0							0	29	30	29	25
9	0							0	29	30	29	24
10	*0							0	29	30	29	24
11	0							0	30	30	29	*24
12	0							0	30	30	29	25
13	0							0	30	30	29	24
14	0	(*)						0	30	30	*29	24
15	0							0	30	30	29	25
16	0							0	*30	30	29	25
17	0							0	30	30	29	25
18	0							0	30	30	28	24
19	0							0	30	30	28	24
20	0							*0	30	30	28	24
21	0							0	31	30	27	24
22	0							0	30	30	27	24
23	0							0	30	30	27	24
24	0							0	30	30	27	24
25	0							0	*29	30	27	22
26	0							0	29	29	21	21
27	0							18	28	29	21	21
28	0							23	28	29	24	21
29	0							21	29	29	24	21
30	0							20	30	29	25	21
31	0							20	-	29	25	-
Total	6.7	0	0	0	0	0	0	102	853	922	852	713
Mean	0.22	0	0	0	0	0	0	3.3	28.4	29.7	27.5	23.8
Ac-ft	13	0	0	0	0	0	0	202	1,690	1,830	1,690	1,410

Calendar year 1951: Max 32 Min 0 Mean 9.96 Ac-ft 7,220
Water year 1951-52: Max 31 Min 0 Mean 9.42 Ac-ft 6,840

* 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 1952 (discontinued).

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

Extremes.--Maximum discharge during year, 438 cfs June 3 (gage height, 3.64 ft); minimum daily, 20 cfs Sept. 22, 23.
1947-52: Maximum discharge, 600 cfs May 29, 1948 (gage height, 3.65 ft); minimum daily, that of Sept. 22, 23, 1952.

Remarks.--Records good except those for periods 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 table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

1.7	19	2.8	164
2.0	38	3.2	287
2.4	87	3.7	468

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	41	37	35	29	29	34	197	409	110	45	26
2	44	41	37	35	29	29	35	212	420	105	44	25
3	45	a41	36	34	29	28	35	256	435	101	42	25
4	45	a41	36	34	29	28	38	294	416	98	39	25
5	46	a41	36	34	29	28	46	301	*409	93	38	26
6	47	a40	36	34	29	28	57	304	401	89	38	26
7	48	a40	36	34	29	28	74	308	390	86	38	26
8	47	a40	36	34	29	28	81	*301	390	82	38	25
9	47	a40	35	34	29	28	71	287	372	81	36	25
10	*47	a40	35	34	30	28	69	267	358	80	36	25
11	46	a41	35	34	30	29	74	250	344	82	36	*23
12	46	a42	*35	34	31	29	80	267	326	78	35	23
13	46	a41	35	34	31	29	87	298	301	69	33	23
14	46	*41	34	34	31	29	95	333	277	64	*31	24
15	45	41	34	34	30	29	92	347	260	62	29	24
16	45	39	34	34	30	30	78	333	*237	60	28	24
17	45	38	34	33	31	31	76	308	221	58	29	24
18	44	38	34	33	30	31	87	294	215	57	28	23
19	44	38	34	33	30	31	105	294	209	57	28	22
20	43	38	34	33	30	31	119	*308	197	57	28	24
21	43	38	34	*32	30	31	112	329	188	55	28	22
22	43	38	35	32	29	32	*107	322	180	*50	28	20
23	43	38	36	32	a29	32	117	304	175	45	28	20
24	43	37	36	32	a29	32	131	287	169	45	27	21
25	43	37	36	31	a29	31	148	287	*159	43	26	23
26	42	37	35	30	a29	31	159	304	150	45	30	23
27	42	38	35	30	a29	31	172	322	141	45	30	22
28	42	38	35	29	a29	32	188	347	135	45	28	22
29	42	37	35	29	*29	34	203	376	125	45	28	22
30	41	37	35	29	-	36	200	409	117	45	27	22
31	41	-	35	29	-	*36	-	405	-	46	27	-
Total	1,366	1,177	1,090	1,013	857	939	2,970	9,451	8,126	2,078	1,006	705
Mean	44.1	39.2	35.2	32.7	29.6	30.3	99.0	305	271	67.0	32.5	23.5
Ac-ft	2,710	2,330	2,160	2,010	1,700	1,860	5,890	18,750	16,120	4,120	2,000	1,400

Calendar year 1951: Max 438 Min 22 Mean 79.3 Ac-ft 57,380
Water year 1951-52: Max 435 Min 20 Mean 84.1 Ac-ft 61,050

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for 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 headgates and 1 mile west of town of Mink Creek.

Records available.--April 1943 to September 1952 (discontinued).

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

Average discharge.--9 years, 46.1 cfs.

Extremes.--Maximum daily discharge during year, 159 cfs June 5; no flow Nov. 21 to Mar. 7. 1943-52: Maximum daily discharge, 163 cfs June 7, 1951; no flow at times in each year.

Remarks.--Records good except those for periods 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.0	0	0.8	28
.1	.5	1.3	60
.2	2.5	1.9	110
.3	5.6	2.4	160
.5	13		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	41	46				0	39	120	155	121	41	26
2	54	45				0	40	121	156	115	41	25
3	53	46				0	40	122	*155	110	39	24
4	53	46				0	43	124	155	110	38	24
5	54	45				0	46	121	159	104	39	23
6	54	45				0	47	121	157	99	38	25
7	54	45				0	49	121	156	91	38	24
8	53	45				3	47	*122	156	87	37	22
9	53	44				5	45	120	158	84	34	23
10	*53	44				8	45	123	157	83	34	23
11	53	45				10	46	124	156	90	34	*24
12	54	45	(*)			10	58	126	156	84	32	22
13	52	45				10	68	131	155	81	30	22
14	51	44				10	80	131	154	76	*31	23
15	51	42				10	92	132	152	68	32	24
16	51	*41				10	101	133	152	65	30	22
17	50	41				10	111	133	151	59	29	21
18	49	41				10	117	137	151	60	28	21
19	49	41				10	122	137	150	60	26	21
20	50	31				13	122	139	152	56	26	20
21	50	0				17	119	140	154	55	27	19
22	49	0				19	*118	139	150	*51	26	18
23	49	0				20	117	*134	150	44	27	18
24	49	0				20	117	133	151	40	26	18
25	49	0				22	118	138	*145	40	24	20
26	49	0				24	120	142	142	42	29	20
27	49	0				27	120	150	139	43	30	19
28	48	0				30	120	143	137	44	26	19
29	48	0				34	120	149	131	43	28	19
30	47	0				38	119	154	126	44	29	20
31	47	-				*39	-	154	-	45	28	-
Total	1,566	867	0	0	0	409	2,546	4,114	4,518	2,194	977	649
Mean	50.5	28.9	0	0	0	13.2	84.9	133	151	70.8	31.5	21.6
Ac-ft	3,110	1,720	0	0	0	811	5,050	8,160	8,960	4,350	1,940	1,290

Calendar year 1951: Max 163 Min 0 Mean 47.5 Ac-ft 34,400
Water year 1951-52: Max 159 Min 0 Mean 48.7 Ac-ft 35,390

* Discharge measurement made on this day.

Note.--No gage-height record Nov. 8-15, Mar. 8-30; discharge estimated on basis of records for Mink Creek near Mink Creek, and Preston-Riverdale & 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 headgates and 1 mile southwest of town of Mink Creek.

Records available.--April 1943 to September 1952 (discontinued).

Gage.--Water-stage recorder.

Extremes.--Maximum daily discharge during year, 28 cfs June 21, 22; no flow Oct. 15 to May 9.

1943-52: 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 thereby reduced about half.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5							0	16	12	11	8.8
2	4.7							0	16	11	9.9	8.6
3	5.6							0	16	11	9.4	8.4
4	3.6							0	*16	11	9.0	8.6
5	2.7							0	17	11	8.6	9.0
6	2.7							0	16	11	9.9	9.4
7	2.6							0	14	10	11	9.2
8	2.5							0	13	12	11	8.8
9	2.2							0	14	9.2	10	9.0
10	*2.1							1.5	16	9.7	10	8.6
11	2.1							5.4	16	12	8.8	*8.6
12	1.7							5.0	15	9.9	7.5	8.5
13	1.1							4.8	13	9.9	8.0	8.5
14	.2	(*)						5.3	13	11	*8.2	8.5
15	0							9.4	15	10	9.4	8.5
16	0							14	*18	14	8.6	2.5
17	0							13	23	12	9.2	4.0
18	0							15	26	9.9	9.2	5.0
19	0							20	24	11	8.4	5.0
20	0							20	25	11	8.6	5.0
21	0							20	28	10	7.9	7.0
22	0						(*)	20	28	*9.9	9.0	7.0
23	0							*19	25	9.9	9.7	7.0
24	0							19	26	9.9	8.9	7.0
25	0							17	*21	9.7	9.9	7.0
26	0							15	19	9.9	11	7.0
27	0							15	18	11	11	6.0
28	0							17	15	11	9.9	5.0
29	0							16	11	12	9.7	4.5
30	0							15	12	12	9.7	4.5
31	0	-					-	16	-	12	9.2	-
Total	37.3	0	0	0	0	0	0	302.4	545	335.9	292.6	214.5
Mean	1.20	0	0	0	0	0	0	9.75	18.2	10.8	9.44	7.15
Ac-ft	74	0	0	0	0	0	0	600	1,080	666	580	425

Calendar year 1951: Max 24 Min 0 Mean 4.57 Ac-ft 3,310
Water year 1951-52: Max 28 Min 0 Mean 4.72 Ac-ft 3,420

* Discharge measurement made on this day.
Note.--No gage-height record Sept. 12-20; discharge estimated on basis of records for Mink Creek near Mink Creek, and Twin Lakes Canal near Mink Creek.

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 1952 (discontinued).

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

Average discharge.--9 years, 51.9 cfs.

Extremes.--Maximum daily discharge during year, 334 cfs May 5; minimum daily, 2.6 cfs Oct. 1, Sept. 5.
1943-52: 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 or no gage-height record, 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 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.4	1.1	1.2	58
.5	3.0	1.6	117
.6	6.3	2.1	220
.7	12	2.6	336
.9	28		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	5.0	46	b42	42	38	33	244	279	9.2	4.3	3.7
2	3.3	5.3	47	b42	44	37	33	258	283	8.0	4.3	4.0
3	3.7	5.3	45	b42	43	b37	35	290	293	7.4	4.3	3.3
4	3.3	5.3	45	b42	43	37	51	329	279	7.4	4.3	3.0
5	3.0	5.0	45	b42	42	36	74	334	*267	6.3	4.3	2.6
6	2.8	5.0	44	b42	42	37	112	322	263	6.3	a4.3	2.8
7	2.8	5.0	43	b42	45	36	162	324	251	6.9	a4.2	3.3
8	2.8	5.3	b43	b42	43	34	218	*317	235	6.3	a4.2	3.3
9	2.8	5.0	b43	42	43	34	162	295	224	6.3	a4.1	3.7
10	*2.8	5.0	b43	42	42	32	152	258	218	5.3	a4.0	3.3
11	3.3	5.3	b43	42	43	30	177	235	200	6.0	a4.0	*4.0
12	3.0	6.9	*43	42	42	30	179	240	179	6.0	a3.9	3.3
13	3.7	5.6	43	43	42	b29	183	263	160	6.0	a3.8	2.8
14	5.3	*5.6	b43	42	b41	29	207	286	142	5.3	*3.7	3.3
15	5.3	5.0	42	42	b41	29	162	290	125	5.3	4.0	3.3
16	5.3	5.0	42	42	41	29	105	276	*105	5.3	3.7	10
17	5.3	4.6	42	42	42	30	112	244	84	5.3	4.0	6.3
18	5.3	6.0	42	b42	41	30	*144	218	71	4.6	4.6	4.6
19	5.0	26	41	42	41	30	190	209	63	5.0	4.0	5.0
20	5.0	51	41	42	41	25	190	224	50	4.6	4.6	5.3
21	5.0	50	40	*42	40	b22	148	249	41	5.0	4.6	5.3
22	5.0	47	40	42	b40	b21	134	247	34	5.3	4.3	3.0
23	5.0	46	41	42	41	21	150	*224	28	5.6	3.0	2.8
24	4.6	46	41	43	b40	21	177	209	34	4.6	2.8	3.0
25	4.0	45	b41	44	b39	21	200	202	*32	4.3	3.7	3.3
26	3.7	45	41	43	b38	23	224	218	28	4.0	3.3	3.0
27	3.7	45	41	43	38	25	238	213	24	5.0	3.7	4.0
28	3.7	45	41	42	38	25	258	247	18	4.6	4.0	4.6
29	4.0	45	42	42	*38	28	265	251	14	5.3	3.7	5.6
30	5.3	45	42	42	-	34	251	276	11	5.6	3.7	5.3
31	5.3	-	42	42	-	34	-	274	-	4.6	3.3	-
Total	125.7	631.2	1,318	1,308	1,196	924	4,726	8,066	4,035	176.7	122.7	120.8
Mean	4.05	21.0	42.5	42.2	41.2	29.8	158	260	134	5.70	3.96	4.03
Ac-ft	249	1,250	2,610	2,590	2,370	1,830	9,370	16,000	8,000	350	243	240

Calendar year 1951: Max 310 Min 1.7 Mean 48.2 Ac-ft 34,870
Water year 1951-52: Max 334 Min 2.6 Mean 62.2 Ac-ft 45,100

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for Twin Lakes Canal near Mink Creek, and Preston-Riverdale & Mink Creek Canal near Mink Creek.
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 headgates 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 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,540 ft (from topographic map). October 1889 to September 1917, staff gage at site 5 miles downstream at different datum.

Average discharge.--8 years (1944-52), 1,013 cfs.

Extremes.--Maximum discharge during year, 3,990 cfs May 5 (gage height, 5.32 ft); minimum, 38 cfs June 18 (gage height, 0.83 ft); minimum daily, 287 cfs Sept. 21.
1889-1916, 1944-52: 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 except those for period of no gage-height record, which are fair. 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,570	1,520	1,570	1,570	1,280	1,340	1,370	2,560	594	1,080	1,000	1,370
2	1,060	605	1,320	1,490	1,650	1,430	1,480	2,420	727	*1,130	988	1,360
3	1,520	1,230	1,150	1,390	1,650	1,600	1,240	2,380	1,040	1,160	628	1,240
4	1,500	970	1,220	1,340	1,380	1,380	1,240	1,860	709	442	1,060	1,240
5	1,460	1,060	1,330	1,270	1,500	1,150	1,410	2,940	1,250	1,270	1,320	1,250
6	1,070	1,120	1,360	1,340	1,730	1,200	1,470	2,580	935	1,060	1,000	996
7	587	918	1,310	1,570	1,390	1,280	1,710	2,580	1,010	971	991	1,010
8	1,420	1,490	1,650	1,760	1,410	1,430	1,820	*2,160	619	838	1,100	1,380
9	*1,300	1,380	1,390	1,650	1,470	1,360	1,900	2,280	989	856	945	1,460
10	1,040	1,320	1,210	1,610	1,110	1,420	1,620	2,270	1,340	676	414	1,360
11	1,300	828	1,670	1,520	1,070	1,300	1,820	1,680	1,110	848	1,170	963
12	1,110	1,310	1,170	1,790	1,140	1,530	2,100	1,470	972	1,060	1,270	896
13	1,340	1,130	*1,680	1,520	1,470	1,490	1,750	1,340	1,190	860	1,180	1,360
14	802	1,430	1,290	1,660	1,350	1,340	1,930	2,060	1,020	834	876	603
15	975	1,050	1,190	1,590	1,420	1,230	1,940	1,070	870	1,040	970	943
16	1,420	981	1,450	1,710	1,070	1,440	1,780	652	1,140	1,170	874	1,190
17	1,370	948	1,700	1,540	1,330	1,520	2,180	1,020	1,080	1,310	558	1,300
18	1,080	845	1,510	1,540	1,400	1,540	*2,150	694	917	987	1,150	1,130
19	1,070	1,140	1,370	1,570	1,460	1,470	2,320	1,070	1,210	954	1,520	1,230
20	909	1,400	1,390	1,540	1,440	1,450	1,680	1,050	848	1,010	1,480	1,240
21	1,160	1,420	1,210	1,600	1,300	1,260	2,230	1,510	939	863	1,080	287
22	1,050	948	1,480	a1,610	1,450	1,120	2,280	1,630	849	*917	991	974
23	1,100	1,140	1,330	a1,470	1,330	1,570	2,320	1,110	1,080	793	1,340	1,320
24	1,300	*1,030	1,420	a1,630	1,280	1,680	2,350	1,840	1,020	822	953	1,400
25	965	1,230	1,140	a1,620	1,480	1,100	2,400	1,830	1,170	992	1,330	831
26	1,130	1,340	1,180	a1,700	1,240	1,350	2,390	1,640	*1,250	960	1,340	922
27	1,370	1,020	1,430	a1,320	1,300	1,690	2,110	1,500	1,040	963	1,510	915
28	995	1,530	1,340	a1,520	1,750	1,270	2,620	1,660	1,420	1,080	1,590	836
29	1,340	1,530	1,470	1,470	1,420	1,200	*2,660	1,930	974	1,170	1,160	1,000
30	1,450	1,190	1,470	1,450	-	931	2,410	2,180	1,020	923	828	1,300
31	1,340	-	1,520	1,390	-	1,610	-	1,840	-	1,110	1,340	-
Total	37,103	35,053	42,920	47,750	40,270	42,681	58,680	54,806	30,332	30,149	33,956	33,306
Mean	1,197	1,168	1,385	1,540	1,389	1,377	1,956	1,768	1,011	973	1,095	1,110
Ac-ft	73,590	69,530	85,130	94,710	79,870	84,660	116,400	108,700	60,160	59,800	67,350	66,060

Calendar year 1951: Max 2,160 Min 218 Mean 1,406 Ac-ft 1,018,000
Water year 1951-52: Max 2,940 Min 287 Mean 1,331 Ac-ft 966,000

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

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 headgates 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 1952 (discontinued).

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

Average discharge.--12 years, 87.4 cfs.

Extremes.--Maximum discharge during year, 571 cfs May 30 (gage height, 3.21 ft); minimum, 12 cfs Mar. 23.
1940-52: Maximum discharge, 705 cfs June 2, 1943 (gage height, 3.83 ft); minimum, 11 cfs Jan. 22, 1951.

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

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	14	2.3	208
1.2	28	2.7	349
1.4	48	3.2	566
1.8	97		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	28	24	20	19	18	25	275	538	*134	61	38
2	35	28	25	b20	20	18	26	304	543	130	60	38
3	34	28	24	b20	19	18	25	365	*520	123	58	37
4	34	28	24	b20	20	18	30	449	493	117	57	37
5	33	28	24	b20	19	18	42	435	502	114	56	36
6	32	28	24	b20	19	18	55	410	502	110	54	35
7	31	28	24	20	19	18	67	*402	484	106	54	35
8	31	28	b24	20	19	18	73	381	484	102	53	34
9	31	28	b23	20	19	18	62	338	471	98	53	*34
10	31	28	b22	20	19	19	61	293	444	96	52	34
11	*32	28	22	20	19	*19	66	279	414	96	51	35
12	32	29	*22	20	19	18	72	319	381	93	51	34
13	31	28	22	20	19	18	77	393	341	90	*49	33
14	31	28	21	20	b19	18	83	435	319	87	50	32
15	31	27	21	19	b19	18	74	440	304	84	48	32
16	31	*26	21	20	19	18	61	397	275	82	46	31
17	31	26	20	19	19	18	*60	338	*251	79	46	31
18	30	26	21	19	19	19	73	307	234	*77	46	30
19	30	25	22	19	19	18	93	334	228	77	44	30
20	30	27	21	19	19	18	102	385	221	74	44	30
21	30	26	20	19	19	18	94	410	215	73	44	30
22	31	26	21	*20	b19	18	94	357	199	72	42	30
23	31	25	20	20	19	18	108	307	184	70	42	30
24	30	25	20	20	b18	18	116	*307	178	68	42	30
25	30	25	22	20	b18	18	155	353	181	68	40	29
26	30	24	20	19	b18	18	187	418	170	67	40	29
27	30	24	20	19	18	19	231	444	157	66	40	29
28	29	24	20	19	18	21	265	484	148	64	40	28
29	29	24	20	19	18	24	272	529	145	63	40	29
30	29	24	20	19	-	26	272	552	141	62	38	28
31	29	-	20	19	-	25	-	529	-	61	38	-
Total	963	797	674	608	547	586	3,021	11,969	9,667	2,703	1,479	968
Mean	31.1	26.6	21.7	19.6	18.9	18.9	101	386	322	87.2	47.7	32.3
Ac-ft	1,910	1,580	1,340	1,210	1,080	1,160	5,990	23,740	19,170	5,360	2,930	1,920

Calendar year 1951: Max 615 Min 20 Mean 93.2 Ac-ft 67,480
Water year 1951-52: Max 552 Min 18 Mean 92.8 Ac-ft 67,390

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

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 headgates, and 7 miles northeast of Preston.

Records available.--April 1943 to September 1952 (discontinued).

Gage.--Water-stage recorder.

Average discharge.--9 years, 16.5 cfs.

Extremes.--Maximum daily discharge during year, 91 cfs June 6; no flow at times.
1943-52: Maximum daily discharge, that of June 6, 1952; 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 table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0	0	0.9	16
.2	.8	1.3	34
.3	1.5	1.7	56
.4	2.5	2.2	97
.6	6.5		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	13	20				0	8.4	73	*43	14	
2	0	b13	20				0	21	77	42	13	
3	0	13	20				0	22	*74	45	12	
4	0	12	20				0	18	81	54	11	
5	0	13	20				0	19	87	52	10	
6	0	13	20				0	28	91	49	9.5	
7	0	14	21				0	*29	89	46	9.2	
8	0	14	16				2	37	90	42	6.8	
9	0	13	3.1				3	39	90	38	6.5	
10	0	13	3				4	43	87	41	6.5	
11	*0	13	3				6	45	85	42	5.8	
12	0	14	*3				8	49	84	41	5.2	
13	0	14	3				12	54	82	40	*4.8	
14	0	13	2				15	57	82	39	3.0	
15	0	b12	1				20	60	82	37	2.4	
16	0	b11	0				22	62	81	32	3.2	
17	0	b11	0				22	60	*82	30	3.2	
18	0	b11	0				*22	62	85	*28	3.1	
19	0	b12	0				19	69	89	25	3.1	
20	0	*12	0				15	78	90	22	2.6	
21	0	13	0				8.6	80	88	22	.9	
22	0	15	0	(*)			6.5	76	84	22	.3	
23	0	b16	0				11	70	81	20	.1	
24	2.7	b16	0				22	*68	69	17	0	
25	13	16	0				25	72	49	15	0	
26	13	16	0				25	68	38	15	0	
27	13	17	0				22	63	46	16	0	
28	13	18	0				15	29	45	15	0	
29	13	18	0				14	2.5	44	15	0	
30	14	20	0				9.5	60	44	15	0	
31	13	-	0				-	59	-	15	0	
Total	94.7	419	175.1	0	0	0	328.6	1,507.9	2,269	975	136.2	0
Mean	3.05	14.0	5.65	0	0	0	11.0	48.6	75.6	31.5	4.39	0
Ac-ft	188	831	347	0	0	0	652	2,990	4,500	1,930	270	0

Calendar year 1951: Max 81 Min 0 Mean 16.9 Ac-ft 12,260
Water year 1951-52: Max 91 Min 0 Mean 16.1 Ac-ft 11,710

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 10-15, Apr. 8-17; discharge estimated on basis of water commissioner's notes, weather records, records for Cub River near Preston, Cub River above Maple Creek, near Franklin, Preston-Whitney Canal near Preston, and Cub River Canal near Preston.

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 headgates and 7½ miles east of Preston.

Records available.--April 1946 to September 1952 (discontinued) 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.--6 years (1946-52), 5.44 cfs.

Extremes.--Maximum daily discharge during year, 49 cfs June 6; minimum daily, 0.1 cfs Nov. 2.

1946-52: 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 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.0	0	0.5	10
.1	1.0	.7	18
.2	2.8	1.0	31
.3	4.9	1.4	52

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.4	0.4				0.4	0.4	23	*16	7.4	1.2
2	.6	.1	.4				.4	.4	25	24	7.2	1.2
3	.7	.7	.4				.4	.6	*38	24	7.2	.9
4	.6	1.2	.4				.4	.9	43	23	7.2	.8
5	.7	1.2	.4				.4	1.0	46	23	7.2	.8
6	.7	1.2	.4				.4	.8	49	21	7.2	.8
7	.8	1.0	.3				.4	.7	46	20	7.2	.8
8	.7	.9	.4				.4	.7	44	20	7.2	.8
9	.7	.9	.4				.4	.5	44	21	7.2	*.8
10	.6	.9	.4				.4	.4	43	20	7.2	.8
11	.7	.8	.3				.4	.3	43	20	7.4	.8
12	.6	.8	*.4				.4	.4	42	20	7.4	.8
13	.6	.8	.4				.4	4.5	41	20	*7.4	.8
14	.6	.7	.4				.4	11	40	20	7.4	.8
15	.6	.5	.4				.4	12	40	20	6.5	.8
16	.6	.3	.4	0.3	0.3	0.4	.4	11	39	20	6.2	.8
17	.6	.4	.4				**.4	14	*38	20	6.4	.8
18	.6	.5	.4				.4	19	37	*20	5.4	.9
19	.6	.3	.4				.4	22	37	20	4.5	.9
20	.5	.4	.4				.3	22	37	18	4.5	.9
21	.5	.5	.4				.3	21	36	14	4.5	.9
22	.5	.5	.4				.4	12	35	12	4.3	.9
23	.5	.3	.4				.4	7.7	34	12	4.0	.8
24	.5	.3	.4				.4	*7.7	34	12	4.0	.8
25	.5	.4	.4				.4	8.0	29	12	4.0	.8
26	.5	.4	.4				.4	7.7	27	12	4.0	.8
27	.5	.3	.4				.5	7.2	18	11	3.4	.8
28	.5	.3	.4				.5	8.3	14	10	2.2	.8
29	.5	.3	.4				.5	24	14	10	1.6	.8
30	.5	.3	.4		-		.5	24	14	8.3	1.4	.8
31	.5	-	.4		-		-	23	-	7.4	1.4	-
Total	18.1	17.6	12.2	9.3	8.7	12.4	12.2	273.2	1,050	530.7	170.1	25.4
Mean	0.58	0.59	0.39	0.3	0.3	0.4	0.41	8.81	35.0	17.1	5.49	0.85
Ac-ft	36	35	24	18	17	25	24	542	2,080	1,050	337	50

Calendar year 1951: Max 48 Min 0.1 Mean 5.66 Ac-ft 4,100
Water year 1951-52: Max 49 Min 0.1 Mean 5.85 Ac-ft 4,240

* Discharge measurement made on this day.
** Field estimate made on this day.
Note.--No gage-height record Dec. 13 to Apr. 16, Sept. 20-30; discharge estimated on basis of weather records and pattern of steady flow.

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 headgates and 5½ miles southeast of Preston.

Records available.--April 1946 to September 1952 (discontinued) in reports of Geological Survey. April 1944 to September 1948 (irrigation season 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.--6 years (1946-52), 25.9 cfs.

Extremes.--Maximum daily discharge during year, 161 cfs June 10; no flow Oct. 6, Nov. 21 to May 9.
1946-52: Maximum daily discharge, 163 cfs June 15, 1951; no flow during winter months and at other times each year.

Remarks.--Records good. No diversions 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.3	0	1.2	26
.4	1.1	1.7	51
.5	2.8	2.4	99
.7	7.2	3.2	169
.9	14		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	18						0	149	*93	42	41
2	11	20						0	149	78	40	40
3	4.8	18						0	147	61	40	40
4	1.4	15						0	*148	56	42	42
5	1.8	16						0	155	53	41	40
6	0	16						0	158	49	12	38
7	12	16						0	160	46	26	36
8	18	17						0	159	50	42	36
9	18	18						0	157	46	42	*37
10	19	18						9.8	161	47	41	37
11	*21	19						45	139	44	40	36
12	20	22						55	155	42	41	38
13	19	20						72	155	40	*40	38
14	19	21						91	154	37	43	39
15	19	20						113	159	38	43	37
16	19	*24						*124	158	38	42	38
17	19	32						135	*152	*38	42	37
18	19	35						130	62	40	42	36
19	20	34						128	56	40	42	34
20	20	29						119	49	40	42	34
21	18	11						83	42	41	44	35
22	18	0						84	36	42	42	35
23	18	0						*93	*93	42	42	36
24	17	0						104	100	43	44	36
25	17	0						108	100	42	45	37
26	18	0						127	93	42	44	36
27	18	0						125	86	42	46	37
28	18	0						123	115	42	46	38
29	18	0						130	112	40	47	36
30	18	0						129	108	*42	*44	36
31	18	-						138	-	44	42	-
Total	487.0	439	0	0	0	0	0	2,265.8	3,667	1,438	1,271	1,116
Mean	15.7	14.6	0	0	0	0	0	73.1	122	46.4	41.0	37.2
Ac-ft	966	871	0	0	0	0	0	4,490	7,270	2,850	2,520	2,210

Calendar year 1951: Max 163 Min 0 Mean 25.5 Ac-ft 18,500
Water year 1951-52: Max 161 Min 0 Mean 29.2 Ac-ft 21,180

* Discharge measurement made on this day.

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 1952 (discontinued).

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.--12 years, 63.9 cfs.

Extremes.--Maximum discharge during year, 582 cfs May 5 (gage height, 3.65 ft); minimum daily, 2.9 cfs Nov. 17.
1940-52: Maximum discharge, 740 cfs May 25, 1950 (gage height, 4.80 ft, present datum); minimum daily, 0.6 cfs Sept. 16, 1948.

Remarks.--Records good except those for periods 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 Idaho-Utah State line (corrected).

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	6.2	15	30	32	31	*54	383	342	*5.6	5.4	3.8
2	32	4.9	18	24	34	31	56	401	339	5.4	6.7	3.7
3	36	5.9	16	22	32	30	55	471	*320	5.2	6.1	3.7
4	38	5.6	16	26	33	30	63	541	284	4.9	4.9	3.7
5	40	5.2	16	32	32	31	66	572	264	4.8	4.3	3.7
6	40	4.1	15	30	32	30	88	541	256	4.7	24	4.5
7	29	3.8	14	32	32	31	142	*497	253	4.6	13	4.9
8	22	3.8	10	34	32	31	205	467	243	4.5	6.1	4.9
9	21	3.8	20	34	31	32	165	413	222	4.5	5.9	*4.5
10	20	3.8	28	33	30	33	148	345	198	4.5	6.1	3.8
11	*21	5.2	32	33	31	34	152	287	186	5.5	5.9	4.0
12	21	11	*34	32	32	33	188	303	136	5.0	5.4	4.0
13	15	7.9	34	32	31	33	205	336	103	5.0	5.2	4.2
14	24	7.2	32	32	27	33	225	365	74	4.8	5.2	4.3
15	23	7.5	32	32	30	33	212	351	48	4.6	5.1	4.3
16	22	*4.6	32	32	34	32	161	*290	29	4.5	4.0	4.3
17	21	2.9	32	30	32	34	*165	196	*14	4.5	4.0	4.3
18	21	3.5	32	28	32	34	208	136	8.6	4.4	*4.0	4.5
19	21	7.5	32	30	32	34	271	134	7.5	4.3	4.0	5.2
20	22	14	31	33	32	33	284	193	7.0	4.3	4.2	5.6
21	22	22	32	*32	32	33	238	295	6.7	*4.3	4.3	5.6
22	22	24	32	32	30	32	225	256	6.7	4.3	4.9	5.9
23	20	20	32	32	28	33	261	196	6.1	4.3	5.4	5.4
24	9.7	20	32	32	26	33	282	*170	9.7	4.3	5.2	5.4
25	8.2	20	28	32	25	33	*320	198	23	4.3	4.3	5.2
26	7.5	19	32	32	27	36	351	251	34	4.3	4.2	5.2
27	7.2	20	32	32	32	39	383	284	23	4.3	4.0	5.2
28	6.6	18	32	32	*32	43	429	362	3.0	4.3	4.0	5.2
29	6.2	17	34	32	31	52	*413	407	6.4	4.5	4.0	5.2
30	5.9	15	33	32	-	58	389	392	5.9	4.7	3.8	5.1
31	6.6	-	32	32	-	57	-	377	-	4.9	3.8	-
Total	642.9	313.4	842	963	896	1,092	6,404	10,410	3,463.6	144.1	177.4	139.3
Mean	20.7	10.4	27.2	31.1	30.9	35.2	213	336	115	4.65	5.72	4.64
Ac-ft	1,280	622	1,670	1,910	1,780	2,170	12,700	20,650	6,870	286	352	276

Calendar year 1951: Max 560 Min 2.9 Mean 65.7 Ac-ft 47,580
Water year 1951-52: Max 572 Min 2.9 Mean 69.6 Ac-ft 50,570

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 13-20, Feb. 22-27, July 5-20; discharge estimated on basis of gage heights, weather records, records for station near Preston, Cub River-Worm Creek Canal near Preston, Preston-Whitney Canal near Preston, and Cub River Canal near Preston.

Maple Creek near Franklin, Idaho

Location.--Lat 42°02'30", long. 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 1952 (discontinued).

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.--6 years, 22.1 cfs.

Extremes.--Maximum discharge during year, 228 cfs Apr. 27 (gage height, 2.60 ft); minimum, 0.6 cfs Nov. 15, but may have been less during periods of ice effect or no gage-height record.

1946-52: Maximum discharge, 315 cfs May 18, 1950 (gage height, 3.15 ft); minimum, that of Nov. 15, 1951.

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

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 27				Apr. 28 to June 10		June 10 to Sept. 30			
0.0	0.6	0.9	30	0.9	44	-0.1	0.5	0.5	9.4
.1	1.7	1.3	63	1.2	74	.0	1.3	.8	22
.2	3.0	1.8	121	1.7	142	.1	2.3	1.2	52
.4	7.5	2.4	202	2.4	218	.3	5.0		
.6	14								

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	1.5	1.4	b1.4	2.0		*12	171	69	*12	4.2	1.6
2	1.8	1.4	1.6	b1.3	2.0		12	182	69	11	3.5	1.6
3	1.8	1.4	1.5	b1.2	2.1		13	203	64	10	3.0	1.5
4	2.2	1.5	1.6	b1.1	2.1		18	198	*64	9.4	2.8	1.5
5	2.0	1.4	1.6	b1.1	2.1		28	160	62	8.7	2.7	1.5
						3.0						
6	1.7	1.3	1.5	b1.2			47	151	60	8.0	2.5	1.4
7	1.6	1.3	2.0	b1.3			76	141	59	8.0	2.5	1.5
8	1.6	1.5	1.6	b1.4			97	*135	51	7.7	2.5	1.4
9	1.6	1.5	b1.3	b1.5			68	113	48	7.5	2.4	*1.4
10	1.6	1.4	b1.4	b1.5			63	96	*44	7.0	3.4	1.3
					2.0							
11	*2.0	1.6	b1.5	b1.6			65	92	41	7.2	2.5	1.5
12	1.8	2.1	*1.6	b1.6			76	103	37	6.6	2.4	1.6
13	2.0	1.7	1.5	b1.6			86	*122	33	6.6	2.3	1.6
14	1.8	1.6	1.4	b1.6			102	125	30	6.2	2.3	1.5
15	1.8	1.3	1.4	b1.6			83	109	28	5.6	2.3	1.5
16	1.7	*1.5	1.5	b1.6			66	92	24	5.2	2.1	1.3
17	1.7	2.0	1.5	1.5			66	73	22	4.8	2.0	1.1
18	1.7	.9	1.4	1.4		3.5	82	61	19	*5.0	*2.0	1.1
19	1.8	.8	1.5	1.5			111	62	16	4.8	2.0	1.1
20	1.7	1.4	1.5	1.6			120	78	20	4.7	2.0	1.1
					1.6							
21	1.7	1.5	1.5	1.7			104	96	15	4.6	1.9	1.1
22	1.7	1.5	1.5	1.8			*103	89	15	4.4	1.8	1.1
23	1.8	1.4	1.5	*1.7			117	76	14	4.2	1.9	1.1
24	1.8	1.8	1.5	1.7			138	*74	18	4.0	1.8	1.1
25	1.7	1.4	b1.3	1.8			155	86	15	4.0	1.8	1.0
26	1.7	1.5	b1.4	1.7	2.0	5.0	*187	90	16	4.0	1.8	1.0
27	1.7	1.4	1.4	1.7	2.4	7.0	189	88	16	4.0	1.9	1.0
28	1.7	1.4	1.4	b1.7	*2.7	10	208	84	14	3.6	1.7	1.0
29	1.7	1.4	1.4	b1.7	2.7	11	*193	84	13	3.4	1.7	.9
30	1.7	1.4	1.3	b1.7	-	11	170	86	12	3.6	1.6	.9
31	1.6	-	1.4	2.0	-	11	-	73	-	3.5	1.6	-
Total	54.3	43.8	45.9	47.8	56.1	137.5	2,855	3,393	1,008	189.3	70.9	38.3
Mean	1.75	1.46	1.48	1.54	1.93	4.44	95.2	109	33.6	6.11	2.29	1.28
Ac-ft	108	87	91	95	111	273	5,660	6,730	2,000	375	141	76

Calendar year 1951: Max 157 Min 0.8 Mean 19.0 Ac-ft 13,710
Water year 1951-52: Max 208 Min 0.8 Mean 21.7 Ac-ft 15,750

Peak discharge (base, 150 cfs).--Apr. 27 (11:50 p.m.) 228 cfs (2.60 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 17-22, Feb. 3-27, Mar. 1-31; discharge estimated on basis of weather records and records for stations on nearby streams.

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 1952 (discontinued) 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.--6 years (1946-52), 33.1 cfs.

Extremes.--Maximum discharge during year, 186 cfs May 3 (gage height, 2.20 ft); minimum, 5.2 cfs Dec. 19, but may have been less during periods of ice effect or no gage-height record.

1946-52: 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 or no gage-height record, which are fair. No diversion above station.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	4.5	1.3	51
.6	8.0	1.7	90
.8	17	2.2	186
1.0	28		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	7.6	7.6		7.0		16	103	150	46	21	13
2	8.4	b7.0	8.0	b5.5	7.3		16	123	153	*45	21	13
3	8.0	b7.0	7.6		7.3	a7.5	16	155	144	43	20	12
4	8.4	7.6	7.6		7.3		19	179	144	42	19	12
5	8.0	8.0	7.6		7.3		27	*169	*155	42	19	12
6	7.6	8.0	7.6		7.3		37	155	162	41	18	12
7	7.6	7.6	b7.0	a5.5	7.3		47	146	157	39	18	12
8	8.4	7.6	b6.5		7.3	a9.0	49	133	141	38	18	11
9	8.4	7.6	b6.5				38	109	129	37	18	11
10	8.8	7.6	b6.5				35	99	121	36	19	11
11	*10	8.0	b6.8	a6.0		*10	35	99	111	36	17	11
12	9.2	8.8	a7.2	b6.0		10	38	109	103	35	16	*11
13	8.8	8.0	*7.6	b6.0		9.6	42	*129	93	34	17	11
14	8.4	8.0	b7.5	a6.0		9.2	46	139	88	33	17	11
15	8.0	7.6	b7.0	a6.0	b7.0	8.8	42	131	82	31	17	11
16	8.0	a7.0	7.0			8.8	33	113	76	31	16	11
17	8.0	a7.0	6.6			8.8	*33	98	72	29	16	11
18	7.6	a7.5	6.6	a6.5		9.6	45	90	71	28	*16	11
19	7.6	a8.0	6.6			9.6	59	94	70	27	16	11
20	7.6	*8.4	6.6			9.2	65	105	67	27	16	10
21	7.6	8.0	6.2	a7.0		8.8	58	111	63	26	15	10
22	7.6	7.6	6.2	*7.0	b6.5	b8.5	57	100	58	*24	14	10
23	7.6	7.3	5.9	7.0		8.4	66	*94	56	21	14	10
24	7.6	7.3	6.2	7.0		8.4	76	98	*62	19	14	9.6
25	7.6	7.3	b6.0	7.0		8.0	90	109	58	19	14	9.2
26	7.6	7.3	b6.0	7.0	a6.5	8.0	103	123	54	18	14	9.2
27	7.6	7.6	6.2	6.6		8.4	117	133	52	18	14	9.2
28	8.0	7.3	6.6	6.6		11	129	144	49	18	14	9.2
29	8.0	7.3	6.6	6.6		16	119	160	49	18	14	9.2
30	8.0	7.6	6.6	6.6	-	18	103	162	49	21	14	8.8
31	8.0	-	b6.5	7.0	-	18	-	146	-	*22	13	-
Total	250.0	228.5	211.0	192.9	200.6	297.6	1,656	3,858	2,839	944	509	322.4
Mean	8.06	7.62	6.81	6.22	6.92	9.60	55.2	124	94.6	30.5	16.4	10.7
Ac-ft	496	453	419	383	398	590	3,280	7,650	5,630	1,870	1,010	639

Calendar year 1951: Max 203 Min 5.9 Mean 29.7 Ac-ft 21,490
Water year 1951-52: Max 179 Min - Mean 31.4 Ac-ft 22,820

* 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.

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 1952 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. Nov. 27, 1945, to May 18, 1952, at present site at datum 1.50 ft higher.

Average discharge.--14 years (1938-52), 90.3 cfs.

Extremes.--Maximum discharge during year, 1,390 cfs Apr. 27 (gage height, 5.81 ft, present datum); minimum daily, 25 cfs Sept. 3, 4, 21.
1938-52: Maximum discharge, that of Apr. 27, 1952; minimum, 4 cfs Aug. 14, 1940.

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

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-7, Apr. 27, 28, Apr. 30 to May 18)

Oct. 1 to May 18				May 19 to Sept. 30			
0.1	29	1.5	254	0.2	24	1.1	135
.3	44	2.1	433	.4	36	1.6	282
.6	79	2.7	671	.7	64	2.1	510
1.0	143	3.5	1,090				

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	61	67	66	61	67	111	834	262	68	34	26
2	36	60	72	b60	65	67	115	*985	251	57	33	26
3	38	63	69	b50	65	63	125	1,060	238	51	33	25
4	39	60	70	b50	65	*65	151	1,020	*216	49	34	25
5	41	*57	71	b52	65	66	186	844	210	45	33	27
6	48	58	69	b55	61	64	262	807	193	44	33	28
7	50	59	65	b60	63	65	458	787	179	45	32	30
8	52	58	b60	b60	61	65	527	730	163	44	33	27
9	54	59	b60	58	60	66	334	*608	150	42	33	27
10	61	59	b62	56	59	67	311	523	133	41	32	27
11	65	63	66	58	60	69	340	500	126	40	31	30
12	60	85	67	58	61	69	407	538	*117	42	31	32
13	63	70	66	60	61	67	447	582	111	42	31	30
14	64	67	*66	60	b58	69	538	*562	102	42	34	31
15	64	63	66	61	b58	67	447	515	96	41	31	31
16	*67	57	66	63	b62	69	*325	493	91	a39	27	29
17	66	56	66	60	66	71	381	413	84	a37	28	29
18	66	59	66	b58	64	70	550	374	78	a35	28	27
19	65	66	67	61	61	74	676	*340	74	a34	*27	28
20	65	75	66	61	63	72	634	435	64	a33	28	27
21	66	83	66	*60	63	67	*542	472	53	a32	31	25
22	65	75	67	61	b62	66	604	445	48	a31	31	27
23	65	70	66	61	b60	66	686	369	52	*31	31	30
24	64	70	67	63	b60	70	*710	*344	81	31	30	30
25	64	69	65	67	b56	71	662	369	96	33	29	30
26	64	67	66	65	b56	75	807	400	88	33	29	29
27	63	67	65	64	b60	80	*1,040	392	*92	34	29	*28
28	63	67	69	63	b62	87	*1,000	352	86	32	29	27
29	63	69	75	61	64	99	898	348	81	31	28	27
30	63	69	72	61	-	118	730	344	84	31	28	28
31	61	-	71	63	-	118	-	297	-	33	27	-
Total	1,799	1,961	2,076	1,856	1,782	2,269	15,004	17,082	3,699	1,223	948	843
Mean	58.0	65.4	67.0	59.9	61.4	73.2	500	551	123	39.5	30.6	28.1
Ac-ft	3,570	3,890	4,120	3,680	3,530	4,500	29,760	33,880	7,340	2,430	1,880	1,670

Calendar year 1951: Max 557 Min 24 Mean 111 Ac-ft 80,330
Water year 1951-52: Max 1,060 Min 25 Mean 138 Ac-ft 100,200

Peak discharge (base, 400 cfs).--Apr. 8 (2:30 a.m.) 710 cfs (2.78 ft); Apr. 14 (8 p.m.) 715 cfs (2.79 ft); Apr. 19 (11 p.m.) 925 cfs (3.15 ft); Apr. 27 (12:10 a.m.) 1,390 cfs (4.31 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.

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 1952.

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

Extremes.--Maximum contents observed during year, 15,420 acre-ft May 22 (elevation, 4,672.3 ft); minimum observed, 5,540 acre-ft Oct. 1 (elevation, 4,649.1 ft).
1938-52: 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 1951 to September 1952

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,649.1	5,540	-
Oct. 31	4,656.6	8,420	+2,880
Nov. 30	-	a10,350	+1,930
Dec. 31	-	a10,400	+90
Calendar year 1951	-	-	+180
Jan. 31	-	a10,440	0
Feb. 29	-	a10,440	0
Mar. 31	-	a10,810	+370
Apr. 30	4,668.0	13,400	+2,590
May 31	-	a15,390	+1,990
June 30	-	a13,440	-1,950
July 31	4,664.4	11,760	-1,680
Aug. 31	-	a9,080	-2,680
Sept.30	4,654.8	7,700	-1,380
Water year 1951-52	-	-	-2,160

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 1952.

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.--14 years, 66.8 cfs.

Extremes.--Maximum discharge during year, 986 cfs Apr. 30 (gage height, 4.54 ft); minimum daily, 1.4 cfs Nov. 8-10, 15, 16.
1938-52: Maximum discharge, that of Apr. 30, 1952; minimum daily, 0.6 cfs Nov. 23-25, 1943.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by Hyrum Reservoir (see preceding page).

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 27, 28, May 13 to June 1)

Oct. 1 to June 1				June 2 to Sept. 30			
0.3	0.4	1.6	101	0.1	2.3	.9	39
.4	1.6	2.2	206	.2	4.0	1.3	81
.5	4.3	2.9	384	.4	9.0	1.7	139
.7	11	3.6	608	.6	18	2.2	242
.9	22	4.5	966				
1.2	48						

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.0	4.3	69	69	71	69	124	910	258	5.0	2.5	9.4
2	7.3	4.3	57	66	73	68	124	802	*240	5.0	2.6	9.0
3	7.3	4.6	2.7	58	72	67	114	755	84	5.7	2.8	10
4	7.3	3.8	6.5	56	71	*66	8.4	802	*23	5.7	3.2	9.4
5	7.3	*1.6	62	59	69	68	8.4	848	56	5.5	2.6	9.8
6	7.3	1.5	62	60	68	67	422	857	77	8.1	2.8	9.8
7	8.8	1.5	62	64	67	67	384	*632	76	6.4	3.7	9.0
8	*9.5	1.4	69	68	67	66	571	520	68	5.7	5.0	9.4
9	9.5	1.4	85	68	66	66	494	533	79	5.3	3.7	10
10	9.5	1.4	80	68	64	67	390	540	70	4.4	3.0	11
11	9.2	1.5	79	67	64	71	352	364	51	5.5	3.7	11
12	9.2	2.7	78	66	67	72	381	268	32	5.3	3.5	10
13	8.8	1.6	76	69	67	69	423	295	23	5.7	3.2	11
14	6.1	1.6	*75	71	64	69	475	*426	16	5.3	3.5	11
15	2.4	1.4	122	68	62	68	510	475	7.8	4.6	4.6	11
16	2.1	1.4	142	73	64	68	*417	475	7.8	3.8	3.7	12
17	1.6	6.4	100	75	72	71	378	463	*7.0	4.2	2.5	13
18	1.6	16	82	71	76	73	453	444	*6.7	4.6	2.8	10
19	1.6	27	78	69	71	78	550	330	6.1	4.0	*3.0	10
20	2.1	39	69	69	68	76	594	*270	7.0	4.4	3.2	11
21	2.4	50	68	71	69	73	574	298	7.8	3.7	4.0	13
22	3.2	62	68	69	66	69	557	347	6.7	3.5	8.1	a12
23	3.8	66	67	69	67	69	581	375	7.0	*4.4	8.4	a13
24	3.8	67	68	*71	67	72	*618	361	8.1	5.5	9.0	a12
25	3.8	72	66	80	63	72	643	349	8.1	4.8	9.0	a16
26	3.8	71	64	78	62	73	714	358	6.7	3.5	10	a14
27	4.6	69	64	75	64	76	740	361	6.7	3.3	10	a12
28	4.6	69	66	72	67	83	*823	349	7.0	3.3	12	a10
29	4.3	69	73	69	67	94	928	327	6.4	2.6	13	a10
30	4.3	69	75	68	-	110	*952	303	5.7	2.5	13	a9.0
31	4.3	-	76	71	-	122	-	282	-	2.5	12	-
Total	168.4	788.4	2,211.2	2,127	1,955	2,299	14,302.8	14,719	1,265.6	143.8	174.1	327.8
Mean	5.43	26.3	71.3	68.6	67.4	74.2	477	475	42.2	4.64	5.62	10.9
Ac-ft	334	1,560	4,390	4,220	3,880	4,560	28,370	29,190	2,510	285	345	650

Calendar year 1951: Max 491 Min 1.4 Mean 89.1 Ac-ft 64,540
Water year 1951-52: Max 952 Min 1.4 Mean 111 Ac-ft 80,290

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and watermaster's notes.

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 1952. 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.--39 years (1913-52), 112 cfs.
Average combined discharge of Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal, 29 years (1923-52), 234 cfs.

Extremes.--Maximum discharge during year, 927 cfs Apr. 28 (gage height, 3.23 ft); minimum, 10 cfs Aug. 9.
Maximum combined daily discharge during year (Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal), 1,060 cfs May 30; minimum daily, 105 cfs Feb. 25, Mar. 22.
1913-52: 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.
1934-52: Maximum combined daily discharge (Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal), 1,400 cfs May 24, 30, 1950; minimum daily, 50 cfs Jan. 21, 1935.

Remarks.--Records excellent above 20 cfs and fair below. Water diverted from river and springs above station for power, irrigation, and municipal supply. Flow regulated by powerplants above station. For records of combined flow of Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal, see following page. Combined flow record excludes that in Logan City culinary pipe lines and one small irrigation diversion from power flume that syphons canyon 400 ft upstream from station.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.8	6.2	1.5	118
.9	14	2.0	270
1.0	23	2.5	490
1.2	51	3.1	842

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	16	14	13	13	13	18	709	709	249	21	17
2	19	17	15	14	14	13	19	715	*697	225	16	16
3	28	17	14	14	13	13	22	697	697	193	15	*37
4	37	18	*13	18	15	15	23	765	673	177	14	16
5	18	18	13	18	16	12	41	746	*679	160	13	15
6	14	18	12	14	15	12	37	721	709	140	12	16
7	14	18	12	16	15	12	46	*661	721	120	12	16
8	14	18	15	16	15	12	55	625	709	104	12	15
9	14	18	14	16	14	12	29	535	679	92	11	15
10	14	18	13	16	14	12	25	460	655	85	55	16
11	15	20	13	17	14	12	22	460	601	92	48	15
12	14	27	14	16	14	12	24	520	573	80	43	*15
13	14	19	*13	19	15	12	35	595	546	80	43	14
14	14	18	13	18	16	12	49	649	515	67	40	13
15	14	18	15	17	17	12	51	661	490	65	38	12
16	14	18	14	18	18	12	29	655	450	49	38	*13
17	14	19	13	16	16	12	*38	535	392	38	35	14
18	14	19	15	15	14	12	80	440	370	34	33	14
19	14	19	14	17	14	13	136	426	340	33	33	14
20	15	21	13	15	14	12	190	515	324	34	30	14
21	15	19	13	17	14	12	193	601	312	34	28	14
22	15	18	15	13	14	12	190	*515	300	29	25	14
23	15	18	13	14	14	12	*235	490	*278	*30	27	15
24	15	18	15	14	14	13	289	475	328	31	25	15
25	16	15	14	16	*15	14	361	551	332	31	21	15
26	16	14	14	14	13	14	435	637	304	29	22	16
27	16	14	13	13	13	14	505	679	304	29	22	15
28	16	14	18	13	14	16	703	703	281	27	21	15
29	16	14	16	13	13	17	784	772	274	23	19	16
30	16	14	14	13	-	21	740	778	266	23	16	16
31	16	-	16	13	-	22	-	721	-	21	15	-
Total	499	532	433	476	420	414	5,404	19,012	14,508	2,424	803	468
Mean	16.1	17.7	14.0	15.4	14.5	13.4	180	613	484	78.2	25.9	15.6
Ac-ft	990	1,060	859	944	833	821	10,720	37,710	28,780	4,810	1,590	928

Calendar year 1951: Max 1,110 Min 8 Mean 141 Ac-ft 102,000
Water year 1951-52: Max 784 Min 11 Mean 124 Ac-ft 90,040

* Discharge measurement made on this day.

Combined discharge, in cubic feet per second, of Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal, near Logan, Utah, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	194	176	154	134	124	112	133	719	1,010	484	284	220
2	202	165	156	116	128	115	135	805	1,000	472	278	217
3	205	169	154	110	124	106	137	891	1,000	454	279	173
4	202	168	152	120	124	116	139	977	977	446	276	214
5	204	171	154	128	122	114	154	982	990	438	269	210
6	198	157	152	128	119	109	147	958	1,010	433	266	209
7	194	162	143	131	118	111	156	935	1,020	423	265	206
8	195	164	126	133	119	113	193	890	1,010	412	264	205
9	192	164	128	133	119	114	217	808	986	403	261	203
10	192	166	139	133	119	114	213	736	956	401	229	202
11	196	168	144	134	121	115	212	746	902	398	260	208
12	190	183	148	133	125	115	218	825	869	388	253	210
13	192	169	142	136	120	108	234	910	838	381	251	206
14	188	168	131	135	114	110	253	966	803	371	248	201
15	186	164	136	134	115	112	252	971	774	363	246	201
16	186	158	142	135	116	115	225	900	751	354	245	198
17	184	155	140	132	118	114	234	782	697	349	241	196
18	184	160	136	125	116	113	278	720	668	341	239	196
19	184	160	144	132	115	120	334	721	653	333	237	196
20	178	166	135	130	115	110	373	804	635	332	234	193
21	188	164	135	131	115	108	389	866	621	322	232	192
22	184	163	141	127	114	105	388	776	599	319	231	192
23	180	155	136	126	115	109	431	713	579	320	233	191
24	178	157	138	129	110	118	485	731	605	316	233	190
25	180	160	135	132	105	116	554	808	591	311	226	189
26	180	158	136	128	111	116	628	892	556	306	228	189
27	179	160	139	124	109	115	698	923	542	304	226	188
28	179	158	145	121	113	124	767	953	518	298	225	186
29	177	156	146	120	114	127	784	1,030	510	292	223	184
30	179	155	141	124	-	136	740	1,060	502	291	223	182
31	177	-	141	128	-	138	-	1,020	-	287	221	-
Total	5,827	4,899	4,389	3,982	3,397	3,568	10,101	26,818	23,172	11,342	7,626	5,947
Mean	188	163	142	128	117	115	337	865	772	366	246	198
Ac-ft	11,560	9,720	8,710	7,900	6,740	7,080	20,040	53,190	45,960	22,500	15,130	11,800

Calendar year 1951: Max 1,350 Min 117 Mean 323 Ac-ft 233,900
Water year 1951-52: Max 1,060 Min 105 Mean 303 Ac-ft 220,300

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 powerhouse of Utah Power & Light Co. and 2⅔ miles east of Logan.

Records available.--May 1913 to September 1952.

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

Average discharge.--39 years, 109 cfs.

Extremes.--1913-52: Maximum daily discharge, 204 cfs Apr. 14, 1952; no flow for periods during several years.

Remarks.--Records good. Flow regulated by powerplant 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 in collaboration with Utah Power & Light Co. in connection with a Federal Power Commission project.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.75	0	1.2	25
.8	2.5	1.6	58
.9	7.0	2.1	115
1.0	12	2.7	204

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	153	153	132	114	105	93	109	10	196	190	193	158
2	156	142	134	95	107	96	110	90	*193	188	194	156
3	169	146	133	89	105	87	109	194	191	186	196	*91
4	158	144	*133	95	103	95	110	199	190	188	196	152
5	180	147	134	103	99	96	109	196	188	188	196	150
6	177	134	133	107	98	91	110	196	188	188	194	148
7	174	140	125	107	97	93	110	194	186	190	194	146
8	175	142	105	109	98	95	138	194	186	190	194	146
9	172	142	108	109	99	96	188	198	186	190	194	144
10	172	144	119	109	99	97	188	199	186	190	116	142
11	175	144	124	109	101	97	190	201	186	188	154	150
12	170	152	127	109	105	97	194	201	186	188	156	*159
13	172	146	*122	109	99	91	199	201	186	188	156	178
14	167	146	111	109	92	93	204	201	186	188	156	175
15	166	142	113	109	92	95	201	201	186	188	156	174
16	166	136	120	109	92	98	196	199	186	190	156	166
17	164	132	120	109	96	96	*196	196	186	193	156	162
18	164	137	114	103	96	95	198	202	186	191	156	162
19	164	136	122	108	95	101	198	201	185	185	154	162
20	156	141	115	108	95	93	183	201	183	185	154	159
21	167	141	115	107	95	91	196	201	183	188	154	*158
22	162	141	119	107	95	87	198	*201	182	191	154	158
23	159	133	116	105	95	91	*196	201	*182	*193	154	152
24	156	134	116	108	91	99	196	201	180	193	156	147
25	158	137	114	109	*85	96	193	201	182	*193	154	146
26	158	136	115	108	92	96	193	199	186	191	154	146
27	156	138	119	104	90	96	193	196	190	191	154	146
28	156	136	120	102	93	103	64	196	190	191	154	144
29	154	134	122	101	95	105	0	196	190	193	154	141
30	156	133	120	104	-	109	0	196	190	191	158	140
31	154	-	118	108	-	109	-	196	-	191	158	-
Total	5,086	4,209	3,738	3,282	2,804	2,977	4,669	5,858	5,601	5,878	5,125	4,558
Mean	164	140	121	106	96.7	96.0	156	189	187	190	165	152
Ac-ft	10,090	8,350	7,420	6,510	5,560	5,910	9,260	11,620	11,110	11,660	10,170	9,040

Calendar year 1951: Max 203 Min 0 Mean 151 Ac-ft 109,500
Water year 1951-52: Max 204 Min 0 Mean 147 Ac-ft 106,700

* 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 1952 (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.--29 years (1923-52), 29.1 cfs.

Extremes.--Maximum daily discharge during year, 128 cfs June 19, 20; no flow Apr. 6 to May 3.

1906, 1924-52: Maximum daily discharge, 136 cfs May 30, 31, 1930; no flow at times in most years.

Remarks.--Records good except those for period of no gage-height record or those below 10 cfs, which are fair. No diversions 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0	0.2	0.8	42
.1	2.0	1.2	62
.2	4.9	1.7	90
.3	9.0	2.4	132
.5	22		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	6.5	7.8	7.0	6.5	5.7	6.1	0	104	45	70	45
2	27	6.1	7.4	6.5	6.5	5.7	6.1	0	110	*59	68	45
3	7.8	6.1	7.0	6.5	6.5	5.7	6.1	0	116	*75	68	*45
4	7.4	6.1	6.5	7.4	6.1	5.7	6.1	13	114	81	66	46
5	6.5	6.1	6.5	7.4	6.5	*5.7	3.7	40	123	90	60	45
6	6.5	4.6	6.5	7.4	6.1	5.7	0	41	*114	105	60	45
7	5.7	3.7	6.1	7.8	6.1	5.7	0	80	117	113	59	44
8	6.1	3.7	6.1	7.8	6.1	5.7	0	71	116	118	*58	44
9	6.1	3.7	6.5	8.2	6.1	5.7	0	75	121	121	56	44
10	6.5	3.7	7.0	8.2	6.1	5.3	0	77	115	126	58	44
11	*6.5	3.7	7.4	8.2	6.1	5.7	0	85	115	118	58	43
12	6.5	3.7	7.4	8.2	6.1	5.7	0	104	a110	120	54	36
13	6.5	3.7	*7.4	8.2	6.1	5.3	0	114	a106	113	52	14
14	6.5	3.7	7.4	8.2	5.7	5.3	0	116	a102	116	52	13
15	6.5	3.7	7.8	7.8	5.7	5.3	0	109	a98	110	52	15
16	6.5	3.7	7.8	7.8	6.1	5.3	0	46	a115	115	51	*19
17	6.5	3.7	7.4	7.4	6.1	5.7	0	*51	a119	118	50	20
18	6.5	3.7	7.4	7.4	6.1	5.7	0	78	a112	116	50	20
19	6.5	4.0	7.8	7.4	5.7	5.7	0	94	*128	115	*50	20
20	6.5	4.0	7.4	7.4	5.7	5.3	0	88	128	113	50	20
21	6.5	4.0	7.0	7.4	5.7	5.3	0	64	*126	100	50	20
22	6.5	3.7	7.4	7.4	5.3	5.7	0	60	117	99	52	20
23	6.5	*3.7	7.0	7.0	5.7	5.7	*0	22	*119	97	52	24
24	6.5	4.9	7.0	*7.0	5.3	5.7	0	*55	97	92	52	28
25	6.5	8.2	7.0	7.0	5.3	5.7	0	56	77	*87	51	28
26	6.5	8.2	7.0	6.5	5.7	5.7	0	56	66	86	52	27
27	7.0	8.2	7.0	6.5	6.1	5.3	0	48	48	84	50	27
28	7.0	8.2	7.4	6.1	6.1	5.3	0	54	47	80	50	27
29	7.0	7.8	7.8	6.1	5.7	5.3	0	58	46	76	50	27
30	7.0	7.8	7.4	6.5	-	6.5	0	85	46	77	49	26
31	7.0	-	7.4	6.5	-	6.5	-	99	-	75	48	-
Total	246.6	152.6	222.0	226.2	172.9	174.3	28.1	1,939	3,072	3,040	1,698	921
Mean	7.95	5.09	7.16	7.30	5.96	5.62	0.94	62.5	102	98.1	54.8	30.7
Ac-ft	489	303	440	449	343	346	56	3,850	6,090	6,030	3,370	1,830

Calendar year 1951: Max 130 Min 0 Mean 30.9 Ac-ft 22,410
Water year 1951-52: Max 128 Min 0 Mean 32.5 Ac-ft 23,600

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and records for Logan River above State dam, near Logan.

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, 3¼ miles upstream from powerplant 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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,000 ft (from topographic map). July 19, 1900, to Dec. 31, 1902, staff gage at site 3½ miles downstream at different datum. Nov. 28, 1913, to Oct. 2, 1934, water-stage recorder at site 1,000 ft upstream at different datum.

Average discharge.--38 years (1914-52), 126 cfs.

Extremes.--Maximum discharge during year, 1,400 cfs May 4 (gage height, 6.54 ft); minimum daily, 79 cfs Jan. 3.
1913-52: 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 except those for periods of ice effect or no gage-height record, which are fair. Some diversions for irrigation of meadowlands above station. Low-water flow may be regulated by powerplant above station.

Rating tables, water year 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 3				May 4 to Sept. 30			
1.9	74	3.7	461	2.3	120	4.2	607
2.2	117	4.4	638	2.6	181	5.0	850
2.6	199	5.2	860	3.0	275	6.0	1,190
3.1	316	5.8	1,060	3.5	410		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	123	112	97	100	95	128	860	375	214	185	152
2	138	119	112	89	100	96	132	*925	*366	221	183	150
3	136	121	112	79	100	95	134	1,020	355	219	179	148
4	136	121	112	81	100	*94	150	1,180	344	214	179	148
5	134	*121	114	b90	98	96	173	1,020	333	205	179	148
6	134	121	112	97	96	93	210	*906	328	212	177	148
7	132	121	105	105	95	93	243	824	331	210	177	146
8	132	121	100	105	95	93	285	748	309	208	175	146
9	130	121	100	105	94	93	268	*664	301	208	175	146
10	130	121	105	103	93	94	259	601	290	205	177	146
11	136	121	110	103	93	96	254	584	280	196	173	148
12	134	138	115	102	93	94	270	598	*270	203	170	148
13	132	123	*112	103	92	93	292	601	262	203	168	146
14	132	119	110	105	90	94	306	592	258	194	162	146
15	130	115	114	103	90	94	280	567	252	199	166	144
16	*132	110	115	105	92	96	*250	564	248	196	166	144
17	132	112	114	100	92	96	294	494	245	194	164	144
18	130	114	114	100	92	96	363	452	243	192	162	142
19	130	114	110	103	92	99	428	432	238	190	*162	142
20	132	119	107	102	90	97	468	*463	238	190	162	140
21	130	119	105	*102	90	97	464	514	236	188	162	140
22	128	114	105	100	90	96	476	466	238	188	158	140
23	128	110	103	99	90	97	491	430	238	*188	156	138
24	128	110	103	99	88	99	527	410	258	179	158	138
25	128	110	102	100	86	99	584	410	260	185	156	138
26	126	110	103	97	86	99	*744	418	250	185	156	138
27	125	110	102	96	87	100	904	407	*238	185	156	136
28	125	108	103	94	90	103	*950	399	238	185	154	136
29	125	108	107	94	92	112	*1,040	402	231	183	154	136
30	123	112	103	95	-	126	907	402	219	183	154	136
31	123	-	103	97	-	128	-	385	-	185	152	-
Total	4,045	3,506	3,344	3,050	2,686	3,053	12,274	18,736	8,272	6,107	5,157	4,298
Mean	130	117	108	98.4	92.6	98.5	409	604	276	197	166	143
Ac-ft	8,020	6,950	6,630	6,050	5,330	6,060	24,350	37,160	16,410	12,110	10,230	8,520

Calendar year 1951: Max 560 Min 82 Mean 188 Ac-ft 135,000
Water year 1951-52: Max 1,180 Min 79 Mean 204 Ac-ft 147,800

Peak discharge (base, 140 cfs).--Apr. 29 (4 a.m.) 1,150 cfs (6.16 ft); May 4 (1 a.m.) 1,400 cfs (6.54 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 7-12, Jan. 30 to Mar. 3, June 10, '11; discharge estimated on basis of weather records and records for stations on nearby streams.

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 1952.

Gage.--Water-stage recorder.

Average discharge.--35 years (1917-52), 51.1 cfs.

Extremes.--Maximum daily discharge during year, 163 cfs July 15, 16; no flow Nov. 27 to May 4.
1912-52: 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 period 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 powerplant 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

1.3	0	2.4	26
1.4	1.0	2.8	44
1.5	2.3	3.4	76
1.7	5.8	4.0	112
1.9	10	4.8	165
2.1	16		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	10						0	156	104	*144	132
2	62	5.8						0	156	130	149	130
3	52	5.4						0	154	150	153	*132
4	45	5.2						0	*151	151	154	131
5	45	5.0						57	152	150	153	131
6	45	4.8						65	*153	149	153	131
7	46	4.7						82	152	153	153	131
8	46	4.5						83	152	156	154	129
9	46	3.3						94	151	155	154	122
10	45	1.6					(*)	111	150	159	150	*122
11	45	1.4						121	149	161	146	114
12	45	1.4						135	148	161	146	110
13	45	1.3						142	150	162	144	107
14	45	1.4						144	151	162	146	108
15	36	1.4						142	152	163	145	108
16	23	1.5						144	151	163	147	108
17	25	1.5						129	150	162	147	108
18	*26	1.6						131	151	162	146	102
19	25	1.8						144	146	157	145	99
20	25	a1.0						112	156	156	152	100
21	26	*a1.0						80	160	*149	154	97
22	25	a1.0						106	162	140	153	92
23	19	a1.0						*100	*162	146	154	91
24	19	a1.0						100	138	151	154	87
25	19	a1.0						101	108	151	153	84
26	19	a1.0						121	124	150	145	84
27	16	0						125	92	130	146	83
28	14	0						134	82	127	143	82
29	14	0						145	84	134	139	83
30	14	0						154	97	144	137	82
31	14	-					-	156	-	144	139	-
Total	1,043	70.4	0	0	0	0	0	3,158	4,240	4,632	4,598	3,220
Mean	33.6	2.35	0	0	0	0	0	102	141	149	148	107
Ac-ft	2,070	140	0	0	0	0	0	6,260	8,410	9,190	9,120	6,390

Calendar year 1951: Max 163 Min 0 Mean 52.6 Ac-ft 38,080
Water year 1951-52: Max 163 Min 0 Mean 57.3 Ac-ft 41,580

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement and notes of gate 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 1952.

Gage.--Water-stage recorder.

Average discharge.--40 years, 227 cfs.

Extremes.--Maximum daily discharge during year, 723 cfs June 19; no flow Mar. 5 to May 5. 1912-52: Maximum daily discharge, 729 cfs May 19, 1946; no flow during periods in every year except 1914.

Remarks.--Records good except those for period of ice effect or no gage-height record, which are fair. Canal diverts from west side of Bear River in NW¼SW¼ sec. 26, T. 13 N., R. 2 W., at dam at which Hammond (East Side) Canal and intake of Cutler powerplant 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 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	13	3.4	203
1.1	20	4.2	314
1.6	43	5.0	446
2.1	73	5.8	591
2.7	125	6.5	727

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	359	74	41				(*)	0	621	463	*566	549
2	331	72	41			18		0	637	502	561	549
3	282	72	40					0	661	570	563	*564
4	226	72	40					0	*673	616	564	563
5	226	72	41			0		0	679	648	563	557
6	225	72	*17			0		277	677	659	580	542
7	228	72	17			0		359	681	707	606	540
8	226	72				0		354	681	717	610	540
9	225	65	b18			0		388	669	719	612	540
10	224							431	650	717	597	*542
11	224					0		485	*652	721	580	523
12	222					0		549	650	703	580	520
13	221					0		568	650	654	574	498
14	225					0		614	650	656	574	491
15	217	55				0		663	650	652	576	491
16	199			18	18	0		614	665	654	570	489
17	199					0		572	677	646	574	489
18	*199					*0		580	713	627	574	477
19	199					0		623	723	604	589	470
20	199		18			0		564	703	602	620	470
21	199	*55				0		451	703	*585	621	470
22	179	55				0		460	703	563	618	468
23	143	54				0		*466	*701	599	618	468
24	126	54		(*)		0		470	568	608	595	470
25	124	54				0		472	389	608	591	470
26	124	54				0		472	412	595	591	472
27	117	60			(*)	0		540	374	547	582	470
28	122	43				0		572	359	538	572	472
29	119	42				0		593	359	559	566	473
30	119	42			-	0		625	398	566	564	473
31	119	-			-	0	-	621	-	568	564	-
Total	6,147	1,761	669	558	522	72	0	13,383	18,328	19,173	18,115	15,110
Mean	198	58.7	21.6	18	18	2.3	0	432	611	618	584	504
Ac-ft	12,190	3,490	1,330	1,110	1,040	143	0	26,540	36,350	38,030	35,930	29,970

Calendar year 1951: Max 717 Min 0 Mean 241 Ac-ft 174,400
Water year 1951-52: Max 723 Min 0 Mean 256 Ac-ft 186,100

* Discharge measurement or observation of no flow made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 8-20, Dec. 11 to May 5, Aug. 27; discharge estimated on basis of 4 discharge measurements and notes on 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 1952.

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-fourths of a mile downstream at different datum.

Extremes.--Maximum discharge during year, 7,020 cfs May 1 (gage height, 6.88 ft); minimum daily, 31 cfs Aug. 10.
. 1889-1952: 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.--Five discharge measurements furnished by Utah Power & Light Co.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,020	2,190	2,020	2,480	a2,340	2,100	3,800	6,670	3,360	2,340	1,070	1,090
2	1,960	1,780	2,360	2,590	2,440	2,270	3,800	6,670	3,100	2,100	885	1,350
3	1,950	1,750	2,240	a2,370	2,380	2,780	3,800	6,620	2,880	1,580	262	1,410
4	2,060	1,140	1,960	a1,830	3,060	3,050	4,620	6,530	*2,730	613	667	911
5	1,840	1,660	1,940	a1,660	3,110	2,380	5,810	6,590	1,860	1,840	1,060	814
6	1,980	1,830	*a2,610	a915	2,480	2,590	*5,920	6,220	*2,200	863	1,070	1,160
7	1,510	1,770	a2,550	a1,830	2,480	2,500	5,860	6,190	1,770	1,060	824	1,020
8	2,110	1,780	a1,300	a1,620	2,460	2,230	5,940	6,190	1,880	778	954	1,210
9	2,000	1,890	a1,650	1,890	2,350	1,800	6,220	5,980	2,330	426	724	1,370
10	1,780	1,490	a1,380	1,970	1,780	2,280	*5,980	5,520	1,990	300	31	*776
11	1,840	1,490	a1,330	2,160	2,110	1,900	*5,570	4,540	1,540	728	1,100	694
12	1,710	2,260	1,810	1,870	2,160	2,000	5,150	4,420	1,570	35	1,190	726
13	2,000	2,380	1,640	1,920	1,780	2,490	4,340	4,010	2,020	36	1,120	1,320
14	1,030	2,090	2,480	2,080	1,720	2,470	4,640	3,820	1,720	104	831	519
15	1,510	2,170	1,960	2,610	2,320	2,460	4,790	3,470	1,480	521	1,080	936
16	1,870	1,700	1,540	2,260	1,350	1,490	4,940	3,680	1,630	272	840	1,260
17	1,770	1,730	a2,020	2,930	1,890	2,390	5,420	3,720	1,360	355	116	1,160
18	*1,640	1,780	a2,770	2,550	2,420	*2,630	5,260	3,330	1,250	1,080	449	990
19	1,640	1,060	a2,200	2,220	2,350	2,280	4,560	2,920	1,660	927	793	920
20	1,860	1,920	a2,920	2,530	2,540	2,500	4,620	2,400	818	512	1,130	1,350
21	1,510	2,130	a1,720	2,860	2,050	2,560	4,850	2,140	248	644	572	1,070
22	1,490	1,790	a2,550	2,530	2,380	2,510	5,090	3,370	50	959	943	1,220
23	2,380	2,070	1,720	2,150	1,840	1,940	5,030	3,620	137	737	1,090	1,270
24	1,650	1,770	1,750	2,180	1,610	2,360	5,060	3,650	1,280	*34	268	1,000
25	1,690	2,030	2,340	2,200	2,280	2,550	5,230	3,650	1,860	820	1,000	940
26	1,660	1,750	2,130	2,340	2,010	2,670	5,380	3,520	1,940	346	1,210	1,060
27	1,760	1,760	2,200	2,650	*1,660	2,690	5,600	3,620	2,240	815	1,160	1,380
28	1,060	2,150	2,350	2,600	1,440	2,050	5,920	3,540	2,490	938	1,040	995
29	1,940	1,850	1,410	2,790	1,890	2,620	6,190	3,620	2,160	1,150	1,570	908
30	1,560	1,930	1,460	2,700	-	2,520	*6,460	3,650	2,180	873	1,610	*1,270
31	1,880	-	2,390	a2,360	-	3,280	-	3,650	-	1,370	636	-
Total	54,660	55,090	62,700	69,645	62,680	74,340	155,850	137,520	53,733	25,156	27,295	32,099
Mean	1,763	1,836	2,023	2,247	2,161	2,398	5,195	4,436	1,791	811	880	1,070
Ac-ft	108,400	109,300	124,400	138,100	124,300	147,500	309,100	272,800	106,600	49,900	54,140	63,670

Calendar year 1951: Max 5,220 Min 41 Mean 2,183 Ac-ft 1,580,000
Water year 1951-52: Max 6,670 Min 31 Mean 2,215 Ac-ft 1,608,000

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

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

Location.--Lat 42°20', long. 112°26', on line between secs. 35 and 36, T. 12 S., R. 34 E., on left bank three-quarters of a mile upstream from highway 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 1952.

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

Average discharge.--13 years (1911-12, 1931-32, 1941-52), 18.0 cfs.

Extremes.--Maximum discharge during year, 70 cfs July 30 (gage height, 1.52 ft); minimum, 13 cfs Dec. 8 (gage height, 0.48 ft).
1911-13, 1931-32, 1940-52: Maximum discharge, 270 cfs Feb. 22, 1948 (gage height, 3.26 ft), from rating curve extended above 50 cfs on basis of computation of peak 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 except those for periods of no gage-height record, which are fair. Diversions above station for irrigation of about 400 acres.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.5	14	0.8	28
.6	18	.9	33
.7	23	1.1	44

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	15	18	16	a19	18	19	41	27	20	26	17
2	16	14	18	16	a19	18	19	43	26	21	21	17
3	16	16	17	17	19	18	20	44	26	21	20	17
4	16	16	18	17	19	18	21	44	26	20	20	17
5	*16	16	17	17	18	18	23	43	25	20	*19	17
6	15	15	17	17	18	18	24	41	25	20	19	18
7	15	16	16	18	18	17	25	40	25	20	19	18
8	15	17	15	17	18	18	25	40	25	19	19	18
9	15	16	14	17	18	18	25	39	24	20	19	18
10	16	17	15	18	17	18	25	37	24	20	19	*18
11	16	17	16	18	17	18	26	36	24	21	19	18
12	16	18	18	*18	17	18	27	35	23	27	19	18
13	16	17	18	19	18	18	28	34	22	25	18	18
14	16	17	17	18	17	18	30	34	22	21	18	18
15	16	15	17	18	17	18	28	34	22	21	18	18
16	16	14	18	18	18	18	28	34	22	20	18	18
17	16	14	18	18	18	18	33	32	22	19	18	18
18	16	*14	18	18	18	18	36	30	21	19	18	18
19	16	15	18	a18	18	18	*38	30	21	19	18	18
20	16	16	18	a18	18	18	39	31	21	18	18	18
21	16	16	18	a18	18	18	35	31	21	18	18	18
22	16	15	16	a18	18	18	35	31	20	18	18	18
23	17	15	18	a18	19	18	37	*30	*20	18	18	18
24	17	16	18	a18	18	19	39	29	22	18	18	18
25	17	16	17	a18	18	*18	39	29	23	18	17	17
26	16	16	18	a18	18	19	39	30	22	18	17	17
27	16	16	18	18	18	19	42	29	22	18	17	17
28	16	17	18	a18	*18	20	42	28	21	18	18	18
29	16	17	18	a18	18	20	43	28	20	18	18	18
30	16	18	18	a19	-	21	42	27	20	24	18	18
31	16	-	18	a19	-	21	-	27	-	26	18	-
Total	494	477	536	551	522	570	932	1,061	684	623	578	532
Mean	15.9	15.9	17.3	17.8	18.0	18.4	31.1	34.2	22.8	20.1	18.6	17.7
Ac-ft	980	946	1,060	1,090	1,040	1,130	1,850	2,100	1,360	1,240	1,150	1,060

Calendar year 1951: Max 32 Min 14 Mean 18.7 Ac-ft 13,510
Water year 1951-52: Max 44 Min 14 Mean 20.7 Ac-ft 15,010

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

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 1952.

Gage.--Staff gages read about once weekly.

Extremes.--Maximum gage height observed during year, 11.9 ft Apr. 21, 28, May 5; minimum observed, 4.30 ft Aug. 18, 24, Sept. 1, 23.
1940-52: 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.5	-	-	-	-	-	-	-	-	-	-	4.30
2	-	-	9.3	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	9.8	-	-	-	-	-	-
4	-	8.5	-	-	-	-	-	-	-	-	-	-
5	8.14	-	-	9.9	-	-	-	11.9	-	-	4.40	-
6	8.30	-	-	-	-	-	10.1	-	-	4.34	-	-
7	8.5	-	-	-	-	-	-	-	-	-	-	4.34
8	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	9.8	-	-	9.8	-	-	-	-	-	-
10	-	-	-	-	9.8	-	-	-	-	-	-	5.10
11	-	8.5	-	-	-	-	-	-	-	-	-	-
12	-	-	-	9.7	-	-	-	10.9	-	-	4.34	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	9.7	-	-	-	-	-	-	-	-
15	-	-	-	-	-	9.75	10.9	-	-	-	-	-
16	-	-	10.2	-	-	-	-	-	4.40	-	-	-
17	-	-	-	-	9.8	-	-	-	-	-	-	4.32
18	-	8.8	-	9.7	-	-	11.6	-	-	-	4.30	-
19	-	-	-	-	-	-	-	10.0	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-
21	8.9	-	-	-	-	-	11.9	-	-	-	-	-
22	-	-	-	-	-	-	-	-	4.32	-	-	-
23	-	-	10.4	-	-	-	-	-	4.40	-	-	4.30
24	-	-	-	-	9.8	-	-	9.5	-	-	4.30	-
25	-	-	-	-	-	-	-	9.0	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	9.7	-	-	-	-	-	-	-	-
28	-	-	-	-	9.80	-	11.9	-	-	4.44	-	-
29	8.9	-	10.4	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	4.36	-	-	6.58
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 1952.

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

Average discharge.--11 years (1941-52), 13.2 cfs.

Extremes.--Maximum discharge during year, 54 cfs Apr. 22 (gage height, 4.72 ft); minimum, 0.2 cfs Apr. 23 (gage height, 0.57 ft).
1940-52: Maximum discharge, 113 cfs Aug. 23, 1946, from computation of flow over weir 50 ft upstream; maximum gage height, that of Apr. 22, 1952; no flow at times during most years.

Remarks.--Records good except those for periods of fragmentary gage-height record, which are poor. Flow partly regulated by Elkhorn Reservoir (see preceding page). Diversions above station for irrigation of about 400 acres.

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

1.3	3.6	2.5	22
1.6	7.2	2.8	28
1.9	12	3.2	35
2.2	16		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	f17	10	8.2	6.8	7.3	8.6	32	27	20	21	16
2	14	f8.9	9.2	8.2	6.8	7.5	8.5	28	25	21	25	16
3	14	f9.6	8.7	8.0	6.8	7.5	8.5	21	25	21	15	16
4	14	f9.4	8.5	7.9	6.8	7.5	8.6	21	25	21	16	16
5	*13	9.6	8.0	7.8	6.8	7.5	9.2	21	20	20	*19	16
6	12	f9.7	8.0	7.6	6.8	7.5	10	24	24	20	19	17
7	16	f20	8.0	7.5	6.8	7.5	10	27	25	20	19	17
8	19	f24	8.3	7.5	6.8	7.8	11	28	24	20	19	17
9	18	f17	8.2	7.5	6.8	8.0	10	29	25	20	19	17
10	16	f11	8.2	7.3	7.1	8.0	10	33	19	20	19	*17
11	17	f11	8.2	7.2	7.1	8.0	11	30	20	21	19	18
12	17	10	8.0	7.2	6.9	8.0	12	28	16	23	19	18
13	16	9.9	8.0	7.2	6.9	7.9	13	29	15	25	18	18
14	13	9.9	7.9	*7.3	6.9	7.8	13	34	14	21	18	18
15	11	9.7	7.9	7.2	6.8	7.8	13	31	20	14	18	18
16	11	9.6	7.9	7.2	6.9	7.6	13	26	21	17	18	18
17	12	16	7.9	7.2	6.9	7.6	12	26	21	20	18	17
18	11	*25	7.8	7.2	6.9	7.8	15	25	21	19	17	17
19	11	20	7.8	7.2	6.9	7.9	*18	27	21	19	17	17
20	11	19	7.8	7.2	6.9	8.0	13	28	21	19	17	17
21	10	18	7.8	7.2	6.9	8.0	12	29	20	19	17	17
22	11	17	7.8	7.1	6.9	8.0	19	29	21	19	17	17
23	19	13	7.8	7.1	6.9	8.0	4.1	29	*20	19	17	17
24	31	11	7.8	7.1	6.9	8.0	16	*29	22	19	17	17
25	f9.4	10	7.8	7.1	6.8	*8.3	16	30	24	19	16	17
26	f8.5	9.9	7.8	7.1	6.8	8.5	20	30	23	19	16	17
27	9.0	9.2	7.8	6.9	7.1	8.3	29	30	22	19	16	17
28	9.9	11	7.8	6.9	*7.2	8.5	30	31	21	19	17	17
29	10	12	8.0	6.9	7.2	8.5	32	31	20	19	17	17
30	f9.6	11	8.2	6.8	-	8.5	32	31	20	20	17	17
31	f16	-	8.2	6.8	-	8.5	-	30	-	21	16	-
Total	425.4	398.4	251.1	226.6	200.1	245.6	437.5	877	642	613	553	511
Mean	13.7	13.3	8.10	7.31	6.90	7.92	14.6	28.3	21.4	19.8	17.8	17.0
Ac-ft	844	790	498	449	397	487	868	1,740	1,270	1,220	1,100	1,010

Calendar year 1951: Max 31 Min 0.7 Mean 11.7 Ac-ft 8,500
Water year 1951-52: Max 34 Min 4.1 Mean 14.7 Ac-ft 10,670

* Discharge measurement made on this day.
f Fragmentary gage-height record; discharge computed from partly estimated gage heights.

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 1952.

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

Average discharge.--13 years (1939-52), 10.8 cfs.

Extremes.--Maximum discharge during year, 158 cfs Apr. 19 (gage height, 2.38 ft); minimum, 2.9 cfs Dec. 22; minimum gage height, 0.48 ft Feb. 2; minimum daily discharge, 5.3 cfs Dec. 22.

1938-52: Maximum discharge observed, 202 cfs Apr. 2, 1943, from rating curve extended above 47 cfs; maximum gage height, 2.38 ft Apr. 19, 1952; minimum discharge 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 powerplant and its small reservoir on Birch Creek cause slight diurnal fluctuations.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 1				May 2 to Sept. 30	
0.6	4.4	1.3	46	0.7	3.6
.7	7.4	1.6	75	.8	7.5
.8	12	2.0	116	.9	14
1.0	23			1.0	21
				1.2	37

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.5	11	10	10	11	11	12	42	16	9.9	8.7	8.7
2	11	11	10	b9.5	8.7	11	12	35	16	9.9	9.3	8.7
3	*11	11	9.9	b9.5	9.5	11	11	18	15	9.9	9.3	8.7
4	10	10	10	b9.5	11	11	12	15	15	9.9	8.7	8.7
5	10	9.5	11	b9.8	10	11	12	21	15	9.9	7.5	8.1
6	10	10	10	10	10	11	15	32	15	9.9	*8.7	8.1
7	9.1	9.1	10	10	10	11	16	31	16	9.9	9.9	8.7
8	8.2	10	9.5	10	11	11	16	31	16	9.9	9.9	9.3
9	8.2	9.1	b11	9.9	11	12	16	30	16	9.9	9.9	9.3
10	8.2	9.1	10	10	11	12	17	28	14	9.3	11	*8.1
11	9.5	10	9.9	*10	11	12	20	26	14	9.9	11	8.7
12	10	9.5	9.9	9.5	11	12	24	26	14	9.9	9.9	8.1
13	10	9.1	9.9	9.9	11	12	31	26	14	9.9	9.9	8.1
14	10	11	9.9	6.8	11	12	40	27	13	9.3	9.9	7.5
15	10	10	9.9	9.9	11	11	33	27	13	9.3	9.9	7.5
16	10	9.9	10	10	11	11	29	26	14	9.3	9.9	7.5
17	10	*10	10	10	11	12	40	24	14	8.7	9.9	7.5
18	10	9.9	7.8	10	10	12	70	22	13	9.3	9.9	7.5
19	11	9.9	9.9	10	10	11	*102	22	12	9.3	8.7	7.5
20	11	10	10	11	10	10	113	23	12	9.3	7.5	7.5
21	9.9	10	11	10	10	11	83	20	12	8.7	8.7	8.1
22	8.7	9.9	5.3	9.9	11	10	85	20	11	8.7	9.3	8.1
23	9.1	9.9	11	9.9	11	11	94	*19	12	8.1	8.7	8.1
24	9.9	9.9	11	9.9	11	11	93	20	*13	8.7	8.7	7.5
25	12	9.9	11	10	11	*10	84	20	11	8.7	9.3	7.5
26	11	9.9	10	9.9	11	10	80	19	11	9.3	8.7	7.5
27	11	10	11	9.9	*11	11	71	19	11	9.3	9.3	7.5
28	11	10	11	9.9	11	11	66	18	11	9.3	11	7.1
29	12	10	10	9.9	11	11	52	18	11	8.7	8.1	7.5
30	11	10	10	9.9	-	12	44	17	11	9.3	8.1	7.5
31	9.5	-	10	9.9	-	12	-	17	-	9.3	8.7	-
Total	311.8	298.6	309.9	304.4	308.2	347	1,393	739	401	290.7	288.0	240.2
Mean	10.1	9.95	10.0	9.82	10.6	11.2	46.4	23.8	13.4	9.38	9.29	8.01
Ac-ft	618	592	615	604	611	688	2,760	1,470	795	577	571	476

Calendar year 1951: Max 46 Min 5.3 Mean 12.0 Ac-ft 8,680
Water year 1951-52: Max 113 Min 5.3 Mean 14.3 Ac-ft 10,380

* 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 1952.

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.--8 years (1941-43, 1946-52), 14.9 cfs.

Extremes.--Maximum discharge during year, 261 cfs Apr. 19 (gage height, 5.79 ft); minimum, 4.5 cfs Sept. 29 (gage height, 1.07 ft).
1940-43, 1946-52: Maximum discharge, that of Apr. 19, 1952; 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 powerplant and its small reservoir on Birch Creek cause slight diurnal fluctuations.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	4.8	2.5	38
1.2	5.8	3.0	56
1.4	8.2	3.5	76
1.7	14	4.0	104
2.0	22	5.0	182

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.5	11	12	12	12	12	15	65	24	12	10	8.7
2	11	12	12	12	11	12	15	60	20	12	12	8.4
3	*11	12	12	11	12	12	16	40	22	12	10	8.1
4	11	12	12	11	12	12	18	35	19	12	11	8.2
5	11	10	12	11	12	12	22	40	19	12	10	8.5
6	11	11	12	11	11	12	28	55	18	12	*8.7	8.2
7	11	9.6	12	11	11	12	33	55	18	13	9.0	7.3
8	9.2	11	11	11	11	12	41	52	17	13	10	6.4
9	9.0	10	14	11	11	13	42	50	16	13	10	*6.1
10	8.1	10	13	11	11	13	44	47	17	12	11	5.8
11	9.3	11	12	11	12	13	50	45	16	11	11	6.2
12	11	11	12	11	12	13	62	44	17	12	9.3	6.2
13	12	10	12	11	12	13	77	45	18	13	9.0	6.1
14	12	12	12	9.0	12	13	100	46	18	13	8.7	5.6
15	12	12	12	*10	12	13	88	46	16	13	9.2	7.3
16	12	11	12	11	12	12	76	43	14	13	9.3	6.8
17	12	*11	12	11	12	13	110	40	14	13	9.3	6.1
18	12	12	11	11	11	13	150	36	14	12	7.6	5.7
19	12	12	12	11	11	12	*173	36	14	12	7.8	5.7
20	12	12	13	11	11	12	*152	36	14	9.2	8.7	5.6
21	11	12	13	11	12	12	99	36	15	9.5	8.8	5.7
22	10	12	9.0	11	12	12	100	35	17	9.5	7.8	5.6
23	9.8	11	12	11	12	12	120	*32	17	9.2	6.9	5.8
24	10	12	13	11	12	12	120	27	*19	9.0	7.8	6.1
25	12	12	13	11	12	12	110	25	17	9.0	6.9	6.4
26	12	12	12	11	12	*13	105	28	17	9.0	7.3	6.5
27	12	12	13	11	12	13	95	30	15	11	7.6	6.1
28	12	12	13	11	*12	14	90	29	13	12	7.2	5.6
29	12	12	12	11	13	14	80	29	12	11	7.9	5.8
30	12	12	12	11	-	16	70	29	12	10	7.3	7.0
31	9.8	-	12	11	-	15	-	25	-	10	7.3	-
Total	340.7	341.6	376.0	340.0	340	394	2,301	1,241	499	353.4	274.4	197.6
Mean	11.0	11.4	12.1	11.0	11.7	12.7	76.7	40.0	16.6	11.4	8.85	6.59
Ac-ft	676	678	746	674	674	781	4,560	2,460	990	701	544	392

Calendar year 1951: Max 80 Min 6.1 Mean 15.4 Ac-ft 11,170
Water year 1951-52: Max 173 Min 5.6 Mean 19.1 Ac-ft 13,880

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 2, 3, 16-20, Dec. 7-16, 19-29, Dec. 31 to about Feb. 26. No gage-height record Jan. 13, 14, Jan. 21 to Feb. 1, Feb. 11-20, 23-27, Mar. 1-24, Apr. 9-18, Apr. 24 to May 22; discharge computed on basis of weather records, recorded range in stage, and records for station above Campbell Creek and nearby streams.

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 highway bridge at Woodruff, 2½ miles north of Idaho-Utah State line.

Drainage area.--485 sq mi, approximately.

Records available.--November 1938 to September 1952.

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

Extremes.--Maximum discharge observed during year, 389 cfs Apr. 7 (gage height, 6.70 ft); minimum observed, 21 cfs Sept. 22-24; minimum gage height observed, 2.18 ft June 10-13, 20.

1938-52: 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 for Oct. 5 to Nov. 10, July 1 to Sept. 30, 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second) (Shifting-control method used Oct. 1-30, June 15 to Sept. 30)

1.9	21	5.0	229
2.5	50	6.0	322
3.0	79	6.7	392
4.0	148		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	68	96	77	123	106	300	228	36	37	89	28
2	38	69	110	83	128	105	312	214	36	34	80	29
3	*40	71	112	82	126	106	300	198	32	36	57	30
4	40	71	98	78	128	106	328	176	34	36	*46	30
5	42	72	105	82	126	106	359	173	34	36	44	30
6	42	68	105	78	125	106	375	96	33	32	42	30
7	43	68	78	78	114	109	389	105	31	36	42	28
8	42	68	61	79	105	112	379	102	31	32	42	28
9	44	71	67	79	96	112	374	101	31	30	40	28
10	46	72	65	81	92	113	346	96	30	30	40	*25
11	50	72	61	83	78	117	306	93	30	32	37	26
12	50	78	63	84	105	117	283	87	30	28	47	30
13	48	93	74	88	86	119	266	82	30	31	45	25
14	50	86	70	88	74	117	246	76	30	35	41	25
15	51	82	71	*84	66	117	255	69	30	36	40	30
16	51	78	74	96	93	120	282	64	30	36	39	30
17	52	68	75	89	96	127	266	64	30	34	37	25
18	54	*62	77	89	93	134	*234	69	30	33	36	22
19	56	63	61	93	84	141	223	58	30	31	32	22
20	60	69	73	99	84	141	221	58	28	31	32	22
21	60	88	75	100	103	119	228	64	30	32	32	22
22	60	102	78	100	99	113	232	64	30	32	32	21
23	71	115	80	98	102	126	224	60	*30	32	32	21
24	70	128	81	98	86	117	224	*53	32	33	30	21
25	66	129	78	107	85	127	226	50	34	32	30	22
26	68	111	80	110	92	*135	232	46	38	32	30	22
27	67	107	80	114	99	148	242	44	39	36	30	23
28	67	92	83	121	*103	188	253	42	44	34	32	23
29	68	91	92	121	99	207	259	39	36	34	33	25
30	66	95	81	119	-	228	242	39	38	34	31	26
31	66	-	75	121	-	282	-	37	-	39	29	-
Total	1,664	2,507	2,479	2,899	2,890	4,121	8,406	2,747	977	1,036	1,249	769
Mean	53.7	83.6	80.0	93.5	99.7	133	280	88.6	32.6	33.4	40.3	25.6
Ac-ft	3,300	4,970	4,920	5,750	5,730	8,170	16,670	5,450	1,940	2,050	2,480	1,530

Calendar year 1951: Max 462 Min 23 Mean 78.8 Ac-ft 57,010
Water year 1951-52: Max 389 Min 21 Mean 86.7 Ac-ft 62,960

* 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 1952.

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

Extremes.--Maximum discharge during year, 7,200 cfs May 3 (gage height, 14.69 ft); minimum, 166 cfs July 26; minimum daily, 183 cfs July 14.
1949-52: Maximum discharge, 7,200 cfs May 3,1952; maximum gage height, 14.83 ft Feb. 11, 1951; minimum discharge, 134 cfs July 6, 1951; minimum daily, 172 cfs July 9, 1951.

Remarks.--Records good except those for periods of ice effect or 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,700	2,150	2,110	b2,100	b2,500	a2,000	4,060	*6,840	3,760	2,410	1,360	859
2	2,230	2,530	2,300	a2,700	b2,600	a2,200	4,260	7,070	3,620	2,500	1,100	1,220
3	2,180	2,080	2,580	a2,800	b2,600	a2,500	4,300	7,160	3,240	2,340	938	1,490
4	2,130	1,690	2,630	a2,500	b2,600	a3,000	*4,400	7,180	3,060	1,820	462	1,600
5	2,170	1,510	2,120	a2,000	b3,300	a3,200	5,560	7,110	2,790	891	718	1,240
6	2,150	1,920	2,240	a1,800	*a3,100	a2,600	6,360	*7,100	2,130	1,750	996	998
7	1,940	2,000	2,700	a1,200	a2,700	a2,800	6,620	6,900	2,420	1,090	1,110	1,250
8	1,830	1,900	*b1,700	a2,000	a2,700	a2,600	6,740	6,740	2,140	1,130	918	1,310
9	2,190	2,130	b1,500	a1,800	a2,600	a2,400	*6,920	6,650	2,510	863	974	1,410
10	2,210	1,900	b1,800	a2,000	a2,500	a2,000	*7,030	6,350	2,210	554	771	*1,560
11	1,930	1,900	b1,500	a2,100	b2,000	a2,400	6,900	5,820	2,090	435	360	1,090
12	2,010	1,920	b1,500	a2,400	b2,300	a2,100	6,440	4,880	*1,740	731	958	912
13	2,040	2,490	b1,700	a2,100	a2,400	a2,200	5,830	4,620	1,820	276	1,350	958
14	1,940	2,600	b1,700	a2,200	a2,000	a2,700	5,080	4,190	2,130	183	1,270	1,430
15	1,360	2,370	b2,700	a2,400	a2,500	a2,700	5,340	*3,850	1,890	193	*1,010	803
16	*1,660	2,470	b2,200	a2,800	a2,500	a2,700	5,460	3,670	1,710	*578	1,190	*1,080
17	1,900	2,060	b1,800	a2,400	a1,600	a1,800	*5,620	3,880	1,760	434	1,020	1,390
18	1,910	2,020	b2,200	a3,200	a2,000	a2,700	6,010	3,780	1,590	416	448	1,300
19	1,710	1,800	b2,900	a2,700	a2,600	*a2,500	5,610	3,460	1,370	1,070	468	1,130
20	1,860	1,440	b2,500	b2,400	a2,500	2,720	5,110	3,150	1,700	995	882	*1,030
21	1,930	2,170	b3,000	a2,700	a2,700	2,760	*5,160	2,400	1,040	677	1,190	1,380
22	1,720	2,390	b1,900	a3,000	a2,300	2,710	5,340	3,250	434	700	824	1,160
23	2,230	*2,030	b2,700	a2,700	a2,600	2,560	5,490	*3,860	*309	967	1,060	1,290
24	2,310	2,310	b2,000	b2,300	a2,100	2,480	5,460	3,960	346	809	1,180	1,340
25	2,050	2,010	b2,000	b2,400	a2,300	2,680	5,460	3,960	1,400	*281	563	1,120
26	1,840	2,160	b2,500	b2,400	a2,500	3,000	5,640	3,940	2,000	676	1,120	1,040
27	1,830	2,110	b2,300	b2,600	a2,200	2,960	5,800	3,810	2,230	482	1,140	1,130
28	1,850	2,110	b2,300	b2,800	a1,900	2,700	6,000	3,860	2,470	820	*1,320	1,360
29	1,360	2,170	b2,500	a2,800	a1,600	2,800	6,340	3,790	2,650	1,030	1,220	1,160
30	2,040	2,140	b1,700	a3,000	-	2,940	6,560	3,840	2,440	1,200	1,750	1,060
31	*1,800	-	b1,800	a2,800	-	3,310	-	3,860	-	1,000	1,710	-
Total	60,010	62,480	67,080	75,100	69,800	80,720	170,900	150,930	60,999	29,301	31,380	36,100
Mean	1,936	2,083	2,164	2,423	2,407	2,604	5,697	4,869	2,033	945	1,012	1,203
Ac-ft	119,000	123,900	133,100	149,000	138,400	160,100	339,000	299,400	121,000	58,120	62,240	71,600

Calendar year 1951: Max 6,850 Min 172 Mean 2,369 Ac-ft 1,715,000
Water year 1951-52: Max 7,180 Min 183 Mean 2,445 Ac-ft 1,775,000

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

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 3½ miles northeast of Oakley.

Drainage area.--163 sq mi.

Records available.--October 1904 to September 1952.

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

Average discharge.--46 years (1906-52), 231 cfs.

Extremes.--Maximum discharge during year, 2,280 cfs June 7 (gage height, 3.96 ft); minimum not determined, occurred during period of ice effect.
1904-52: 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, 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 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 11-26, July 21 to Sept. 30)

0.7	46	2.5	602
1.0	86	3.0	957
1.5	191	3.9	2,080
2.0	356		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	84	76				70	*829	1,520	596	199	120
2	91	71	77	(*)			67	994	*1,550	574	191	116
3	112	88	70				66	1,280	1,580	529	178	114
4	107	84	70				71	1,430	1,600	497	168	112
5	109	80	70				77	*1,470	1,790	487	161	107
				50								
6	109	78					91	1,460	1,800	472	159	109
7	105	82					112	1,420	*2,040	443	161	111
8	101	78					118	1,220	1,860	407	161	109
9	100	77				50	105	1,050	1,790	393	154	105
10	101	76					103	957	*1,820	364	194	100
			50									
11	152	77					105	994	1,570	344	181	116
12	141	84					100	*1,080	1,580	321	154	132
13	124	80					111	1,260	1,490	310	148	116
14	111	83					124	1,470	1,380	303	145	109
15	112	82					118	1,470	1,290	*264	143	105
					50							
16	120						*111	1,220	*1,060	242	148	105
17	116						122	985	985	242	150	103
18	116						150	875	994	239	148	101
19	118						186	*813	985	238	*145	96
20	114			60			210	852	916	213	143	94
21	109						258	966	836	207	150	94
22	*100	74				60	285	891	756	199	135	94
23	101		70				325	829	777	191	132	93
24	100						385	821	*875	186	130	91
25	100				(*)		513	852	777	199	122	91
26	101						663	*932	735	196	132	*89
27	101						742	949	715	188	143	89
28	96			(*)			*806	1,050	568	*194	139	101
29	93					*67	798	1,330	579	194	137	109
30	96	*77			-	72	806	1,560	*626	199	128	107
31	89	-			-	67	-	1,560	-	204	124	-
Total	3,328	2,317	1,983	1,760	1,450	1,736	7,798	34,869	36,844	9,630	4,703	3,138
Mean	107	77.2	64.0	56.8	50	56.0	260	1,125	1,228	311	152	105
Ac-ft	6,600	4,600	3,930	3,490	2,880	3,440	15,470	69,160	73,080	19,100	9,330	6,220

Calendar year 1951: Max 2,100 Min 50 Mean 241 Ac-ft 174,200
Water year 1951-52: Max 2,040 Min - Mean 299 Ac-ft 217,300

Peak discharge (base, 1,200 cfs).-- May (7:30 p.m.) 1,600 cfs (3.53 ft); May 15 (4 a.m.) 1,580 cfs (3.43 ft); June 7 (8 a.m.) 2,280 cfs (3.96 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 16-29, Dec. 3 to Mar. 28 (no gage-height record Jan. 1 to Mar. 28; discharge estimated on basis of 4 discharge measurements, 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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,900 ft (from topographic map).

Extremes.--Maximum discharge during year, 2,240 cfs May 5 (gage height, 4.71 ft); minimum, 71 cfs Oct. 1.
1950-52: Maximum discharge, 2,340 cfs May 30, 1951 (gage height, 4.73 ft); minimum, 70 cfs Sept. 13, 27, 28, 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.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 5				May 6 to Sept. 30			
1.5	74	3.0	661	1.2	78	3.0	770
1.7	116	4.0	1,500	1.5	144	4.0	1,620
2.0	196	4.6	2,140	2.0	294	4.5	2,130
2.5	381			2.5	497		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*76	118	138	96		96	144	1,490	1,600	604	213	154
2	82	b110	141	b90		94	149	1,630	*1,560	556	195	147
3	134	134	b130	b90		103	154	1,860	1,600	488	165	139
4	146	141	b130	b90		103	163	2,120	1,620	417	157	137
5	144	136	b125	90		98	179	*2,120	1,700	380	149	127
6	134	128				105	211	2,040	1,770	345	139	122
7	116	136				105	275	2,040	*1,960	308	137	125
8	114	136		110		105	309	1,840	1,920	277	127	125
9	112	136				107	305	1,600	*1,810	231	122	122
10	112	131	b100			107	329	1,380	1,900	204	180	111
11	174	134				109	350	1,280	1,740	204	213	130
12	152	176				105	381	*1,340	1,640	176	167	165
13	144	163			100	103	481	1,530	1,550	181	149	154
14	134	160				109	567	1,690	1,430	176	144	147
15	128	152	100			109	481	1,740	1,330	165	147	144
16	168	b130				114	*450	1,620	1,120	*144	139	134
17	165	b130				114	555	1,270	*988	149	132	127
18	154	b130				114	709	1,070	965	144	134	125
19	163	b130		120		112	824	*958	958	137	*134	116
20	174	b150				114	948	*972	884	130	132	116
21	168	160				103	1,040	1,290	822	130	134	118
22	*157	152	130			107	964	1,170	758	130	127	116
23	154	b150				109	998	1,090	758	118	125	109
24	154	152				121	998	1,020	950	116	127	107
25	152	149			*100	124	1,100	1,020	996	165	120	100
26	138	b140			112	126	1,340	*1,050	884	216	125	*100
27	136	152		115	109	126	1,460	1,030	835	167	170	94
28	128	149	*110	101	101	128	*1,580	1,110	676	*165	176	94
29	121	152	*116	b105	101	*131	1,560	1,310	598	165	167	96
30	105	*144	112	b105	-	141	1,480	1,560	*626	167	173	94
31	116	-	101	b105	-	144	-	1,640	-	195	160	-
Total	4,255	4,261	3,683	3,466	2,923	3,486	20,484	44,880	37,948	7,150	4,679	3,695
Mean	137	142	119	112	101	112	683	1,448	1,265	231	151	123
Ac-ft	8,440	8,450	7,310	6,870	5,800	6,910	40,630	89,020	75,270	14,180	9,280	7,330

Calendar year 1951: Max 2,060 Min 75 Mean 270 Ac-ft 195,500
Water year 1951-52: Max 2,120 Min 76 Mean 385 Ac-ft 279,500

Peak discharge (base, 1,200 cfs).--May 5 (4 a.m.) 2,240 cfs (4.71 ft); May 15 (12 m.) 1,800 cfs (4.18 ft); May 21 (7 p.m.) 1,600 cfs (3.95 ft); June 7 (2:15 p.m.) 2,100 cfs (4.47 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 15-28, Jan. 5-28, Feb. 1-25 (stage-discharge relation affected by ice most of period), discharge estimated on basis of 3 discharge measurements, 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 left bank 1½ miles upstream from high-water contour for Echo Reservoir, 1¼ miles south of Coalville, and 6 miles downstream from Silver Creek.

Drainage area.--438 sq mi.

Records available.--April 1927 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,600 ft (from topographic map). Prior to Mar. 22, 1931, staff gage at same site and datum.

Average discharge.--25 years, 217 cfs.

Extremes.--Maximum discharge during year, 2,190 cfs May 6 (gage height, 3.59 ft); minimum, 76 cfs Oct. 1 (gage height, 0.00 ft).
1927-52: Maximum discharge, that of May 6, 1952; maximum gage height, 4.08 ft May 29, 1951; minimum discharge, 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 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-9, Apr. 21 to May 2, May 6, 7, 12, June 8-13, Sept. 11-30)

-0.2	73	1.5	480
0	90	2.0	710
.5	180	3.0	1,410
1.0	310	3.7	2,150

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*78	144	160	b120		a120	188	1,690	1,660	570	192	152
2	81	140	160	b110		a120	192	*1,720	1,660	512	174	146
3	120	146	158	b100	a125		a200	1,920	1,680	460	164	142
4	154	162	154	b100			a210	2,050	*1,730	391	158	136
5	148	158	a150				a220	2,100	1,800	349	150	126
6	148	154	a140	a135			238	*2,140	1,900	316	138	120
7	132	156	a130				352	2,050	1,950	280	140	120
8	128	158	124				516	1,900	1,990	262	136	117
9	126	156	91			a125	556	*1,720	1,990	230	140	115
10	130	156	95				552	1,520	*2,040	195	169	110
11	192	158	112				a540	1,430	1,890	188	218	124
12	172	166					a600	*1,410	1,760	164	160	164
13	162	182	a120				a640	1,530	1,660	170	154	160
14	156	185					a680	1,660	1,520	162	146	154
15	148	185			a115		a600	1,700	1,420	*150	148	152
16	178	172					a550	1,660	1,150	136	148	148
17	188	168					*635	1,410	*968	136	138	144
18	174	164		a145			808	1,180	961	134	132	142
19	180	164					1,100	*1,030	934	126	128	132
20	192	172				a135	1,180	1,060	862	110	*124	130
21	192	176					1,300	1,420	796	110	122	132
22	*182	180	a155				1,320	1,380	720	105	117	130
23	a175	180					a1,340	1,280	715	102	115	124
24	a175	180				a140	1,350	1,150	904	98	120	122
25	a170	178				a142	*1,500	1,100	1,020	134	120	118
26	a170	176			(*)	*144	1,860	1,150	916	192	122	*113
27	166	174		a140	a120	142	1,900	*1,150	874	154	164	112
28	162	172		a130		144	*1,940	1,220	695	*150	172	112
29	156	*172	*b150	*a130		154	1,810	1,410	592	146	168	112
30	146	168	b140	a130	-	166	1,700	1,600	*620	146	168	110
31	140	-	b130	a130	-	180	-	1,650	-	170	156	-
Total	4,821	5,002	4,389	4,230	3,410	4,157	26,577	47,390	39,377	6,548	4,601	3,919
Mean	156	167	142	136	118	134	886	1,529	1,313	211	148	131
Ac-ft	9,560	9,920	8,710	8,390	6,760	8,250	52,710	94,000	78,100	12,990	9,130	7,770

Calendar year 1951: Max 1,850 Min 70 Mean 285 Ac-ft 206,700
Water year 1951-52: Max 2,140 Min 78 Mean 422 Ac-ft 306,300

* Discharge measurement made on this day.
a No gage-height record (affected by ice for most periods); discharge estimated on basis of 7 discharge measurements, weather records, and records for other Weber River stations.
b Stage-discharge relation affected by ice.

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 1952.

Gage.--Water-stage recorder and concrete control. Datum of gage is 5,560.6 ft above mean sea level, datum of 1929. Prior to Feb. 13, 1931, staff gage at site 100 ft upstream at different datum. Feb. 13, 1931, to Oct. 15, 1941, water-stage recorder at site 300 ft upstream at different datum.

Average discharge.--25 years (1927-52), 62.5 cfs.

Extremes.--Maximum discharge during year, 1,540 cfs Apr. 28 (gage height, 4.67 ft); minimum, 6.3 cfs Nov. 16 (gage height, 0.26 ft).
1927-52: Maximum discharge, that of Apr. 28, 1952; minimum, less than 1 cfs for several days during June to November 1934.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Several diversions above stations for irrigation, none below. Flow slightly affected by Chalk Creek Reservoir (capacity, 1,200 acre-ft).

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 30 to May 4, May 12-18)

0.3	9.0	1.4	217
.4	17	2.0	404
.6	41	3.0	825
.9	95	4.0	1,280

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*9.8	22	17	18	25	24	32	*816	511	150	43	36
2	13	13	15	b20	25	24	34	866	519	142	43	37
3	21	21	19	b20	22	24	37	1,030	*511	135	38	36
4	25	26	12	b20	22	22	40	1,200	475	131	36	34
5	27	22	12	b20	21	24	47	1,150	475	122	36	33
6	29	17	12	b20	15	21	54	*1,060	464	110	36	33
7	28	18	15	b20	17	24	73	1,010	449	97	34	32
8	27	24	16	b20	20	24	79	866	411	91	32	31
9	27	24	14	b20	21	21	66	*695	390	81	33	31
10	27	21		b20	21	21	66	586	*356	81	46	29
11	34	22	b15	26	21	25	64	638	326	83	49	34
12	33	29		26	22	21	64	656	301	79	43	54
13	29	27		26	25	19	73	*700	277	77	40	44
14	27	27		25	20	24	93	717	251	75	36	41
15	26	21		24	21	21	89	687	228	73	33	37
16	27	b10	a20	24	22	28	*79	590	212	*68	32	34
17	27			24	24	27	93	535	*195	66	31	34
18	26	a15		24	21	21	135	479	185	64	29	34
19	26			25	18	25	185	456	177	61	27	33
20	27			25	22	25	217	*499	174	55	*27	33
21	28		a25	25	22	20	271	634	164	57	27	32
22	*27			25	24	18	289	544	150	52	28	*28
23	26			25	24	21	376	564	145	46	29	25
24	26			25	20	27	*471	503	198	44	29	24
25	26	a20	b25	25	19	*29	573	511	228	44	28	22
26	27		b25	25	22	27	766	556	225	49	29	20
27	26		26	25	*22	22	1,100	*527	220	49	32	18
28	25		26	17	21	25	*1,200	535	182	47	33	19
29	25	*20	*26	*20	22	31	*1,090	560	162	*46	38	18
30	24	22	26	22	-	38	946	573	*152	41	37	16
31	24	-	22	24	-	38	-	535	-	38	36	-
Total	799.8	606	608	705	621	759	8,708	21,278	8,713	2,354	1,070	932
Mean	25.8	20.2	19.6	22.7	21.4	24.5	290	686	290	75.9	34.5	31.1
Ac-ft	1,590	1,200	1,210	1,400	1,230	1,510	17,270	42,200	17,280	4,670	2,120	1,850

Calendar year 1951: Max 500 Min 7.2 Mean 73.0 Ac-ft 52,880
Water year 1951-52: Max 1,200 Min 9.8 Mean 129 Ac-ft 93,530

Peak discharge (base, 400 cfs).--Apr. 28 (6 a.m.) 1,540 cfs (4.67 ft); May 4 (6:45 a.m.) 1,360 cfs (4.28 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, and records for nearby streams.
b Stage-discharge relation affected by ice.

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 1952.

Gage.--Staff gage read once 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, 74,240 acre-ft June 20, 24, 25, July 5-7 (elevation, 5,560.2 ft); minimum, 9,520 acre-ft Apr. 7 (elevation, 5,495.8 ft).
1930-52: 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38,180	38,400	38,820	38,610	38,290	34,580	12,710	56,320	66,040	73,940	61,090	46,610
2	38,080	38,400	38,820	38,610	38,400	33,990	12,000	58,810	67,440	73,940	60,820	46,250
3	38,080	38,400	38,820	38,400	38,400	33,300	11,370	61,220	68,290	73,940	60,420	45,780
4	37,240	38,400	38,820	38,400	38,500	32,710	10,750	63,130	68,580	73,940	60,010	45,540
5	38,290	38,400	38,820	38,180	38,500	32,230	10,260	64,230	69,010	74,240	59,480	45,080
6	38,400	38,500	38,820	38,180	38,500	31,370	9,780	66,040	69,580	74,240	58,940	44,610
7	38,500	38,500	38,820	38,180	38,400	30,610	9,520	66,740	70,300	74,240	58,410	44,150
8	38,400	38,500	38,720	38,180	38,400	29,870	9,890	66,880	71,020	73,650	57,890	43,580
9	38,400	38,500	38,610	38,180	38,290	29,040	10,540	66,460	71,600	73,360	57,360	43,240
10	38,400	38,500	38,400	38,180	38,290	28,220	11,030	65,200	71,890	72,920	56,840	42,780
11	38,400	38,500	38,400	38,180	38,290	27,410	11,540	63,820	72,180	72,470	56,450	42,220
12	38,610	38,500	38,400	38,180	38,180	26,620	12,000	62,170	72,330	72,040	56,320	41,770
13	38,610	38,720	38,400	38,180	38,180	25,830	12,410	61,090	72,770	71,600	56,060	41,660
14	38,610	38,820	38,400	38,400	38,180	25,060	13,320	59,880	73,210	71,160	55,800	41,550
15	38,610	38,820	38,290	38,400	38,180	24,470	14,470	59,480	73,360	70,730	55,410	41,550
16	38,610	38,720	38,290	38,400	37,970	23,710	14,920	59,210	73,500	70,150	55,020	41,440
17	38,720	38,610	38,290	38,500	37,970	22,960	15,600	58,410	73,500	69,580	54,510	41,440
18	38,720	38,500	38,290	38,500	37,970	22,310	16,720	57,360	73,650	69,150	53,870	41,330
19	38,720	38,500	38,400	38,500	37,970	21,580	17,160	56,580	74,090	68,720	53,230	41,110
20	38,720	38,500	38,400	38,500	37,870	20,870	20,640	55,920	74,240	68,010	52,600	41,000
21	38,720	38,720	38,500	38,610	37,870	20,090	22,120	56,060	74,090	67,300	51,970	40,880
22	38,720	38,820	38,610	38,610	37,760	19,370	24,890	56,450	74,090	66,740	51,350	40,660
23	38,610	38,820	38,610	38,610	37,660	18,560	27,240	56,580	73,800	66,040	50,730	40,440
24	38,610	38,820	38,720	38,610	37,340	17,810	29,400	56,840	74,240	65,340	50,110	40,230
25	38,610	38,820	38,610	38,610	36,930	17,080	31,940	56,840	74,240	64,650	49,620	40,010
26	38,500	38,820	38,610	38,610	36,520	16,370	35,700	57,490	74,090	64,090	49,010	39,900
27	38,500	38,820	38,610	38,610	36,200	15,670	40,230	58,550	73,800	63,680	48,520	39,790
28	38,400	38,820	38,610	38,610	35,800	14,990	44,270	59,880	73,650	63,130	48,040	39,790
29	38,400	38,820	38,720	38,610	35,080	14,330	49,870	61,090	73,940	62,580	47,680	39,680
30	38,400	38,820	38,720	38,400	-	13,760	53,490	62,580	73,940	62,040	47,320	39,680
31	38,400	-	38,720	38,290	-	13,320	-	64,650	-	61,630	46,960	-

Monthly elevation and contents, water year October 1951 to September 1952

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	5,532.2	38,400	-
Oct. 31	5,532.2	38,400	0
Nov. 30	5,532.6	38,820	+420
Dec. 31	5,532.5	38,720	-100
Calendar year 1951...	-	-	-6,010
Jan. 31	5,532.1	38,290	-430
Feb. 29	5,529.0	35,080	-3,210
Mar. 31	5,502.5	13,320	-21,760
Apr. 30	5,545.1	53,490	+40,170
May 31	5,553.5	64,650	+11,160
June 30	5,560.0	73,940	+9,290
July 31	5,551.3	61,630	-12,310
Aug. 31	5,539.8	46,960	-14,670
Sept.30	5,533.4	39,680	-7,280
Water year 1951-52...	-	-	+1,280

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,440 ft (from Echo Reservoir elevations). Prior to Apr. 18, 1931, staff gage at site a quarter of a mile downstream at different datum. Apr. 18, 1931, to Mar. 23, 1950, water-stage recorder at site 0.3 mile downstream at different datum.

Average discharge.--25 years, 287 cfs.

Extremes.--Maximum discharge during year, 3,060 cfs May 13 (gage height, 7.34 ft); minimum daily, 116 cfs Oct. 3.
1927-52: Maximum discharge, that of May 13, 1952; 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 14 to Sept. 30)

2.6	107	5.0	1,150
3.0	191	6.0	1,910
3.5	347	7.0	2,750
4.0	562	7.4	3,110

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*207	163	196	189	174	423	543	1,360	1,450	*826	402	382
2	154	163	196	189	174	423	548	1,720	1,650	730	394	382
3	116	163	196	*181	174	423	543	2,270	*1,930	655	394	382
4	152	163	196	167	177	423	543	2,700	2,030	402	423	382
5	172	163	196	167	177	464	548	2,870	2,000	431	440	386
6	169	174	196	167	177	553	543	*2,950	2,010	529	444	411
7	196	184	196	167	177	548	491	3,010	2,040	534	427	415
8	199	184	196	167	177	548	325	3,000	2,070	529	402	406
9	177	184	196	167	177	548	325	2,950	2,130	510	390	390
10	177	184	172	167	177	543	328	2,790	2,160	492	382	382
11	177	184	156	156	177	538	332	2,780	*2,070	466	343	370
12	189	184	156	149	174	538	336	2,800	1,850	453	325	310
13	196	194	156	149	174	534	336	*2,850	1,670	457	314	245
14	196	201	156	154	174	534	340	2,820	1,650	461	310	223
15	196	201	156	165	174	529	343	2,700	1,540	466	343	212
16	196	201	156	165	165	524	*347	2,571	1,410	*470	394	212
17	207	201	156	165	156	524	351	2,420	1,220	474	419	212
18	217	181	156	165	156	520	355	2,180	*1,040	488	440	231
19	217	163	156	165	163	515	359	1,960	1,000	484	453	254
20	217	163	156	163	177	510	366	*1,800	1,120	479	*461	254
21	217	163	156	167	186	515	430	1,850	1,160	479	461	257
22	217	174	156	174	196	510	600	1,930	1,140	484	457	*260
23	217	194	172	174	246	506	605	1,800	720	479	436	237
24	*217	194	196	174	310	506	615	1,690	*838	484	427	228
25	217	194	199	181	310	502	625	1,550	1,610	488	419	214
26	217	194	189	194	*310	*497	640	1,340	1,540	492	415	167
27	217	194	189	194	343	492	650	*1,110	1,230	497	415	158
28	181	194	189	194	427	492	*665	1,160	947	479	419	152
29	163	*196	189	*194	423	484	784	1,250	745	*457	398	145
30	163	196	189	194	-	492	1,160	1,320	796	461	394	135
31	163	-	189	184	-	515	-	1,400	-	431	382	-
Total	5,916	5,491	5,509	5,348	6,202	15,673	14,976	66,900	44,766	15,567	12,523	8,394
Mean	191	183	178	173	214	506	499	2,158	1,492	502	404	280
Ac-ft	11,730	10,890	10,930	10,610	12,300	31,090	29,700	132,700	88,790	30,880	24,840	16,650

Calendar year 1951: Max 2,190 Min 105 Mean 380 Ac-ft 275,300
Water year 1951-52: Max 3,010 Min 116 Mean 566 Ac-ft 411,100

* 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 1952.

Gage.--Water-stage recorder. Prior to Apr. 8, 1941, 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.--13 years, 41.1 cfs.

Extremes.--Maximum discharge during year, 730 cfs May 5 (gage height, 6.87 ft), from rating curve extended above 340 cfs; minimum, 11 cfs Nov. 6.
1921-23, 1941-52: 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 good except those for periods of ice effect or no gage-height record and those above 300 cfs, which are fair.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 7 to May 29)

Oct. 1 to Apr. 23				Apr. 24 to Sept. 30			
2.9	14	4.0	102	3.5	15	6.0	317
3.2	29	5.2	253	3.7	28	7.0	477
3.5	50			4.0	55	8.1	665
				5.0	173		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	14	16				17	525	200	*44	26	16
2	19	14	16				17	*579	185	43	24	17
3	18	15	17				17	638	*178	42	22	16
4	19	15	17				20	663	155	40	21	15
5	19	15	17				26	660	141	39	21	15
6	17	15	17				38	632	135	38	21	15
7	16	15				20	55	*603	130	38	21	16
8	16	15					56	543	121	37	21	16
9	16	14					56	466	113	36	21	15
10	16	14					55	427	109	36	33	15
11	19	15					52	435	*100	36	29	17
12	17	19					56	463	89	36	23	20
13	17	17					76	474	82	35	21	20
14	17	17	17		20		87	*469	81	33	20	18
15	16	15		19			75	419	80	32	19	17
16	17						64	370	79	30	18	17
17	16						76	298	78	*28	18	16
18	16	15					*127	275	*76	27	17	16
19	16						168	276	68	26	17	16
20	17					18	230	312	65	25	17	16
21	17						245	*328	62	24	*17	16
22	17						226	292	61	24	17	*16
23	*16	16					252	272	58	23	17	17
24	16						*274	262	72	23	18	17
25	16	17					317	286	69	28	17	16
26	16	16	19				*360	298	67	28	19	15
27	16	16			(*)	*18	459	*260	64	36	20	15
28	16	*16	(*)		23	19	525	246	54	38	18	16
29	16	16				21	*547	252	50	*26	18	17
30	15	16		(*)	-	22	509	244	47	24	17	17
31	15	-			-	19	-	220	-	32	17	-
Total	515	465	545	589	589	591	5,082	12,487	2,869	1,007	625	491
Mean	16.6	15.5	17.6	19.0	20.3	19.1	169	403	95.6	32.5	20.2	16.4
Ac-ft	1,020	922	1,080	1,170	1,170	1,170	10,080	24,770	5,690	2,000	1,240	974

Calendar year 1951: Max 329 Min - Mean 53.5 Ac-ft 38,720
Water year 1951-52: Max 663 Min - Mean 70.6 Ac-ft 51,290

Peak discharge (base, 130 cfs).--May 5 (2 a.m.) 730 cfs (6.87 ft); July 25 (9:30 p.m.) 136 cfs (4.71 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 2, 16-24, 26, Dec. 3, Dec. 7 to Mar. 26 (no gage-height record Dec. 22 to Mar. 26; discharge estimated on basis of 4 discharge measurements, weather records, and records for nearby streams).

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,300 ft. Prior to Oct. 1, 1934, staff gage at site 1½ miles upstream at different datum.

Average discharge.--47 years, 450 cfs.

Extremes.--Maximum discharge during year, 4,810 cfs May 7 (gage height, 8.55 ft); minimum, 153 cfs Oct. 3 (gage height, 1.83 ft).
1905-52: 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 except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Flow regulated by Echo Reservoir (see p. 84).

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 4 to June 13)

1.8	147	5.0	1,710
2.0	191	6.0	2,460
2.5	336	7.0	3,260
3.0	540	8.0	4,110
4.0	1,060	8.6	4,720

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	263	206	260	215	227	a477	660	2,930	1,840	*940	499	418
2	*227	206	266	*215	230	a477	675	3,360	1,930	855	481	418
3	156	208	260	215	227	a481	680	3,900	2,190	790	472	410
4	196	208	269	215	227	a481	705	4,470	*2,320	565	485	402
5	227	208	269		227	a503	740	4,680	2,260	535	494	395
6	221	216	266		221	590	785	*4,640	2,250	625	508	410
7	240	230	263		235	600	830	4,700	2,290	620	494	426
8	266	230	260		238	605	680	4,490	2,290	630	468	418
9	227	227	260		238	605	665	*4,210	2,320	595	464	410
10	230	224	235	215	240	605	660	3,950	2,350	560	472	399
11	235	230			238	600	675	3,890	*2,210	540	460	406
12	240	260			227	598	690	4,030	2,010	526	418	387
13	255	258			224	590	755	*3,990	1,810	512	395	297
14	255	275			230	590	825	4,010	1,800	517	376	275
15	252	266			227	580	*805	3,800	1,690	508	399	249
16	255	258			219	580	755	3,630	1,550	508	443	249
17	263	255	200		206	585	780	3,350	1,340	*503	477	255
18	281	238			204	580	895	3,040	*1,160	508	490	260
19	281	201			206	580	1,040	2,760	a1,100	508	499	288
20	278	208				580	1,160	2,650	a1,200	499	503	281
21	281	216		.245		570	1,240	*2,680	a1,220	490	*508	291
22	281	227				560	1,410	2,670	a1,200	494	499	303
23	281	252				570	1,510	2,520	a800	494	481	*291
24	*278	260	246		a310	575	1,600	2,360	a900	490	468	260
25	281	260	272			570	1,730	2,250	1,700	499	464	258
26	281	258	246			*570	1,980	2,080	1,670	508	468	198
27	281	260	249			570	2,270	1,730	1,370	517	468	194
28	252	260	252			575	2,500	*1,730	1,130	522	464	184
29	208	*260	255		*472	585	*2,610	1,780	925	*503	444	182
30	208	260	252	*249	-	605	2,820	1,800	920	508	430	168
31	208	-	249	*243	-	635	-	1,810	-	503	418	-
Total	7,688	7,125	7,229	7,177	7,553	17,672	35,130	99,890	49,745	17,372	14,409	9,382
Mean	248	237	233	232	260	570	1,171	3,222	1,658	560	465	313
Ac-ft	15,250	14,130	14,340	14,240	14,980	35,050	69,680	198,100	98,670	34,460	28,580	18,610

Calendar year 1951: Max 2,430 Min 149 Mean 524 Ac-ft 379,300
Water year 1951-52: Max 4,700 Min 156 Mean 766 Ac-ft 556,100

* 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 at Echo and at Gateway.
Note.--Stage-discharge relation affected by ice Dec. 8-23, Jan. 1-29 (no gage-height record Dec. 11-23, Jan. 5-29; discharge estimated on basis of 1 discharge measurement, weather records, and records for stations at Echo and at Gateway).

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 1952 in reports of Geological Survey. November 1931 to September 1952 in reports of Weber River water commissioner.

Gage.--Staff gage. Altitude of gage is 5,550 ft (from river-profile map).

Extremes.--Maximum contents observed during year, 28,790 acre-ft June 24, 25 (gage height, 140.95 ft); minimum observed, 5,560 acre-ft Apr. 6.
1931-52: 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-foot 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-feet, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	-	-	26,220	27,860	28,660	-	-
2	-	-	13,690	-	-	-	-	26,950	27,860	28,660	-	-
3	-	-	-	-	14,680	13,960	-	27,310	27,880	28,690	23,590	-
4	-	13,140	-	-	-	-	-	28,300	27,880	28,690	-	-
5	-	-	-	-	-	-	-	28,250	27,860	28,690	-	-
6	-	-	-	14,130	-	-	5,560	28,090	27,910	28,690	-	-
7	12,840	-	-	-	-	-	-	27,990	27,940	-	-	16,520
8	-	-	-	-	-	-	-	27,880	27,990	-	-	-
9	-	-	13,800	-	-	13,080	-	27,520	28,090	-	-	-
10	-	-	-	-	14,760	-	-	27,600	28,220	-	22,060	-
11	-	13,250	-	-	-	-	-	27,520	28,400	-	-	-
12	-	-	-	-	-	-	-	27,470	28,610	-	-	-
13	-	-	-	14,260	-	-	6,660	27,490	28,690	28,120	-	-
14	12,920	-	-	-	-	-	-	27,470	28,770	-	-	15,160
15	-	-	-	-	-	-	-	27,470	28,770	-	-	-
16	-	-	13,800	-	-	12,720	-	27,470	28,740	-	-	-
17	-	-	-	-	14,800	-	-	27,440	28,720	-	20,550	-
18	-	13,360	-	-	-	-	-	27,390	28,690	-	-	-
19	-	-	-	-	-	-	-	27,420	28,690	-	-	-
20	-	-	-	14,380	-	-	11,020	27,470	28,720	26,690	-	-
21	13,000	-	-	-	-	-	-	27,730	28,720	-	-	13,800
22	-	-	-	-	-	-	-	27,880	28,720	-	-	-
23	-	-	13,960	-	-	-	-	27,880	28 770	-	-	-
24	-	-	-	-	14,800	-	16,980	27,830	28,790	-	19,120	-
25	-	13,520	-	-	-	-	-	27,780	28,790	-	-	-
26	-	-	-	-	-	-	-	27,780	28,770	-	-	-
27	-	-	-	14,460	-	-	21,690	27,830	28,720	25,120	-	-
28	13,110	-	-	-	-	-	22,610	27,830	28,690	-	-	12,420
29	-	-	-	-	a14,280	-	24,450	27,880	28,660	-	-	-
30	-	a13,640	14,130	-	-	7,120	25,320	27,860	28,640	-	-	a11,890
31	a13,120	-	a14,130	a14,590	-	a6,900	-	27,860	-	a24,250	17,860	-

a No gage-height record; contents interpolated.

Monthly gage height and contents, water year October 1951 to September 1952

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	99.00	12,720	-
Oct. 31	-	a13,120	+400
Nov. 30	-	a13,640	+520
Dec. 31	-	a14,130	+490
Calendar year 1951	-	-	-880
Jan. 31	-	a14,590	+460
Feb. 29	-	a14,280	-310
Mar. 31	-	a6,900	-7,380
Apr. 30	134.20	25,320	+18,420
May 31	139.15	27,860	+2,540
June 30	140.65	28,640	+780
July 31	-	a24,250	-4,390
Aug. 31	116.10	17,860	-6,390
Sept.30	-	a11,890	-5,970
Water year 1951-52	-	-	-830

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 1952 in reports of Geological Survey. October 1931 to September 1952 in report 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.--21 years (1931-52), 54.9 cfs.

Extremes.--Maximum discharge during year, 872 cfs May 4 (gage height, 3.49 ft); minimum daily, 17 cfs Oct. 9-12, 15, 16.
1931-52: Maximum discharge, that of May 4, 1952; 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.2	9.7	2.0	343
.3	18	3.0	666
.6	53	3.3	789
1.0	117		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	20	20	21	*21	61	154	*346	253	*59	134	132
2	21	20	20	22	21	61	148	300	241	53	134	130
3	21	20	19	22	21	61	146	425	238	56	132	128
4	21	19	20	22	21	61	142	638	238	59	132	125
5	21	20	20	22	21	63	138	768	*220	60	132	125
6	21	20	20	20	21	61	87	678	216	60	130	123
7	19	20	20	20	22	90	48	*604	191	60	128	128
8	18	20	20	20	22	130	49	553	165	59	128	128
9	17	20	21	20	22	183	50	502	142	57	126	125
10	17	20	21	21	22	148	49	*457	109	102	130	123
11	17	19	21	21	22	142	50	427	85	123	132	121
12	17	19	21	21	22	140	52	413	*85	125	130	121
13	18	19	21	21	22	136	53	404	113	125	128	119
14	18	19	21	21	22	136	54	*399	130	125	128	126
15	17	19	20	20	22	134	57	399	130	126	128	132
16	17	19	20	20	22	154	59	380	132	128	126	128
17	19	20	20	21	42	169	*60	359	138	132	130	125
18	19	20	20	21	63	166	64	322	119	132	132	123
19	19	19	21	22	63	164	68	279	*91	132	132	119
20	18	19	21	22	61	160	74	277	87	134	130	117
21	19	19	21	22	61	154	80	*330	87	*132	130	128
22	19	19	21	22	61	152	89	366	75	132	*128	130
23	*19	19	21	21	61	152	94	364	76	132	128	*126
24	19	19	21	20	61	152	146	348	111	132	130	125
25	19	19	21	21	61	*152	181	311	138	130	130	128
26	19	19	21	21	61	148	*237	281	140	130	130	125
27	19	20	21	21	61	148	299	282	130	134	128	125
28	19	*20	*21	22	*61	146	330	*277	99	136	128	132
29	19	20	21	22	61	142	338	280	85	136	126	132
30	19	20	21	22	-	142	338	280	82	*136	126	132
31	20	-	21	22	-	158	-	270	-	136	130	-
Total	586	585	638	656	1,124	4,066	3,734	12,319	4,146	3,373	4,016	3,781
Mean	18.9	19.5	20.6	21.2	38.8	131	124	397	138	109	130	126
Ac-ft	1,160	1,160	1,270	1,300	2,230	8,060	7,410	24,430	8,220	6,690	7,970	7,500

Calendar year 1951: Max 188 Min 4.2 Mean 58.4 Ac-ft 42,270
Water year 1951-52: Max 768 Min 17 Mean 107 Ac-ft 77,400

* 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 1952 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.--11 years (1941-52), 34.8 cfs.

Extremes.--Maximum discharge during year, 413 cfs May 4 (gage height, 3.66 ft); minimum, 5.8 cfs Oct. 20.

1941-52: Maximum discharge, 464 cfs (revised) Aug. 20, 1945 (gage height, 3.60 ft); minimum recorded, 3.0 cfs Feb. 11, 1944, but may have been less during periods of ice effect.

Revisions.--The maximum discharge for the water year 1945 has been revised to 464 cfs Aug. 20, 1945 (gage height, 3.60 ft), superseding figure published in Water-Supply Paper 1040.

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 table, water year 1951-52, 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, Nov. 3-5, 8-15, Nov. 28 to Dec. 2, Dec. 4-6, Mar. 31 to May 9)

0.9	6.0	2.0	71
1.1	8.9	2.5	155
1.3	15	3.0	278
1.5	24	3.4	400
1.7	39		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.3	7.1	7.7				15	*247	229	*41	16	11
2	8.7	7.2	7.4				18	272	234	39	16	10
3	11	7.4	7.8				18	329	212	36	15	11
4	10	7.4	8.2				23	360	205	36	15	10
5	8.6	7.2	8.2				32	366	*188	35	14	9.9
6	8.2	7.0	8.2				46	329	188	33	15	10
7	7.9	6.8	8				75	*296	179	32	14	11
8	7.9	7.1	8				78	281	159	30	14	11
9	7.7	7.1					61	*245	143	28	16	10
10	7.9	7.0					57	227	128	28	17	10
11	9.4	7.2					55	250	119	28	15	10
12	8.2	9.6					58	281	*107	28	14	11
13	8.0	8.2					73	*323	98	27	13	13
14	8.0	8.0					85	314	91	26	13	11
15	7.2	7.7				9	73	272	85	25	13	10
16	8.0	7.7		8	9		60	229	80	24	13	10
17	7.4						61	188	74	23	12	9.0
18	6.6		8				*78	177	74	22	12	9.0
19	6.0						122	184	*71	21	12	9.0
20	7.1						124	237	66	20	12	9.0
21	7.9						121	278	63	*18	12	9.0
22	7.9	7.7					135	*229	59	18	*12	9.0
23	*7.5						164	205	58	17	12	*8.9
24	7.7						199	205	71	17	12	9.1
25	7.9						*228	227	58	16	11	8.7
26	7.7						264	247	55	16	11	8.7
27	7.5		(*)			(*)	264	245	50	16	12	8.9
28	7.5	*7.7				10	*336	247	47	16	13	8.7
29	7.5	7.5			(*)	12	314	*261	44	15	12	8.7
30	7.5	7.5	8		-	14	253	258	43	*17	11	8.7
31	7.5	-		(*)	-	16	-	232	-	16	11	-
Total	246.2	227.1	247.5	248	261	295	3,490	8,041	3,278	764	410	293.3
Mean	7.94	7.57	7.98	8	9	9.5	116	259	109	24.6	13.2	9.78
Ac-ft	488	450	491	492	518	585	6,920	15,950	6,500	1,520	813	582

Calendar year 1951: Max 208 Min 6.0 Mean 32.4 Ac-ft 23,420
Water year 1951-52: Max 366 Min 6.0 Mean 48.6 Ac-ft 35,310

Peak discharge (base, 220 cfs).--May 4 (3:30 p.m.) 413 cfs (3.66 ft).
* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 2, 6, 7, 16-27, Dec. 3, Dec. 7 to Mar. 30 (no gage-height record Nov. 17-27, Dec. 3, 9-27, Jan. 2 to Mar. 27; discharge estimated on basis of 5 discharge measurements, weather records, and records for nearby streams). No gage-height record July 12-20, Sept. 7-22; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby streams.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,050 ft (from river-profile map).

Extremes.--Maximum discharge during year, 926 cfs May 8 (gage height, 9.19 ft); minimum daily, 9.6 cfs July 6.
1950-52: Maximum discharge, that of May 8, 1952; minimum daily, 2.2 cfs July 4, 1951.

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

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 25 to Apr. 30, May 14 to June 1, Sept. 23-30)

Oct. 1 to May 28				May 29 to Sept. 30			
1.4	14	6.0	389	2.4	9.0	6.0	350
2.0	59	7.0	485	3.0	50	7.0	477
3.0	139	8.0	616	4.0	133	8.0	616
4.0	219	9.0	855	5.0	235		
5.0	299	9.1	890				

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	22	29		35		185	649	511	*65	116	
2	*27	25	26		36		183	*674	487	31	115	
3	35	24	30		35		182	696	467	23	112	
4	43	23	26	28	35	68	185	784	*448	18	111	
5	45	22	26		34		197	876	435	11	111	
6	45	24					194	886	416	9.6	107	
7	45	24				110	192	862	392	19	105	
8	41	25		28		150	220	*886	343	14	103	
9	38	24				210	174	879	305	13	98	
10	38	24				170	161	814	257	46	107	
11	45	24		31	35	160	166	763	208	89	112	100
12	42	36				158	180	760	*184	88	107	
13	43	30				156	199	793	199	87	102	
14	42	29				153	231	*827	201	88	100	
15	39	28				150	210	750	184	88	96	
16	39		28			168	192	672	171	85	95	
17	37				50	180	*214	588	170	92	92	
18	36				68	178	*254	540	158	99	95	
19	32	28			68	173	298	504	*121	105	87	
20	29					170	312	525	104	107	80	
21	27			35		167	285	606	105	*104	79	
22	26	28				162	299	*626	95	98	76	
23	*24	28				162	341	602	80	94	74	*96
24	23	28				161	386	563	129	92	80	100
25	22	29			68	*161	471	549	174	94	80	90
26	22	28				161	*517	558	188	86	*81	91
27	22	28				162	565	558	183	89	88	84
28	22	29			(*)	161	*649	*564	142	96		98
29	22	*26	29			161	661	575	109	93	95	100
30	22	26	29		-	173	635	586	99	*92		98
31	22	-	30	(*)	-	191	-	546	-	100		-
Total	1,009	802	869	1,011	1,426	4,516	8,938	21,061	7,065	2,215.6	2,991	2,957
Mean	32.5	26.7	28.0	32.6	49.2	146	298	679	236	71.5	96.5	98.6
Ac-ft	2,000	1,590	1,720	2,010	2,830	8,960	17,730	41,770	14,010	4,390	5,930	5,870

Calendar year 1951: Max 371 Min - Mean 82.7 Ac-ft 59,870
Water year 1951-52: Max 886 Min 9.6 Mean 150 Ac-ft 108,800

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 16-21, 23, 24, 26, Dec. 6-28, Jan. 1-31, Feb. 5 to Mar. 24 (no gage-height record Jan. 7-31, Feb. 20 to Mar. 24; discharge estimated on basis of 3 discharge measurements, weather records, and records for East Canyon Creek near Morgan). No gage-height record Aug. 28 to Sept. 22; discharge estimated on basis of 1 discharge measurement, recorded range in stage, and record for East Canyon Creek near Morgan.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,100 ft.

Extremes.--Maximum daily discharge during year, 6,000 cfs May 5, 6; minimum, 204 cfs Dec. 14, but may have been less during period of no gage-height record.
1950-52: Maximum daily discharge that of May 5, 6, 1952; minimum recorded, 192 cfs Feb. 1, 1951.

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. 84,88).

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	309	243	297	264	*278	545	852	3,800	2,400	1,100	630	520
2	*316	236	305		282	545	870	4,300	2,400	1,000	620	520
3	250	246	293		275	530	864	4,700	2,500	900	620	520
4	286	243	305		275	535	912	5,200	2,650	780	620	520
5	301	239	305		275	550	990	6,000	2,600	660	620	510
				235								
6	297	246	297		264	645	1,060	6,000	2,550	680	620	520
7	297	264	278		257	645	1,210	5,800	2,550	690	620	530
8	332	260	285		260	695	1,130	5,400	2,550	700	610	530
9	286	257	265			705	978	5,100	2,500	680	600	530
10	286	253	260			720	924	4,800	2,500	660	600	520
11	293	260	250	243		710	966	4,600	2,400	660	600	520
12	297	320	236	236		700	1,000	4,800	2,300	650	560	520
13	309	305	233	246		695	1,090	4,700	2,150	640	540	450
14	305	312	223	246		700	1,200	4,800	2,100	620	520	400
15	305	305	226	260		700	*1,150	4,600	1,950	620	530	380
					260							
16	305	295	236	264		715	1,100	4,300	1,800	620	540	375
17	309	285	239	260		740	1,200	4,000	1,650	620	560	370
18	324	275	239	260		740	1,400	3,700	1,450	620	580	360
19	324	240	243	260		745	1,600	3,400	1,350	630	600	380
20	320	255	233	264		750	1,700	3,200	1,350	620	620	375
21	324	265	243	271		730	1,800	3,300	1,400	610	620	375
22	324	270	246	275		725	2,000	3,200	1,350	600	620	390
23	324	285	250	275		725	2,200	3,100	1,250	590	600	390
24	*316	290	271	278		*735	2,300	2,950	1,200	580	580	370
25	320	290	290	297	365	730	2,400	2,800	1,700	610	580	360
26	320	290	286	301		735	2,700	2,700	1,900	620	580	340
27	316	290	*290	305	451	740	3,000	2,500	1,700	630	560	320
28	301	*293	290	293	*526	755	3,200	2,400	1,400	630	560	290
29	250	293	297	282	530	765	*3,200	2,450	1,200	630	560	270
30	246	293	293	293	-	795	3,500	2,500	1,150	620	550	260
31	246	-	290	305	-	830	-	2,450	-	630	540	-
Total	9,338	8,189	8,294	8,093	8,878	21,575	48,496	123,550	57,950	20,900	18,160	12,715
Mean	301	273	268	261	306	696	1,617	3,985	1,932	674	586	424
Ac-ft	18,520	16,260	16,450	16,050	17,610	42,790	96,190	245,100	114,900	41,450	36,020	25,220

Calendar year 1951: Max 2,590 Min 223 Mean 634 Ac-ft 458,900
Water year 1951-52: Max 6,000 Min - Mean 946 Ac-ft 686,600

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 16-27, Dec. 8-11, Jan. 2-10, Feb. 9-26, Apr. 15 to Sept. 30; discharge estimated on basis of 4 discharge measurements, weather records, and records for stations at Devils Slide and at Gateway.

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 1952. 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.--32 years (1920-52), 610 cfs.

Extremes.--Maximum discharge during year, 7,600 cfs May 5 (gage height, 9.51 ft); minimum not determined, occurred during period of no gage-height record.
1889-1903, 1919-52: 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. 84,88).

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 30 to May 5, May 21, 22)

Oct. 1 to May 3				May 4 to Sept. 30			
1.1	270	5.0	2,680	1.0	345	6.0	3,970
1.5	408	6.0	3,500	2.0	810	7.0	4,900
2.0	635	7.0	4,350	3.0	1,440	8.0	5,920
3.0	1,220	8.0	5,290	4.0	2,230	9.0	7,080
4.0	1,910	9.0	6,400	5.0	3,070	9.3	7,440

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	343	298	350	318	325	590	1,090	4,680	2,700	1,200	720	610
2	350	292	362		329	590	1,110	5,040	2,690	*1,130	695	620
3	298	298	350		322	*580	1,120	5,690	2,940	1,000	680	620
4	339	298	362		*322	580	1,230	6,770	3,070	867	680	620
5	350	295	362		322	590	1,370	7,390	*3,000	735	700	605
				275								
6	336	295	354		315	682	1,490	7,340	2,940	725	715	600
7	332	308	336		312	698	1,810	*7,120	2,910	730	715	635
8	362	312	347		318	752	2,020	*6,620	2,850	750	690	640
9	336	312	320		318	775	1,630	6,110	2,840	730	685	630
10	329	308	300	275	318	803	1,470	*5,670	2,850	710	695	620
11	339	308	300	275	315	797	1,540	5,490	*2,690	735	710	620
12	332	388	300	275	318	786	1,630	5,760	2,530	715	665	635
13	343	365	301	275	318	775	1,740	*5,670	2,260	695	640	556
14	343	365	290	290	305	786	1,860	5,770	2,240	695	610	528
15	343	358	298	292	305	775	*1,740	5,450	2,160	690	605	506
16	343	339	287	295	312	780	1,600	5,140	1,990	685	620	488
17	343	329	287	292	305	808	1,850	4,640	1,850	690	650	466
18	358	329	287	290	325	820	*2,320	4,260	1,680	690	650	448
19	362	292	290	295	318	837	2,410	3,920	*1,480	710	660	461
20	358	315	281	295	332	826	2,580	3,890	1,480	695	670	456
21	358	350	287	298	354	808	2,570	4,070	1,560	685	685	452
22	362	329	295	308	354	797	2,720	*4,010	1,450	*670	680	470
23	358	343	298	305	385	797	2,870	3,760	1,360	665	665	474
24	*358	354	315	315	466	*814	3,060	3,450	1,310	655	650	448
25	362	354	332	336	462	808	3,350	3,450	1,870	680	645	*430
26	362	350	322	350	479	826	3,770	3,280	2,210	690	*650	409
27	362	*354	*322	354	483	860	4,100	2,940	1,900	700	655	377
28	350	350	322	343	566	883	4,470	*2,840	1,650	720	660	377
29	312	350	343	332	575	924	*4,500	2,850	1,280	705	660	369
30	305	350	350	343	-	995	4,520	2,880	1,240	690	645	365
31	298	-	347	350	-	1,060	-	2,800	-	*705	640	-
Total	10,626	9,888	9,897	9,301	10,478	24,202	69,540	148,750	64,980	23,142	20,690	15,535
Mean	343	330	319	300	361	781	2,318	4,798	2,166	747	667	518
Ac-ft	21,080	19,610	19,630	18,450	20,780	48,000	137,900	295,000	128,900	45,900	41,040	30,810

Calendar year 1951: Max 2,900 Min 280 Mean 761 Ac-ft 550,700
Water year 1951-52: Max 7,390 Min - Mean 1,139 Ac-ft 827,100

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 9-12, Jan. 2-13 (no gage-height record Jan. 2-9; discharge estimated on basis of weather records and records for stations at Echo and at Devils Slide).

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,250 ft.

Extremes.--Maximum discharge during year, 7,070 cfs May 6 (gage height, 10.89 ft); minimum, 6.2 cfs Sept. 19.
1950-52: Maximum discharge, that of May 6, 1952; minimum, that of Sept. 19, 1952.

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. 84,88).

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 5 to May 5, July 24 to Aug. 2, Aug. 18 to Sept. 30)

Oct. 1 to May 18				May 19 to Sept. 30			
2.2	34	6.0	1,870	1.2	11	4.0	804
2.5	88	7.0	2,770	1.4	21	5.0	1,360
3.0	208	8.0	3,800	1.7	44	6.0	2,020
3.5	376	9.0	4,900	2.0	78	7.0	2,850
4.0	585	10.0	6,050	2.5	195	7.8	3,600
5.0	1,130	10.8	7,010	3.0	364		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	270	339	350	369	576	1,080	4,470	2,150	637	76	26
2	58	264	350	304	361	576	1,130	4,700	2,080	*569	61	29
3	48	273	361	294	361	*567	1,090	5,170	2,210	414	51	31
4	152	273	372	277	*354	567	1,180	6,050	2,380	289	109	33
5	180	267	376	311	372	580	1,350	*6,840	2,380	123	47	24
6	194	267	369	304	361	632	1,490	6,910	*2,280	73	53	35
7	205	280	365	314	339	666	1,780	6,790	2,280	58	63	60
8	287	287		325	354	720	2,160	6,490	2,240	66	48	54
9	280	284		304	343	746	1,730	*6,040	2,210	58	48	55
10	267	284		297	343	804	1,470	5,680	2,200	44	57	52
11	277	287		311	343	798	1,440	5,090	2,080	65	68	75
12	280	365		314	354	772	1,600	5,120	1,920	53	46	105
13	290	365		311	350	761	1,690	5,060	*1,630	48	29	104
14	294	354		311	336	782	*1,930	5,030	1,520	53	16	90
15	287	343		318	328	772	1,900	4,640	1,440	53	14	68
16	290	328	a350	328	346	804	2,360	*4,720	1,350	48	26	61
17	290	311		322	343	787	1,730	4,470	1,200	49	41	38
18	304	325		314	350	814	2,050	3,930	995	*44	30	19
19	318	304		308	350	875	2,430	3,540	829	54	54	15
20	314	325		308	361	836	2,680	3,350	*789	48	79	20
21	318	372		308	384	814	2,580	3,510	834	75	116	16
22	318	339		322	369	798	2,670	3,540	829	65	85	42
23	322	325		318	395	787	2,810	*3,440	789	40	71	77
24	318	325		336	450	831	2,990	3,150	745	29	50	62
25	318	358		391	479	831	*3,280	3,050	1,190	35	*42	*34
26	*322	346	*346	384	492	870	3,670	2,960	1,660	39	94	55
27	322	*350	350	391	492	898	4,060	2,730	1,440	41	59	46
28	325	350	350	380	544	*909	*4,280	2,440	1,200	69	*50	37
29	290	346	346	361	562	933	4,490	2,400	874	68	64	29
30	273	346	380	369	-	992	4,430	2,400	693	61	57	29
31	267	-	372	384	-	1,050	-	*2,280	-	*75	54	-
Total	8,044	9,513	10,976	10,169	11,185	24,148	69,530	135,990	46,417	3,443	1,758	1,421
Mean	259	317	354	328	386	779	2,318	4,387	1,547	111	56.7	47.4
Ac-ft	15,960	18,870	21,770	20,170	22,190	47,900	137,900	269,700	92,070	6,830	3,490	2,820

Calendar year 1951: Max 2,310 Min 15 Mean 566 Ac-ft 409,900
Water year 1951-52: Max 6,910 Min 14 Mean 909 Ac-ft 659,700

* 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 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 1952.

Gage.--Water-stage recorder. Prior to Aug. 14, 1934, at site 300 ft upstream at different datum.

Average discharge.--31 years, 112 cfs.

Extremes.--Maximum discharge during year, 1,890 cfs May 3 (gage height, 5.98 ft); minimum, 39 cfs Nov. 2.
1921-52: Maximum discharge, that of May 3, 1952; minimum observed, 20 cfs Nov. 25, 1931, July 28, 1934.

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

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 24, 25)

Oct. 1 to Apr. 26				Apr. 27 to Sept. 30			
1.1	36	3.0	413	1.0	45	3.0	502
1.5	77	4.0	800	1.2	65	4.0	880
2.0	160	4.8	1,180	1.5	108	5.0	1,360
				2.0	210	5.5	1,620

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	45	49	50	51	53	105	*1,200	435	110	75	56
2	54	45	52	50	52	53	110	1,420	406	*108	69	56
3	52	44	50	50	53	*53	108	1,590	381	105	68	55
4	52	44	51	50	*54	51	131	1,620	345	102	65	55
5	53	44	51	50	53	51	183	*1,520	325	100	65	55
6	51	43	50		52	50	255	1,450	*307	97	65	55
7	50	43	45		52	50	323	1,280	282	94	65	56
8	49	44	45		52	51	366	*1,080	264	91	65	55
9	49	44	45		51	53	339	907	252	89	65	53
10	49	44	45		51	55	323	804	239	89	70	53
11	54	47	45			55	320	828	232	89	68	55
12	50	62	50			55	355	916	217	89	65	55
13	50	51	48			54	404	974	*210	88	63	54
14	49	50	48			55	429	956	198	86	62	54
15	49	47	47			56	361	*912	189	85	62	54
					51							
16	49	47	47			60	331	780	183	82	62	53
17	49	51	47			62	383	640	172	79	61	52
18	49	52	48			63	*507	593	165	*81	60	52
19	49	52	50	50		66	628	585	154	79	58	51
20	49	52	49			66	720	640	*146	78	57	51
21	49	51	48			64	686	701	138	77	57	51
22	49	50	49			63	657	607	136	77	58	51
23	49	49	48			64	*720	543	134	75	57	51
24	49	49	50			66	796	*529	152	75	58	51
25	*48	49	50			65	*890	578	142	73	57	*50
					52							
26	47	49	*50			67	1,180	611	136	72	58	50
27	47	*49	49			75	1,360	593	127	72	*57	50
28	47	49	51			*85	*1,420	564	122	72	55	50
29	47	49	53			99	1,380	568	116	70	55	50
30	46	49	51		-	120	1,260	554	111	77	56	50
31	46	-	51		-	110	-	*485	-	*77	56	-
Total	1,528	1,444	1,512	1,550	1,499	1,990	17,030	27,028	6,416	2,638	1,914	1,584
Mean	49.3	48.1	48.8	50.0	51.7	64.2	568	872	214	85.1	61.7	52.8
Ac-ft	3,030	2,860	3,000	3,070	2,970	3,950	33,780	53,610	12,730	5,230	3,800	3,140

Calendar year 1951: Max 953 Min 43 Mean 164 Ac-ft 119,100
Water year 1951-52: Max 1,620 Min 43 Mean 181 Ac-ft 131,200

Peak discharge (base, 400 cfs).--May 3 (8:30 p.m.) 1,890 cfs (5.98 ft).
Note.--Stage-discharge relation affected by ice Dec. 7-11, 14, 15, Jan. 1 to Feb. 3, Feb. 11 to Mar. 2 (no gage-height record Jan. 6 to Feb. 3; discharge estimated on basis of 1 discharge measurement, weather records, and records for nearby streams).

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 1952.

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

Extremes.--Maximum contents during year, 44,180 acre-ft June 7-16 (elevation, 4,872.00 ft); minimum, 90 acre-ft Mar. 20 (elevation, 4,822.73 ft).
1936-52: 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, 44,180 acre-ft (revised) 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 negligible. Water is used for irrigation on Ogden River Project.

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

Contents at 8 a.m., in acre-feet, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13,390	12,190	13,480	8,180	3,380	1,480	3,200	34,780	42,410	43,820	32,310	21,920
2	13,200	12,190	13,580	8,040	3,250	1,450	3,730	34,780	42,410	43,470	32,010	21,670
3	13,290	12,190	13,580	7,820	3,110	1,350	3,250	34,780	43,290	43,290	31,710	21,310
4	13,480	12,190	13,680	7,820	2,970	1,290	2,880	35,250	43,640	43,120	31,410	20,950
5	13,390	12,190	13,680	7,820	2,880	1,190	2,750	35,890	43,820	42,940	30,960	20,600
6	13,290	12,190	13,390	7,540	2,750	1,100	3,200	35,890	44,000	42,760	30,520	20,250
7	13,200	12,100	13,200	7,270	2,620	1,010	3,980	35,890	44,180	42,410	30,230	19,900
8	13,100	12,100	12,920	7,000	2,490	904	5,590	35,890	44,180	42,060	29,790	19,560
9	13,010	12,100	12,740	6,730	2,370	794	7,540	35,890	44,180	41,540	29,360	19,210
10	13,010	12,100	12,370	6,530	2,210	701	8,990	35,890	44,180	41,200	29,210	18,880
11	12,920	12,100	12,190	6,150	2,060	585	10,000	35,890	44,180	40,850	29,070	18,540
12	12,830	12,100	11,930	5,900	1,910	453	11,320	35,250	44,180	40,510	29,070	18,320
13	12,830	12,560	11,760	5,780	1,720	526	12,280	36,210	44,180	40,170	28,930	17,990
14	12,740	12,650	11,490	6,020	1,520	632	14,550	36,530	44,180	39,660	28,790	17,560
15	12,650	12,740	11,230	5,840	1,320	724	16,280	36,530	44,180	39,500	28,360	17,120
16	12,650	12,740	10,980	5,660	1,070	701	16,800	36,530	44,180	38,990	27,940	16,700
17	12,560	12,740	10,730	5,420	822	655	16,910	36,530	44,000	38,490	27,660	16,490
18	12,470	12,740	10,570	5,300	632	585	17,020	37,020	43,820	38,330	27,380	16,280
19	12,470	12,740	10,320	5,120	161	341	19,790	37,340	43,820	37,830	26,970	16,070
20	12,370	12,830	10,080	4,950	435	90	21,430	37,830	43,640	37,500	26,560	15,760
21	12,370	13,010	9,840	4,780	678	137	23,530	38,990	43,290	37,020	26,290	15,450
22	12,280	13,010	9,760	4,620	904	328	24,430	39,330	43,120	36,690	26,020	15,250
23	12,280	13,010	9,610	4,450	1,070	904	25,220	39,330	42,940	36,370	25,480	15,140
24	12,280	13,200	9,380	4,400	1,260	1,550	25,880	39,330	42,940	35,890	24,690	14,840
25	12,280	13,200	9,220	4,290	1,410	1,650	26,830	39,330	42,760	35,410	24,170	14,650
26	12,280	13,290	8,990	4,140	1,450	1,650	28,220	40,340	43,120	35,100	23,920	14,450
27	12,190	13,290	8,840	3,980	1,550	1,690	30,080	40,510	43,120	34,620	23,660	14,250
28	12,190	13,290	8,700	3,880	1,650	1,870	32,010	40,510	43,640	34,150	23,410	13,960
29	12,190	13,390	8,550	3,780	1,580	2,020	33,840	41,200	43,820	33,690	23,150	13,770
30	12,190	13,480	8,400	3,680	-	2,290	34,780	41,890	43,820	33,380	22,780	13,480
31	12,190	-	8,400	3,530	-	2,710	-	42,410	-	32,920	22,040	-

Monthly elevation and contents, water year October 1951 to September 1952

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,849.41	13,650	-
Oct. 31	4,848.00	12,190	-1,460
Nov. 30	4,849.35	13,480	+1,290
Dec. 31	4,843.26	8,400	-5,080
Calendar year 1951	-	-	-12,710
Jan. 31	4,835.31	3,530	-4,870
Feb. 29	4,830.59	1,580	-1,950
Mar. 31	4,833.49	2,710	+1,130
Apr. 30	4,866.40	34,780	+32,070
May 31	4,871.00	42,410	+7,630
June 30	4,871.80	43,820	+1,410
July 31	4,865.20	32,920	-10,900
Aug. 31	4,857.30	22,040	-10,880
Sept.30	4,849.41	13,480	-8,560
Water year 1951-52	-	-	-170

† Elevations at 8 a.m.

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 1952, 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.--15 years (1937-52), 98.4 cfs.

Extremes.--Maximum discharge during year, 3,190 cfs May 3 (gage height, 7.76 ft); minimum daily, 0.5 cfs Feb. 25, Feb. 27 to Mar. 8.
1937-52: Maximum discharge, that of May 3, 1952; minimum, 0.3 cfs at times when reservoir gates were closed.

Remarks.--Records good. Flow regulated by Pine View Reservoir (see p. 96). 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	2.0	1.7	1.4	1.0	0.5	12	*2,450	575	21	29	26
2	4.9	1.9	1.8	1.3	1.0	.5	213	2,650	133	*23	28	26
3	4.5	2.1	1.8	1.4	1.0	.5	435	2,630	96	20	28	25
4	5.5	2.2	1.9	1.4	*1.0	.5	432	2,670	314	19	27	26
5	4.2	2.3	2.1	1.4	1.0	*.5	442	*2,760	200	18	25	25
6	3.8	2.4	2.0	1.4	1.0	.5	465	2,570	*142	17	17	25
7	3.6	2.6	1.8	1.4	1.0	.5	514	2,650	142	17	29	25
8	3.6	2.6	1.9	1.3	1.0	.5	554	*2,230	142	39	29	25
9	3.4	2.6	1.9	1.2	1.1	.6	558	1,730	146	43	29	25
10	3.4	2.8	1.8	1.2	1.1	.7	582	1,600	164	36	19	24
11	4.0	3.0	1.8	1.2	1.1	.6	606	1,250	139	36	8.7	20
12	3.7	4.5	1.7	1.1	.9	.6	622	1,120	62	36	5.3	20
13	3.7	3.6	1.6	1.2	.8	.6	630	1,470	*39	36	12	20
14	3.7	3.3	1.6	1.2	.8	.6	*634	1,680	36	36	22	11
15	3.7	3.2	1.7	1.1	.8	.6	626	*1,750	36	35	12	3.2
16	3.7	3.0	1.6	1.1	.7	.6	630	1,310	36	32	11	8.7
17	3.7	2.9	1.6	1.1	.8	.7	638	816	32	31	11	12
18	3.7	2.9	1.6	1.1	.8	67	697	728	32	*28	12	7.8
19	3.2	3.0	1.5	1.1	.6	102	787	732	30	27	21	3.4
20	2.8	3.6	1.5	1.1	.6	41	967	824	*58	26	26	3.4
21	2.8	3.7	1.5	1.1	.6	4.3	1,240	997	58	28	26	3.7
22	2.8	3.7	1.4	1.1	.6	4.2	1,430	1,200	58	26	27	9.1
23	2.8	3.6	1.5	1.1	.6	4.3	*1,560	1,170	54	23	27	9.1
24	2.2	3.7	1.4	1.1	.6	4.2	1,570	*728	29	25	28	9.1
25	*1.6	3.6	1.4	1.1	.5	4.0	*1,600	538	27	29	26	*9.1
26	1.7	3.6	*1.4	1.0	.6	5.3	1,770	524	25	28	26	9.1
27	1.7	*2.8	1.4	1.0	.5	6.5	1,900	768	23	28	*29	8.7
28	1.7	1.8	1.4	1.0	.5	*6.8	2,160	563	22	29	28	8.4
29	1.8	1.7	1.4	1.0	.5	8.6	2,310	452	20	28	26	8.7
30	1.8	1.8	1.4	1.0	-	14	2,330	440	22	27	26	8.7
31	1.9	-	1.4	1.0	-	15	-	*513	-	*27	26	-
Total	99.8	86.5	50.5	36.2	23.1	296.8	28,914	43,513	2,892	874	696.0	445.2
Mean	3.22	2.88	1.63	1.17	0.80	9.57	964	1,404	96.4	28.2	22.5	14.8
Ac-ft	198	172	100	72	46	589	57,350	86,310	5,740	1,730	1,380	883

Calendar year 1951: Max 1,190 Min 1.4 Mean 174 Ac-ft 126,300
Water year 1951-52: Max 2,760 Min 0.5 Mean 213 Ac-ft 154,600

* Discharge measurement made on this day.

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 highway bridge 1 mile downstream from Fourmile Creek, 1½ miles south of Plain City, and 8 miles above mouth.

Drainage area.--2,060 sq mi, approximately.

Records available.--May 1905 to September 1952 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, 10,100 cfs May 6 (gage height, 19.01 ft); minimum, 45 cfs Sept. 20, 21 (gage height, 2.37 ft).
1904-52: Maximum discharge, that of May 6, 1952; practically no flow during latter part of several summers since 1915.

Remarks.--Records good. 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. 84,88,96).

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-18, Jan. 13 to Mar. 17, Apr. 23 to May 5)

Oct. 1 to Apr. 26

2.7	73	10.0	2,080
3.0	110	12.0	2,850
4.0	284	14.0	3,750
6.0	800	16.0	4,750
8.0	1,400	17.1	5,410

Apr. 27 to Sept. 30

8.0	1,400	16.0	6,060
10.0	2,170	18.0	8,460
12.0	1,340	19.0	10,000
14.0	4,420		

Note.--Same as preceding table below 8 ft.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	77	350	429	577	679	812	1,410	*7,370	3,050	893	*115	85
2	100	355	455	494	674	812	1,460	7,440	2,810	842	125	82
3	124	362	455	*471	676	797	1,760	7,760	2,480	*671	98	82
4	319	360	503	424	679	794	1,820	8,180	2,860	533	94	*76
5	392	350	585	460	*709	*809	1,940	9,220	2,970	338	116	66
6	394	348	577	450	701	848	2,080	*9,970	*2,700	202	63	54
7	379	355	562	460	665	917	2,310	9,820	2,620	153	70	54
8	460	364	499	486	657	959	2,820	9,350	2,580	147	95	74
9	471	352	479	486	652	1,020	2,620	8,640	2,580	145	67	85
10	429	338	510	484	644	1,080	2,380	*7,940	2,540	134	157	84
11	458	332	518	507	644	1,120	2,270	7,340	2,390	120	224	81
12	453	422	510	520	649	1,040	2,500	6,920	2,190	106	183	97
13	450	455	499	528	636	1,010	2,580	7,080	*1,940	105	130	110
14	442	434	484	523	611	1,000	*2,760	7,300	1,670	100	104	109
15	432	416	484	520	590	989	2,910	7,250	1,570	96	95	106
16	427	394	502	546	617	1,040	2,500	*6,830	1,460	84	85	93
17	429	374	499	544	617	1,110	2,640	6,070	1,320	70	68	96
18	434	389	499	525	609	1,140	2,990	5,280	1,130	*68	79	82
19	442	386	505	528	580	1,320	*3,330	4,760	971	63	69	58
20	450	402	497	528	499	1,250	3,880	4,380	*902	61	58	48
21	447	473	494	538	512	1,060	4,240	4,670	929	68	65	57
22	455	432	499	549	499	998	4,580	5,030	932	120	84	70
23	455	409	515	549	510	971	4,910	*5,000	920	87	85	85
24	453	424	523	564	574	992	*4,980	4,460	914	68	81	*88
25	445	455	525	698	609	1,060	*5,060	4,040	1,270	63	77	80
26	*424	*447	541	707	630	1,130	*5,370	3,790	1,840	61	58	77
27	422	445	536	723	652	1,230	5,840	3,790	1,780	60	88	85
28	412	442	538	718	707	*1,260	6,190	*3,390	1,480	61	78	78
29	396	437	590	687	786	1,290	*6,690	3,120	1,200	78	88	78
30	369	432	603	679	-	1,340	7,150	3,060	956	103	88	73
31	352	-	611	679	-	1,400	-	2,990	-	132	90	-
Total	12,192	11,934	16,026	17,152	18,267	32,598	103,970	192,240	54,754	5,832	2,977	2,393
Mean	393	398	517	553	630	1,052	3,466	6,201	1,825	188	96.0	79.8
Ac-ft	24,180	23,670	31,790	34,020	36,230	64,660	206,200	381,300	108,600	11,570	5,900	4,750

Calendar year 1951: Max 3,800 Min 37 Mean 906 Ac-ft 655,600
Water year 1951-52: Max 9,970 Min 48 Mean 1,285 Ac-ft 932,900

* Discharge measurement made on this day.

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 1952.

Gage.--Water-stage recorder and concrete control.

Extremes.--Maximum discharge during year, 36 cfs May 3 (gage height, 1.13 ft); minimum, 1.4 cfs Dec. 2, Jan. 20.
1950-52: Maximum discharge, that of May 3, 1952; no flow part of each day Jan. 1, 7, 30, Feb. 19, Mar. 11, 17, 18, 1951, result of freezeups.

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

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.4	0.8	0.8	12
.5	1.8	.9	19
.6	3.4	1.0	27
.7	6.6	1.1	36

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.1	2.0	2.0		1.9	1.8	3.0	22	15	5.5	5.2	2.8
2	2.1	2.3	2.1	b1.8	1.9	1.8	3.4	24	15	*4.8	4.2	2.8
3	2.6	2.4	1.9	(*)	1.9	1.8	3.4	30	15	4.8	3.9	2.8
4	3.0	2.3	2.1	2.0	2.0	1.8	*4.2	27	14	4.8	3.9	*3.0
5	*2.3	2.4	2.0	2.0	1.9	1.8	6.6	28	*14	4.8	3.6	3.2
6	2.3	2.4	2.0	1.9	1.9	1.8	10	28	15	4.8	3.4	3.0
7	2.3	2.4	1.9	1.9	1.9	1.8	17	*28	15	4.8	3.6	3.0
8	2.1	2.4	b1.9	1.6	2.0	2.0	15	25	14	4.5	3.6	3.0
9	2.1	2.4	b1.9	1.6	2.1	2.3	10	22	13	4.8	3.9	3.0
10	2.3	2.4	b1.9	1.8	2.3	2.3	8.5	19	11	4.8	3.6	2.8
11	2.3	2.4	1.9	1.8	2.4	2.3	8.0	18	11	4.8	3.5	2.8
12	2.3	2.6	1.9	1.8	2.6	2.1	8.0	18	*10	4.8	3.5	2.8
13	2.1	2.6	1.9	1.9	2.4	2.0	9.0	20	9.3	4.5	3.5	2.8
14	2.1	2.6	1.8	1.9	2.3	2.0	11	21	9.0	4.5	*3.4	2.8
15	2.1	2.3	1.8	1.9	2.0	2.0	9.3	20	8.5	*4.5	3.4	2.4
16	2.1	2.3	1.8	1.9	2.0	2.0	8.0	*20	8.0	4.2	3.2	*2.4
17	*2.1		1.6	1.8	2.0	2.0	8.0	19	8.0	4.2	3.4	2.4
18	2.1		1.6	1.8	1.9	2.0	11	18	7.5	4.2	3.4	2.3
19	2.1	(*)	1.9	1.8	1.9	*2.0	15	17	*7.5	4.2	3.4	2.4
20	2.1		1.8	1.8	1.9	2.0	15	17	7.1	3.9	3.4	2.3
		b2.0										
21	2.1		*1.8	1.6	1.9	2.0	13	18	7.1	3.9	3.4	2.3
22	2.1		1.8	1.6	2.0	1.9	15	16	7.1	4.2	3.4	2.3
23	2.1		1.8	1.6	2.1	1.9	*17	*15	6.6	3.6	3.4	2.3
24	2.1		1.8	1.8	2.1	1.9	19	13	8.0	3.6	3.6	2.1
25	2.1		1.8	1.9	2.1	1.9	22	14	6.6	3.6	3.6	2.1
26	2.1	2.1	1.8	1.8	1.8	2.0	26	15	6.6	3.6	3.4	2.1
27	2.0	2.3	1.8	1.8	1.8	2.0	29	15	6.2	3.6	3.4	2.1
28	2.0	2.1	1.9	1.8	1.8	2.6	24	15	5.8	3.6	3.2	2.1
29	2.0	*2.0	2.0	1.8	*1.8	3.4	23	*17	5.5	*3.4	3.2	2.1
30	*2.0	2.0	2.0	1.8	-	3.4	*22	17	5.5	3.6	3.2	2.1
31	2.3	-	2.0	*1.9	-	3.2	-	15	-	3.9	2.8	-
Total	67.5	66.7	58.2	56.0	58.6	65.8	393.4	611	291.9	132.8	109.6	76.4
Mean	2.18	2.22	1.88	1.81	2.02	2.12	13.1	19.7	9.73	4.28	3.54	2.55
Ac-ft	134	132	115	111	116	131	780	1,210	579	263	217	152

Calendar year 1951: Max 22 Min 0.5 Mean 4.39 Ac-ft 3,170
Water year 1951-52: Max 30 Min 1.6 Mean 5.43 Ac-ft 3,940

Peak discharge (base, 10 cfs).--May 3 (10 p.m.) 36 cfs (1.13 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.

Drainage area.--9.9 sq mi, approximately.

Records available.--November 1949 to September 1952.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,100 ft (from Forest Service topographic map).

Extremes.--Maximum discharge during year, 150 cfs May 6; minimum, 1.1 cfs Nov. 2.
1949-52: Maximum discharge, 254 cfs May 22, 1950; minimum, that of Nov. 2, 1951.

Remarks.--Records good except those for Apr. 24 to June 11 and those for periods of no gage-height record, which are fair. Record includes some water diverted from Hardscrabble Creek.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	2.7					6.9	95	96	22	9.4	3.6
2	*3.3	2.4					8.1	*89	93	*20	7.5	3.3
3	6.9	3.6				3.5	8.1	78	90	19	6.9	3.3
4	6.9	3.6					*9.4	92	88	20	6.2	*3.0
5	4.4	3.3					15	88	*82	18	5.6	3.0
6	4.0	3.3		3.5			24	112	84	17	5.2	3.0
7	4.0	3.3			4.0		30	*111	84	17	5.2	3.3
8	3.6	3.3	3.5			4.0	30	103	e78	16	4.8	3.3
9	3.6	3.3					22	90	e70	15	5.2	3.3
10	3.6	3.0					*20	84	e60	14	6.2	3.3
11	6.9	3.0				4.5	20	95	e58	14	5.2	4.0
12	4.8	4.4				4.8	20	108	*43	12	4.4	4.0
13	4.4	3.3				4.8	24	108	42	12	4.0	4.0
14	4.4	4.0				4.8	28	108	40	11	4.2	4.4
15	4.0	3.6				4.8	26	100	39	*11	*4.8	4.4
16	4.4	(*)				4.4	22	*90	36	10	4.4	*4.0
17	*4.0					*4.4	22	84	32	9.4	4.0	3.6
18	4.0					4.4	33	84	30	9.4	4.0	3.6
19	4.0					4.4	42	100	*28	9.4	4.0	3.3
20	4.0		(*)			4.4	43	114	28	8.8	4.0	3.3
21	4.4			4.0	3.5	4.0	41	*122	28	8.1	4.4	3.3
22	4.0					4.0	46	98	26	8.1	4.0	3.3
23	4.0	3.5				4.0	*49	98	26	8.1	4.4	3.0
24	3.6		4.0			4.0	e58	98	35	8.1	4.4	3.0
25	3.6					4.0	e66	106	30	8.1	4.0	3.0
26	3.6					4.4	e84	118	28	8.1	4.0	3.0
27	3.6					4.8	e103	121	28	7.5	4.0	2.7
28	3.6				(*)	6.9	e84	127	26	8.1	4.0	2.7
29	3.3	(*)			-	8.8	e80	*125	22	*7.5	3.6	2.7
30	*3.3				-	10	e80	103	24	7.5	3.6	2.7
31	3.3	-		(*)	-	8.1	-	100	-	8.8	3.6	-
Total	127.9	102.6	116.5	119.0	107.5	146.2	1,144.5	3,149	1,474	373.0	149.2	100.4
Mean	4.13	3.42	3.76	3.84	3.71	4.72	38.2	102	49.1	12.0	4.81	3.35
Ac-ft	254	204	231	236	213	290	2,270	6,250	2,920	740	296	199

Calendar year 1951: Max 106 Min 2.4 Mean 16.5 Ac-ft 11,960
Water year 1951-52: Max 127 Min 2.4 Mean 19.4 Ac-ft 14,100

Peak discharge (base, 80 cfs).--May 6 (8:30 p.m.) 150 cfs (1.55 ft); May 13 (6 p.m.) 149 cfs (1.64 ft); May 29 (3 p.m.) 145 cfs (1.62 ft).

* Discharge measurement made on this day.

e Stage-discharge relation indefinite; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby streams.

Note.--No gage-height record Nov. 16 to Mar. 11; discharge estimated on basis of 5 discharge measurements, weather records, and records for nearby streams.

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 1952.

Gage.--Water-stage recorder and conctete control. Altitude of gage is 4,900 ft (from Forest Service topographic map).

Extremes.--Maximum discharge during year, 31 cfs May 15; minimum, 0.3 cfs Dec. 31.
1950-52: Maximum discharge, that of May 15, 1952; minimum, that of Dec. 31, 1951.

Remarks.--Records good.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 5-7, 12-16)

0.5	0.3	0.9	7.4
.6	.9	1.0	12
.7	2.2	1.3	30
.8	4.2		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	0.7	0.9	0.9	*0.8	0.9	1.6	16	14	3.6	2.2	1.2
2	*1.0	.6	.8	.9	.8	.8	1.7	16	12	*3.4	1.9	1.2
3	1.6	.8	.8	*.9	.8	.8	1.9	18	12	3.4	1.7	*1.2
4	1.3	.9	.8	.9	.8	.8	*2.4	25	11	3.4	1.7	1.2
5	1.1	.9	.9	.8	.8	.9	3.6	23	*11	3.2	1.7	1.2
6	1.0	.8	.8	.8	.8	.8	5.4	22	11	3.2	1.9	1.2
7	1.0	.8	.8	.8	.9	.9	6.7	*23	10	3.0	1.9	1.2
8	1.0	.9	.8	.8	1.0	1.1	5.7	21	9.0	3.0	1.9	1.2
9	.9	.9	.8	.8	1.0	1.1	4.5	20	8.6	3.0	2.0	1.1
10	1.0	.9	.8	.8	1.1	1.2	4.0	19	8.2	3.0	2.0	1.0
11	1.1	.9	.8	.8	1.1	1.2	3.6	19	7.1	3.0	1.7	1.1
12	.9	1.0	.8	.9	1.1	1.2	3.8	21	*6.7	2.8	1.7	1.1
13	.9	.9	.8	.8	1.0	1.1	4.2	24	6.4	2.8	*1.7	1.1
14	.9	1.1	.8	.8	1.0	1.1	4.8	25	5.7	2.6	1.6	1.0
15	.8	.9	.8	.9	1.1	1.1	4.0	27	6.1	*2.6	1.6	1.0
16	.8	*.9	.8	.9	1.0	1.1	3.4	*27	5.7	2.4	1.6	*1.0
17	*.8	1.1	.8	.8	1.0	1.1	4.0	24	5.4	2.4	1.4	1.0
18	.8	1.1	.9	.8	1.0	1.1	6.4	21	5.1	2.4	1.4	1.0
19	.8	1.1	.9	.8	1.0	*1.1	6.7	19	*4.8	2.2	1.4	1.0
20	.8	1.0	.9	.8	.9	1.1	6.7	19	4.5	2.2	1.4	1.0
21	.8	1.1	*.9	.8	.9	1.0	6.4	19	4.5	2.2	1.4	1.0
22	.8	1.0	.9	.8	.9	1.0	6.7	18	4.2	2.2	1.4	1.0
23	.8	1.0	.9	.8	.9	1.0	*7.8	*16	4.2	2.0	1.3	1.0
24	.8	1.0	.9	.8	.9	.9	8.2	14	5.1	2.0	1.3	1.0
25	.8	1.0	.9	.9	.9	1.0	12	14	4.5	2.0	1.3	1.0
26	.8	1.0	.9	.8	.9	1.1	12	15	4.2	2.0	1.3	1.0
27	.8	.9	.9	.8	.9	1.2	14	15	4.2	2.0	1.3	1.0
28	.8	.9	.9	.8	.9	1.3	16	15	4.0	*2.0	1.3	1.0
29	.8	*.9	1.0	.8	*.9	1.7	16	*16	3.6	1.9	1.3	1.0
30	*.8	.9	.9	.8	-	1.9	*16	16	3.6	1.9	1.2	1.0
31	.8	-	.8	.8	-	1.7	-	14	-	2.0	1.2	-
Total	28.3	27.9	26.4	25.6	27.1	34.3	200.2	601	206.4	79.8	48.7	32.0
Mean	0.91	0.93	0.85	0.83	0.93	1.11	6.67	19.4	6.88	2.57	1.57	1.07
Ac-ft	56	55	52	51	54	68	397	1,190	409	158	97	63

Calendar year 1951: Max 18 Min 0.6 Mean 2.69 Ac-ft 1,950
Water year 1951-52: Max 27 Min 0.6 Mean 3.65 Ac-ft 2,650

Peak discharge (base, 10 cfs).-- May 7 (5 p.m.) 30 cfs (1.30 ft); May 15 (8:30 p.m.) 31 cfs (1.16 ft).
* Discharge measurement made on this day.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,100 ft (from Forest Service topographic map).

Extremes.--Maximum discharge during year, 30 cfs May 5; minimum, 0.3 cfs Dec. 17-20.
1949-52: Maximum discharge, that of May 5, 1952; minimum, 0.3 cfs Sept. 23, 24, 1950, Dec. 17-20, 1951.

Remarks.--Records good. Record includes flow through pipe line for Centerville City water supply.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	0.6	0.6	0.5	*0.5	0.5	1.2	13	10	*1.3	0.9	0.5
2	*.6	.5	.6	*.5	.5	.5	1.3	15	9.8	1.3	.8	.5
3	.9	.6	.6	.5	.5	.5	*1.4	19	9.2	1.3	.8	*.5
4	.8	.6	.6	.5	.5	.5	1.5	21	9.3	1.2	.8	.5
5	.7	.6	.6	.5	.5	.5	1.9	25	*7.3	1.1	.8	.5
6	.7	.6	.6	.5	.5	.6	2.8	24	6.6	1.1	.8	.5
7	.7	.5	.6	.5	.5	.6	4.7	24	6.3	1.0	.8	.5
8	.7	.5	.7	.5	.5	.7	5.0	*21	5.8	1.0	.8	.5
9	.7	.5	.8	.5	.5	.8	4.5	18	5.4	1.1	.9	.5
10	.7	.5	.7	.5	.5	.8	3.6	17	5.0	1.0	.9	.5
11	.8	.5	.8	.5	.5	.7	3.5	17	*4.4	1.0	.8	.5
12	.7	.8	.9	.5	.5	.7	3.6	17	4.0	1.0	.7	.5
13	.7	.6	.9	.5	.5	.7	3.9	19	3.8	.9	*.7	.5
14	.7	.6	.6	.5	.5	.7	4.4	21	3.4	.9	.7	.5
15	.6	.5	.6	.5	.5	.7	4.3	19	3.3	*.9	.6	.5
16	.7	*.5	.5	.5	.5	.7	3.9	*16	3.1	.8	.6	*.5
17	*.7	.6	.4	.6	.5	.7	4.0	14	2.9	.8	.6	.5
18	.7	.6	.3	.6	.5	*.7	5.4	12	*2.8	.8	.6	.5
19	.6	.6	.3	.6	.5	.7	6.7	12	2.6	.9	.6	.5
20	.7	.7	*.4	.6	.6	.7	6.7	14	2.6	.9	.6	.5
21	.7	.6	.4	.6	.5	.6	6.5	14	2.3	.8	.6	.5
22	.6	.6	.4	.6	.6	.6	6.7	12	2.3	.8	.6	.5
23	.6	.6	.4	.6	.6	.6	*7.4	*12	2.2	.8	.5	.5
24	.6	.6	.4	.6	.6	.6	8.5	11	2.8	.8	.6	.5
25	.6	.6	.4	.6	.6	.6	10	11	2.1	.8	.5	.5
26	.6	.6	.4	.6	.6	.8	12	12	2.0	.8	.6	.5
27	.6	.6	.5	.6	.6	.9	14	13	2.0	.9	.6	.5
28	.6	.6	.5	.6	*.6	1.1	15	13	1.8	*.8	.7	.5
29	.6	*.5	.5	.6	.6	1.2	14	*14	1.5	.8	.6	.5
30	*.6	.6	.5	.6	-	1.3	*12	13	1.5	.8	.5	.6
31	.6	-	.5	.6	-	1.3	-	11	-	.9	.5	-
Total	20.7	17.2	17.0	17.0	15.4	22.6	180.4	494	128.1	29.3	21.1	15.1
Mean	0.67	0.57	0.55	0.55	0.53	0.73	6.01	15.9	4.27	0.95	0.68	0.50
Ac-ft	41	34	34	34	31	45	358	980	254	58	42	30

Calendar year 1951: Max 12 Min 0.3 Mean 1.87 Ac-ft 1,350
Water year 1951-52: Max 25 Min 0.3 Mean 2.67 Ac-ft 1,940

* Discharge measurement made on this day.

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 1952.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,000 ft (from U. S. Forest Service topographic map).

Extremes.--Maximum daily discharge during year, 30 cfs May 6, 7; minimum not determined, probably occurred during period of backwater.
1949-52: Maximum daily discharge, that of May 6, 7, 1952; minimum not determined, probably occurred during periods of ice effect, backwater or no gage-height record.

Remarks.--Records good except those for periods of ice effect, backwater 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, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			1.6		1.4	1.3	2.4	22	15	4.5	2.6	1.3
2			1.6		1.5	1.3	2.7	22	15	4.7	2.3	1.3
3			1.6	b1.4	1.4	1.4	2.7	25	14	4.4	2.3	1.3
4		1.5	1.7		1.4	1.3	3.1	28	14	4.4	2.2	1.4
5			1.6		1.4	1.3	4.0	28	13	4.2	2.1	1.4
6	1.0			1.3	1.4	1.3	5.3	30	12	4.2	2.0	1.4
7		1.5		1.4	1.4	1.4	7.1	30	12	4.1	2.1	1.4
8		1.5		1.3	1.4	1.6	6.5	28	11	4.0	2.1	1.4
9		1.5	b1.4	1.3	1.4	1.6	4.9	26	10	4.1	1.9	1.4
10		1.4		1.3	1.4	1.7	5.1	23	9.3	4.1	1.8	1.4
11		1.5		1.3	1.5	1.7	5.1	22	8.8	3.9	1.7	1.5
12		1.7	1.4	1.3	1.6	1.6	5.1	22	8.8	3.9	1.7	1.5
13		1.6	1.4	1.4	1.5	1.6	5.7	22	8.3	4.0	1.8	1.5
14		1.6	1.3	1.4	b1.5	1.6	6.7	23	7.9	3.6	1.7	1.5
15		1.6	1.4	1.4	b1.4	1.6	6.5	21	7.6	3.3	1.8	1.4
16	1.3	1.6	1.4	1.4	1.4	1.6	5.8	21	7.5	3.3	1.7	1.4
17		b1.5	1.4	1.3	1.4	1.6	6.2	18	7.0	3.1	1.6	1.4
18		1.4	1.5	1.4	1.4	1.6	8.1	17	6.8	3.2	1.7	1.4
19		1.5	1.5	1.4	b1.4	1.6	11	17	6.4	2.9	1.7	1.4
20		1.6	1.4	1.4	1.4	1.6	11	19	6.1	2.7	1.7	1.4
21		1.6	1.4	1.4	1.3	1.6	9.8	21	5.9	2.6	1.9	1.4
22		1.5	1.5	1.4	b1.4	1.6	11	19	5.9	2.6	1.8	1.4
23		1.5	1.4	1.4	1.4	1.7	12	18	6.1	2.5	1.7	1.4
24		1.6	1.3	1.4	1.4	1.6	15	17	7.4	2.3	1.8	1.4
25		1.6	1.3	1.6	b1.4	1.6	17	16	5.9	2.3	1.8	1.4
26	1.5	1.4	1.4	1.4	1.4	1.7	21	17	5.6	2.3	1.6	1.4
27		1.5	1.3	1.4	1.4	1.8	21	17	5.4	2.3	1.6	1.4
28		1.5	1.4	1.4	1.3	2.1	23	16	5.1	2.3	1.6	1.4
29		1.5	1.4	1.4	1.3	2.4	22	16	4.6	2.3	1.5	1.4
30		1.4	1.4	1.4	-	2.7	22	17	4.5	2.4	1.4	1.4
31		-	1.3	1.4	-	2.4	-	16	-	2.4	1.3	-
Total	39.5	45.6	44.3	42.9	40.9	51.5	288.8	654	256.9	102.9	56.5	42.1
Mean	1.27	1.52	1.43	1.38	1.41	1.66	9.63	21.1	8.56	3.32	1.82	1.40
Ac-ft	78	90	88	85	81	102	573	1,300	510	204	112	84

Calendar year 1951: Max 17 Min - Mean 3.03 Ac-ft 2,200
Water year 1951-52: Max 30 Min - Mean 4.55 Ac-ft 3,310

b Stage-discharge relation affected by ice.

Note.--Backwater Oct. 1 to Nov. 6; discharge estimated on basis of 3 discharge measurements, weather records, and records for nearby streams. No gage-height record July 14, 26, 27, Aug. 4-11, Aug. 16 to Sept. 2, Sept. 13-15; discharge estimated on basis of 5 discharge measurements, engineer's notes, and records for nearby streams.

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 1952.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,500 ft (from Forest Service topographic map).

Extremes.--Maximum discharge during year, 82 cfs May 5 (gage height, 2.79 ft); no flow Oct. 5.
1950-52: Maximum discharge, that of May 5, 1952; no flow Oct. 5, 1951.

Remarks.--Records good.

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 27, May 2, 28)

Oct. 1 to Apr. 26, May 28 to Sept. 30				Apr. 27 to May 27	
0.7	0.5	1.1	12	2.2	16
.8	1.3	1.2	19	2.3	24
.9	3.6	1.3	33	2.5	43
1.0	7.2	1.4	56	2.7	65

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	1.1	1.3	1.3	1.1	1.2	2.5	34	22	*4.2	2.3	0.9
2	*1.0	1.0	1.3	*1.3	1.1	1.2	2.8	*43	20	4.2	1.8	.8
3	1.3	1.2	1.3	1.3	1.1	1.2	*3.0	53	20	3.9	1.6	*.8
4	1.3	1.2	1.3	1.4	1.1	1.2	3.9	53	*18	3.6	1.6	.7
5	.6	1.3	1.3	1.4	1.1	1.2	6.0	56	17	3.3	1.4	.7
6	.7	1.2	1.3	1.4	1.2	1.2	8.3	55	16	3.3	1.6	.7
7	.7	1.2	1.1	1.4	1.3	1.2	11	40	14	3.3	1.6	.7
8	.7	1.3	1.1	1.3	1.4	1.3	10	*39	12	3.0	1.4	.7
9	.7	1.2	1.2	1.2	1.4	1.6	7.9	38	11	2.8	1.8	.6
10	.7	1.2	1.3	1.2	1.4	1.6	7.5	31	11	3.0	1.8	.6
11	1.1	1.3	1.3	1.2	1.6	1.4	7.2	27	*9.6	3.0	1.6	.7
12	.9	1.4	1.3	1.2	1.6	1.4	7.5	27	8.3	3.0	*1.3	.7
13	.9	1.4	1.3	1.2	1.4	1.3	9.2	29	7.9	3.0	1.6	.7
14	.9	1.4	1.2	1.2	1.2	1.3	11	34	7.5	3.0	1.3	.7
15	1.0	1.3	1.2	1.2	1.3	1.3	9.6	*33	7.9	*2.8	1.1	*.7
16	1.1	*1.2	1.2	1.2	1.3	1.3	8.7	28	7.5	2.8	1.1	.7
17	*1.1	1.2	1.3	1.2	1.3	1.3	9.6	25	7.5	2.8	1.0	.7
18	1.1	1.2	1.3	1.2	1.3	*1.3	15	21	*6.8	2.5	1.1	.7
19	1.1	1.3	1.4	1.2	1.2	1.3	19	20	6.4	2.5	1.1	.7
20	1.2	1.4	*1.3	1.2	1.3	1.2	21	23	6.4	2.3	1.1	.7
21	1.4	1.6	1.3	1.2	1.4	1.2	18	*28	6.4	2.0	1.1	.7
22	1.3	1.4	1.4	1.2	1.3	1.1	*19	25	6.0	2.0	1.0	.7
23	1.3	1.3	1.3	1.2	1.3	1.2	22	22	6.0	1.8	1.0	.7
24	1.4	1.3	1.3	1.1	1.3	1.2	30	20	7.5	1.8	1.0	.7
25	1.4	1.4	1.3	1.1	1.2	1.2	37	20	6.4	1.8	.9	.7
26	1.4	1.4	1.3	1.1	1.3	1.2	46	21	6.4	1.8	1.0	.7
27	1.4	1.4	1.3	1.1	1.3	1.4	57	21	6.0	2.0	.9	.7
28	1.6	1.4	1.3	1.1	*1.3	2.5	36	*26	5.2	*2.0	1.0	.7
29	1.4	*1.4	1.3	1.1	1.2	3.0	*39	26	4.9	1.8	1.0	.7
30	*1.3	1.4	1.3	1.1	-	3.0	33	24	4.6	1.8	1.0	.7
31	1.2	-	1.3	*1.2	-	2.5	-	20	-	2.0	1.0	-
Total	34.2	39.0	39.7	37.7	37.3	45.5	517.7	962	296.2	83.1	40.1	21.2
Mean	1.10	1.30	1.28	1.22	1.29	1.47	17.3	31.0	9.87	2.68	1.29	0.71
Ac-ft	68	77	79	75	74	90	1,030	1,910	588	165	80	42

Calendar year 1951: Max 20 Min 0.6 Mean 3.27 Ac-ft 2,370
Water year 1951-52: Max 57 Min 0.6 Mean 5.88 Ac-ft 4,280

Peak discharge (base, 15 cfs).--May 5 (10:30 p.m.) 82 cfs (2.79 ft).
* Discharge measurement made on this day.

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., on right bank 2 miles southeast of Bountiful.

Records available.--April 1950 to September 1952.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,240 ft (from topographic map).

Extremes.--Maximum daily discharge during year, 140 cfs Apr. 28; minimum daily, 1.3 cfs Nov. 2.
1950-52: Maximum daily discharge, that of Apr. 28, 1952; minimum, 1.2 cfs Sept. 3, 1950, Sept. 25, 27, 28, 1951.

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, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	1.5	1.7	1.8	1.8	1.9	3.2	*90	56	*13	5.7	2.4
2	*1.7	1.3	1.7	*1.8	1.8	1.9	3.5	86	59	12	5.2	2.3
3	2.9	1.6	1.7	1.7	1.8	1.9	*3.5	99	51	12	4.9	2.3
4	2.2	1.6	1.7	1.7	1.8	1.9	4.4	114	*48	11	4.6	*2.3
5	2.0	1.6	1.8	1.8	1.8	1.9	5.9	124	48	11	4.6	2.3
6	2.0	1.6	1.7	1.8	1.8	1.9	7.8	118	48	11	4.6	2.3
7	1.9	1.6	1.7	1.8	1.8	1.9	15	98	49	10	4.6	2.3
8	1.9	1.6	1.7	1.8	1.8	2.0	20	*90	43	10	4.3	2.4
9	1.8	1.6	1.7	1.8	1.8	2.2	18	70	41	10	4.6	2.1
10	1.7	1.6	1.6	1.8	1.9	2.4	18	65	41	9.9	4.9	2.1
11	1.9	1.7	1.6	1.8	1.9	2.3	18	70	*38	9.6	4.3	2.2
12	1.8	2.0	1.6	1.8	2.1	2.1	18	81	36	9.6	*4.0	2.4
13	1.8	1.8	1.6	1.8	2.0	2.1	21	79	34	9.3	3.7	2.3
14	1.8	1.8	1.6	1.8	2.0	2.1	23	87	32	*9.2	3.7	2.3
15	1.8	*1.8	1.6	1.8	2.0	2.1	24	*71	31	8.8	3.6	*2.1
16	1.7	1.6	1.6	1.8	2.1	2.1	22	69	29	8.5	3.5	2.0
17	*1.7	1.6	*1.6	1.8	2.1	2.1	21	59	27	8.0	3.4	2.0
18	1.7	1.7	1.6	1.8	2.1	*2.0	28	45	*26	7.8	3.2	2.0
19	1.7	1.8	1.6	1.8	2.0	2.0	38	45	24	7.6	3.2	1.9
20	1.7	1.8	1.6	1.7	2.0	2.0	39	50	23	7.3	3.2	1.9
21	1.7	1.9	1.8	1.8	2.0	2.0	35	*60	22	6.7	3.1	1.9
22	1.8	1.8	1.8	1.8	2.0	2.0	*44	52	20	6.4	3.1	1.9
23	1.8	1.8	1.8	1.8	2.0	2.0	58	48	20	6.2	2.9	1.9
24	1.8	1.8	1.9	1.9	2.0	2.0	62	46	23	6.0	2.8	1.9
25	1.7	1.7	1.8	2.3	2.0	1.9	*72	50	20	6.0	2.5	1.9
26	1.7	1.7	1.8	2.0	2.0	1.9	*76	60	18	5.9	2.6	1.8
27	1.8	1.7	1.8	1.9	1.9	2.1	110	59	16	6.0	2.7	1.8
28	1.8	1.7	1.9	1.9	*1.9	2.6	140	*61	15	*5.8	2.6	1.8
29	1.8	1.7	1.9	1.8	1.9	3.3	*104	64	14	5.4	2.6	1.8
30	*1.7	*1.7	1.8	*1.8	-	3.6	113	63	14	5.5	2.5	1.8
31	1.7	-	1.7	1.8	-	3.2	-	56	-	5.6	2.4	-
Total	56.6	50.7	53.0	56.5	56.1	67.4	1,165.3	2,229	966	261.1	113.6	62.4
Mean	1.83	1.69	1.71	1.82	1.93	2.17	38.8	71.9	32.2	8.42	3.66	2.08
Ac-ft	112	101	105	112	111	134	2,310	4,420	1,920	518	225	124

Calendar year 1951: Max 38 Min 1.2 Mean 6.51 Ac-ft 4,710
Water year 1951-52: Max 140 Min 1.3 Mean 14.0 Ac-ft 10,190

* Discharge measurement made on this day.

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 1952.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during year, 724 cfs May 2; minimum, 1.1 cfs Dec. 13.
1950-52: Maximum discharge, that of May 2, 1952; minimum, that of Dec. 13, 1951.

Remarks.--Records good. Records include discharge of Salt Creek diversion canal near Nephi.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*8.1	10	7.8	7.2	10	12	24	432	191	88	58	40
2	7.9	8.7	8.2	7.2	10	12	27	580	184	85	57	39
3	15	8.9	7.2	7.2	10	12	30	569	189	84	57	37
4	8.7	9.2	7.8	6.8	10	11	29	525	183	84	55	37
5	*9.0	9.0	7.8	7.2	10	12	34	*436	185	85	53	35
6	8.8	9.0	8.2	6.4	10	12	43	391	184	91	56	35
7	8.4	8.9	7.5	6.8	10	11	63	417	180	92	64	35
8	8.3	8.6	5.8	7.2	10	12	63	369	166	84	61	35
9	7.5	8.5	4.5	7.5	10	12	68	289	158	81	58	34
10	7.5	8.6	4.5	7.5	10	12	71	256	156	*80	57	33
11	8.7	8.6	5.4	7.5	10	13	67	259	145	73	54	35
12	9.1	9.0	6.8	7.8	10	13	66	*266	143	71	51	34
13	9.1	8.6	4.5	7.8	10	13	84	267	135	70	51	33
14	9.1	8.8	5.4	8.2	9.5	13	87	267	*127	68	51	33
15	8.7	8.2	6.4	8.2	9.1	13	77	248	123	66	50	32
16	9.1	7.8	6.4	8.2	10	13	78	219	116	62	49	31
17	9.1	7.5	*6.8	8.6	11	13	96	*186	112	62	49	32
18	8.6	7.5	6.8	8.6	*11	13	*137	171	113	61	49	31
19	8.2	7.4	7.2	9.1	9.5	12	*160	176	113	61	49	31
20	9.3	7.7	7.5	8.6	10	13	160	196	113	62	56	31
21	9.4	7.8	7.5	*9.5	11	*12	196	206	104	60	46	31
22	9.8	7.8	7.8	9.5	10	11	209	180	100	59	45	31
23	9.8	7.8	8.2	9.5	11	11	226	160	*100	57	43	32
24	9.4	7.8	8.2	9.5	11	13	*346	156	109	63	40	29
25	9.8	7.2	8.2	11	9.5	14	*362	164	102	64	*40	30
26	8.8	*7.2	8.6	11	10	15	470	184	90	60	56	*30
27	11	7.8	8.6	11	11	15	*514	189	84	64	47	30
28	10	7.8	9.1	10	11	16	*551	194	81	*71	49	30
29	10	7.8	12	10	11	16	*428	*200	85	65	45	30
30	10	7.8	11	10	-	20	404	204	86	62	42	30
31	*10	-	9.5	10	-	22	-	197	-	60	40	-
Total	286.2	247.3	231.2	264.6	295.6	412	5,170	8,553	3,957	2,195	1,578	986
Mean	9.23	8.24	7.46	8.54	10.2	13.3	172	276	132	70.8	50.9	32.9
Ac-ft	568	491	459	525	586	817	10,250	16,960	7,850	4,350	3,130	1,960

Calendar year 1951: Max 89 Min 4.5 Mean 19.9 Ac-ft 14,440
Water year 1951-52: Max 580 Min 4.5 Mean 66.1 Ac-ft 47,950

* Discharge measurement made on this day.

Payson Creek above diversions, near Payson, Utah

Location.--Lat 39°58'10", long. 111°41'30", in SE¼SE¼ sec. 3, T. 10 S., R. 2 E., on left bank a quarter of a mile above diversion dam for Strawberry Water Users Association powerplant, 5 miles southeast of Payson, and 12 miles upstream from Utah Lake.

Drainage area.--19.6 sq mi.

Records available.--July 1947 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,500 ft (from river-profile map).

Average discharge.--5 years, 15.4 cfs.

Extremes.--Maximum discharge during year, 465 cfs May 4 (gage height, 2.99 ft), from rating curve extended above 150 cfs on basis of logarithmic plotting; minimum, 2.1 cfs Feb. 12.
1947-52: Maximum discharge, that of May 4, 1952; minimum recorded, that of Feb. 12, 1952.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow affected by several small reservoirs.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	3.3	1.7	61
.8	5.4	2.0	96
1.0	12	3.0	275
1.2	21	3.4	378
1.4	34		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	b4.9	4.8	b4.8	4.6	4.6	*6.8	*146	61	22	17	11
2	5.0	b4.8	5.0	b4.6	4.8	4.8	6.8	208	*60	22	16	11
3	6.2	4.8	b4.8	b4.5	4.8	4.6	7.1	290	61	22	15	10
4	6.0	4.8	5.0	b4.6	4.6	4.8	8.2	370	56	21	15	9.6
5	5.4	4.6	5.2	4.8	4.4	4.6	10	353	53	20	16	9.3
6	5.2	4.6	*5.2	4.8	*4.4	*4.6	12	298	50	20	18	9.3
7	5.2	*4.6	b5.1	4.9	4.1	4.6	16	264	46	20	17	9.3
8	5.0	4.6	b5.1	5.0	4.1	4.6	15	*187	43	20	16	10
9	5.0	4.6	b5.0	*4.8	4.1	4.6	12	152	40	*19	16	10
10	5.2	4.6	b4.8	4.8	4.1	4.8	11	152	36	19	16	11
11	5.7	4.6	b4.9	4.8	4.1	4.8	11	152	34	19	15	*14
12	5.2	4.8	5.0	4.8	b4.1	4.8	11	168	32	18	15	14
13	5.2	4.8	5.0	4.8	b4.0	4.8	13	185	*30	18	14	14
14	5.2	5.0	4.8	4.8	b4.1	4.8	15	167	28	17	14	14
15	5.0	4.8	4.8	4.8	b4.3	4.8	13	*141	28	17	14	14
16	5.2	b4.7	4.8	4.8	4.4	5.0	13	117	28	17	14	13
17	*5.2	b4.6	4.8	4.8	4.4	5.0	17	108	27	16	14	13
18	5.2	b4.7	4.8	4.8	b4.3	5.0	*23	115	*27	17	14	13
19	5.2	4.8	4.8	4.8	b4.0	b5.0	26	137	27	17	14	13
20	5.2	5.0	4.8	4.8	4.1	5.2	25	*212	26	16	*14	12
21	5.7	5.0	4.8	4.8	4.4	5.0	23	136	26	16	14	13
22	5.4	4.8	5.0	4.8	b4.3	b4.8	29	73	26	16	12	13
23	5.4	4.6	5.0	4.6	4.4	b5.0	37	82	26	15	12	13
24	5.4	4.8	4.8	4.6	4.4	5.2	*50	79	29	*16	11	14
25	5.4	4.8	4.8	4.8	b4.3	5.0	63	83	27	16	12	13
26	6.5	4.6	4.8	4.8	4.6	5.2	91	106	27	15	11	12
27	6.2	4.8	4.8	4.8	4.6	5.4	110	78	26	15	11	11
28	6.0	4.8	5.0	4.6	4.6	5.7	*135	83	24	16	12	11
29	5.7	4.8	5.2	4.6	b4.6	6.5	119	80	23	15	11	14
30	5.2	4.8	5.7	4.6	-	7.1	122	71	23	15	11	16
31	5.0	-	b5.2	4.6	-	6.8	-	62	-	15	11	-
Total	167.0	142.5	153.6	147.2	126.0	157.3	1,050.9	4,855	1,050	547	432	364.5
Mean	5.39	4.75	4.95	4.75	4.34	5.07	35.0	157	35.0	17.6	13.9	12.2
Ac-ft	331	283	305	292	250	312	2,080	9,630	2,080	1,080	857	723

Calendar year 1951: Max 36 Min 4.0 Mean 9.23 Ac-ft 6,680
Water year 1951-52: Max 370 Min 4.0 Mean 25.1 Ac-ft 18,220

Peak discharge (base, 80 cfs).-- May 4 (5 p.m.) 465 cfs (2.99 ft); May 20 (6:30 p.m.) 367 cfs (2.70 ft).
* 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 1952 in reports of Geological Survey. January 1933 to September 1952 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 at site 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 at different datum. May 12, 1937, to Oct. 8, 1938, staff gage at present site and datum.

Average discharge.--36 years (1908-25, 1933-52), 96.6 cfs.

Extremes.--Maximum discharge during year, 1,800 cfs May 4 (gage height, 7.96 ft); minimum daily, 10 cfs Dec. 9, 10.
1908-25, 1933-52: Maximum discharge, that of May 4, 1952; minimum observed, 10 cfs Sept. 17, 22, 25, Oct. 25, 1934, Dec. 9, 10, 1951.

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

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 19-30, May 3-8, 18-30)

Oct. 1 to May 2				May 3 to Sept. 30			
2.2	26	5.0	715	2.9	61	6.0	865
2.5	62	6.0	1,070	3.5	151	7.0	1,230
3.0	156	7.0	1,470	4.0	256	8.0	1,630
4.0	405			5.0	535	8.2	1,710

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	38	35		51	56	*129	1,250	704	180	a150	96
2	27	30	42	b25	51	54	135	*1,440	655	176	a130	94
3	38	37	33		49	49	143	1,550	669	*172	a120	93
4	35	38	37	b30	51	48	*178	1,650	628	164	116	90
5	36	37	*40	b35	49	49	229	1,660	592	164	111	87
6	36	36	36		44	*48	290	*1,690	556	170	111	85
7	35	*38	b20		*48	48	380	1,650	514	160	116	85
8	32	40	b15	b40	48	52	388	1,590	484	*153	121	78
9	33	38	b10	(*)	49	58	332	1,510	448	149	124	77
10	35	38	b10		52	59	*350	*1,370	409	147	131	74
11	35	38	b12	43	52	58	329	1,330	380	144	116	*76
12	33	42	b18	42	56	54	306	1,370	*353	137	113	77
13	34	41	b20	44	51	51	358	1,400	336	138	110	71
14	35	42	b30	43	44	52	411	*1,390	310	137	105	71
15	36	37	34	43	52	52	353	1,330	290	135	97	72
16	*38	28	34	44	52	55	334	a1,200	280	130	97	74
17	36	31	36	44	58	58	465	a1,100	263	123	99	76
18	36	29	36	43	56	58	*618	1,010	249	116	100	73
19	36	30	37	43	48	61	*636	a900	*238	114	136	71
20	36	35	37	42	51	59	597	a900	229	113	*108	72
21	36	40	37	43	52	55	673	*936	222	106	97	73
22	36	40	38	44	51	56	718	770	215	106	107	72
23	37	*40	40	43	56	a60	*624	672	207	106	110	73
24	37	41	40	46	54	a65	834	686	231	*106	100	73
25	38	40	36	51	49	a60	*862	662	249	118	96	73
26	42	36	38	51	61	a70	1,140	700	249	116	100	73
27	38	38	40	51	62	a85	1,210	722	242	123	113	72
28	42	37	40	44	*58	a100	*1,440	742	213	167	136	72
29	41	38	47	43	54	a115	*1,390	760	198	121	106	72
30	*41	35	41	46	-	a130	1,300	746	188	a110	102	69
31	41	-	32	52	-	a140	-	*756	-	a130	99	-
Total	1,117	1,108	1,001	1,285	1,509	2,015	17,152	35,442	10,801	4,231	3,477	2,314
Mean	36.0	36.9	32.3	41.5	52.0	65.0	572	1,143	360	136	112	77.1
Ac-ft	2,220	2,200	1,990	2,550	2,990	4,000	34,020	70,300	21,420	8,390	6,900	4,590

Calendar year 1951: Max 284 Min 10 Mean 62.6 Ac-ft 45,330
Water year 1951-52: Max 1,690 Min 10 Mean 223 Ac-ft 161,600

Peak discharge (base, 330 cfs).--Apr. 28 (5 a.m.) 1,530 cfs (7.15 ft); May 4 (10 p.m.) 1,800 cfs (7.96 ft); May 12 (11:30 p.m.) 1,460 cfs (7.58 ft); May 21 (8:30 a.m.) 1,040 cfs (6.75 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.

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 west portal of tunnel and 18 miles northeast of Thistle.

Records available.--October 1945 to September 1952 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, 1932-52: 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 Strawberry Water Users Association.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	104								6	118	106	188
2	107								6	190	39	178
3	88								6	196	21	181
4	64								6	198	37	220
5	78								6	217	94	248
6	95								6	252	136	281
7	107								6	253	117	245
8	117								6	266	102	276
9	106								6	315	70	283
10	43								6	335	10	265
11	5								6	344	26	264
12	5								6	330	82	249
13	5								6	341	190	213
14	5								6	328	215	132
15	5								22	315	235	134
		5	4	4	4	4	5	6				
16	5								75	329	250	156
17	5								149	330	224	156
18	5								190	334	245	156
19	5								217	319	276	156
20	5								248	301	272	154
21	5								249	251	285	138
22	5								261	261	290	142
23	5								268	283	269	141
24	5								264	257	268	137
25	5								211	221	260	162
26	5								139	162	270	162
27	5								68	101	253	162
28	5								46	97	244	162
29	5								6	46	254	167
30	5				-				16	9.7	195	175
31	5	-			-		-		-	77	189	-
Total	1,014	150	124	124	116	124	150	186	2,513	7,376.7	5,524	5,683
Mean	32.7	5	4	4	4	4	5	6	83.8	238	178	189
Ac-ft	2,010	298	246	246	230	246	298	369	4,980	14,630	10,960	11,270

Calendar year 1951: Max 505 Min - Mean 96.3 Ac-ft 69,720
Water year 1951-52: Max 344 Min - Mean 63.1 Ac-ft 45,780

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 1952. 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.--15 years (1914-17, 1940-52), 117 cfs.

Extremes.--Maximum discharge during year, 1,610 cfs May 4; minimum daily, 5 cfs Jan. 1-3. 1908-17, 1940-52: Maximum discharge, that of May 4, 1952; minimum, 1.0 cfs Nov. 9, 1948.

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 tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 7-15, Apr. 20 to May 29, June 23 to July 5, July 17 to Aug. 10, Aug. 14 to Sept. 30)

Oct. 1 to May 13						May 14 to Sept. 30			
2.1	15	3.0	117	5.0	735	3.4	56	4.5	274
2.3	27	3.5	223	6.0	1,180	3.7	99	5.0	429
2.5	47	4.0	371	6.7	1,520	4.0	155	5.7	700

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	111	22	16	5		26	*47	850	329	253	163	216
2	115	18	23	5		26	50	*1,100	299	317	113	206
3	111	22	21	5		24	52	1,400	296	*280	85	206
4	88	23	24	10	25	26	*69	1,500	274	288	85	230
5	87	22	*23	15		24	91	1,400	264	308	118	258
6	99	21	23	20		*23	122	1,200	251	308	161	280
7	110	*22	20	20	(*)	22	180	*1,100	233	308	153	253
8	118	23	10	20		23	180	900	216	*329	141	271
9	115	23	21	*20		25	150	700	204	360	124	285
10	66	22	21		25	26	*160	600	194	380	80	282
11	35	22	28			26	150	600	183	390	59	*280
12	24	29	26			25	130	600	*172	373	86	274
13	24	25	19			22	150	650	163	398	181	246
14	23	25	20			26	190	*700	149	402	226	185
15	21	23	21			26	150	600	145	369	246	174
16	*22	16	22			26	140	500	209	376	291	188
17	22	18	23			26	200	400	251	363	288	190
18	21	20	22			26	*350	350	288	363	305	188
19	21	20	23			27	*383	400	*291	344	*305	188
20	21	24	22	25		28	400	*400	285	335	308	183
21	21	24	23		25	26	516	500	302	294	323	172
22	21	22	23			26	600	400	323	299	329	176
23	21	*22	24			28	*560	400	317	308	305	172
24	21	23	24			30	640	400	320	*305	294	166
25	22	23	21			29	800	300	305	288	280	185
26	24	21	23			30	1,000	300	302	218	288	188
27	27	23	22			31	1,100	300	251	170	277	188
28	24	22	23		*24	37	1,300	400	223	163	274	188
29	23	22	25		26	44	*1,000	447	194	127	277	190
30	*22	21	20		-	54	900	398	178	88	228	199
31	22	-	15		-	52	-	*338	-	120	216	-
Total	1,502	663	671	670	725	890	11,760	20,133	7,411	9,224	6,609	6,407
Mean	48.5	22.1	21.6	21.6	25.0	28.7	392	649	247	298	213	214
Ac-ft	2,980	1,320	1,330	1,330	1,440	1,770	23,330	39,930	14,700	18,300	13,110	12,710

Calendar year 1951: Max 522 Min 8 Mean 133 Ac-ft 96,630
Water year 1951-52: Max 1,500 Min 5 Mean 182 Ac-ft 132,200

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 1, 8-12, Dec. 31 to Feb. 27 (no gage-height record Jan. 5 to Feb. 6, Feb. 16-27; discharge estimated on basis of 3 discharge measurements, weather records, and records for Spanish Fork at Thistle and at Castilla). No gage-height record Apr. 7-18, 20, Apr. 22 to May 28, July 9-11; discharge estimated on basis of 11 discharge measurements, weather records, and records for stations as above.

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 Cold 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 1952 in reports of Geological Survey. January 1933 to September 1952 in reports of Spanish Fork water commissioner.

Gage.--Water-stage recorder. Altitude of gage is 4,870 ft (from topographic map). 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.--25 years (1919-25, 1933-52), 222 cfs.

Extremes.--Maximum discharge during year, 3,610 cfs May 3 (gage height, 9.83 ft); minimum, 14 cfs Dec. 9.
1919-25, 1933-52: Maximum discharge, that of May 3, 1952; minimum, that of Dec. 9, 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. 109).

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 19, Apr. 29 to May 8, June 6-13, June 28 to July 5)

Oct. 1 to Apr. 19				Apr. 20 to May 8		May 9 to Sept. 30			
2.6	15	5.0	480	6.1	1,080	2.9	170	6.0	1,360
2.8	35	6.0	860	7.0	1,550	3.0	192	7.0	1,910
3.0	60	6.6	1,110	8.0	2,150	4.0	485	7.7	2,330
4.0	225			9.0	2,850	5.0	885		
				10.0	3,550				

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a150	71	61	36	89	92	*202	*2,210	1,040	363	a330	331
2	a150	57	76	34	90	89	216	2,650	979	438	a260	326
3	a150	70	57	36	88	82	227	3,160	988	*457	a230	323
4	a135	73	70	43	86	77	*277	3,280	925	445	a220	343
5	a135	68	*73	56	88	84	352	3,130	857	485	226	380
6	a145	66	68	59	74	*80	477	*3,070	817	509	277	407
7	a150	*70	47	70	*74	84	607	2,960	777	501	285	371
8	a160	71	25	77	78	90	600	2,610	a700	*509	272	392
9	a160	70	20	*74	78	100	*535	*2,280	a660	541	258	401
10	a110	68	23	76	84	104	549	2,010	a610	577	219	380
11		68	30	77	84	104	532	2,010	585	577	177	*386
12		82	36	82	100	96	483	2,050	*537	549	209	380
13	a70	78	51	86	90	90	604	*2,140	501	541	315	348
14		78	57	83	64	95	688	2,200	465	537	351	269
15		74	61	77	61	95	581	2,060	434	521	357	247
16	*78	45	66	88	74	98	535	1,890	485	521	377	269
17	74	47	70	84	100	101	748	1,500	525	517	366	277
18	73	48	68	86	96	98	*968	1,350	553	517	374	277
19	73	52	74	84	60	102	1,100	a1,200	*561	497	*428	272
20		67	71	82	78	102	*1,120	a1,200	561	477	404	272
21		73	71	82	89	94	1,300	*1,440	573	417	407	258
22	a73	71	76	83	67	84	1,420	a1,200	565	424	428	261
23		*68	82	80	89	92	*1,390	a1,100	565	453	431	261
24		73	82	82	84	107	*1,500	a1,200	605	*438	404	253
25		73	74	92	54	101	*1,810	a1,100	577	424	389	274
26		64	76	94	68	117	2,420	a1,100	501	a360	410	280
27	a80	71	77	92	92	125	2,600	a1,100	410	a320	428	280
28		68	78	82	*89	141	*3,050	1,140	a395	a350	445	280
29		68	96	74	74	167	*2,440	1,140	a380	a270	424	282
30	*73	64	88	74	-	208	2,290	1,140	a360	a220	371	291
31	73	-	71	89	-	216	-	*1,120	-	a270	334	-
Total	2,997	2,016	1,975	2,314	2,342	3,315	31,621	57,740	18,491	14,025	10,406	9,371
Mean	96.7	67.2	63.7	74.6	80.8	107	1,054	1,863	616	452	336	312
Ac-ft	5,940	4,000	3,920	4,590	4,650	6,580	62,720	114,500	36,680	27,820	20,640	18,590

Calendar year 1951: Max 614 Min 20 Mean 210 Ac-ft 152,100
Water year 1951-52: Max 3,280 Min 20 Mean 428 Ac-ft 310,600

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 3 discharge measurements, 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 1952.

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.--31 years (1904-6, 1909-19, 1920-25, 1938-52), 93.9 cfs.

Extremes.--Maximum discharge measured during year, 3,020 cfs Apr. 28; no flow for many days.
1903-7, 1909-25, 1938-52: Maximum discharge measured, that of Apr. 28, 1952; 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 powerplant. 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	63	74	70	98	112	260	2,070			c0	
2	9.8	52	82	a40	101	112	*260	*2,310	(*)			
3	18	55	77	a44	104	106	255	2,690	a800	c10		
4	25	60	76	a50	104	100	282	2,690			a0	
5	14	60	87	a60	104	112	*351	2,620				
6	9.6	58	*80	a70	*103	*106		2,560				
7	10	*56	68	a80	96	107		2,430		c1		
8	9.8	66	b35		94	117		*2,310	a500			
9	9.1	62	b22	(*)	94	135	(*)	2,020		(*)		
10	14	62	b25		96	142		1,470				
11	45	62	b30		99	147	a600	1,470				
12	65	70	b35		103	138		1,600				(*)
13		79	b50	a90	106	127		*1,550	a200		a5	
14		74	b60		106	130		1,530				
15	a72	70	b66		105	130		1,340	c200			c40
16		54	b70		104	135	(*)	1,320				
17	(*)	49	b72		100	149		1,110				
18	50	53	b70		109	144	*a1,100	951	*c100			
19	52	58	b76	87	111	150	(*)	921				
20	51	74	b74	87	102	150		*1,010		c0	(*)	
21	58	85	b76	89	101	139		905				
22	56	84	81	88	102	127		968				
23	56	*84	85	88	100	126	a1,500	947	c50			
24	56	85	86	88	102	142	(*)	1,040		(*)		
25	57	85	80	97	102	146		961				
26	54	81	79	108	100	159	a2,500	994			c5	
27	72	79	81	108	a100	175	a2,800	1,050				
28	68	80	80	105	*a100	186	*2,880	1,090	c25			
29	66	76	104	98	99	207	2,370	1,070				
30	*66	73	112	92	-	235	2,190	1,020				
31	64	-	91	93	-	268	-	1,020	-			-
Total	1,420.7	2,049	2,184	2,632	2,945	4,459	32,648	47,037	8,375	53	130	1,200
Mean	45.8	68.3	70.5	84.9	102	144	1,088	1,517	279	1.7	4.2	40
Ac-ft	2,820	4,060	4,330	5,220	5,840	8,840	64,760	93,300	16,610	105	258	2,380

Calendar year 1951: Max 219 Min 0.2 Mean 56.6 Ac-ft 41,000
Water year 1951-52: Max 2,880 Min 0 Mean 287 Ac-ft 208,500

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 13 discharge measurements, weather records, and records for other Spanish Fork stations.
b Stage-discharge relation affected by ice.
c Backwater from high level of Utah Lake; discharge estimated on basis of 5 discharge measurements, weather records, and records for other Spanish Fork stations.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,920 ft (from topographic map). Prior to June 1, 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. Apr. 17, 1945, to July 23, 1952, water-stage recorder at same site at datum 1.70 ft higher.

Average discharge.--17 years (1904-5, 1907-16, 1945-52), 58.6 cfs.

Extremes.--Maximum discharge during year, 1,250 cfs May 4 (gage height, 7.83 ft, present datum); minimum daily, 19 cfs Dec. 9, Sept. 5, but may have been less during periods of no gage-height record.
1904-16, 1945-52: Maximum discharge, that of May 4, 1952; minimum, 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 plants at times during low stages. Springville City pipeline (capacity, approximately 5 cfs) diverts water from tributary spring above station (diversion began August 1951).

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		24	25		26	24	41	969	241	87	53	30
2		22	25		27	24	*45	*1,010	223	85	50	24
3	a20	23	25		26	24	46	1,090	225	82	49	24
4		25	26		26	24	56	1,090	216	81	47	22
5		24	26	a23	26	24	84	1,020	211	80	46	19
6		24	*26		26	24	129	943	203	79	48	21
7		24	24		26	*23	191	896	189	78	51	30
8	a21	*24	21		*25	24	219	*740	132	*76	48	34
9		24	19	25	25	24	175	626	176	a73	53	32
10		24	21	*27	25	25	177	530	176	a72	53	*36
11		24	21	27	25	25	168	558	165	a71	49	34
12		27		27	26	25	159	613	157	a70	46	33
13		27		27	26	25	191	653	*147	a68	45	32
14	a22	27		27	24	25	232	633	138	a67	46	31
15		25		27	24	26	a223	*553	132	a65	*44	32
16		24		27	25	26	a213	455	126	a64	42	33
17	*22	24		26	25	26	a240	364	117	a62	42	34
18	22	24		27	25	26	*351	307	*109	a61	42	34
19	22	25		27	24	27	450	284	109	a60	41	34
20	22	25		26	24	26	*469	322	106	a59	42	34
21	22	25	a23	26	24	25	439	*358	102	a58	40	30
22	23	25		26	24	24	526	301	104	a57	38	29
23	23	25		25	25	25	583	248	100	a56	36	26
24	23	26		27	24	22	*680	243	106	59	37	25
25	23	26		30	22	20	698	255	106	*68	38	25
26	24	25		29	22	28	769	268	104	59	39	26
27	25	25		28	24	27	886	277	100	55	40	26
28	24	25		27	24	30	*969	268	93	55	41	26
29	24	25		27	24	34	*1,020	*277	90	57	40	26
30	24	25		26	-	38	982	286	88	54	38	27
31	24	-		26	-	43	-	261	-	54	35	-
Total	684	742	719	801	719	813	11,411	16,698	4,341	2,072	1,359	869
Mean	22.1	24.7	23.2	25.8	24.8	26.2	380	539	145	66.8	43.8	29.0
Ac-ft	1,360	1,470	1,430	1,590	1,430	1,610	22,630	33,120	8,610	4,110	2,700	1,720

Calendar year 1951: Max 204 Min 15 Mean 48.6 Ac-ft 35,170
Water year 1951-52: Max 1,090 Min - Mean 113 Ac-ft 81,780

Peak discharge (base, 120 cfs).--May 4 (7 p.m.) 1,250 cfs (6.13 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 4 discharge measurements, weather records, and records for nearby streams.

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 1952.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during year, 554 cfs June 6 (gage height, 3.09 ft); minimum, 4.6 cfs Mar. 28, but may have been less during period of no gage-height record.
1949-52: Maximum discharge, 765 cfs May 27, 1951 (gage height, 3.49 ft); minimum, 4.5 cfs Nov. 1, 1950, but may have been less during period of no gage-height record.

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.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 13 to Apr. 9)

0.6	4.6	1.7	86
.8	7.5	2.0	152
1.0	13	2.5	317
1.2	23	2.9	495
1.4	41		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	7.3	6.8		5.7	6.3	5.4	155	382	*113	100	33
2	14	b7.0	7.0		5.7	6.5	5.6	187	*396	110	98	35
3		b7.5	7.3	b6.0	5.8	6.1	5.7	227	405	106	100	37
4		8.4	7.5		*5.7		6.0	266	414	98	98	37
5		*8.2	7.7		5.7		6.6	*266	441	92	96	38
6	a12	b7.5	7.5	6.0	5.7	a6.2	7.7	285	454	84	88	37
7		7.2	*b7.1	*6.0	5.7		9.6	266	428	77	79	36
8		6.8	b7.1	6.0	5.7	*6.3	11	210	378	94	76	*35
9	*9.3	6.6	7.2	6.0	5.8	6.1	10	181	*405	108	79	33
10	9.6	6.8	6.8	5.8	5.8	6.0	9.8	173	432	104	94	28
11	19	6.8	6.8	5.8	5.8	5.8	9.6	217	414	81	84	30
12	14		6.6	5.8	5.8	5.8	9.3	293	410	52	*76	34
13	12		6.5	5.8	5.8		9.8	369	374	64	68	30
14	11		6.5	6.0	5.8		11	410	351	68	67	28
15	10	b7.0	6.3	5.8	5.8		11	364	334	72	64	26
16	11		6.3	5.8	5.8		11	247	270	86	64	18
17	10		6.3	6.0	6.0		14	192	*233	84	62	12
18	9.8		6.3	6.0	6.1		18	178	237	90	62	11
19	10	7.3	6.5	6.0	6.3		26	*178	220	102	61	9.6
20	10	7.2	6.5	6.0	6.1	a5.5	32	210	195	88	58	9.3
21	9.6	7.5	6.3	6.0	6.3		*41	224	178	*90	58	9.3
22	9.1	7.3	6.5	5.8	6.3		40	178	160	90	56	9.3
23	10	7.2	6.8	6.0	6.3		49	168	*152	98	58	8.6
24	8.6	7.2	6.6	5.8	6.3		60	192	175	108	45	8.2
25	8.6	7.2	b6.5	6.0	6.5		77	227	168	110	35	8.0
26	9.3	7.0	6.5	6.5	6.3		102	*255	187	108	36	7.7
27	9.6	7.0	6.3	5.8	6.3		128	285	190	104	40	7.5
28	9.1	7.0	6.3	5.8	6.3	*4.8	155	343	162	104	41	7.3
29	8.6	6.8	6.5	5.8	6.5	5.1	*147	400	133	102	41	7.3
30	8.4	7.0	b6.3	5.7	-	5.1	138	418	110	108	36	7.2
31	8.4	-	b6.2	5.7	-	5.2	-	405	-	106	34	-
Total	333.0	214.8	207.4	183.7	173.7	176.4	1,166.1	7,969	8,788	2,901	2,054	637.3
Mean	10.7	7.16	6.69	5.93	5.99	5.69	38.9	257	293	93.6	66.3	21.2
Ac-ft	660	426	411	364	345	350	2,310	15,810	17,430	5,750	4,070	1,260

Calendar year 1951: Max 598 Min 6.2 Mean 64.5 Ac-ft 46,730
Water year 1951-52: Max 454 Min 4.8 Mean 67.8 Ac-ft 49,190

Peak discharge (base, 400 cfs).--May 14 (9 p.m.) 459 cfs (2.83 ft); June 6 (9 p.m.) 554 cfs (3.09 ft).

a No gage-height record; discharge estimated on basis of 3 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 1952 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.--1945-52: 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.

Discharge, in cubic feet per second, 1952

Day	Discharge	Day	Discharge	Day	Discharge	Day	Discharge
July 1	0	July 9	136	July 17	67	July 25	0
2	0	10	152	18	56	26	0
3	29	11	138	19	46	27	0
4	60	12	128	20	30	28	0
5	96	13	118	21	25	29	0
6	117	14	113	22	*20	30	0
7	117	15	92	23	7.9	31	0
8	117	16	*70	24	0		
Total							1,734.9
Mean							56.0
Ac-ft							3,440

Calendar year 1951:	Max 246	Min 0	Mean 8.95	Ac-ft	6,480
Water year 1951-52:	Max 152	Min 0	Mean 4.74	Ac-ft	3,440

* Discharge measurement or observation of no flow made on this day.
Note.--No flow on all other days not shown.

Weber-Provo diversion canal near Woodland, Utah

Location.--Lat 40°36'40", long. 111°18'15", on 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 1952 (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.--1931-52: 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.

Discharge, in cubic feet per second, 1952

Day	Discharge	Day	Discharge	Day	Discharge	Day	Discharge
July 1	-	July 9	134	July 17	71	July 25	-
2	-	10	149	18	67	26	-
3	32	11	142	19	54	27	-
4	62	12	132	20	39	28	-
5	99	13	119	21	31	29	-
6	124	14	116	22	*21	30	-
7	122	15	98	23	17	31	-
8	120	16	*80	24	-		
Total							1,829
Mean							-
Ac-ft							3,630

The period:	Max -	Min -	Mean -	Ac-ft	3,630

* 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 1952.

Gage.--Water-stage recorder. Altitude of gage is 6,100 ft (from river-profile map).

Extremes.--Maximum discharge during year, 1,820 cfs May 15, 31; maximum gage height, 5.72 ft May 15; minimum discharge, 63 cfs Oct. 1.
1949-52: Maximum discharge, 2,190 cfs May 29, 1951 (gage height, 6.43 ft); minimum, 29 cfs Jan. 31, 1951.

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

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 14-20, 27, 28)

Oct. 1 to May 28				May 29 to Sept. 30			
1.6	59	3.0	376	1.6	67	4.0	850
1.9	83	4.0	811	2.0	131	5.0	1,430
2.2	131	5.0	1,340	3.0	401	5.4	1,670
2.5	206	5.7	1,740				

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	63	77	78		78		88	1,180	1,560	366	221	92
2	64	71			78		95	1,310	*1,530	*353	207	88
3	73	78			73		99	1,440	1,580	346	204	86
4	82	81		73	*73	77	106	a1,520	1,510	340	202	86
5	80	78			76		120	1,610	1,570	356	192	82
6	78	*73	73				151	*1,630	1,600	370	190	82
7	76	76		73			200	1,590	1,600	353	190	84
8	76	79		73		*77	215	1,410	1,500	321	183	89
9	74	77				*78	186	1,290	*1,450	346	181	*90
10	74	75				78	186	1,160	1,500	384	221	86
11	*87	76				79	181	1,220	1,380	373	*219	102
12	84	91			76	78	176	1,390	1,330	330	183	125
13	81	80				79	206	1,490	1,270	308	167	112
14	78	79				81	239	1,650	1,150	311	156	109
15	77	78				79	209	1,690	1,070	285	154	107
16	83			73		79	198	1,430	*870	273	152	100
17	81					80	246	1,170	725	260	148	92
18	79	78				79	331	985	700	251	144	84
19	79					79	407	*895	690	249	135	80
20	80					80	447	1,000	605	238	137	80
21	81					79	492	a1,060	579	228	131	82
22	77		73			79	*500	a960	548	214	129	84
23	77					78	590	a880	*535	*204	129	80
24	80	79				78	656	a920	605	209	122	76
25	80				76	79	789	960	587	241	105	74
26	84			73		80	1,090	*1,080	605	238	105	72
27	90	80				79	1,200	1,240	610	221	109	72
28	86	80				78	*1,380	1,400	535	224	110	71
29	82	80				79	1,240	1,570	465	214	118	70
30	82	79				79	1,170	1,660	398	216	107	67
31	80	-			-	*80	-	1,660	-	234	98	-
Total	2,448	2,352	2,268	2,263	2,202	2,433	13,193	40,450	30,657	8,856	4,849	2,604
Mean	79.0	78.4	73.2	73.0	75.9	78.5	440	1,305	1,022	286	156	86.8
Ac-ft	4,860	4,670	4,500	4,490	4,370	4,830	26,170	80,230	60,810	17,570	9,620	5,160

Calendar year 1951: Max 1,910 Min - Mean 231 Ac-ft 167,100
Water year 1951-52: Max 1,690 Min 63 Mean 313 Ac-ft 227,300

Peak discharge (base, 1,200 cfs).--May 6 (3 a.m.) 1,730 cfs (5.69 ft); May 15 (6 a.m.) 1,820 cfs (5.72 ft); May 31 (4:30 a.m.) 1,820 cfs (5.65 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for station near Kamas.

Note.--Stage-discharge relation affected by ice Nov. 16-26, Dec. 2 to Feb. 1, Feb. 6 to Mar. 7, Mar. 24 to Apr. 1 (no gage-height record Dec. 13 to Jan. 6, Jan. 9-22, Feb. 20 to Mar. 7; discharge estimated on basis of 1 discharge measurement, weather records, and records for station near Kamas).

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 1952.
Gage.--Mercury indicating gage read once daily. Datum of gage is at mean sea level (levels by Bureau of Reclamation).
Extremes.--Maximum contents during year, 152,900 acre-ft June 24, 25 (elevation, 5,417.13 ft); minimum, 111,500 acre-ft Mar. 28-30 (elevation, 5,399.77 ft).
1940-52: 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-foot 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 on trend indicated by 8 a.m. readings.
Cooperation.--Records of daily elevations and contents furnished by Provo River water commissioner.

Contents at 12 p.m., in acre-feet, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	120,200	120,200	120,800	118,700	116,900	113,800	111,700	125,900	144,500	152,400	147,600	139,800
2	120,000	120,100	120,800	118,500	116,800	113,800	111,800	126,100	146,700	152,200	147,300	139,400
3	119,700	120,100	120,800	118,400	116,600	113,700	111,900	126,800	148,000	152,100	147,100	139,000
4	119,600	120,000	120,800	118,200	116,500	113,700	112,100	127,500	149,200	152,000	146,800	138,600
5	119,500	119,900	120,800	118,100	116,400	113,600	112,300	127,800	150,700	151,900	146,500	138,100
6	119,500	119,900	120,800	118,100	116,300	113,600	112,800	127,900	151,800	151,900	146,200	137,700
7	119,500	119,800	120,700	118,100	116,200	113,400	113,500	127,600	152,300	151,800	146,000	137,200
8	119,500	119,800	120,600	118,100	116,000	113,300	114,200	126,600	152,400	151,800	145,700	136,700
9	119,500	119,900	120,400	118,100	115,900	113,200	115,000	124,800	152,400	151,800	145,600	136,200
10	119,500	119,900	120,200	118,100	115,700	113,100	115,700	122,800	152,500	151,800	145,500	135,700
11	119,500	120,000	120,000	118,100	115,600	113,000	116,500	121,100	152,300	151,800	145,500	135,200
12	119,500	120,100	119,800	118,100	115,500	112,900	117,300	119,500	152,200	151,800	145,300	134,700
13	119,500	120,300	119,600	118,100	115,400	112,800	118,200	117,900	152,400	151,800	145,100	134,300
14	119,500	120,400	119,400	118,100	115,400	112,800	118,900	117,300	152,400	151,700	144,800	133,800
15	119,600	120,600	119,300	118,100	115,300	112,700	119,500	117,300	152,300	151,600	144,600	133,400
16	119,600	120,500	119,300	118,100	115,200	112,600	119,600	116,900	152,400	151,300	144,400	132,900
17	119,600	120,400	119,200	118,100	115,100	112,400	119,400	116,100	152,400	151,100	144,100	132,400
18	119,700	120,300	119,200	118,100	115,000	112,300	119,700	115,400	152,400	150,900	143,800	131,900
19	119,700	120,300	119,200	118,000	114,900	112,200	120,000	115,200	152,400	150,700	143,600	131,500
20	119,700	120,400	119,200	118,000	114,800	112,100	120,000	115,800	152,400	150,400	143,300	131,000
21	119,700	120,400	119,200	118,000	114,700	112,000	119,900	117,400	152,300	150,100	143,100	130,500
22	119,700	120,500	119,100	117,900	114,600	112,000	119,800	119,500	152,300	149,800	142,800	130,000
23	119,800	120,600	119,100	117,900	114,500	111,900	119,700	121,600	152,500	149,400	142,600	129,600
24	119,900	120,700	119,000	117,900	114,400	111,800	119,600	123,600	152,900	149,100	142,300	129,200
25	120,000	120,800	119,000	118,000	114,300	111,700	120,400	125,500	152,900	148,900	142,000	128,900
26	120,200	120,800	118,900	118,000	114,200	111,600	121,600	127,500	152,800	148,800	141,700	128,500
27	120,300	120,800	118,900	118,100	114,100	111,600	123,000	129,800	152,600	148,600	141,300	128,200
28	120,400	120,800	118,900	117,900	114,000	111,500	124,300	132,500	152,600	148,500	141,000	127,800
29	120,300	120,800	118,800	117,600	113,900	111,500	125,100	135,500	152,600	148,300	140,700	127,500
30	120,300	120,800	118,800	117,400	-	111,500	125,500	138,400	152,500	148,100	140,500	127,200
31	120,300	-	118,800	117,100	-	111,600	-	141,500	-	147,800	140,200	-

Monthly elevation and contents, water year October 1951 to September 1952

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	5,403.93	120,600	-
Oct. 31	5,403.80	120,300	-300
Nov. 30	5,404.02	120,800	+500
Dec. 31	5,403.15	118,800	-2,000
Calendar year 1951	-	-	-11,600
Jan. 31	5,402.38	117,100	-1,700
Feb. 29	5,400.87	113,900	-3,200
Mar. 31	5,399.80	111,600	-2,300
Apr. 30	5,406.10	125,500	+13,900
May 31	5,412.77	141,500	+16,000
June 30	5,416.97	152,500	+11,000
July 31	5,415.22	147,800	-4,700
Aug. 31	5,412.25	140,200	-7,600
Sept.30	5,406.84	127,200	-13,000
Water year 1951-52	-	-	+6,600

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 1952.

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.--40 years (1912-52), 359 cfs. (Since 1932 flow includes that of Weber-Provo diversion canal.)

Extremes.--Maximum discharge during year, 3,050 cfs May 9 (gage height, 7.65 ft); minimum daily, 260 cfs Oct. 8, 9, 12-14, 17, 18.
1911-52: Maximum discharge observed, 3,180 cfs June 11, 1921; minimum discharge, 23 cfs Mar. 11, 1948.

Remarks.--Records good except those for periods of no gage-height record, which are fair. 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. 115).

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 15-26, May 2-7, 23-29, June 7-16, June 23 to July 14, Aug. 5 to Sept. 30)

2.4	257	5.0	1,320
2.7	338	6.0	1,900
3.0	430	7.0	2,590
4.0	802	7.6	3,040

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	358	310	313		377		307	2,000	554	619	466	450
2	364	307	316		350		307	2,200	751	597	466	450
3	358	307	313		350		305	2,310	1,170	*590	477	456
4	308	307	*313		318		307	2,330	1,290	532	473	456
5	262	307	313	300	*302		313	2,530	*1,190	528	477	456
6	262	307	310				324	*2,700	1,400	528	473	460
7	262	307	307			(*)	324	2,810	1,720	522	477	456
8	260	*307	305	*302			332	2,900	1,830	518	477	456
9	260	305		299		300	330	*2,980	*1,870	504	473	456
10	262	305		302			332	2,900	1,710	497	470	*463
11	*273	305		299			332	2,790	1,740	487	466	470
12	260	296		299			341	2,860	1,590	480	466	473
13	260	273		299			350	2,920	1,360	490	470	470
14	260	275		299			452	2,670	1,260	504	*463	470
15	262	288		299			610	*2,480	1,250	504	473	470
16	262	294		299			767	2,440	995	504	460	470
17	260	294		296	300		940	2,200	798	500	443	463
18	260	294		299			1,010	1,850	793	497	446	456
19	265	294		299			*1,040	*1,520	*785	490	450	446
20	270	299	305	299			1,230	1,220	785	490	443	450
21	270	302		299			1,320	1,170	702	494	450	460
22	270	299		302			*1,320	910	619	490	456	463
23	270	299		299		290	1,380	*460	582	*487	453	446
24	267	299		302			1,420	539	649	494	453	427
25	267	296		305			1,440	572	940	494	456	417
26	267	296		299			1,470	554	975	487	477	414
27	280	294		296			1,530	522	955	487	473	420
28	291	313		333			1,730	*528	755	480	453	430
29	302	313		401		300	*1,880	561	660	470	450	427
30	310	313		398	-	305	1,910	561	664	477	450	427
31	310	-		398	-	*310	-	557	-	477	450	-
Total	8,692	9,005	9,505	9,622	8,897	9,205	25,653	55,544	32,342	15,718	14,330	13,528
Mean	280	300	307	310	307	297	855	1,792	1,078	507	462	451
Ac-ft	17,240	17,860	18,850	19,080	17,650	18,260	50,880	110,200	64,150	31,180	28,420	26,830

Calendar year 1951: Max 1,850 Min 230 Mean 414 Ac-ft 299,700
Water year 1951-52: Max 2,980 Min 260 Mean 579 Ac-ft 420,600

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 9 to Jan. 7, Feb. 5 to Mar. 30; discharge estimated on basis of 3 discharge measurements, weather records, and records for station at Provo.

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 1952.

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.--40 years (1912-52), 30.1 cfs.

Extremes.--Maximum discharge during year, 102 cfs May 6 (gage height, 1.90 ft); minimum, 18 cfs Mar. 18.
1911-52: Maximum discharge observed, 123 cfs May 27, 1922; minimum discharge, 7.4 cfs June 5, 1951.

Remarks.--Records good. Station below all diversions.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.6	18
1.0	40
1.5	73
1.8	95

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	32	26	24	24	23	22	68	74	33	40	48
2	30	33	27	23	24	23	23	78	67	33	44	48
3	32	32	26	24	24	23	23	82	64	*34	44	49
4	32	32	*26	24	24	23	24	91	60	35	44	48
5	31	31	27	24	*24	23	25	88	60	35	41	49
6	30	30	26	24	24	23	25	*84	67	36	44	49
7	30	31	26	24	24	*23	25	85	74	36	45	47
8	29	*30	26	*24	24	24	26	86	67	35	42	48
9	29	30	25	24	22	24	26	*74	62	36	46	*49
10	29	31	25	24	22	23	27	71	58	39	47	49
11	30	31	24	24	22	23	28	72	52	38	46	50
12	*30	36	24	24	22	22	29	76	50	40	50	49
13	30	32	24	24	22	22	29	80	*47	38	49	49
14	30	31	24	24	22	22	31	84	42	32	*48	50
15	31	30	24	24	22	22	32	89	41	35	47	50
16	32	30	24	24	23	22	33	85	38	39	47	49
17	31	29	25	24	23	22	34	70	*35	39	47	50
18	31	29	26	24	22	20	35	61	30	38	47	50
19	32	29	26	24	22	20	37	49	29	37	46	47
20	32	29	25	24	22	21	37	56	24	36	45	47
21	32	29	24	24	22	21	38	65	28	33	45	47
22	32	28	26	24	22	20	*40	*65	28	38	42	50
23	31	28	26	24	22	21	42	57	24	*38	41	50
24	31	28	25	25	23	21	43	52	33	41	46	51
25	31	27	25	26	22	22	44	51	36	42	44	51
26	31	26	24	24	23	22	49	54	35	41	49	49
27	30	26	24	24	22	22	59	64	33	42	49	50
28	31	26	25	24	23	23	*66	70	32	42	48	49
29	32	26	26	24	22	22	67	*74	30	43	49	48
30	31	26	26	24	-	24	69	82	32	43	49	48
31	30	-	25	24	-	*24	-	80	-	43	49	-
Total	953	888	782	746	659	690	1,088	2,243	1,352	1,170	1,420	1,468
Mean	30.7	29.6	25.2	24.1	22.7	22.3	36.3	72.4	45.1	37.7	45.8	48.9
Ac-ft	1,890	1,760	1,550	1,480	1,310	1,370	2,160	4,450	2,680	2,320	2,820	2,910

Calendar year 1951: Max 57 Min 12 Mean 26.5 Ac-ft 19,190
Water year 1951-52: Max 91 Min 20 Mean 36.8 Ac-ft 26,700

* Discharge measurement made on this day.

Provo River at Provo, Utah

Location.--Lat 40°14'15", 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), May 1933 to September 1934, January 1937 to September 1952. Published as Provo River at San Pedro, Los Angeles & Salt Lake Railway bridge near Provo for period 1903-4 and as Provo River at Rio Grande Western Railway bridge near Provo for year 1905.

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.--16 years (1993-34, 1937-52), 185 cfs.

Extremes.--Maximum discharge during year, 2,520 cfs May 6 (gage height, 6.37 ft); minimum, 6.8 cfs July 12, 13.

1903-5, 1933-34, 1937-52: Maximum discharge, that of May 6, 1952; practically no flow during several periods.

Remarks.--Records good except those above 1,000 cfs, which are fair. 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. 115). 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 1951-52:

Month	Diversion (acre-feet)	Month	Diversion (acre-feet)
October	533	May	980
November	492	June	786
December	676	July	750
January	676	August	690
February	632	September	636
March	676	Water year 1951-52	8,181
April	654		

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-6, Nov. 20 to Dec. 20, Jan. 25 to Feb. 13, Mar. 22 to May 5, May 7-10, June 7-18)

Oct. 1 to Apr. 19				Apr. 20 to Sept. 30					
1.8	42	4.0	401	0.2	4.0	1.3	106	4.0	1,220
2.0	60	5.0	707	.3	8.0	1.6	166	5.0	1,770
2.5	114	6.0	1,080	.5	19	2.0	274	6.0	2,320
3.0	186			.7	34	2.5	455	6.2	2,430
				1.0	64	3.0	690		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	333	336	352	412	343	348	*1,920	159	95	8.5	22
2	70	333	343	360	385	343	*345	1,930	259	42	8.5	25
3	124	336	336	355	383	338	348	2,030	578	*26	8.5	22
4	166	331	*338	360	350	338	346	2,000	775	22	8.0	21
5	168	331	345	360	*338	*338	360	2,240	*705	19	9.0	21
6	186	331	338	355	338	333	383	*2,420	835	22	8.0	21
7	193	321	333	350	333	333	388	2,390	1,110	17	8.0	20
8	193	*319	328	*348	324	333	409	*2,330	1,190	10	9.5	17
9	194	314	324	348	333	340	404	2,420	1,190	9.0	12	18
10	205	314	331	345	328	338	*406	2,400	1,100	9.0	20	*22
11	214	314	338	345	328	340	423	2,320	*1,110	9.0	25	38
12	203	326	338	343	331	333	436	*2,310	1,040	7.6	19	48
13	203	292	336	343	326	331	447	2,350	815	7.6	18	48
14	207	296	340	340	326	331	540	2,260	695	9.5	18	48
15	*234	305	340	340	324	328	760	1,930	650	10	*17	52
16	266	312	340	340	326	331	871	1,870	509	12	12	55
17	273	310	343	340	331	328	993	1,730	313	13	11	60
18	275	312	343	340	333	326	*1,050	1,420	280	12	13	60
19	275	314	345	338	328	324	*939	1,160	*256	15	17	55
20	281	314	343	336	333	324	1,230	810	244	11	12	55
21	285	326	345	336	333	324	1,400	*785	200	12	11	64
22	285	328	348	333	331	317	1,380	383	130	12	10	86
23	285	326	348	333	336	317	*1,330	*330	74	*13	10	79
24	288	331	350	336	333	321	1,400	271	76	15	12	64
25	288	331	348	344	333	319	1,440	256	250	32	13	51
26	290	321	348	382	336	321	1,470	230	387	28	18	43
27	299	311	345	360	336	326	1,470	178	435	27	22	49
28	312	343	348	358	336	324	1,600	157	393	26	22	65
29	324	343	372	428	333	328	*1,750	*132	216	22	20	66
30	331	338	375	428	-	343	1,840	151	140	17	24	65
31	331	-	368	425	-	348	-	153	-	12	24	-
Total	7,290	9,656	10,653	11,001	9,817	10,261	26,506	43,266	16,114	593.7	448.0	1,360
Mean	235	322	344	355	339	331	884	1,396	537	19.2	14.5	45.3
Ac-ft	14,460	19,150	21,130	21,820	19,470	20,350	52,570	85,820	31,960	1,180	889	2,700

Calendar year 1951: Max 1,200 Min 1.1 Mean 215 Ac-ft 156,000
Water year 1951-52: Max 2,420 Min 7.6 Mean 402 Ac-ft 291,500

* Discharge measurement made on this day.

American Fork above upper powerplant, 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 intake for upper powerplant of Utah Power & Light Co., 4 miles upstream from mouth of canyon, and 8 miles northeast of American Fork.

Drainage area.--55 sq mi, approximately.

Records available.--October 1945 to September 1952 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.--25 years, 54.0 cfs.

Extremes.--Maximum discharge during year, 531 cfs June 6 (gage height, 6.92 ft); minimum, 4 cfs (estimated) Jan. 25.
1927-52: Maximum discharge, 645 cfs Aug. 3, 1951 (gage height, 7.38 ft); minimum, that of Jan. 25, 1952.

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. Twenty-two discharge measurements were made by Geological Survey in addition to those made by power company.

Rating tables, water year 1951-52, 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	16	4.3	13	5.8	192
4.7	27	4.6	28	6.2	306
4.8	34	5.0	57	6.5	400
		5.4	106	6.8	502

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	20	20	b13	15	15	a16	*227	384	197	78	40
2	25	17	20	b13	16	14	a16	294	403	195	74	40
3	27	20	*18	a13	15	14	a18	368	*403	187	70	38
4	26	20	19	a14	15	14	a20	400	394	184	68	37
5	26	20	20	a14	15	*14	a22	394	426	184	67	36
6	25	20	19	a14	15	14	a25	420	*474	195	66	35
7	25	20	16	a16	15	14	*35	*403	420	*189	67	35
8	25	20	b19	a16	*16	14	34	371	407	169	64	34
9	25	*20	a19	a16	16	15	33	*325	410	161	63	33
10	26	20	a19	*a16	16	15	35	309	397	152	62	32
11	32	19	a19	16	16	15	33	331	*384	141	59	32
12	27	20	a19	16	16	14	33	*362	381	135	56	*33
13	25	20	a19	16	16	14	36	390	340	125	54	33
14	25	*20	a19	16	15	14	41	410	309	120	52	32
15	25	20	a19	16	b15	14	38	374	282	114	49	32
16	25	16	a19	14	15	14	37	303	250	113	47	31
17	24	16	19	14	15	14	40	262	233	109	46	31
18	*24	16	19	16	15	14	47	247	*253	104	45	*30
19	a24	18	20	16	14	14	*58	256	256	100	47	29
20	23	20	19	16	14	14	69	328	244	97	47	29
21	23	21	18	16	14	14	81	352	225	91	*45	29
22	22	20	19	16	b14	15	87	*300	214	88	44	29
23	22	20	18	16	14	16	103	256	208	88	42	29
24	22	20	18	16	14	15	123	250	236	86	41	29
25	22	20	18	16	b14	14	164	276	216	*96	a42	29
26	22	19	18	16	14	15	*174	325	189	92	a44	a29
27	22	20	18	15	14	14	195	*356	*164	87	a44	a28
28	21	20	18	15	14	15	216	390	157	83	44	a28
29	21	20	18	15	*14	16	208	420	179	79	44	a27
30	22	20	18	16	-	16	197	423	197	78	43	27
31	22	-	17	16	-	a16	-	400	-	91	41	-
Total	750	582	578	474	431	450	2,234	10,522	9,035	3,930	1,655	956
Mean	24.2	19.4	18.6	15.3	14.9	14.5	74.5	339	301	127	53.4	31.9
Ac-ft	1,490	1,150	1,150	940	855	893	4,430	20,870	17,920	7,800	3,280	1,900

Calendar year 1951: Max 473 Min 14 Mean 64.3 Ac-ft 46,570
Water year 1951-52: Max 474 Min 13 Mean 86.3 Ac-ft 62,680

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

Dry Creek near Alpine, Utah

Location.--Lat 40°28'35", long. 111°45'25", 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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,320 ft (from topographic map). Prior to Aug. 3, 1951, at site 500 ft downstream at different datum (destroyed by flood).

Average discharge.--5 years, 23.5 cfs.

Extremes.--Maximum discharge during year, 292 cfs May 3; minimum, 3.4 cfs Mar. 5.
1947-52: Maximum discharge not determined, occurred Aug. 3, 1951; minimum, 3.4 cfs Nov. 10, 1950, Mar. 5, 1952.

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

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 21 to May 2, May 5-27, June 3 to July 11)

0.4	2.0	1.3	41
.6	7.0	1.6	74
.8	13	2.0	136
1.0	21	2.5	233

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			6.7	b5.4	4.8	3.8	5.6	*106	148	62	15	9.4
2			6.7	b5.4	4.8	3.8	6.2	131	133	58	14	9.1
3			*b6.7	b5.4	5.1	3.6	*6.2	219	*136	52	13	8.8
4			6.7	b5.4	5.1	3.6	7.6	213	147	48	12	8.5
5		a5.2	6.7	b5.4	5.1	*3.6	10	205	128	49	12	8.2
6			b6.7		4.8	3.8	a16	175	*146	47	13	8.2
7			b6.7		4.8	4.1	*a24	*134	133	*43	14	8.5
8			b6.0	a5.4	*4.8	4.1	22	121	139	41	13	8.2
9		(*)	b5.4		4.8	4.8	21	111	134	39	12	7.9
10		5.4	b5.5	(*)	5.1	5.1	21	*111	133	37	12	7.6
11		5.6	b5.6	5.4	5.4	4.8	18	122	*121	33	11	7.9
12		6.5	5.6	5.1	5.4	4.6	18	*128	119	31	11	*7.9
13		6.5	5.4	5.1	5.1	4.6	20	132	109	28	10	7.9
14		6.5	5.4	5.1	b4.6	4.6	25	147	111	26	10	7.6
15		6.5	5.1	5.1	b4.3	4.3	21	114	105	26	9.1	7.3
16	a5.4	*b6.5	5.6	5.4	4.3	4.6	20	100	100	24	8.8	7.3
17		b6.5	5.1	5.4	4.3	4.6	21	81	102	23	8.8	6.7
18	(*)	b6.5	5.4	5.1	4.3	4.6	26	78	*105	21	9.1	6.7
19		6.5	5.4	5.1	b4.2	4.6	*30	78	114	20	12	6.5
20		6.5	5.1	5.4	4.1	4.3	31	94	114	20	11	6.5
21		6.5	5.4	5.4	4.1	b4.3	35	88	96	18	*11	6.5
22		6.5	5.6	5.4	b4.1	b4.3	39	*75	92	17	9.4	6.5
23		6.5	5.6	5.4	4.1	b4.3	56	69	84	17	9.4	6.5
24		6.5	5.6	5.4	4.3	b4.3	69	73	105	17	9.1	6.2
25		6.5	5.4	5.1	b4.1	4.6	78	91	75	*17	9.7	5.1
26		6.2	5.6	5.1	b4.1	4.6	*108	106	66	16	16	5.1
27		6.5	5.4	5.1	4.1	4.6	122	126	58	16	13	4.8
28		6.7	5.4	5.1	3.6	5.4	*149	145	59	15	11	5.1
29		6.7	5.6	5.1	b3.8	5.9	128	137	70	14	11	4.8
30		6.7	5.6	5.1	-	6.2	112	101	66	15	10	4.6
31		-	b5.4	5.1	-	5.9	-	105	-	18	9.7	-
Total	167.4	181.6	178.1	163.5	131.5	140.3	1,265.6	3,716	3,248	908	350.1	211.9
Mean	5.4	6.05	5.75	5.27	4.53	4.53	42.2	120	108	29.3	11.3	7.06
Ac-ft	332	360	353	324	261	278	2,510	7,370	6,440	1,800	694	420

Calendar year 1951: Max 204 Min - Mean 24.1 Ac-ft 17,470
Water year 1951-52: Max 219 Min 3.6 Mean 29.1 Ac-ft 21,140

Peak discharge (base, 100 cfs).--May 3 (4 p.m.) 292 cfs (2.75 ft); June 6 (5:30 p.m.) 244 cfs (3.15 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 4 discharge measurements, weather records, and records for Fort Creek at Alpine.

b Stage-discharge relation affected by ice.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,050 ft (from topographic map).

Average discharge.--5 years, 9.1 cfs.

Extremes.--Maximum discharge during year, 134 cfs May 3 (gage height, 3.55 ft); minimum, 0.4 cfs Oct. 2.
1947-52: Maximum discharge, 246 cfs Aug. 4, 1951 (gage height, 4.60 ft), from rating curve extended above 78 cfs; no flow at times during July, August, and September 1951.

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

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 3 to Mar. 16, June 11-14)

0.9	0.5	1.7	17
1.0	.9	2.0	31
1.1	1.8	2.5	60
1.2	3.2	3.0	93
1.4	7.4	3.2	107

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.2	3.8	3.6	b3			9.4	*72	45	8.2	3.4	3.0
2	2.2	b3.6	3.6	b3			10	91	45	7.7	.9	1.4
3	4.2	3.8	*3.6		3	3.5	*9.6	105	*40	7.4	4.5	3.8
4	4.5	3.8	3.4				14	98	39	6.9	4.3	3.8
5	4.0	3.8	3.4			*3.6	24	*88	43	6.9	4.5	3.8
6	4.2	3.6	b3.4			3.6	29	67	52	3.6	4.9	3.8
7	4.3	3.6	b3.3			4.0	*31	67	42	*4.3	5.1	3.8
8	3.1	3.4	b3.2		(*)	4.3	25	60	38	6.9	5.1	1.8
9	2.9	*3.2	b3.1			5.6	23	52	36	6.5	5.1	2.3
10	2.9	3.1	b3.1	(*)		6.2	24	50	34	6.5	3.7	3.6
11	4.7	3.1	3.1			5.3	20	54	*26	5.8	.9	3.8
12	*3.6	3.4	3.2			4.7	19	*59	30	5.1	2.4	*3.6
13	4.0	3.4	3.4			4.5	29	63	26	5.1	3.5	3.8
14	3.8	3.6	3.1			4.7	31	59	*23	4.1	4.5	3.6
15	3.6	3.2	2.9			4.5	23	49	20	.8	4.3	.7
16	4.0		2.9			4.7	19	41	17	2.7	4.3	3.6
17	3.8		2.9	3		4.9	25	36	15	4.5	4.3	3.6
18	4.0	b3.5	2.9			4.7	40	35	*11	4.3	4.2	3.8
19	3.6		2.9		3.5	4.7	*44	38	10	4.3	2.7	4.0
20	3.2	3.6	2.8			4.7	41	49	14	4.0	2.4	4.2
21	4.2	3.6	2.8				40	38	10	4.0	*4.3	2.8
22	4.9	3.6	2.9				41	*35	9.9	3.8	4.3	1.3
23	4.7	3.4	3.1			b4.5	52	31	9.6	2.8	4.3	2.8
24	4.5	3.6	2.8				61	*35	16	.7	4.3	4.2
25	4.2	3.6	2.8			4.7	70	39	11	*4.0	4.9	4.2
26	4.0	b3.4	2.8			5.3	*85	44	11	5.1	1.4	4.2
27	4.2	3.4	2.9			6.5	88	46	5.6	5.3	4.5	4.2
28	4.3	3.6	2.9			8.5	90	48	6.9	5.6	4.2	1.9
29	4.2	3.6	3.1			11	*75	54	9.1	4.9	4.0	2.5
30	4.0	3.6	3.1		-	12	64	50	8.5	5.3	4.2	4.3
31	3.8	-	b3		-	9.9	-	44	-	5.6	4.2	-
Total	120.8	105.4	96.0	93	99.0	164.6	1,156.0	1,695	703.6	152.7	119.6	98.2
Mean	3.90	3.51	3.10	3.0	3.4	5.31	38.5	54.7	23.5	4.93	3.86	3.27
Ac-ft	240	209	190	184	196	326	2,290	3,360	1,400	303	237	195

Calendar year 1951: Max 49 Min 0 Mean 7.04 Ac-ft 5,090
Water year 1951-52: Max 105 Min 0.7 Mean 12.6 Ac-ft 9,130

Peak discharge (base, 75 cfs).--May 3 (6 p.m.) 134 cfs (3.55 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 3 to Mar. 4 (stage-discharge relation affected by ice most of period); discharge estimated on basis of 3 discharge measurements, weather records, and records for nearby stations.

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 1951 to September 1952

Month	Strawberry tunnel	Upper Hobble Creek ditch	Lower Hobble Creek ditch	Strawberry River and Willow Creek ditches
October	2,010	0	0	154
November	298	0	0	2
December	246	0	0	0
January	246	0	0	0
February	230	0	0	0
March	246	0	0	0
April	298	0	0	0
May	369	0	0	23
June	4,980	328	146	705
July	14,630	41	27	1,040
August	10,960	8	0	415
September	11,270	1	0	143
Water year 1951-52	45,790	378	173	2,480

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 1952.

Gage.--Water-stage recorder. Altitude of gages is 4,480 ft (from topographic map). 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.--39 years (1913-52), 365 cfs.

Extremes.--1913-52: Maximum daily discharge, 1,410 cfs June 10, 1952; 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 may be 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	446	122	110	165	304	394	512	819	1,400	1,130	898	684
2	434	120	111	174	304	391	492	864	1,400	1,070	887	708
3	359	119	112	182	316	401	491	919	1,400	1,100	880	706
4	271	117	110	201	323	412	497	896	1,380	1,110	862	712
5	257	121	111	159	325	412	501	953	1,380	1,110	860	703
6	251	120	50	163	327	415	512	950	1,390	1,100	853	701
7	247	120	50	168	327	415	531	985	1,390	1,050	861	700
8	245	120	69	154	330	415	454	926	1,390	1,070	866	699
9	238	120	71	174	333	434	529	945	1,390	1,070	863	732
10	221	121	71	191	333	453	549	997	1,410	1,070	839	728
11	221	120	72	214	340	434	536	1,020	1,380	1,050	835	703
12	227	121	79	216	309	457	549	1,040	1,300	1,030	837	651
13	221	122	81	214	327	457	553	1,060	1,330	1,020	837	637
14	220	122	79	214	340	457	563	1,080	1,380	1,020	851	628
15	147	122	81	218	343	467	575	958	1,240	1,010	817	632
16	148	122	83	208	353	471	563	1,130	1,270	1,010	810	630
17	149	121	92	218	325	471	571	1,160	1,280	999	810	633
18	144	120	98	211	334	485	596	1,200	1,280	988	819	631
19	125	114	94	231	360	479	613	1,240	1,250	945	804	629
20	125	110	91	234	366	447	541	1,260	1,180	940	804	633
21	124	112	96	239	360	406	572	1,270	1,150	960	796	632
22	125	112	99	242	370	448	621	1,300	1,150	946	784	619
23	126	111	108	244	364	484	632	1,360	1,160	947	764	615
24	125	111	114	253	360	490	652	1,350	1,150	951	776	614
25	125	112	118	269	374	505	681	1,360	1,180	958	779	608
26	122	112	122	275	377	514	707	1,320	1,200	932	787	606
27	115	112	132	284	380	551	724	1,340	1,210	918	771	605
28	116	111	134	292	372	544	785	1,370	1,210	905	764	601
29	115	111	143	292	383	535	765	1,320	1,210	924	764	602
30	117	110	162	290	-	510	786	1,310	1,110	927	758	597
31	121	-	151	290	-	526	-	1,370	-	907	719	-
Total	6,027	3,508	3,094	6,879	9,959	14,280	17,653	35,072	38,550	31,167	25,375	19,579
Mean	194	117	99.8	222	343	461	588	1,131	1,285	1,005	819	653
Ac-ft	11,950	6,960	6,140	13,640	19,750	28,320	35,010	69,560	76,460	61,820	50,330	38,830

Calendar year 1951: Max 873 Min 14 Mean 342 Ac-ft 247,300
Water year 1951-52: Max 1,410 Min 50 Mean 577 Ac-ft 418,800

Note.--Discharge for Dec. 9-27, Jan. 1-14, computed from once-daily staff-gage readings.

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 1952.

Gage.--Water-stage recorder. Datum of gage is 4,219.02 ft above mean sea level, datum of 1929. Since Dec. 31, 1946, auxiliary water-stage recorder about 1 mile downstream.

Average discharge.--9 years (1943-52), 180 cfs.

Extremes.--Maximum discharge during year, 1,700 cfs June 7; maximum gage height, 8.84 ft May 7; minimum daily discharge, 90 cfs Nov. 24-26.
1942-52: Maximum discharge, that of June 7, 1952; maximum gage height, that of May 7, 1952; 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 headgates 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. 127 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*143	155	148	306	458	415	588	1,030	1,380	905	560	216
2	145	157	149	310	475	435	576	1,020	*1,430	781	519	246
3	224	154	148	315	473	*431	564	1,100	1,490	689	440	273
4	323	149	149	279	454	430	540	1,210	1,520	659	403	224
5	319	137	152	273	446	443	530	*1,320	1,530	638	362	208
6	300	135	153	269	433	444	544	*1,360	*1,540	615	362	203
7	284	133	149	266	408	448	*558	1,440	1,640	590	352	209
8	232	128	152	269	406	469	614	1,170	1,630	*540	339	232
9	204	126	161	265	403	507	542	*1,030	*1,560	521	310	230
10	171	120	158	272	403	536	528	965	1,520	513	327	230
11	196	109	156	307	399	594	546	953	1,460	515	*362	227
12	199	112	155	331	404	566	530	*1,030	*1,400	502	330	236
13	194	125	157	356	*401	544	502	*1,020	1,400	521	308	224
14	186	124	191	346	363	*517	*600	1,060	1,270	*504	283	219
15	*174	*123	206	*346	332	492	*758	1,130	1,190	478	289	*215
16	162	114	206	386	332	515	*604	1,140	*1,120	450	266	217
17	152	130	*206	399	354	576	578	*1,310	1,020	429	250	222
18	145	138	201	383	363	572	570	1,260	956	432	239	222
19	135	125	217	372	346	576	614	*1,130	903	413	211	222
20	131	116	221	361	354	566	672	1,160	881	362	199	223
21	135	126	214	368	360	530	*682	1,370	*765	358	200	217
22	133	a110	216	360	360	524	676	*1,540	724	360	189	209
23	125	a100	237	358	372	532	735	1,500	714	*338	190	204
24	121	a90	248	363	348	*558	804	1,490	783	325	218	196
25	118	a90	245	437	346	576	*842	1,340	*956	364	218	194
26	112	a90	251	496	379	610	913	*1,290	1,120	432	200	193
27	110	a120	235	484	395	651	*986	1,260	*1,180	474	197	195
28	119	166	236	464	410	626	*1,040	1,210	1,180	510	200	198
29	130	166	254	452	412	616	1,100	1,260	1,150	*542	*212	195
30	131	*156	302	*446	-	612	*1,110	1,360	*1,010	524	236	197
31	*137	-	346	439	-	*610	-	*1,400	-	560	228	-
Total	5,390	3,824	6,219	11,078	11,389	16,521	20,446	37,858	36,422	15,844	8,999	6,496
Mean	174	127	201	357	393	533	682	1,221	1,214	511	290	217
Ac-ft	10,690	7,580	12,340	21,970	22,590	32,770	40,550	75,090	72,240	31,430	17,850	12,880

Calendar year 1951: Max 561 Min 72 Mean 166 Ac-ft 120,000
Water year 1951-52: Max 1,640 Min 90 Mean 493 Ac-ft 358,000

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of gage-height record for auxiliary gage and records for 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 1952.

Gage.--Water-stage recorder. Datum of gage is 4,220.73 ft above mean sea level, datum of 1929.

Average discharge.--9 years (1943-52), 147 cfs.

Extremes.--Maximum discharge during year, 367 cfs June 26 (gage height, 5.75 ft); no flow May 10, 24.
Maximum combined discharge during year (Jordan River and Surplus Canal), 1,820 cfs June 7; minimum daily, 201 cfs Nov. 19.
1942-52: Maximum discharge, 384 cfs June 3, 1944; maximum gage height, 5.75 ft June 26, 1952; no flow May 10, 24, 1952.
Maximum combined discharge (Jordan River and Surplus Canal), that of June 7, 1952; minimum daily, 145 cfs May 18, 1946.

Remarks.--Records good. Flow regulated by gates and pumps at outlet of Utah Lake. Many diversions above station for irrgation and industrial and municipal water supplies. Surplus Canal diverts water 1,000 ft upstream from station (see p. 126). For records of combined flow see following page.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*140	156	136	176	177	208	262	166	112	200	263	198
2	141	129	149	123	188	216	259	153	*112	159	256	135
3	145	125	158	98	194	*211	267	183	112	125	220	72
4	128	122	156	121	192	211	271	174	113	114	205	99
5	115	121	163	119	192	219	271	111	113	105	183	132
6	101	120	170	115	183	220	277	82	*113	96	175	127
7	97	121	161	*115	175	221	*284	54	116	116	163	135
8	143	125	166	115	174	232	297	18	117	*126	160	158
9	161	123	174	111	176	251	310	*.3	*115	121	138	158
10	156	122	172	112	181	264	305	0	111	118	148	161
11	164	125	171	134	186	274	317	.3	109	147	*166	162
12	171	136	171	150	200	263	310	.7	*107	156	153	166
13	171	148	173	162	*201	249	285	.1	106	174	142	157
14	170	144	122	156	219	*278	*211	.1	100	*163	127	154
15	*167	*146	92	*139	249	304	*274	.3	96	148	132	*151
16	159	141	96	136	249	308	*286	2.7	*91	144	122	152
17	158	94	*101	150	258	330	260	.5	86	132	116	158
18	154	66	99	144	260	325	255	.2	105	124	103	158
19	153	76	103	140	248	323	270	.1	143	158	133	156
20	153	91	108	135	253	312	250	.1	149	176	162	158
21	160	100	105	140	254	294	*209	.1	*199	175	157	154
22	162	113	107	137	253	234	212	*.2	221	178	154	149
23	155	145	125	136	259	213	221	.1	216	*168	115	147
24	151	147	137	142	252	*227	203	0	260	159	93	158
25	152	152	133	169	231	228	*204	37	*337	179	95	169
26	152	154	128	193	209	235	191	*73	326	209	126	166
27	157	133	127	188	202	264	194	*90	*280	236	175	167
28	159	92	132	179	205	265	*199	107	277	250	189	167
29	162	95	143	173	206	266	208	109	276	*240	*195	165
30	165	*115	170	*167	-	270	*166	113	*242	237	214	164
31	*167	-	196	166	-	*271	-	*115	-	250	207	-
Total	4,689	3,676	4,344	4,441	6,226	7,986	7,528	1,590.8	4,859	5,083	4,987	4,553
Mean	151	123	140	143	215	258	251	51.3	162	164	161	152
Ac-ft	9,300	7,290	8,620	8,810	12,350	15,840	14,930	3,160	9,640	10,080	9,890	9,030

Calendar year 1951: Max 262 Min 65 Mean 136 Ac-ft 98,260
Water year 1951-52: Max 337 Min 0 Mean 164 Ac-ft 118,900

* Discharge measurement made on this day.

Combined discharge, in cubic feet per second, of Jordan River and Surplus Canal at Salt Lake City, Utah, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	283	311	284	482	635	623	850	1,200	1,490	1,100	823	414
2	286	286	298	433	663	651	835	1,170	1,540	940	775	381
3	369	279	306	413	667	642	831	1,280	1,600	814	660	345
4	451	271	305	400	646	641	811	1,380	1,630	773	608	323
5	434	258	315	392	638	662	801	1,430	1,640	743	545	340
6	401	255	323	384	616	664	821	1,440	1,650	711	537	330
7	381	254	310	381	583	669	842	1,490	1,760	706	515	344
8	375	253	318	384	580	701	911	1,190	1,750	666	499	390
9	365	249	335	376	579	758	852	1,030	1,680	642	448	388
10	327	242	330	384	584	800	833	965	1,630	631	475	391
11	360	234	327	441	585	868	863	953	1,570	662	528	389
12	370	248	326	481	604	829	840	1,030	1,510	658	483	402
13	365	273	330	518	602	793	787	1,020	1,510	695	450	381
14	356	268	313	502	582	795	811	1,060	1,370	667	410	373
15	341	269	298	485	581	796	1,030	1,130	1,290	626	421	366
16	321	255	302	522	581	823	890	1,140	1,210	594	388	369
17	310	224	307	549	612	906	838	1,310	1,100	561	366	380
18	299	203	300	527	623	897	825	1,260	1,060	556	342	380
19	288	201	320	512	594	899	884	1,130	1,050	571	344	378
20	284	207	329	496	607	878	922	1,160	1,030	538	361	381
21	295	226	319	508	614	824	891	1,370	964	533	357	371
22	295	a223	323	497	613	758	888	1,540	945	538	343	358
23	280	a245	322	494	631	745	956	1,500	930	506	305	351
24	272	a237	385	505	600	785	1,010	1,490	1,040	484	311	354
25	270	a242	378	606	577	804	1,050	1,380	1,290	543	313	363
26	264	a244	379	689	588	845	1,100	1,360	1,450	641	326	359
27	267	a253	362	672	597	915	1,180	1,350	1,460	710	372	362
28	278	258	368	643	615	891	1,240	1,320	1,460	760	389	365
29	292	261	397	625	618	882	1,310	1,370	1,430	782	407	360
30	296	271	472	613	-	882	1,280	1,470	1,250	761	450	361
31	304	-	542	605	-	881	-	1,520	-	810	435	-
Total	10,079	7,500	10,563	15,519	17,615	24,507	27,982	39,438	41,289	20,922	13,986	11,049
Mean	325	250	341	501	607	791	933	1,272	1,376	675	451	368
Ac-ft	19,990	14,880	20,950	30,780	34,940	48,610	55,500	78,220	81,900	41,500	27,740	21,920

Calendar year 1951: Max 821 Min 182 Mean 302 Ac-ft 218,300
Water year 1951-52: Max 1,760 Min 201 Mean 657 Ac-ft 476,900

a No gage-height record on Surplus Canal; discharge estimated on basis of gage-height record for auxiliary gage and records for Jordan River.

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 1952.

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.--21 years (1912-13, 1914-16, 1917-18, 1922-23, 1924-27, 1939-52), 133 cfs.

Extremes.--Maximum discharge during year, 827 cfs June 3 (gage height, 3.96 ft); minimum, 36 cfs Feb. 19.
1911-28, 1939-52: 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 Feb. 19, 1952.

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 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 2-6)

Oct. 1 to Apr. 29		Apr. 30 to Sept. 30	
1.2	40	1.6	76
1.4	68	2.0	164
1.7	129	3.0	484
2.0	202	3.9	805
2.7	400		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*45	46	49			51	60	363	702	223	137	99
2	44	47	50			51	62	*416	699	220	134	97
3	45	46	b49			b50	65	511	794	214	134	97
4	45	46	b49			b49	67	595	742	206	132	95
5	45	46	b49			49	70	641	738	211	130	93
6	45	47			b47	49	76	*713	706	217	128	93
7	45	47				49	89	735	*691	197	*128	93
8	45	47				49	93	761	645	186	128	95
9	45	47			(*)	49	81	742	620	191	123	93
10	45	47				51	77	724	598	206	123	91
11	46	47				b48	68	735	564	180	116	91
12	45	47			47	b46	68	750	532	172	112	93
13	45	49				b46	74	*753	*508	167	112	93
14	45	49				b46	91	768	470	162	112	91
15	45	49			b47	46	111	775	447	159	110	91
16	45	b46		b46		46	122	720	423	*154	110	91
17	45	b47			47	b46	140	691	386	154	112	91
18	45	b47	b46			b46	159	641	340	149	112	89
19	45	49		(*)		46	171	609	314	144	116	87
20	45	50			b47	46	184	612	*304	142	112	89
21	46	51				b46	197	652	294	139	133	93
22	46	50				b46	218	*620	281	134	129	93
23	46	47				b46	245	606	277	134	123	91
24	46	b47			50	46	276	602	274	134	112	89
25	47	b47			b49	46	301	609	*264	137	108	89
26	50	b47			b49	47	318	616	271	134	146	*89
27	46	50			49	47	391	645	271	142	121	89
28	46	49	(*)		*47	*49	394	648	245	172	114	89
29	46	*49			49	51	*364	645	236	175	*116	89
30	46	49			-	57	*353	659	229	149	108	89
31	*46	-		47	-	60	-	688	-	142	101	-
Total	1,411	1,432	1,442	1,427	1,374	1,500	4,985	20,245	13,865	5,246	3,732	2,752
Mean	45.5	47.7	46.5	46.0	47.4	48.4	166	653	462	169	120	91.7
Ac-ft	2,800	2,840	2,860	2,830	2,730	2,980	9,890	40,160	27,500	10,410	7,400	5,460

Calendar year 1951: Max 202 Min 40 Mean 56.2 Ac-ft 40,680
Water year 1951-52: Max 794 Min - Mean 162 Ac-ft 117,800

Peak discharge (base, 500 cfs).--May 15 (3:30 a.m.) 812 cfs (3.92 ft); June 3 (5 a.m.) 827 cfs (3.96 ft); July 28 (8 p.m.) 602 cfs (3.34 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

Sevier River near Circleville, Utah

Location.--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 1952.

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.--11 years (1914-22, 1923-24, 1950-52), 212 cfs.

Extremes.--Maximum discharge recorded during year, 802 cfs May 6 (gage height, 5.48 ft); minimum, 39 cfs Feb. 19 (gage height, 1.72 ft).
1912, 1914-27, 1949-52: 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, 30 cfs July 13, 1951.
Flood of March 1938 probably exceeded that of May 1922.

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

Revisions (water years).--W 1180: 1922(M).

Rating table, water year 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 13 to Aug. 27, Sept. 5-20)

1.8	41
2.5	119
3.5	280
4.5	510
5.4	760

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	69	113			112	221	430	609	173	152	120
2	*45	66	115			112	195	465	606	176	132	115
3	46	73	107		100	103	179	540	664	172	119	113
4	52	73	103			103	189	610	745	170	107	108
5	55	73	114			107	202	710	655	167	97	106
6	54	69	108		100	111	219	*750	624	180	96	106
7	50	69	95		100	111	*230	750	*588	160	*105	107
8	45	70	82		*99	115	280	740	570	145	119	103
9	45	71			100	128	*195	720	528	150	108	100
10	47	72		80	101	148	190	690	497	160	96	*94
11	46	74			101	122	185	660	472	140	95	91
12	44	82			105	102	180	660	460	136	95	97
13	45	87			87	117	175	*652	*429	132	93	105
14	48	89			83	106	180	640	398	127	89	108
15	49	85			93	112	190	646	360	120	87	106
16	51	80			100	114	200	658	346	*126	84	103
17	52	81			106	109	220	622	324	122	85	106
18	52	95			111	108	237	585	286	118	90	106
19	49	109		(*)	99	108	275	533	*253	119	94	106
20	-	115	80		89	108	280	515	*231	126	108	108
21					94	102	272	562	222	124	119	124
22	49				103	101	271	562	219	119	108	156
23	49				103	96	283	*536	217	109	113	126
24	49	10			106	112	320	528	200	122	108	122
25	53	105			96	118	350	520	198	153	102	*122
26	62	100		100	94	149	410	513	*198	131	106	122
27	65	111	(*)		*101	233	470	518	224	129	*305	129
28	60	*117			108	*248	535	549	197	149	*150	133
29	62	114			108	246	520	562	190	260	158	128
30	*64	113			-	235	*450	554	176	222	138	123
31	70	-			-	239	-	567	-	257	126	-
Total	1,599	2,705	2,677	2,700	2,887	4,135	8,083	18,547	11,686	4,694	3,580	3,393
Mean	51.6	90.2	86.4	87.1	99.6	133	269	598	390	151	115	113
Ac-ft	3,170	5,370	5,310	5,360	5,730	8,200	16,030	36,790	23,180	9,310	7,100	6,730

Calendar year 1951: Max 299 Min 30 Mean 72.8 Ac-ft 52,720
Water year 1951-52: Max 750 Min 44 Mean 182 Ac-ft 132,300

* Discharge measurement made on this day.

Note.--No gage-height record Apr. 8 to May 12, July 3-12; discharge estimated on basis of recorded range in stage, 5 discharge measurements, weather records, and records for stations at Hatch and near Kingston. Stage-discharge relation affected by ice Dec. 9 to Feb. 5.

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 1952.

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.--38 years, 144 cfs.

Extremes.--Maximum discharge during year, 844 cfs May 6 (gage height, 2.62 ft); minimum, 14 cfs Oct. 15, 16.
1914-52: 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 period of no gage-height record, which are fair. Many diversions above station for irrigation.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 3-8)

0.7	14	1.5	194
.8	24	2.0	404
.9	38	2.8	850
1.1	76		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	70	141	107	118	151	231	448	495	53	144	76
2	*17	68	144	81	126	144	209	495	527	53	86	78
3	17	70	135		129	135	201	620	626	66	66	74
4	18	68	132		126	135	212	706	796	70	50	74
5	18	63	138		126	138	224	*736	670	68	35	63
6	17	74	135		126	138	235	802	*637	88	*28	53
7	20	81	118		121	138	258	802	560	121	41	50
8	23	78	109		*118	141	291	766	516	107	74	53
9	18	81	104	a85	126	154	227	730	433	98	70	45
10	23	78	84		135	180	220	648	366	112	57	40
11	25	81	76		138	157	220	582	316	104	53	37
12	25	96	96		148	135	194	554	*295	88	50	43
13	24	112	115		144	141	191	*544	291	66	40	52
14	24	121	121		121	141	198	510	278	55	27	91
15	17	109	88	91	138	135	201	532	231	*46	24	88
16	17	98	86	96	138	144	216	582	227	46	22	94
17	23	101	104	101	141	138	250	582	201	48	22	72
18	20	112	91	*107	141	132	274	560	170	43	20	86
19	19	129	94	107	151	129	321	484	*148	41	24	70
20	20	138	78	101	115	129	316	448	163	48	28	66
21	21	141	84	98	126	126	312	566	138	52	46	91
22	24	138	61	98	135	123	308	566	126	52	55	157
23	24	138	96	104	126	118	321	*560	144	40	63	112
24	28	135	115	112	138	126	362	*510	132	41	70	109
25	34	129	96	129	129	132	385	463	138	101	66	*112
26	37	115	94	148	129	167	453	474	*144	68	55	115
27	38	132	*98	144	*135	*258	532	458	151	63	*208	118
28	45	*141	104	126	141	295	610	484	129	78	*141	121
29	*52	144	129	107	148	308	549	484	104	209	132	101
30	53	138	191	96	-	287	*474	463	78	216	104	112
31	63	-	151	112	-	266	-	458	-	270	86	-
Total	821	3,179	3,408	3,085	3,833	5,041	8,995	17,617	9,230	2,611	1,987	2,453
Mean	26.5	106	110	99.5	132	163	300	568	308	84.2	64.1	81.8
Ac-ft	1,630	6,310	6,760	6,120	7,600	10,000	17,840	34,940	18,310	5,180	3,940	4,870

Calendar year 1951: Max 191 Min 7.0 Mean 64.7 Ac-ft 46,870
Water year 1951-52: Max 802 Min 17 Mean 170 Ac-ft 123,500

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

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 1952 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, 55,000 acre-ft June 10 (gage height, 37.0 ft); minimum observed, 1,960 acre-ft Oct. 10 (gage height, 4.6 ft).
1914-15, 1934-52: Maximum contents observed, 55,000 acre-ft May 1, 1946, May 20, 1948, June 10, 20, 1949, June 10, 1952 (gage height, 37.0 ft); minimum, 400 acre-ft Aug. 1, Sept. 1, 20, Oct. 1, 1934.

Remarks.--Reservoir was formed in 1898 by a 15-foot earth-fill, rock-faced dam which was raised some each year to the ultimate height of 45 ft in 1915 (revised). The dam has a concrete core through the center. 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 of 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,080	3,300	6,500	10,700	13,950	18,350	24,780	39,920	54,750	53,000	44,480	36,800
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-
10	1,960	4,100	7,500	11,350	15,440	19,920	29,100	48,320	55,000	51,750	42,080	34,600
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	2,080	5,200	8,400	12,780	16,750	21,900	32,000	53,750	54,250	48,320	38,720	32,000
21	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	a18,190	-	-	-	-	-	-	-
30	-	a6,370	-	-	-	-	a39,130	-	53,000	-	-	a30,200
31	a3,180	-	10,460	a13,830	-	24,600	-	a54,650	-	a44,860	a36,990	-

a No gage-height record; contents interpolated.

Monthly gage heights and contents, water year October 1951 to September 1952

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4.8	2,080	-
Oct. 31	-	a3,180	+1,100
Nov. 30	-	a6,370	+3,190
Dec. 31	13.8	10,460	+4,090
Calendar year 1951	-	-	-8,740
Jan. 31	-	a13,830	+3,370
Feb. 29	-	a18,190	+4,360
Mar. 31	23.0	24,600	+6,410
Apr. 30	-	a39,130	+14,530
May 31	-	a54,650	+15,520
June 30	36.2	53,000	-1,650
July 31	-	a44,860	-8,140
Aug. 31	-	a36,990	-7,870
Sept.30	-	a30,200	-6,790
Water year 1951-52	-	-	+28,120

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 1952.

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.--39 years, 87.7 cfs.

Extremes.--Maximum discharge during year, 490 cfs May 5 (gage height, 2.78 ft); minimum, 6.2 cfs Feb. 16.
1913-52: 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. 132).

Revisions (water years).--W 750: 1931-32.

Rating table, water year 1951-52, except periods 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	2.5	374
1.0	56	2.7	455

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	13	13	a13	13	14	a22	*51	a190	42	188	154
2	*68	13	13	a13	13	14	23	57	a190	89	184	154
3	68	16	13		12	15	22	207	a190	63	182	154
4	68	14	13		13	15	22	364	193	61	178	153
5	68	13	13		13	14	21	421	191	60	176	153
6	66	12		13	13	14	21	*356	*191	55	*174	153
7	66	12			13	14	23	296	182	54	170	153
8	64	12			*13	15	24	258	140	48	172	151
9	63	12			13	20	22	188	89	89	174	151
10	63	12			13	21	22	121	51	149	168	151
11	63	12		a13	13	17	23	109	52	184	164	149
12	62	13			13	16	22	*101	*47	180	168	151
13	62	14			11	16	22	61	49	176	166	151
14	61	14				16	21	54	46	174	168	153
15	61	17			13	16	22	55	44	*172	168	156
16	60	15		13		17	21	54	43	168	168	158
17	60	17				16	21	56	53	164	168	156
18	50	15	a13	(*)	13	16	21	68	69	164	170	153
19	a44	17			13	16	21	112	64	164	168	151
20	a39	13			13	18	21	126	56	164	166	151
21	a34	13		13		16	21	151	61	164	172	158
22	a30	12		14		16	21	156	61	164	168	154
23	a26	12		14		17	21	*164	53	162	170	151
24	a23	12		14		17	21	170	53	164	164	151
25	a21	16		14	14	18	22	174	57	a170	160	*151
26	19	13		15		22	23	184	*56	a170	174	149
27	17	15	(*)	14	(*)	*20	35	188	57	a170	*164	149
28	15	*13		a14			88	178	56	a170	162	149
29	14	12		a14			61	a180	48	a180	164	151
30	*14	13		a13	-	a22	71	a180	41	a180	158	153
31	13	-		a13	-		-	a180	-	191	154	-
Total	1,450	407	403	412	383	534	841	5,020	2,673	4,285	5,250	4,572
Mean	46.8	13.6	13.0	13.3	13.2	17.2	28.0	162	89.1	138	169	152
Ac-ft	2,880	807	799	817	760	1,060	1,670	9,960	5,300	8,500	10,410	9,070

Calendar year 1951: Max 242 Min 9.0 Mean 63.8 Ac-ft 46,160
Water year 1951-52: Max 421 Min - Mean 71.7 Ac-ft 52,030

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby stations.
Note.--Stage-discharge relation affected by ice Dec. 6 to Jan. 20, Feb. 14-17, Feb. 19 to Mar. 2.

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 1952.
Gage.--Staff gage read once daily. Datum of gage is 5,900.8 ft above mean sea level.
Extremes.--Maximum contents during year, 74,010 acre-ft for several days during May and June (gage height, 76.0 ft); minimum, 1,680 acre-ft Oct. 1 (gage height, 25.3 ft).
1914-52: 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 at 4 p.m., in acre-feet, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,680	2,570	10,470	18,280	25,420	33,360	44,420	61,860	74,010	67,370	46,260	35,620
2	1,760	2,820	10,770	18,410	25,560	33,670	44,790	62,080	74,010	66,650	46,450	35,130
3	1,760	3,140	10,970	18,540	25,850	33,830	45,160	62,530	72,760	65,730	46,640	34,480
4	1,720	3,260	11,170	18,660	26,140	34,150	45,530	63,210	73,510	65,030	46,450	33,830
5	1,720	3,480	11,570	18,780	26,420	34,480	45,900	64,340	74,010	64,340	46,080	32,880
6	1,720	3,730	11,990	18,910	26,720	34,800	46,260	65,500	73,510	63,660	45,710	32,570
7	1,760	3,980	12,300	19,160	27,000	35,130	46,820	65,730	73,010	62,980	45,900	31,790
8	1,850	4,230	12,620	19,410	27,300	35,450	47,190	65,960	73,260	61,860	45,710	31,020
9	1,970	4,440	12,830	19,670	27,580	35,790	47,740	66,190	73,510	60,760	45,710	30,260
10	2,100	4,640	13,040	19,930	27,880	36,120	48,120	66,420	74,010	59,670	45,710	29,500
11	2,240	4,770	13,260	20,060	28,020	36,460	48,680	66,650	74,010	58,600	45,530	28,910
12	2,330	4,840	13,470	20,190	28,320	36,790	49,060	66,890	73,760	57,750	45,340	28,320
13	2,420	4,910	13,800	20,320	28,610	37,300	49,430	66,890	74,010	56,930	45,160	27,730
14	2,420	4,980	14,120	20,450	28,910	37,820	49,810	67,130	74,010	56,120	44,980	27,440
15	2,420	5,120	14,340	20,580	29,200	38,330	50,200	67,130	73,760	55,310	44,790	27,150
16	2,420	5,340	14,670	20,710	29,350	38,510	50,580	67,850	73,510	54,510	44,610	26,860
17	2,470	5,480	15,010	20,840	29,650	38,680	51,160	68,330	74,010	53,510	43,880	26,570
18	2,470	5,780	15,340	20,980	29,950	38,850	51,740	69,050	74,010	52,530	43,150	26,140
19	2,420	6,000	15,680	21,120	30,260	39,030	52,330	69,540	73,510	51,550	40,620	25,850
20	2,380	6,220	16,020	21,380	30,560	39,200	52,920	69,780	73,010	50,580	41,700	25,560
21	2,280	6,450	16,250	21,790	31,020	39,560	53,510	70,280	72,500	49,620	40,800	25,560
22	2,280	6,760	16,600	22,200	31,480	39,740	54,110	71,010	73,760	48,870	39,740	25,710
23	2,200	7,070	16,830	22,610	31,790	39,910	54,710	71,750	73,510	48,310	38,850	25,850
24	2,150	7,390	16,950	23,030	31,940	40,090	55,310	72,500	74,010	47,930	38,330	25,990
25	2,100	7,790	17,070	23,440	32,100	40,620	55,910	72,760	74,010	47,560	37,990	25,990
26	2,060	8,210	17,190	23,720	32,250	41,160	56,530	72,760	73,510	46,820	37,650	25,850
27	2,060	8,900	17,310	24,000	32,410	41,520	57,550	73,010	73,010	46,640	36,960	25,850
28	2,100	9,250	17,430	24,290	32,720	42,060	59,030	73,260	72,500	46,450	37,130	25,710
29	2,150	9,710	17,800	24,570	33,040	42,600	60,320	73,510	68,330	46,450	37,990	25,560
30	2,200	10,090	18,040	24,850	-	43,150	61,420	73,760	68,090	46,260	36,960	25,420
31	2,380	-	18,280	25,140	-	43,880	-	74,010	-	46,080	36,120	-

Monthly gage height and contents, water year October 1951 to September 1952

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	24.2	1,270	-
Oct. 31	26.9	2,380	+1,110
Nov. 30	37.6	10,090	+7,710
Dec. 31	45.1	18,280	+8,190
Calendar year 1951	-	-	-2,300
Jan. 31	50.2	25,140	+6,860
Feb. 29	55.5	33,040	+7,900
Mar. 31	61.8	43,880	+10,840
Apr. 30	70.7	61,420	+17,540
May 31	76.0	74,010	+12,590
June 30	73.6	68,090	-5,920
July 31	63.0	46,080	-22,010
Aug. 31	57.4	36,120	-9,960
Sept.30	50.4	25,420	-10,700
Water year 1951-52	-	--	+24,150

† Gage heights at 4 p.m.

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 1952.

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.--40 years (1912-52), 243 cfs.

Extremes.--Maximum discharge during year, 1,020 cfs June 3 (gage height, 3.36 ft); minimum, 2.4 cfs Jan. 14 (gage height, -0.22 ft).
1911-52: 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, which are fair. One small diversion between gage and Piute Reservoir. Flow regulated by Piute Reservoir (see preceding page).

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

-0.3	1.7	0.2	18	1.5	285
-.1	4.8	.4	35	2.0	480
0	7.6	.6	60	3.0	880
.1	12	1.0	140		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	29	3.8		3.4	4.5	4.6	*252	440	448	188	436
2	*67	27	3.8		3.4	4.6	4.6	348	484	544	271	580
3	90	26	3.8		3.4	4.5	4.8	364	772	580	306	592
4	109	24	3.7		3.4	4.3	4.8	444	752	564	306	616
5	111	24	b3.7		3.5	4.3	4.8	448	836	544	376	604
6	100	24	3.7		3.5	4.3	4.8	*528	*872	560	*368	604
7	96	23	3.8	b2.6	3.5	4.3	4.8	756	808	588	324	584
8	96	33	3.8		*3.5	4.3	4.8	848	596	648	178	580
9	77	34			3.7	4.3	4.8	783	320	664	131	584
10	67	35			3.8	4.3	4.8	412	199	680	168	540
11	106	47			3.8	4.3	4.8	432	278	680	241	440
12	124	45	b3.3		3.8	b4.4	4.8	*476	*274	660	372	352
13	124	47		2.6	b3.8	4.5	4.8	448	188	644	460	356
14	90	43		b2.6	b3.9	4.6	4.8	400	205	604	552	360
15	65	43		b2.6	4.0	4.5	4.8	400	199	*620	588	364
16	65	42		2.8	4.0	4.5	4.8	285	170	652	580	360
17	65	40	2.9	3.2	4.0	4.5	4.8	244	160	704	632	368
18	90	40	2.8	*3.2	4.2	4.5	4.8	282	175	696	640	380
19	90	39	2.8	3.2	4.2	4.5	4.8	313	254	644	632	380
20	90	37	b2.8	3.2	b4.2	4.5	4.8	302	388	628	608	380
21	92	30	b2.8	3.2	4.2	4.5	4.8	264	452	628	600	380
22	92	17	2.9	b3.2	4.3	b4.5	4.8	274	444	588	552	380
23	90	16	2.8	3.4	4.3	b4.5	4.8	299	436	508	516	380
24	90	3.8	2.6	3.2	4.3	4.5	4.8	*356	460	404	444	356
25	90	3.6	2.6	3.4	4.2	4.5	4.8	428	432	404	392	*310
26	98	3.8	2.6	3.2	b4.2	4.5	5.1	432	*428	468	392	316
27	86	4.0	2.6	3.4	*4.2	*4.6	5.1	384	332	556	388	332
28	63	4.0	*2.6	3.4	4.3	4.6	5.4	404	254	548	*392	332
29	62	*4.0	b2.6	3.4	4.5	4.6	5.6	420	316	520	392	384
30	*47	4.0	b2.6	3.4	-	4.6	42	428	313	388	392	400
31	30	-	2.6	3.4	-	4.6	-	432	-	268	392	-
Total	2,598	792.4	97.1	91.2	113.5	138.5	182.8	12,886	12,237	17,632	12,773	13,030
Mean	83.8	26.4	3.13	2.94	3.91	4.47	6.09	416	408	569	412	434
Ac-ft	5,150	1,570	193	181	225	275	363	25,560	24,270	34,970	25,330	25,840

Calendar year 1951: Max 598 Min - Mean 141 Ac-ft 101,800
Water year 1951-52: Max 872 Min - Mean 198 Ac-ft 143,900

* Discharge measurement made on this day.
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 1952. 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 5,500 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).

Average discharge.--17 years (1912-16, 1939-52), 282 cfs.

Extremes.--Maximum discharge during year, 1,240 cfs June 7 (gage height, 3.73 ft); minimum, 4.6 cfs Feb. 13 (gage height, 0.57 ft).

1911-16, 1939-52 (not including flow of Clear Creek): Maximum discharge, 2,270 cfs May 16, 1941 (gage height, 4.83 ft); minimum, that of Feb. 13, 1952.

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, which are fair. Many diversions above station for irrigation. Flow regulated by Piute and Otter Creek Reservoirs.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	20	2.0	271
1.0	38	2.5	476
1.3	80	3.0	738
1.6	146	3.7	1,220

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	103	*51	24			26	28	123	664	449	290	418
2	57	48	24			25	27	351	676	564	290	514
3	*88	49				24	27	418	817	621	359	595
4	119	46				b24	26	505	1,120	648	359	616
5	154	44				26	25	574	1,120	632	388	626
6	154	43				25	26	595	1,160	632	422	621
7	121	43				25	26	*732	1,220	642	414	621
8	117	51				25	24	879	1,100	692	343	579
9	112	54				26	24	977	829	*750	189	595
10	95	51				26	24	700	600	774	217	600
11	93	53				27	26	564	534	774	223	500
12	157	66				25	25	610	*564	744	363	427
13	171	66				b24	24	642	481	710	444	388
14	171	64	b24			b24	24	610	422	692	554	384
15	102	61			b25	25	24	*616	422	664	616	380
16	86	58		b22		26	23	579	384	676	632	380
17	86	55				25	*24	440	359	727	637	380
18	93	61	(*)			25	25	427	355	774	664	388
19	117	69			(*)	*26	26	444	405	727	670	401
20	117	56				26	26	467	449	692	676	405
21	119	57				23	26	490	564	676	637	418
22	117	51		(*)		b23	26	458	564	664	605	414
23	117	43				b24	26	436	554	616	579	405
24	114	40				32	*32	444	549	486	529	401
25	112	34				32	36	514	564	462	440	*368
26	128	34	26			30	40	554	*544	458	*431	343
27	149	*35	25			27	45	*554	529	574	431	351
28	103	27	26		25	26	54	579	380	610	431	355
29	88	25	b25		24	26	57	621	384	610	436	372
30	86	24	b25		-	26	60	642	401	*534	427	414
31	64	-	b25		-	28	-	670	-	414	422	-
Total	3,510	1,459	752	682	724	802	906	17,215	18,714	19,688	14,118	13,659
Mean	113	48.6	24.3	22	25.0	25.9	30.2	555	624	635	455	455
Ac-ft	6,960	2,890	1,490	1,350	1,440	1,590	1,800	34,150	37,120	39,050	28,000	27,090

Calendar year 1951: Max 596 Min - Mean 154 Ac-ft 111,300
Water year 1951-52: Max 1,220 Min - Mean 252 Ac-ft 182,900

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

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 left 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 1952 in reports of Geological Survey. April 1934 to September 1952 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.--17 years (1912-17, 1940-52), 33.4 cfs.

Extremes.--Maximum discharge during year, 337 cfs May 5 (gage height, 4.58 ft); minimum, 1.5 cfs Oct. 1, 2, 11, 12.
1912-19, 1940-52: Maximum discharge observed, 487 cfs Aug. 7, 1941 (gage height, 4.05 ft, site and datum then in use); no flow Aug. 26, 1913.

Remarks.--Records good except those for period of no gage-height record, which are fair. Practically entire flow is diverted above station each year during latter part of irrigation season.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 28 to June 9, June 23 to Sept. 30)

0.8	1.3	1.3	14	3.0	161
.9	2.5	1.5	24	4.0	308
1.0	4.2	2.0	60	4.1	324
1.1	6.6	2.5	104		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	*4.6	12	5.3	12	17	43	202	210	76	16	3.0
2	*1.5	2.5	12	5.3	12	14	43	220	196	72	16	2.8
3	1.6	2.8	9.4	6.6	10	12	51	273	240	71	15	2.8
4	2.4	3.4	12	7.8	11	14	70	311	311	66	13	2.8
5	3.0	3.1	13	9.0	11	14	107	308	297	64	12	3.3
6	2.4	2.8	9.7	9.0	11	14	141	*300	267	62	11	3.1
7	2.6	3.4	6.6	10	11	14	177	287	268	61	10	3.6
8	2.8	3.8	6.6	11	11	14	112	264	228	57	11	3.8
9	2.1	3.4	5.3	10	11	15	72	219	208	*53	9.4	2.6
10	1.7	3.3	6.0	9.7	12	15	71	187	201	50	8.7	2.8
11	1.6	3.4	7.2	11	12	14	66	171	181	46	8.7	2.8
12	2.0	4.2	9.0	11	13	12	57	178	*162	40	8.0	2.8
13	2.6	6.6	11	12	12	14	67	191	151	35	8.7	2.6
14	3.1	6.3	11	11	10	13	84	215	136	32	7.8	2.5
15	4.0	4.0	9.4	12	10	14	76	*228	128	26	5.5	2.5
16	4.0	3.1	11	13	13	14	92	194	121	23	4.2	3.4
17	4.2	3.0	11	12	15	13	*130	154	104	21	4.6	2.8
18	4.6	3.3	*11	13	10	12	148	125	100	20	4.2	2.6
19	4.4	3.8	12	12	*8.0	*14	*153	111	105	19	4.4	3.6
20	4.4	6.0	11	12	13	14	128	118	112	18	4.6	3.1
21	4.8	11	9.0	12	15	9.7	120	203	109	17	3.8	3.0
22	4.8	14	12	*10	14	11	115	185	116	17	3.6	3.6
23	4.8	10	12	11	13	13	146	153	109	16	3.6	*2.6
24	4.8	14	12	12	13	19	*187	135	102	16	4.2	2.0
25	4.6	10	10	13	9.4	16	215	136	101	16	3.8	2.0
26	7.7	6.9	12	12	11	18	246	149	*94	14	*4.0	2.0
27	8.7	*13	12	11	14	19	273	*171	87	13	3.6	2.1
28	8.4	11	12	11	14	22	318	187	78	16	3.6	2.4
29	7.8	11	17	11	14	31	261	196	77	*17	3.3	2.1
30	7.4	13	19	12	-	52	219	213	77	16	3.1	2.1
31	6.9	-	12	12	-	50	-	218	-	16	3.0	-
Total	127.2	190.7	335.2	329.7	345.4	537.7	3,988	6,202	4,676	1,086	222.4	83.2
Mean	4.10	6.36	10.8	10.6	11.9	17.3	133	200	156	35.0	7.17	2.77
Ac-ft	252	378	665	654	685	1,070	7,910	12,300	9,270	2,150	441	165

Calendar year 1951: Max 58 Min 0.7 Mean 9.42 Ac-ft 6,820
Water year 1951-52: Max 318 Min 1.5 Mean 49.5 Ac-ft 35,950

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 23 to Feb. 18; discharge estimated on basis of 2 discharge measurements, weather records, and records for Salina Creek at Salina and Chalk Creek near Fillmore.

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 1952. Prior to 1935, published as "near Vermillion."

Gage.--Water-stage recorder. Altitude of gage is 5,230 ft. July 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.--38 years (1914-52), 109 cfs.

Extremes.--Maximum discharge during year, 796 cfs June 10 (gage height, 3.98 ft); minimum, 0.6 cfs Oct. 7, 8, 17, 18.
1914-52: 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. 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-8)

0.6	0	1.1	18	2.5	260
.7	2.1	1.3	32	3.0	425
.8	4.9	1.6	62	4.0	804
.9	8.5	2.0	130		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	*87	70	112	129	106	164	164	145	2.9	2.7	3.5
2	1.0	84	72	106	148	105	132	110	197	2.4	2.7	4.1
3	**1.0	79	73	106	116	99	114	66	236	1.9	2.4	4.1
4	1.0	76	73	106	108	97	122	58	301	1.9	2.4	4.1
5	1.0	75	73	106	108	97	150	62	436	1.7	2.1	4.1
6	.8	73	73	106	106	97	210	*125	717	1.7	2.7	4.1
7	.8	70	75	92	103	101	272	256	729	2.1	2.9	4.6
8	.8	69	75	75	103	103	307	282	748	2.4	2.7	4.9
9	1.0	69	75	75	101	101	*285	294	772	*2.7	6.0	4.9
10	1.3	68	73	75	97	99	216	336	*772	2.7	12	5.6
11	1.3	66	72	76	97	97	192	343	*666	2.9	16	6.0
12	1.0	60	70	79	97	97	130	215	316	2.9	19	6.3
13	1.3	61	72	84	97	97	105	*80	65	2.9	18	7.1
14	1.3	63	72	87	92	99	106	22	3.2	2.7	13	7.4
15	1.3	65	72	87	89	101	*106	8.9	3.5	2.7	6.0	62
16	33	65	70	89	94	103	176	8.9	5.6	2.9	4.6	82
17	21	65	70	87	97	106	210	10	13	2.9	2.7	81
18	.6	65	*70	87	103	106	227	10	19	2.9	2.4	79
19	.8	65	69	89	*92	*105	254	8.9	20	2.7	2.4	78
20	1.3	63	70	89	90	106	269	7.8	16	2.4	2.4	76
21	1.3	61	70	89	90	106	266	5.3	13	2.7	2.4	76
22	1.7	61	69	*87	94	105	210	3.5	8.5	2.4	2.4	75
23	1.7	61	70	87	97	105	186	3.8	7.4	2.4	2.4	*69
24	17	62	75	89	97	106	174	20	*7.4	2.7	2.4	68
25	27	63	76	103	94	51	137	5.6	3.2	2.7	2.7	69
26	28	65	78	143	92	9.4	*124	242	4.3	3.2	*2.1	70
27	32	*68	233	137	96	13	130	*257	3.8	3.2	2.1	72
28	33	68	313	120	103	12	162	260	3.8	2.7	2.4	72
29	62	69	181	116	101	12	251	248	3.8	*2.7	3.5	72
30	96	69	130	112	-	20	260	179	2.9	2.4	3.5	72
31	92	-	122	108	-	128	-	126	-	2.7	3.5	-
Total	464.3	2,035	2,856	3,004	2,931	2,689.4	5,647	3,949.1	6,240.8	80.6	154.5	1,243.8
Mean	15.0	67.8	92.1	96.9	101	86.8	188	127	208	2.60	4.98	41.5
Ac-ft	921	4,040	5,660	5,960	5,810	5,330	11,200	7,830	12,380	160	306	2,470

Calendar year 1951: Max 313 Min 0.6 Mean 40.3 Ac-ft 29,170
Water year 1951-52: Max 772 Min 0.6 Mean 85.5 Ac-ft 62,070

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

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 1952.

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 a quarter of a mile upstream at different datum.

Average discharge.--11 years (1917-19, 1943-52), 22.6 cfs.

Extremes.--Maximum discharge during year, 856 cfs May 3, from rating curve extended above 400 cfs; minimum, 0.2 cfs Oct. 8.
1914-19, 1942-52: Maximum discharge, 926 cfs May 15, 1948, 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.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 16 to June 1)

0.8	0.3	1.6	64
.9	2.0	2.0	133
1.0	5.0	2.5	249
1.1	10	3.0	407
1.3	28	3.3	525

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	*3.8	b6		b10	20	a28	260	170	2.6	1.7	1.2
2	.3	1.8	5.5		7.7	17	a26	332	157	5.0	1.7	1.3
3	.8	3.5	b5		9.3	15	28	525	308	3.2	1.7	1.2
4	.6	6.1	5.5		10	13	34	495	302	2.6	2.0	1.3
5	*.6	6.1	7.7		8.2	13	41	496	386	3.5	1.3	.6
6	.3	2.6			9.3	14	50	*480	207	2.9	1.3	.6
7	.3	2.6			9.3	13	67	a430	188	1.7	1.8	.6
8	.6	3.5			9.9	19	73	a380	153	*.8	2.9	.5
9	.5	2.3			b9	18	44	a330	141	1.3	2.0	.6
10	.8	2.6	b5		b9	13	46	a290	*129	1.0	1.3	1.0
11	.8	2.6			9.9	9.9	49	a280	107	1.2	.8	1.2
12	.6	4.1			9.3	8.8	26	a290	88	2.0	.6	.6
13	.6	3.2		b9		12	34	*312	78	2.9	.6	.5
14	.8	4.4				12	44	366	64	2.9	1.5	.3
15	1.2	2.6			b9	9.3	32	356	55	1.8	1.0	.6
16	1.3	1.8				13	*24	207	44	1.3	1.3	1.2
17	4.4	1.2			12	13	44	168	36	1.7	1.0	1.2
18	3.8	1.8			10	*9.9	75	143	28	1.7	1.0	1.0
19	2.8	2.0	(*)		*8.2	10	89	155	23	1.5	.8	1.0
20	1.7	1.8			b15	9.9	*66	*219	12	1.8	.6	.8
21	1.8	5.0			17	6.6	76	357	9.9	1.3	1.3	1.2
22	2.3	6.6	b9		18	6.7	54	197	8.2	1.3	1.3	1.5
23	3.2	5.0		(*)	15	9.7	89	151	5.5	1.0	1.0	*1.1
24	3.5	4.7			14	8.8	129	151	*3.8	1.3	.8	1.0
25	3.2	7.7		a25	13	11	154	155	17	8.7	.8	.6
26	3.2	6.6		a20	16	20	*250	170	8.8	7.0	*1.2	.8
27	3.2	*b6		13	18	21	300	186	16	2.9	1.2	1.0
28	3.8	b6		7.7	17	21	312	200	8.2	2.3	1.3	1.3
29	4.1	b6		10	17	22	166	204	4.4	*2.6	1.3	.8
30	4.1	b6		b10	-	a30	179	192	4.4	2.0	1.0	.6
31	3.8	-		9.3	-	a34	-	197	-	4.7	.8	-
Total	59.3	120.0	235.7	311.0	337.1	453.6	2,629	8,674	2,762.2	78.5	38.9	27.2
Mean	1.91	4.00	7.60	10.0	11.6	14.6	87.6	280	92.1	2.53	1.25	0.91
Ac-ft	118	238	468	617	669	900	5,210	17,200	5,480	156	77	54

Calendar year 1951: Max 114 Min 0.1 Mean 5.40 Ac-ft 3,910
Water year 1951-52: Max 525 Min 0.3 Mean 43.0 Ac-ft 31,190

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

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 1951-52

Month	Fairview ditch	Candland ditch	Coal Fork ditch	Twin Creek tunnel	Spring City tunnel	Black Canyon ditch	Cedar Creek tunnel
October	0	0	1	0	51	0	6
November	0	0	0	0	42	0	0
December	0	0	0	0	43	0	0
January	0	0	0	0	43	0	0
February	0	0	0	0	35	0	0
March	0	0	0	0	37	0	0
April	0	12	23	0	159	0	6
May	0	253	282	18	579	26	178
June	250	238	222	277	324	337	340
July	716	61	77	165	259	135	154
August	760	11	19	2	78	2	25
September	338	8	6	0	11	0	9
Water year 1951-52	2,060	583	630	462	1,660	500	718

Month	Reeder ditch	John August ditch	Madsen ditch	Ephraim tunnel	Larsen tunnel	Horseshoe tunnel	
October	5	0	0	28	0	0	
November	3	0	0	18	0	0	
December	0	0	0	12	0	0	
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	6	894	615	123	
June	56	2	7	1,800	1,210	575	
July	45	139	0	935	410	284	
August	14	57	0	142	44	20	
September	9	8	0	45	2	0	
Water year 1951-52	138	206	13	3,920	2,280	1,000	

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 1952 water year are as follows: October, 42; May, 976; June, 1,060; July, 1,170; August, 999; September, 738; total for water year, 4,980.

San Pitch River near Gunnison, Utah

Location.--Lat 39°09', long. 111°49', in NW¼NW¼ sec. 20, T. 19 S., R. 1 E. at bridge on U. S. Highway 89 at Gunnison.

Records available.--June 1900 to December 1905, February 1912 to May 1918, April to July 1952 (discontinued).

Gage.--Reference mark on highway bridge. Distance from reference mark to water surface read twice daily. June 1900 to December 1905 staff gage at site 4 miles upstream at different datum. February 1912 to May 1914 staff gage and May 1914 to May 1918 water-stage recorder, at site 3 miles downstream at different datums.

Extremes.--Maximum discharge observed during period April to July, 1,330 cfs June 5; no flow Apr. 1-4.
1900-1905, 1912-18, 1952: Maximum discharge, that of June 5, 1952; no flow at times.

Remarks.--Records fair. Flow is normally completely regulated by Gunnison Reservoir, 7 miles upstream, and during most recent years there has been no contribution from this tributary to the Sevier River. Station was reestablished and records collected during the spring runoff of 1952 because of unusual hydrologic conditions. The runoff during this season probably exceeded that of any other in recent history.

Discharge, in cubic feet per second, April to July 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0	487	439	154		
2							0	552	416	149		
3							0	608	650	144		
4							0	586	947	120		
5							10	593	1,320	105		
6							100	*552	1,030	86		
7							500	518	985	*60		
8							*725	456	971	50		
9							*631	418	952	40		
10							*656	388	*944	35		
11							675	384	834	30		
12							725	434	874	25		
13							750	*439	868	20		
14							740	475	842	15		
15							*705	456	832	12		
16							625	374	743	11		
17							540	339	662	10		
18							450	321	511	10		
19							350	313	478	9		
20							*363	343	341	9		
21							427	409	260	8		
22							404	365	214	8		
23							432	359	154	8		
24							*485	352	*112	7		
25							504	348	132	7		
26							595	330	199	7		
27							670	356	279	6		
28							698	363	214	6		
29							542	402	148	*6		
30							492	454	181	6		
31							-	463	-	5		
Total							13,767	13,237	17,532	1,168		
Mean							459	427	584	37.7		
Ac-ft							27,310	26,260	34,770	2,320		

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 Apr. 1-19, July 8-28, 30, 31; discharge estimated on basis of 7 discharge measurements and records for Sevier River below San Pitch River near Gunnison.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,900 ft (from topographic map).

Average discharge.--35 years, 229 cfs.

Extremes.--Maximum discharge during year, 2,050 cfs June 10 (gage height, 5.49 ft); minimum, 23 cfs Oct. 1 (gage height, 0.75 ft).
1917-52: 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 except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by reservoirs and many diversions above station for irrigation. Most of flow diverted above station during irrigation season.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 15 to Sept. 30)

0.7	17	4.0	810
1.1	56	4.5	1,010
1.5	114	5.0	1,340
2.0	223	5.5	2,070
3.0	505		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	172	200	239	267	272	309	940	928	356	78	132
2	26	170	193	239	293	285	323	980	936	306	82	132
3	40	*170	186	b210	288	246	296	1,100	1,110	304	82	114
4	48	184	184	b190	282	236	280	1,070	1,600	257	96	118
5	56	198	186	b180	252	233	304	*1,110	1,710	257	154	123
6	*52	167	186	b180	249	233	391		1,760	231	159	125
7	56	159	181	b180	249	239	634	a1,100	1,870	*163	159	127
8	60	200	176	184	246	252	*1,070		1,900	112	156	136
9	63	184		188	244	278	1,080		*1,930	102	118	142
10	68	174		191	241	278	*1,060	1,020	1,950	88	142	146
11	71	174	b160	191	236	254	1,040	1,030	1,880	94	144	128
12	79	174		193	239	244	1,070	*1,130	*1,720	90	138	104
13	104	176		196	231	241	970	1,040	1,260	92	136	107
14	109	179		200	223	236	940	1,040	1,060	96	121	109
15	112	148	170	206	218	239	*952	1,020	948	102	100	96
16	112	126	b160	208	216	239	873	824	904	111	88	154
17	132	161	165	223	233	*244	820	700	845	119	85	163
18	121	156	165	218	*252	241	733	634	724	140	81	165
19	104	159	165	216	228	233	806	634	673	118	79	156
20	100	161	*167	213	213	233	817	673	553	76	82	159
21	99	163	163	210	213	231	845	a710	502	72	81	174
22	99	170	174	213	218	228	838	a800	457	71	78	*188
23	100	172	172	210	226	228	831	775	345	66	81	181
24	96	172	170	210	228	236	870	733	*275	71	81	174
25	109	170	174	333	216	254	928	715	301		96	181
26	121	*165	174	*537	210	206	*990	*817	388	a100	127	176
27	132	172	174	487	220	206	1,110	908	532		158	176
28	130	172	318	348	239	196	1,240	948	481		*198	170
29	127	179	409	298	257	203	970	990	418	*140	125	172
30	148	186	339	285	-	208	928	1,010	379	86	132	184
31	174	-	291	278	-	228	-	1,010	-	82	136	-
Total	2,872	5,113	6,002	7,454	6,907	7,380	24,318	28,761	30,339	4,202	3,573	4,412
Mean	92.6	170	194	240	238	238	811	928	1,011	136	115	147
Ac-ft	5,700	10,140	11,900	14,780	13,700	14,640	48,230	57,050	60,180	8,330	7,090	8,750

Calendar year 1951: Max 409 Min 17 Mean 127 Ac-ft 91,970
Water year 1951-52: Max 1,950 Min 24 Mean 359 Ac-ft 260,500

* 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 Sigurd.
b Stage-discharge relation affected by ice.

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 1952.

Gage.--Staff gage below gage height 60 ft and wire-weight gage above, read once daily.

Extremes.--Maximum contents during year, 201,100 acre-ft June 19, 21 (gage height, 76.5 ft); minimum recorded, 1,930 acre-ft Oct. 6 (gage height, 13.7 ft).
1914-52: 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-foot 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 at about 8 a.m.

Revisions (water years).--W 960: 1941.

Contents at 8 a.m., in acre-feet, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	9,280	22,240	36,270	52,650	67,390	87,460	136,300	160,800	192,900	162,300	141,500
2	-	9,840	22,590	36,700	53,410	67,970	88,430	138,900	161,600	191,200	161,600	141,500
3	-	10,180	23,290	37,120	53,920	68,540	89,420	140,200	163,100	191,200	161,600	140,800
4	-	10,880	23,640	37,560	54,690	69,120	90,430	142,900	165,400	189,400	160,800	140,200
5	-	11,120	24,170	38,000	55,470	69,690	91,100	144,900	167,800	187,600	160,100	139,500
6	1,930	11,470	24,350	38,000	55,980	70,260	91,770	147,000	170,100	187,600	161,600	138,900
7	-	11,960	24,710	38,220	56,500	70,850	92,810	148,400	174,200	185,900	160,800	138,900
8	-	12,340	25,070	38,660	57,030	71,440	93,870	149,800	177,400	184,200	160,800	138,200
9	-	12,710	25,070	39,100	57,560	72,020	94,930	151,200	180,800	182,500	160,800	137,600
10	-	13,100	25,420	39,540	58,080	72,610	96,780	152,000	184,200	182,500	160,800	137,600
11	-	13,620	25,790	39,990	58,610	73,200	99,450	152,700	187,600	180,800	159,300	136,300
12	-	14,020	26,160	40,440	58,870	73,790	101,900	152,700	191,200	179,100	158,600	135,600
13	3,540	14,430	26,530	40,890	59,410	74,390	104,000	153,400	193,800	177,400	158,600	135,000
14	-	15,130	26,890	41,350	59,680	74,990	106,200	154,100	194,700	177,400	157,100	133,800
15	-	15,410	27,080	41,800	60,220	75,590	108,000	153,400	196,500	175,800	155,600	133,800
16	-	15,840	27,450	42,260	60,760	76,190	109,800	154,100	196,500	175,000	154,100	132,500
17	-	16,140	27,830	42,730	61,300	76,800	111,700	155,600	197,400	174,200	153,400	132,500
18	-	16,580	28,400	43,190	61,840	77,410	113,100	157,100	198,300	172,600	152,700	132,500
19	-	16,880	28,770	43,890	62,110	78,020	115,200	156,300	201,100	170,900	151,200	131,900
20	-	17,490	29,150	44,360	62,380	78,630	116,700	154,900	200,200	170,100	150,500	131,900
21	-	17,960	29,350	44,830	62,930	79,240	117,700	155,600	201,100	164,700	149,800	131,900
22	-	18,420	29,540	45,300	63,480	79,550	119,300	154,900	198,300	167,800	148,400	132,500
23	-	18,900	30,130	45,780	64,030	79,860	-	155,600	198,300	167,800	148,400	132,500
24	-	19,390	30,710	46,250	64,580	80,480	123,100	156,300	195,600	165,400	146,300	132,500
25	-	19,880	31,100	46,980	64,860	81,100	124,200	156,300	194,700	164,700	144,900	132,500
26	-	20,200	31,500	47,460	65,150	81,730	126,500	155,600	194,700	163,100	144,200	132,500
27	7,710	20,540	32,110	48,670	65,710	82,350	127,700	155,600	193,800	162,300	142,900	132,500
28	8,010	20,880	32,710	49,900	66,270	83,300	130,100	157,100	192,900	161,600	142,900	132,500
29	8,320	21,220	33,120	50,890	66,830	83,930	132,500	158,600	193,800	163,100	142,200	133,100
30	8,640	21,720	34,370	51,390	-	85,200	134,400	-	192,900	162,300	141,500	133,800
31	9,070	-	35,630	51,890	-	86,490	-	160,800	-	161,600	141,500	-

Monthly gage height and contents, water year October 1951 to September 1952

Date	Gage height (feet)†	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	-	a150	-
Oct. 31	21.8	9,070	+8,920
Nov. 30	30.9	21,720	+12,650
Dec. 31	38.2	35,630	+13,910
Calendar year 1951	-	-	-56,310
Jan. 31	45.2	51,890	+16,260
Feb. 29	50.8	66,830	+14,940
Mar. 31	57.3	86,490	+19,660
Apr. 30	67.9	134,400	+47,910
May 31	71.7	160,800	+26,400
June 30	75.6	192,900	+32,100
July 31	71.8	161,600	-31,300
Aug. 31	69.0	141,500	-20,100
Sept.30	67.8	133,800	-7,700
Water year 1951-52	-	-	+133,650

† Gage heights at 8 a.m.
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 1952.

Gage.--Water-stage recorder. Rubble masonry control since Apr. 16, 1914. Altitude of gage is 4,800 ft. Prior to Apr. 8, 1938, at present site and datum. Apr. 8, 1938, to Mar. 31, 1942, at site 1,300 ft upstream at different datum.

Average discharge.--41 years, 248 cfs.

Extremes.--Maximum discharge during year, 944 cfs June 21 (gage height, 4.28 ft); minimum daily, 0.8 cfs Oct. 1, Oct. 31 to Nov. 3.
1911-52: 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 or no gage-height record, 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 15 to Dec. 1, May 15-30, June 20-30, Aug. 8 to Sept. 30)

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	4.3	912

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a0.8	a0.6	1.7				4.6	5.6	218	640	145	346
2	a1.0	a.8					4.6	5.6	232	727	138	391
3	a1.2	*.8					4.6	6.0	230	786	135	394
4	a1.5	1.0					4.6	6.5	228	782	133	397
5	*1.7	1.3					4.6	*6.5	228	779	190	400
6	4.2	2.1					4.6	185	200	776	210	400
7	5.6	2.1					4.2	346	95	*736	210	406
8	5.1	2.0					4.6	352	53	718	205	406
9	4.2	2.0	a2.5				4.6	509	*51	646	202	409
10	3.5	1.8					4.6	718	81	607	400	409
11	3.5	1.7					4.6	715	252	607	409	412
12	2.8	1.7		a3.5			4.6	745	352	607	535	412
13	2.5	1.7					4.6	754	376	613	610	418
14	a2.1	1.7					*5.1	718	460	547	607	421
15	1.7	1.6			a4.5	a4.5	5.1	697	511	505	610	412
16	2.1	1.6					5.1	*441	508	505	556	343
17	2.1	1.6	(*)			(*)	5.1	175	346	568	490	292
18	2.1	1.6					5.1	440	34	625	535	292
19	2.2	1.8					4.6	797	193	628	601	295
20	1.8	2.2					4.6	870	464	583	a610	292
21	1.7	2.4			(*)		4.6	828	761	559	a620	155
22	1.7	2.5					5.1	598	779	562	a630	*73
23	1.5	2.5					4.6	772	835	643	634	168
24	1.5	2.5	a3.5				4.6	*630	880	718	631	190
25	1.5	2.1					4.6	860	880	721	628	84
26	1.4	*1.8		(*)			5.1	*664	821	703	628	70
27	1.5	2.0		a6.0			5.1	481	*676	451	433	68
28	1.3	2.0					5.6	451	464	*379	*272	68
29	1.1	1.8					6.0	445	397	361	275	26
30	1.0	1.7			-		6.0	394	555	331	280	4.2
31	.8	-			-	4.6	-	274	-	246	286	-
Total	66.7	53.2	92.7	128.5	130.5	139.6	145.4	14,889.2	12,160	18,659	12,848	8,453.2
Mean	2.15	1.77	2.99	4.15	4.5	4.50	4.85	480	405	602	414	282
Ac-ft	132	106	184	255	259	277	288	29,530	24,120	37,010	25,480	16,770

Calendar year 1951: Max 1,040 Min 0.5 Mean 213 Ac-ft 154,000
Water year 1951-52: Max 880 Min 0.8 Mean 185 Ac-ft 134,400

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 6 discharge measurements, weather records and records for Sevier Bridge Reservoir and station near Lynndyl.
Note.--Stage-discharge relation affected by ice most of period Dec. 2 to Mar. 30.

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 3½ miles southwest of Lynndyl.

Drainage area.--6,270 sq mi, approximately.

Records available.--April 1914 to October 1919, November 1942 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,650 ft.

Average discharge.--14 years (1914-19, 1943-52), 222 cfs.

Extremes.--Maximum discharge during year, 912 cfs May 14 (gage height, 6.50 ft); minimum, 14 cfs Feb. 26 (gage height, 1.77 ft).
1914-19, 1942-52: 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. 143). Several diversions for irrigation between reservoir and station. Records of chemical analyses and water temperatures for the water year 1952 are given in Water-Supply Paper 1253.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 2-11)

2.0	20	4.0	265
2.3	35	5.0	504
2.6	59	6.0	766
3.0	100	6.6	928
3.5	170		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	28	30		28	23	76	56	359	362	261	151
2	*65	28	30		30		42	59	259	474	205	177
3	72	28	31		30		31	68	222	526	184	234
4	68	31	28		29		28	100	218	599	178	242
5	65	46	30		28		27	151	209	604	172	232
6	62	48	31		27		25	226	205	602	168	220
7	60	48	b30		26		23	328	220	602	246	220
8	57	48	30		25	b23	22	*534	220	581	246	220
9	55	50			25		22	522	132	545	246	222
10	55	50			25		21	620	116	*506	242	234
11	54	51			24		21	860	112	424	228	230
12	53	53			24		20	893	192	410	322	232
13	48	56					20	888	*345	412	379	250
14	46	58					20	904	400	400	469	257
15	40	59		b30		24	20	858	442	347	474	250
16	32	57			b24	24	20	*823	519	301	469	257
17	32	50	(*)			25	20	701	532	315	456	232
18	31	53				25	*20	379	449	338	383	182
19	30	53				26	20	423	272	381	391	175
20	30	62	b30			*26	21	747	115	388	419	168
21	30	57		(*)	*23	25	21	834	298	391	442	173
22	29	58			25	23	21	855	602	355	442	167
23	29	58			22	22	20	650	707	388	449	87
24	30	58			23	23	20	534	731	442	449	53
25	30	59			25	25	20	574	774	555	*444	118
26	30	53			22	23	21	825	712	565	427	*92
27	31	57			23	42	21	744	*688	560	479	64
28	30	39			23	70	25	512	550	432	369	61
29	30	*30			23	110	37	*459	434	573	184	60
30	29	30			-	162	52	449	257	359	165	62
31	*29	-			-	133	-	427	-	*276	148	-
Total	1,374	1,456	930	930	722	1,130	777	17,003	11,291	14,013	10,136	5,322
Mean	44.3	48.5	30.0	30	24.9	36.5	25.9	548	376	452	327	177
Ac-ft	2,730	2,890	1,840	1,840	1,430	2,240	1,540	33,720	22,400	27,790	20,100	10,560

Calendar year 1951: Max 780 Min - Mean 177 Ac-ft 128,100
Water year 1951-52: Max 904 Min - Mean 178 Ac-ft 129,100

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Mar. 27-29, Apr. 6-17; discharge estimated on basis of weather records, recorded range in stage, and records for station near Juab.

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 1952.

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, 509 cfs May 4; minimum daily, 4.9 cfs Dec. 9. 1914, 1944-52: Maximum discharge, that of May 4, 1952; minimum daily, that of Dec. 9, 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 head of Fillmore Canal. One small irrigation diversion above gage.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.4	7.9	7.4	7.7	11	13	36	321	274	43	23	16
2	*7.2	6.6	7.7	7.4	11	14	38	375	248	42	22	15
3	11	7.9	7.0	7.7	12	13	40	452	262	41	22	15
4	10	7.5	7.6	8.2	12	14	48	477	263	41	21	14
5	10	7.5	6.9	8.4	12	14	70	474	248	42	20	14
6	9.5	7.3	5.7	9.2	12	14	101	448	227	41	20	14
7	9.3	7.3	6.6	9.2	13	14	141	438	208	40	22	14
8	9.1	7.3	5.4	9.2	13	14	146	*406	184	38	22	14
9	8.7	7.3	4.9	9.2	13	14	102	367	167	*38	20	14
10	7.7	7.2	5.2	9.2	13	15	93	318	150	37	19	13
11	7.9	7.3	6.5	9.4	13	15	90	303	137	36	19	14
12	8.1	7.4	6.9	9.6	14	15	77	320	125	35	18	15
13	7.9	7.6	8.2	9.6	11	15	79	349	*113	34	17	14
14	7.9	7.7	8.2	9.6	15	15	95	373	105	33	17	14
15	7.9	7.5	7.8	9.4	16	15	94	*370	98	32	17	14
16	7.9	5.6	8.2	9.7	16	15	91	308	90	31	17	13
17	7.9	5.6	8.4	9.7	16	15	*98	249	83	30	17	13
18	7.9	6.1	*8.4	9.7	15	15	130	207	78	29	17	13
19	7.9	6.9	8.8	9.7	14	15	163	191	74	28	17	13
20	8.1	7.2	8.7	9.7	16	*13	154	226	70	28	18	13
21	7.9	7.4	8.8	9.8	*14	13	134	310	65	27	17	14
22	8.1	7.7	8.8	*9.8	14	13	127	295	63	26	16	14
23	7.9	7.3	8.8	9.9	13	12	157	253	60	25	16	13
24	7.9	7.3	8.7	9.8	13	14	213	227	64	26	16	13
25	7.7	7.0	8.6	11	11	15	*263	232	60	30	16	*13
26	8.4	6.6	8.8	11	12	15	313	260	*58	27	*17	13
27	8.9	7.4	8.6	11	12	16	389	295	52	26	16	13
28	8.5	7.4	8.6	10	12	19	403	308	48	28	18	13
29	8.1	*7.4	9.5	10	13	26	330	*321	45	27	20	13
30	8.1	7.4	10	11	-	38	295	324	46	26	17	13
31	8.1	-	9.1	11	-	41	-	308	-	*25	16	-
Total	257.9	215.6	242.8	295.8	382	509	4,510	10,105	3,765	1,012	570	411
Mean	8.32	7.19	7.83	9.54	13.2	16.4	150	326	126	32.6	18.4	13.7
Ac-ft	512	428	482	587	758	1,010	8,950	20,040	7,470	2,010	1,130	815

Calendar year 1951: Max 61 Min 4.9 Mean 13.5 Ac-ft 9,790
Water year 1951-52: Max 477 Min 4.9 Mean 60.9 Ac-ft 44,190

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 12-17, Jan. 1-21; discharge estimated on basis of weather records and records for nearby streams.

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 1952.

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.

Average discharge.--5 years, 12.1 cfs.

Extremes.--Maximum discharge during year, 219 cfs May 15 (gage height, 3.58 ft); minimum, 0.9 cfs Aug. 12.
1947-52: 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, 0.2 cfs May 26, 27, 1951, when gates of Three Forks Dam were closed.

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 Three Creeks Reservoir (capacity, 2,020 acre-ft) completed in 1950.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 15-26)

1.2	1.9	2.0	30
1.3	3.3	2.5	66
1.5	7.8	3.0	120
1.7	15	3.4	171

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	3.7	3.2	3.3	3.0	2.8	4.2	34	153	60	50	11
2	*4.8	b3.5	3.3	3.3	3.0	2.8	4.0	15	130	42	51	10
3	5.3	b3.5	3.0	3.5	3.0	2.7	4.0	2.0	138	36	53	10
4	5.6	3.7	3.3	3.3	2.8	2.7	*5.0	2.0	140	36	54	10
5	5.3	3.5	3.2	3.3	2.8	2.7	6.8	2.0	140	27	54	10
6	5.0	b3.5	3.3	3.3	2.8	2.7	7.8	2.1	133	27	54	10
7	4.8	b3.5		3.8	2.8	2.7	8.7	2.0	142	39	53	10
8	4.8	3.5		3.8	*2.8	2.7	9.4	2.0	144	34	52	10
9	4.8	3.3		3.0	2.8	2.7	7.0	2.1	108	42	49	9.7
10	4.8	b3.3	a3	3.0	2.8	2.7	6.8	2.3	81	51	42	9.4
11	4.8	3.3		*3.2	2.8	2.7	6.3	2.4	*131	50	28	9.4
12	4.6	3.2		3.0	2.7	2.7	5.8	2.7	148	49	13	9.4
13	4.6	3.5		3.0	2.7	2.7	6.0	3.0	76	49	7.3	9.4
14	4.6	3.3	3.0	3.0	2.7	2.7	6.6	7.7	*50	*48	*11	9.4
15	4.6		3.0	2.8	2.8	2.7	6.0	134	50	48	16	9.4
16	4.6		3.0	2.8	2.8	2.8	7.3	*136	70	47	16	9.4
17	4.2	b3	3.0	3.0	2.8	2.8	9.7	144	108	47	15	9.4
18	4.2		3.0	3.2	2.7	2.8	12	94	100	46	14	*9.4
19	4.2		3.0	3.0	2.7	2.8	13	28	67	48	14	9.4
20	4.2		2.8	3.0	2.8	2.8	14	41	42	51	13	9.4
21	4.2	3.3	2.8	2.8	2.8	2.8	16	50	42	51	13	10
22	4.0	3.3	3.0	3.0	2.7	2.8	18	99	42	50	13	10
23	4.2	3.3	3.0	2.8	2.7	2.7	20	166	42	51	13	9.7
24	4.2	3.3	3.0	2.8	2.7	2.7	23	164	47	52	12	9.0
25	4.2	3.3	3.2	2.7	2.7	2.4	26	161	58	51	12	8.7
26	4.2	3.3	3.3	2.7	2.7	2.6	28	80	53	50	12	9.0
27	4.8	3.3	3.2	3.2	2.7	3.3	30	*5.8	41	50	12	9.0
28	4.4	3.3	3.2	3.2	2.7	3.2	31	6.0	41	49	12	9.0
29	4.6	3.5	3.0	3.0	2.7	3.7	32	8.3	53	48	13	8.7
30	4.2	3.3	3.3	3.0	-	4.2	32	83	69	49	12	9.0
31	*4.2	-	2.8	3.2	-	4.2	-	152	-	*50	11	-
Total	141.8	99.3	94.9	96.0	80.5	89.3	406.4	1,633.4	2,639	1,428	794.3	286.2
Mean	4.57	3.31	3.06	3.10	2.78	2.88	13.5	52.7	88.0	46.1	25.6	9.54
Ac-ft	281	197	188	190	160	177	806	3,240	5,230	2,830	1,580	568

Calendar year 1951: Max 37 Min 0.2 Mean 7.27 Ac-ft 5,260
Water year 1951-52: Max 166 Min 2.0 Mean 21.3 Ac-ft 15,450

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

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 1952.

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.--38 years (1914-52), 56.3 cfs.

Extremes.--Maximum discharge during year, 624 cfs May 15 (gage height, 4.26 ft); minimum not determined, occurred during period of no gage-height record.
1914-52: 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, 3.0 cfs 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 powerplants and several small reservoirs.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 9				May 10 to Sept. 30			
1.9	12	2.6	87	2.2	27	3.5	313
2.1	24	3.0	177	2.5	63	4.1	547
2.3	43	3.7	415	3.0	163		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	19	18			17	29	199	487	149	88	34
2	*22	16	18			17	33	251	451	124	84	34
3	21	18	b18			b17	29	291	507	109	84	33
4	19	17	18		a17	18	*29	337	519	107	83	32
5	19	18	*18			18	37	379	527	99	81	32
6	20	18			(*)	*16	49	391	519	101	83	38
7	20	21			b17	21	54	375	507	107	81	42
8	20	19			b17	22	61	352	475	97	86	42
9	19	18			17	21	48	*333	439	101	79	38
10	18	18			16	21	46	331	391	115	69	36
11	19	18		(*)	17	19	48	342	403	109	56	35
12	18	19			17	20	39	379	*395	109	44	35
13	19	18			b16	20	38	411	313	121	*33	34
14	18	19	a16		b16	20	43	435	257	*119	*34	33
15	18	18			b16	18	38	531	232	117	37	34
16	18	b17		a15	b16	18	40	*455	226	113	36	34
17	18	b17			16	19	57	383	257	109	36	a34
18	18	b17			19	19	70	313	247	105	37	*34
19	18	b17			b16	18	77	235	220	103	39	32
20	18	20			b16	19	80	299	179	107	42	31
21	18	18			16	b18	100	349	168	107	37	36
22	18	17			18	b18	96	338	163	105	39	47
23	18	18			17	b18	119	372	156	103	38	35
24	18	17			15	19	146	372	163	105	36	32
25	18	18	a18		b15	20	156	387	171	105	35	32
26	20	b18			b15	20	167	368	156	101	37	30
27	19	18			16	20	205	*335	135	103	35	29
28	21	17	18		16	21	223	357	117	109	36	28
29	20	17	17		18	24	183	395	132	109	48	31
30	20	18	16		-	28	164	467	149	103	37	30
31	*18	-	a15		-	29	-	535	-	99	34	-
Total	587	538	520	465	480	613	2,504	11,297	9,061	3,370	1,624	1,027
Mean	18.9	17.9	16.8	15	16.6	19.8	83.5	364	302	109	52.4	34.2
Ac-ft	1,160	1,070	1,030	922	952	1,220	4,970	22,410	17,970	6,680	3,220	2,040

Calendar year 1951: Max 174 Min 11 Mean 33.3 Ac-ft 24,130
Water year 1951-52: Max 535 Min - Mean 87.7 Ac-ft 63,640

Peak discharge (base, 250 cfs).--May 15 (7:30 p.m.) 624 cfs (4.26 ft); May 30 (8:30 p.m.) 606 cfs (4.23 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on bssis of 3 discharge measurements, weather records, and records for station at Adamsville.

b Stage-discharge relation affected by ice.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 6,000 ft (from topographic map). Prior to Oct. 1, 1937, at site 300 ft upstream at different datum.

Average discharge.--37 years (1914-36, 1937-52), 38.7 cfs.

Extremes.--Maximum discharge during year, 605 cfs June 4 (gage height, 4.45 ft); minimum, 1.6 cfs Oct. 1, 2.
1913-36, 1937-52: 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 or no gage-height record, 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 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 12-19)

0.8	1.4	1.2	11	2.5	165
.9	2.6	1.4	22	3.0	260
1.0	4.5	1.7	49	4.0	483
1.1	7.2	2.0	88	4.5	605

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	*27	40	34	54	54	a45	163	392	42	50	31
2	1.7	30	46	24	51	46	a50	189	363	45	41	27
3	*2.3	32	41	b25	48	45	a45	277	505	32	35	26
4	3.1	36	42	b26	47	46	*a45	338	582	28	28	24
5	5.2	33	*45	b28	45	47	48	383	568	27	26	21
6	4.7	33	42	b29	*46	*47	66	415	526	28	31	22
7	4.3	36	36	b30	47	46	89	404	524	27	46	23
8	5.0	38	33	b32	45	50	116	354	485	26	45	a23
9	4.5	35	30	b33	46	51	102	*315	418	26	40	a22
10	4.5	36	31	*b35	46	50	97	273	338	34	53	a21
11	4.0	35	b32	38	46	48	114	256	285	28	46	a20
12	4.3	41	b33	45	48	45	99	285	*277	25	44	a20
13	4.7	55	b34	42	42	42	94	294	227	21	42	a19
14	5.5	42	b35	41	42	45	97	352	*159	19	*42	a18
15	5.0	37	b36	43	45	43	89	427	122	*24	36	a19
16	4.7	31	b37	40	44	48	81	404	105	23	34	a19
17	5.0	31	b38	43	43	49	81	302	114	21	32	*a19
18	6.6	36	39	43	42	48	111	229	114	21	26	19
19	5.8	39	39	42	40	54	116	154	102	20	16	18
20	5.5	40	b39	41	42	55	104	151	84	19	23	19
21	5.5	42	b39	42	42	44	124	285	71	19	30	36
22	5.8	43	40	46	42	46	125	217	47	21	24	36
23	6.3	42	44	41	41	45	133	245	32	23	28	26
24	6.3	42	42	42	38	49	141	239	36	74	26	21
25	6.9	41	b40	57	37	61	186	247	55	89	23	23
26	13	40	39	92	39	82	186	245	49	69	27	21
27	22	50	39	74	42	94	227	*191	55	70	28	21
28	23	50	40	57	49	89	270	202	48	67	27	22
29	20	45	97	50	48	a89	231	217	40	53	56	19
30	17	41	73	50	-	a89	175	281	39	*71	41	17
31	17	-	42	53	-	a68	-	402	-	65	34	-
Total	231.0	1,159	1,283	1,318	1,287	1,715	3,487	8,736	6,762	1,157	1,080	672
Mean	7.45	38.6	41.4	42.5	44.4	55.3	116	282	225	37.3	34.8	22.4
Ac-ft	458	2,300	2,540	2,610	2,550	3,400	6,920	17,330	13,410	2,290	2,140	1,330

Calendar year 1951: Max 97 Min 0.9 Mean 17.5 Ac-ft 12,660
Water year 1951-52: Max 582 Min 1.7 Mean 78.9 Ac-ft 57,280

* 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 Beaver.
b Stage-discharge relation affected by ice.

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 1952.

Gage.--Staff gage.

Extremes.--Maximum contents observed during year, 22,380 acre-ft June 5 (gage height, 50.2 ft); minimum observed, 2,680 acre-ft Oct. 16 (gage height, 19.6 ft).
1937-52: 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, 23,260 acre-ft between gage height 0.0 ft (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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-		-	-	-	-	-	-	21,280	-	-	-
2	-		-	-	-	-	-	19,930	-	20,120	15,370	-
3	-		-	-	-	-	-	-	21,720	-	-	-
4	-		-	-	-	-	14,970	20,120	-	-	-	-
5	-		-	-	-	-	-	-	22,380	-	-	-
6	-		-	-	-	-	-	-	-	-	14,320	-
7	-		-	-	-	-	15,130	-	-	-	-	10,940
8	-		-	-	-	12,700	-	-	-	-	-	-
9	-		-	-	-	-	-	-	-	-	-	-
10	-		-	-	11,620	-	-	-	-	17,850	-	-
11	-		-	-	-	-	-	-	-	-	-	-
12	-		-	-	-	-	15,940	-	21,500	-	-	-
13	-		-	-	-	-	-	-	-	-	-	-
14	-		-	-	-	-	-	-	-	-	-	-
15	-		-	-	-	13,110	-	21,060	-	17,190	-	-
16	2,680		-	-	-	-	16,340	-	-	-	-	-
17	-		-	-	-	-	-	-	-	-	13,590	-
18	-		-	-	-	-	16,620	-	-	-	-	-
19	-		-	-	-	-	-	-	-	-	-	-
20	-		-	-	-	-	-	-	-	-	-	9,860
21	-		-	-	-	-	17,100	-	-	-	-	-
22	-		-	-	-	-	17,470	-	-	-	12,950	-
23	-		-	-	-	-	-	-	-	-	-	-
24	-		-	-	-	13,510	-	-	-	-	-	-
25	-		-	9,250	-	-	-	-	20,590	-	-	-
26	-		-	-	-	-	18,230	-	-	-	-	-
27	-		-	-	-	-	-	-	-	-	-	-
28	-		-	-	-	13,920	18,700	-	-	-	-	-
29	-		7,490	-	11,960	-	-	-	-	-	-	-
30	-	5,460	-	9,860	-	-	19,180	-	a20,250	15,290	-	9,930
31	3,130	-	a7,600	a10,150	-	14,720	-	a21,280	-	a15,290	11,820	-

a No gage-height record; contents interpolated.

Monthly gage height and contents, water year October 1951 to September 1952

Date	Gage height (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	19.0	2,490	-
Oct. 31	21.0	3,130	+640
Nov. 30	27.3	5,460	+2,330
Dec. 31	-	a7,600	+2,140
Calendar year 1951	-	-	+830
Jan. 31	-	a10,150	+2,550
Feb. 29	38.5	11,960	+1,810
Mar. 31	42.0	14,720	+2,760
Apr. 30	47.0	19,180	+4,460
May 31	-	a21,280	+2,100
June 30	-	a20,250	-1,030
July 31	-	a15,290	-4,960
Aug. 31	38.3	11,820	-3,470
Sept.30	35.5	9,930	-1,890
Water year 1951-52	-	-	+7,440

a No gage-height record; contents interpolated.

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 1952.

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.--37 years (1914-36, 1937-52), 40.3 cfs.

Extremes.--Maximum daily discharge during year, 513 cfs June 7; minimum daily, 4.0 cfs Nov. 21-26, 30, Dec. 1.
1913-52: Maximum discharge, 727 cfs June 10, 1921 (gage height, 3.53 ft); minimum, 0.3 cfs Mar. 19, 20, 1914.

Remarks.--Records good. 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 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.7	2.5	1.5	88
.8	6.3	2.0	187
.9	12	2.5	321
1.0	21	3.0	494
1.2	43	3.1	532

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	*4.4	4.0	5.2	5.5	6.9	9.3	68	228	140	64	107
2	4.4	4.4	4.4	5.2	5.5	6.9	9.9	77	257	142	64	107
3	*4.4	4.4	4.4	5.2	5.5	6.9	*9.9	126	297	142	64	107
4	4.4	4.4	4.4	5.2	5.5	6.9	9.9	139	428	142	88	107
5	4.4	4.4	4.4	5.2	5.9	6.9	9.9	198	487	136	109	107
6	4.4	4.4	*4.4	5.2	*5.9	*7.5	10	220	505	126	116	107
7	4.4	4.4	4.4	5.2	5.9	7.5	10	262	513	126	114	105
8	4.4	4.4	4.4	5.2	5.9	7.5	10	321	483	126	114	105
9	4.4	4.4	4.4	5.2	5.9	7.5	10	*324	450	124	114	72
10	4.4	4.4	4.4	*5.2	5.9	8.1	11	309	396	124	114	69
11	4.4	4.4	4.4	5.2	5.9	8.1	12	297	343	124	114	69
12	4.4	4.4	4.4	5.2	5.9	8.1	11	291	*324	124	114	69
13	4.4	4.4	4.4	5.2	6.3	8.1	12	285	282	124	114	69
14	4.4	4.4	4.4	5.2	6.3	8.1	11	291	169	122	114	69
15	4.4	4.4	4.4	5.2	6.3	8.1	11	306	107	*122	113	69
16	4.4	4.4	4.4	5.2	6.3	8.1	11	331	116	122	*113	69
17	4.4	4.4	4.4	5.2	6.3	8.7	12	331	128	122	113	*69
18	4.4	4.4	4.4	5.2	6.3	8.7	11	315	126	122	113	69
19	4.4	4.4	4.4	5.2	6.3	8.7	11	291	130	122	113	60
20	4.4	4.4	4.4	5.2	6.3	8.7	11	274	136	122	113	51
21	4.4	4.0	4.4	5.2	6.3	8.7	11	271	102	122	113	51
22	4.4	4.0	4.4	5.2	6.3	8.7	10	251	118	122	113	50
23	4.4	4.0	4.4	5.2	6.3	8.7	10	235	130	122	113	50
24	4.4	4.0	4.4	5.5	6.3	8.7	11	232	128	122	111	39
25	4.4	4.0	4.4	5.9	6.3	9.3	11	235	126	122	111	30
26	4.8	4.0	5.2	5.9	6.3	9.3	11	238	124	122	111	27
27	4.8	4.4	5.2	5.5	6.3	9.3	12	*198	124	122	111	27
28	4.8	4.4	5.2	5.5	6.3	9.3	35	176	124	118	111	27
29	4.8	4.4	5.2	5.5	6.3	9.3	66	172	124	103	111	27
30	4.4	4.0	5.5	5.5	-	9.3	68	167	132	88	109	27
31	4.4	-	5.2	5.5	-	9.3	-	192	-	74	109	-
Total	138.4	129.2	141.1	164.4	176.3	255.9	457.9	7,473	7,137	3,791	3,318	2,011
Mean	4.46	4.31	4.55	5.30	6.08	8.25	15.3	241	238	122	107	67.0
Ac-ft	275	256	280	326	350	508	908	14,820	14,160	7,520	6,580	3,990

Calendar year 1951: Max 65 Min 4.0 Mean 19.4 Ac-ft 14,000
Water year 1951-52: Max 513 Min 4.0 Mean 68.8 Ac-ft 49,970

* Discharge measurement made on this day.

Minersville Canal at Minersville, Utah

Location.--Lat 38°13', long. 112°56', in NW¼ sec. 7, T. 30 S., R. 9 W., on left bank 1 mile downstream from point of diversion and 1 mile east of Minersville.

Records available.--June to September 1906 (monthly discharge only), March to October 1914, June 1951 to September 1952.

Gage.--Water-stage recorder and Parshall flume. June 21 to Sept. 21, 1906, staff gage, and Mar. 13 to Oct. 17, 1914, water-stage recorder at approximately same site at different datum.

Extremes.--1906, 1914, 1951-52: Maximum discharge, 63 cfs May 16, 23, June 1, 3, 1952; no flow Mar. 15-18, Sept. 1, 1914, Apr. 16-27, 1952.

Remarks.--Records good except those for period of no gage-height record, which are poor. Flow diverted from Beaver River for irrigation purposes in vicinity of Minersville.

Discharge, in cubic feet per second, 1951-52

1951

Day	July	Aug.	Sept.	Day	July	Aug.	Sept.	Day	July	Aug.	Sept.
1	*27	29	28	11	28	29	18	21	30	29	4.9
2	26	*30	28	12	29	28	1.5	22	30	28	4.6
3	24	30	28	13	29	28	.7	23	25	28	4.4
4	5.1	5.2	28	14	29	28	.6	24	3.7	28	4.2
5	9.9	.5	29	15	29	28	.6	25	12	28	3.9
6	26	1.3	29	16	30	28	.7	26	30	28	3.9
7	29	10	30	17	30	28	1.8	27	29	28	3.9
8	28	28	30	18	29	28	1.5	28	28	28	4.6
9	28	29	30	19	29	29	2.0	29	28	28	4.9
10	28	29	31	20	29	29	3.7	30	28	*28	4.9
								31	28	29	-
Total									793.7	785.0	366.3
Mean									25.6	25.3	12.2
Ac-ft									1,570	1,560	727

* Discharge measurement made on this day.
Note.--Daily discharge for days in June as follows: June 28, 30 cfs; June 29, 28 cfs; June 30, 28 cfs. A discharge measurement was also made on Juen 28.

1951-52

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	*1.5	2.1			1.3	3.4	50	63	42	0.9	36
2	4.6	1.2	2.1			3.9	3.4	51	62	41	2.5	37
3	*4.4	1.2	2.5		2	3.9	3.4	52	63	40	2.3	37
4	4.4	1.7	2.1			3.9	3.4	51	59	37	23	37
5	2.7	2.0	2.3			3.7	*3.9	52	55	36	39	37
6	1.0	2.0	*2.1		*2	*3.7	8.7	54	49	34	36	37
7	1.2	2.0	1.7		2.7	3.7	4.2	56	49	34	36	37
8	1.8	2.0	1.3		2.5	3.7	1.8	54	45	34	36	37
9	1.7	2.0	1.5		2.5	3.7	1.8	55	49	36	36	17
10	1.7	2.0	1.5	(*)	2.5	3.7	1.8	58	49	41	36	1.0
11	1.5	2.1	1.5		2.5	3.9	2.0	58	48	36	37	2.8
12	1.5	3.0	1.3		2.5	3.9	1.3	58	*52	32	37	2.8
13	1.5	3.0	1.0	1	2.5	3.7	.3	59	53	34	37	1.7
14	1.7	3.0			3.4	3.9	.1	61	48	34	37	1.7
15	1.5	3.0			4.2	3.7	.1	62	40	*34	37	1.7
16	1.7	3.0			4.2	3.7	0	*63	42	33	*37	1.7
17	2.8	2.8			3.7	3.7	0	62	46	33	37	*1.5
18	2.5	2.5			2.5	3.7	0	61	45	33	37	1.3
19	2.3	3.0			2.3	3.7	0	62	41	33	37	2.0
20	2.3	3.0			2.3	3.7	0	60	45	33	37	2.8
21	2.0	3.0			2.3	3.7	0	59	33	34	37	3.0
22	1.2	3.0	1		2.3	3.4	0	59	26	34	36	3.0
23	1.0	3.0			2.1	3.4	0	63	45	34	36	3.0
24	1.0	3.0			2.1	2.4	0	62	45	34	36	2.8
25	1.7	2.8			2.1	3.4	0	61	44	35	36	2.5
26	1.8	2.1			2.1	3.4	0	60	44	35	36	2.5
27	1.7	2.3			2.0	3.4	0	60	44	34	36	2.5
28	1.7	2.1		2	1.5	3.4	14	61	44	34	36	2.5
29	1.7	2.1			.9	3.4	49	59	44	34	36	2.5
30	1.7	2.1			-	3.4	50	58	42	*17	36	2.5
31	1.7	-			-	3.4	-	61	-	.6	36	-
Total	64.6	71.5	41.0	37	69.7	109.5	152.6	1,802	1,414	1,035.6	1,014.7	359.8
Mean	2.08	2.38	1.32	1.2	2.40	3.53	5.09	58.1	47.1	33.4	32.7	12.0
Ac-ft	128	142	81	73	138	217	303	3,570	2,800	2,050	2,010	714

Calendar year 1951 Max - Min - Mean - Ac-ft -
Water year 1951-52: Max 63 Min 0 Mean 16.9 Ac-ft 12,230

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 14 to Feb. 6; discharge estimated on basis of 2 discharge measurements and weather records.

Beaver River at Minersville, Utah

Location.--Lat 38°13', long. 112°56', in NE¼ sec. 12, T. 30 S., R. 10 W., on right bank at Minersville.
Records available.--April 1909 to December 1913, June 1951 to September 1952.
Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,250 ft (from topographic map). Apr. 13, 1909, to Dec. 20, 1913, staff gage at site three-quarters of a mile downstream at different datum.
Average discharge.--5 years, 32.4 cfs.
Extremes.--1951: Maximum discharge during period June to September, 41 cfs July 5 (gage height, 1.00 ft); minimum, 0.1 cfs Aug. 9, 11.
1951-52: Maximum discharge during water year, 433 cfs June 6 (gage height, 2.43 ft); minimum, 0.5 cfs Feb. 19, 25.
1909-13, 1951-52: Maximum discharge observed, 608 cfs Jan. 2, 1910 (gage height, 4.70 ft, site and datum then in use); no flow part of each year 1909-13.
Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by Rockyford Reservoir (see p. 150).

Discharge, in cubic feet per second, 1951-52

1951

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	-	24	10	12	11	-	17	0.1	11	21	-	17	15	1.0
2	-	24	*12	13	12	-	17	1.3	8.0	22	-	18	15	.8
3	-	22	13	12	13	-	17	2.5	2.8	23	-	11	15	.8
4	-	24	6.0	12	14	-	16	5.4	1.2	24	-	10	15	1.0
5	-	23	6.0	12	15	-	17	14	.5	25	-	9.6	16	1.3
6	-	11	4.9	13	16	-	19	15	.3	26	-	9.6	15	1.5
7	-	13	4.9	12	17	-	19	15	.2	27	-	9.6	15	1.5
8	-	15	1.3	12	18	-	18	15	.2	28	-	11	15	2.2
9	-	17	.2	11	19	-	16	17	.6	29	*23	9.6	15	1.5
10	-	17	.4	11	20	-	16	16	1.5	30	24	9.6	13	1.2
										31	-	9.6	*12	-
Total											-	486.6	321.0	159.1
Mean											-	15.7	10.4	5.30
Ac-ft											-	965	637	316

* Discharge measurement made on this day.

1951-52

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	*3.8	3.2		4.4	4.0	7.5	19	138	63	37	42
2	.7	4.0	3.5		4.4	4.0	8.0	23	164	63	35	46
3	*1.2	4.0	3.5		4.4	4.0	8.0	53	198	63	35	52
4	1.3	3.5	3.2		4.4	4.0	8.0	140	330	65	33	49
5	2.0	3.5	3.5		b4.4	4.0	*7.5	145	409	65	39	47
6	3.2	3.5	*3.5		*b4.4	*4.0	2.9	156	420	55	49	47
7	3.2	3.5				3.5	7.0	181	416	54	49	47
8	2.5	3.5				3.5	9.1	249	399	54	47	50
9	2.8	3.5				3.5	9.1	*255	363	54	46	50
10	2.8	3.5		(*)	b4.0	4.4	10	243	321	61	46	54
11	3.2	3.2				6.0	13	228	261	50	44	52
12	3.2	3.2		b3.5		6.0	12	222	*267	54	44	52
13	3.5	3.5				6.0	13	219	231	54	46	50
14	3.2	3.2			b3.5	6.0	13	219	120	55	44	46
15	3.5	3.2			b5.0	6.0	13	225	44	*57	*44	46
16	3.5	3.2	b3.5		b3.0	6.5	13	243	38	57	46	46
17	2.0	3.2			b3.2	6.5	13	246	54	57	46	*47
18	1.5	2.5			b3.2	6.5	14	237	54	61	47	47
19	1.3	3.2			b3.2	6.5	13	219	63	59	46	37
20	1.3	2.5			b3.2	7.0	13	207	68	57	46	27
21	1.5	2.8			b3.2	6.5	14	198	57	55	46	27
22	2.2	3.2			3.2	6.5	14	184	57	54	44	27
23	2.2	2.8			3.2	7.0	12	158	61	55	44	26
24	2.2	2.8	3.5	4.4	3.2	7.5	9.6	153	57	55	42	22
25	2.0	b2.8	b3.5	b4.0	b3.3	7.5	11	158	57	55	42	18
26	2.8	b2.8	b3.5	b4.0	b3.5	7.5	11	161	54	54	42	16
27	2.8	b2.8	3.5	b3.5	3.5	7.5	11	*132	52	54	42	16
28	2.2	3.2	3.5	b3.5	3.5	7.5	10	102	49	54	46	16
29	2.2	3.2	b3.5	b3.5	3.5	7.5	19	95	47	54	47	16
30	2.0	3.2	b3.5	b3.5	-	7.5	18	82	54	44	44	16
31	2.5	-	b3.5	4.4	-	7.5	-	97	-	47	44	-
Total	71.2	96.8	107.9	111.3	106.8	181.9	336.7	5,249	4,903	1,739	1,352	1,134
Mean	2.30	3.23	3.48	3.59	3.68	5.87	11.2	169	163	56.1	43.6	37.8
Ac-ft	141	192	214	221	212	361	668	10,410	9,720	3,450	2,680	2,250

Calendar year 1951: Max - Min - Mean - Ac-ft -
Water year 1951-52: Max 420 Min 0.7 Mean 42.0 Ac-ft 30,520

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

Beaver River near Milford, Utah

Location.--Lat 38°28', long. 113°01', in SW¼ sec. 17, T. 27 S., R. 10 W., on right bank 4 miles north of Milford.

Records available.--July 1951 to September 1952.

Gage.--Water-stage recorder.

Extremes.--1951: No flow during period July to September.
1951-52: Maximum discharge during water year, 221 cfs June 11 (gage height, 2.84 ft); no flow Oct. 1 to Jan. 27.

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

Rating table, July 1, 1951, to Sept. 30, 1952 (gage height, in feet, and discharge, in cubic feet per second)

0.4	0	1.2	20
.5	.2	1.6	43
.6	.9	2.0	79
.7	2.1	2.5	152
.8	4.4	2.8	212
.9	7.7		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		(*)	0			20	5.0	1.3	35	1.0	2.1	0.5
2	(*)		0			24	4.1	1.1	31	.7	2.4	1.3
3			0		10	24	*3.3	.9	33	.8	2.8	1.0
4			0			29	2.8	.7	39	1.1	2.3	1.0
5			0			29	2.6	16	48	1.3	.9	1.3
6			*0		30	*29	2.4	31	61	1.1	.5	1.2
7			0		*44	27	2.3	34	96	1.0	1.0	.9
8			0		37	20	1.7	36	148		2.3	.8
9			0		30	14	1.6	*39	179		1.3	.7
10			0	(*)	24	12	1.7	50	197		.5	.2
11			0		20	12	4.7	66	212	.8	1.1	.2
12			0		16	14	8.8	79	204		1.2	.5
13			0		12	22	7.0	87	*189		1.3	1.1
14			0		11	20	5.4	98	177		2.1	1.4
15			0	0	8.5	26	3.6	94	156	*.2	*.9	1.4
16			0		7.4	33	2.6	*100	117	.7	.7	*2.4
17			0		7.4	38	2.0	105	83	1.1	1.1	2.4
18			0		6.4	44	1.7	115	61	1.1	1.0	3.0
19			0		6.7	45	1.6	128	43	1.0	1.3	2.4
20			0		7.0	45	1.4	131	29	2.0	1.8	1.4
21			0		6.7	39	1.6	131	19	1.8	2.0	2.0
22			0		6.4	38	1.3	121	13	.7	2.3	2.8
23			0		7.0	35	1.2	112	14	.4	1.6	2.0
24			0		8.1	30	1.0	104	10	.4	2.4	2.1
25			0		7.7	24	1.0	96	8.5	1.7	3.6	1.6
26			0		7.7	19	1.0	89	6.7	3.0	3.0	1.0
27			0		8.8	14	1.0	85	5.0	4.4	1.8	.4
28			0		12	12	1.1	*81	5.0	5.7	1.1	.1
29			0	6	17	9.6	1.1	72	3.6	4.7	1.1	.1
30			3.5		-	7.7	1.3	59	1.6	*4.7	.9	.5
31			1.0		-	5.7	-	47	-	3.3	.3	-
Total	0	0	4.5	24	398.8	761.0	77.9	2,208.0	2,224.4	49.5	48.7	37.7
Mean	0	0	0.15	0.8	13.8	24.5	2.60	71.2	74.1	1.60	1.57	1.26
Ac-ft	0	0	8.9	48	791	1,510	155	4,380	4,410	98	97	75

Calendar year 1951: Max - Min - Mean - Ac-ft -
Water year 1951-52: Max 212 Min 0 Mean 15.9 Ac-ft 11,570

* Discharge measurement or observation of no flow made on this day.
Note.--No flow July 1 (beginning of record) to Sept. 30, 1951. No gage-height record Dec. 31 to Feb. 6, July 8-15; discharge estimated on basis of recorded range in stage, 3 discharge measurements, and weather records.

Coal Creek near Cedar City, Utah

Location.--Lat 37°40'20", long. 113°02'05", in NE¼ sec. 13, T. 36 S., R. 11 W., on right bank 4 miles downstream from South Creek and 1.3 miles east of Cedar City. Prior to Oct. 10, 1951, and for period May 4 to July 2, 1952, at site 2 miles upstream.

Records available.--May 1915 to November 1919, May 1935 to September 1952. 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 6,000 ft (from topographic map). Prior to Mar. 30, 1939, staff gages and Mar. 30, 1939, to May 14, 1945, water-stage recorder at several sites about 0.5 mile upstream at various datums. May 15, 1945, to Oct. 10, 1951, and May 4 to July 2, 1952, water stage recorder at site 2 miles upstream at different datum.

Average discharge.--16 years (1935-37, 1938-52), 33.9 cfs.

Extremes.--Maximum discharge during year, 456 cfs May 20 (gage height, 3.85 ft, site and datum then in use); minimum, 0.6 cfs Nov. 16, result of freezup.
1935-52: 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, that of Nov. 16, 1951.

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

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 4-12, June 7 to Sept. 8)

Oct. 1-10, May 4 to July 2				Oct. 11 to May 3, July 3 to Sept. 30			
1.5	6.3	2.3	90	1.5	2.7	2.3	41
1.6	12	2.6	145	1.6	4.4	2.6	74
1.7	20	3.0	232	1.7	6.8	3.0	136
1.8	29	3.4	328	1.8	10	3.4	220
2.0	49	3.7	405	2.0	19	3.8	326

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.4	10	11	5.4	12	11	35	173	234	45	22	13
2		5.7	11	7.8	12	10	37	*266	*223	*41	22	13
3	a7.5	10	7.1	9.0	11	9.2	45	320	301	39	21	13
4		9.7	12	11	10	10	52	379	248	38	22	13
5	(*)	*9.4	9.7	11	*11	*10	*146	379	234	40	21	13
6	7.9	8.6	8.7	11	12	10	161	376	234	42	22	13
7	7.9	9.0	4.6	12	15	10		382	207	37	22	13
8	7.4	9.4	5.3	12	13	11	d100	*382	185	34	22	*13
9	7.4	9.0	5.8	11	12	11		361	174	39	22	12
10	*7.1	8.7	7.4	11	11	11		346	162	36	21	12
11	7.1	9.7	9.0	11	13	9.5		350	*147	31	21	13
12	6.5	10	10	*10	14	11		363	133	30	20	13
13	6.5	10	13	11	7.8	12		363	120	29	24	13
14	6.8	11	9.7	10	8.7	10	d60	369	109	*28	d20	12
15	6.5	9.0	*9.7	11	d9.9	12		*333	100	28	d20	12
16	6.5	3.7	11	11	12	12		274	93	27	d25	12
17	6.8	4.9	10	11	12	12		220	87	24	20	12
18	6.8	6.8	10	11	11	11	*87	214	81	23	22	12
19	6.5	12	9.7	11	8.4	12	87	255	79	22	*20	*12
20	6.5	12	9.0	11	9.2	12	d90	333	73	21	21	13
21	7.1	11	8.7	11	12	9.0		333	68	21	71	17
22	6.8	11	10	10	9.7	11		260	65	20	22	14
23	7.1	9.0	10	10	10	11	108	260	61	20	20	12
24	9.0	11	10	11	10	13	*122	289	60	21	16	12
25	21	7.8	9.4	11	8.5	13	*144	284	56	19	15	11
26	18	8.7	9.7	11	9.8	14	179	298	69	49	16	11
27	13	13	9.7	11	11	15	218	306	57	34	15	11
28	13	12	10	10	11	23	167	298	51	25	17	11
29	16	11	12	10	11	31	129	301	49	*26	17	11
30	15	12	12	11	-	34	*129	284	47	24	14	*11
31	12	-	6.3	13	-	37	-	262	-	22	14	-
Total	279.6	285.1	291.5	328.2	318.0	427.7	2,936	9,615	3,807	935	667	373
Mean	9.02	9.50	9.40	10.6	11.0	13.8	97.9	310	127	30.2	21.5	12.4
Ac-ft	555	565	578	651	631	848	5,820	19,070	7,550	1,850	1,320	740

Calendar year 1951: Max 59 Min 3.7 Mean 12.9 Ac-ft 9,370
Water year 1951-52: Max 382 Min 3.7 Mean 55.4 Ac-ft 40,180

Peak discharge (base, 350 cfs).--May 7 (7 p.m.) 416 cfs (3.59 ft); May 14 (9 p.m.) 418 cfs (3.68 ft); May 20 (10 p.m.) 456 cfs (3.85 ft); June 3 (12 m.) 379 cfs (3.56 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement, recorded range in stage, weather records, and records for nearby streams.
d Doubtful gage-height record; discharge estimated as for "a".

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,400 ft.

Extremes.--Maximum discharge during year, 178 cfs June 7 (gage height, 2.72 ft), from rating curve extended above 93 cfs; minimum, 0.6 cfs Mar. 3.
1947-52: Maximum discharge, that of June 7, 1952; minimum, 0.4 cfs Mar. 11, 1951, 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.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 26 to June 7)

0.6	.6	1.4	18
.7	1.2	1.7	38
.9	3.1	2.0	69
1.0	4.7	2.3	115
1.2	9.6	2.6	174

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	2.9	2.9	b1.9	2.3	a1.7	2.9	28	124	47	20	7.1
2	3.4	*2.9	b2.8	a1.7	2.3	1.9	3.3	32	124	50	19	6.8
3	3.7	3.0	b2.7	a1.6	2.3	1.5	*3.4	37	119	53	18	6.4
4	*3.7	3.0	b2.6	a1.7	2.3	1.6	3.9	43	122	58	16	6.2
5	3.6	b2.9	b2.6	a1.8	2.2	1.6	4.5	49	133	62	15	6.0
6	3.4	b2.8	b2.6	a1.8	2.1	1.6	4.8	52	151	63	16	6.0
7	3.4	2.9	*b2.6	a1.9	*2.2	*1.6	6.8	55	161	61	19	5.8
8	3.4	3.0	b2.5	a1.9	2.2	1.6	6.6	56	143	58	17	5.6
9	3.4	3.0	b2.4	*a2.0	2.2	1.6	6.6	56	141	54	15	5.3
10	3.4	2.9	b2.3	1.9	2.1	1.6	6.0	60	131	50	14	5.6
11	3.4	3.0	b2.1	1.9	2.0	1.7	6.0	63	117	49	14	5.8
12	3.4	3.0	2.2	1.9	1.9	1.6	5.8	70	106	44	13	5.8
13	3.4	2.9	2.0	2.0	1.7	1.6	6.2	81	*92	43	13	5.8
14	3.4	3.0	1.6	2.0	2.1	1.7	6.4	93	83	39	12	5.6
15	3.3	2.8	1.3	2.0	1.3	1.7	6.4	92	79	37	*12	5.1
16	3.4	b2.7	1.1	2.0	1.2	1.8	6.6	83	70	*35	11	*4.9
17	3.4	b2.7	1.1	1.9	1.2	1.8	7.4	*73	69	34	10	4.7
18	3.3	b2.7	1.1	1.9	1.1	1.8	8.5	60	73	32	10	4.7
19	3.3	b2.6	1.2	1.8	1.1	1.8	9.6	54	74	31	9.4	4.5
20	3.3	2.6	1.4	1.8	1.0	1.8	9.6	54	69	30	9.4	4.9
21	3.1	2.9	1.4	1.8	1.0	1.8	9.4	50	68	30	9.6	5.3
22	3.0	2.8	1.5	1.8	.9	1.8	9.6	50	63	28	8.8	4.9
23	3.1	2.6	1.6	1.9	.9	1.8	11	48	64	27	8.5	4.5
24	3.1	2.5	1.6	2.0	.9	1.8	12	50	60	28	8.2	4.4
25	3.4	2.8	1.6	2.0	.9	1.9	14	55	60	28	7.7	4.4
26	3.9	3.1	1.6	1.8	b.9	2.2	15	63	52	26	8.0	4.4
27	3.4	3.0	1.9	a2.0	1.0	2.3	18	67	44	26	7.7	4.4
28	3.4	2.9	2.0	2.1	1.0	2.5	23	*81	39	24	8.2	4.2
29	3.3	2.9	2.0	2.2	1.2	2.6	24	117	40	23	8.0	4.2
30	3.3	2.9	2.1	2.3	-	2.9	25	119	44	23	7.1	4.2
31	3.1	-	b2.0	2.3	-	2.9	-	128	-	22	6.8	-
Total	104.4	85.7	60.4	59.6	45.5	58.1	283.3	2,019	2,715	1,215	371.4	157.5
Mean	3.37	2.86	1.95	1.92	1.57	1.87	9.44	65.1	90.5	39.2	12.0	5.25
Ac-ft	207	170	120	118	90	115	562	4,000	5,390	2,410	737	312

Calendar year 1951: Max 79 Min 0.5 Mean 6.69 Ac-ft 4,840
Water year 1951-52: Max 161 Min 0.9 Mean 19.6 Ac-ft 14,230

Peak discharge (base, 20 cfs).--May 14 (10 p.m.) 96 cfs (2.10 ft); June 7 (5 a.m.) 178 cfs (2.72 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 Lehman Creek near Baker.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,400 ft.

Extremes.--Maximum discharge during year, 45 cfs June 2 (gage height, 1.49 ft); minimum, 0.7 cfs Jan. 3, but may have been less during periods of no gage-height record.
1947-52: Maximum discharge, that of June 2, 1952; minimum, that of Jan. 3, 1952.

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

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 10 to July 10, Aug. 21 to Sept. 30)

0.6	0.9	1.0	8.3
.7	1.5	1.2	19
.8	2.8	1.5	46

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	1.9	1.4	b1.2	a1.3	1.3	3.2	8.7	42	23	18	8.3
2	2.3	*b1.8	b1.3	b1.1	a1.2	b1.3	3.4	10	44	24	17	7.9
3	2.5	1.8	b1.3	1.0	a1.2	b1.3	*3.4	12	35	23	16	7.9
4	*2.6	1.8	b1.3	a1.1	a1.2	1.4	3.8	12	34	24	16	7.5
5	2.6	1.7	1.4	a1.1	a1.2	1.4	4.5	13	35	25	16	7.1
6	2.5	1.7	1.3	a1.1	a1.2	1.4	5.0	14	35	24	16	7.1
7	2.3	1.7	*1.2	a1.1	*1.2	*1.3	5.5	15	28	25	16	7.1
8	2.3	1.8	b1.2	a1.1	b1.1	b1.3	5.3	16	31	24	16	6.8
9	2.3	1.7	b1.2	*b1.1	b1.2	1.4	4.8	17	32	25	16	6.8
10	2.3	1.7	b1.3	b1.2	1.3	1.5	4.5	17	36	24	16	6.8
11	2.2	1.7	b1.3	b1.4	1.3	b1.4	4.3	18	37	23	16	7.1
12	2.2	1.8	b1.4	b1.3	b1.2	b1.3	4.3	19	36	23	16	6.8
13	2.2	1.7	b1.4	1.3	b1.2	b1.3	4.5	22	*34	23	15	6.8
14	2.2	1.8	1.4	1.3	b1.1	b1.5	4.5	24	33	22	14	6.4
15	2.0	b1.7	1.4	1.3	b1.2	1.7	4.3	25	32	21	*14	6.1
16	2.2	b1.6	1.4	&1.3	b1.3	1.7	4.5	26	31	*21	13	*5.8
17	2.2	b1.5	1.3	a1.2	1.4	1.6	4.8	*24	32	20	12	5.5
18	2.2	b1.6	1.4	a1.2	1.3	1.6	5.0	23	32	20	12	5.5
19	2.2	1.7	1.3	a1.2	b1.2	1.6	5.3	21	32	20	11	5.3
20	2.0	1.6	1.3	a1.2	b1.2	b1.6	5.0	22	33	20	11	5.3
21	2.0	1.7	1.4	a1.2	b1.2	b1.5	4.8	20	32	20	11	5.5
22	2.0	1.6	1.4	a1.2	b1.3	b1.5	5.0	20	31	20	10	5.0
23	2.0	1.4	1.5	a1.3	1.3	b1.6	5.3	20	31	20	10	4.8
24	1.9	1.5	1.3	a1.3	1.3	b1.7	5.8	21	31	20	9.6	5.0
25	2.0	1.5	1.3	a1.3	1.3	1.8	6.1	23	32	20	9.2	4.8
26	2.3	1.5	1.3	a1.2	1.4	2.0	6.4	24	30	19	9.6	4.8
27	2.2	1.5	1.3	a1.2	1.4	2.2	7.1	26	28	19	9.2	4.8
28	2.0	1.5	b1.3	a1.3	1.3	2.5	8.7	*27	26	19	9.2	4.8
29	2.0	1.5	b1.3	a1.3	1.3	2.6	8.7	31	26	19	8.7	4.8
30	2.0	1.5	b1.3	a1.4	-	3.0	8.3	35	24	19	8.3	4.8
31	1.9	-	b1.3	a1.4	-	3.2	-	41	-	19	8.3	-
Total	68.1	49.5	41.2	37.9	36.3	52.5	156.1	646.7	975	668	400.1	183.0
Mean	2.20	1.65	1.33	1.22	1.25	1.69	5.20	20.9	32.5	21.5	12.9	6.10
Ac-ft	135	98	82	75	72	104	310	1,280	1,930	1,320	794	363

Calendar year 1951: Max 16 Min - Mean 3.80 Ac-ft 2,750
Water year 1951-52: Max 44 Min 1.0 Mean 9.06 Ac-ft 6,560

Peak discharge (base, 10 cfs).--June 2 (3:30 a.m.) 45 cfs (1.49 ft).
* Discharge measurement made on this day.
a No gage-height record (stage-discharge relation probably affected by ice); discharge estimated on basis of weather records, and records for Baker Creek at narrows, near Baker.
b Stage-discharge relation affected by ice.

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 1952.
Gage.--Water-stage recorder and sharp-crested weir. Datum of gage is 1,605.40 ft above mean sea level, adjustment of 1934. Supplementary water-stage recorder on river 400 ft east and 500 ft upstream from base gage. Prior to Feb. 24, 1950, present supplementary gage used as base gage.
Extremes.--Maximum discharge during year, 265 cfs Dec. 5 (gage height, 7.72 ft); minimum daily, 1.1 cfs Jan. 22.
1948-52: Maximum discharge, 450 cfs Sept. 6, 1950 (gage height, 8.08 ft); minimum daily, that of Jan. 22, 1952.
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 except those for periods of no gage-height record and those above 75 cfs, which are poor. Discharge measurements generally made three times a month. Records of daily discharge include water pumped from open sumps in ground-water seepage area surrounding station. The monthly runoff is adjusted for flow from infiltration line that bypasses the station. The California Electric Power Co. diverts out of basin about 15 miles upstream to powerplants in San Gorgonio River basin and thence to an area north of Banning for irrigation. One small diversion for domestic use and one for irrigation are made 2 to 3 miles upstream.
Cooperation.--Records of monthly diversion of infiltration pipeline furnished by Whitewater Mutual Water Co. Records of flow diverted out of basin furnished by the California Electric Power Co.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.3	7.4	4.0	3.5	4.4	8.7	30	21	19	11	12	13
2	5.7	5.7	3.0	2.2	5.3	5.0	31	24	17	11	9.7	12
3	5.7	4.9	5.0	1.6	5.0	3.2	24	24	16	11	9.2	13
4	5.7	2.2	5.6	1.5	5.2	3.0	18	24	14	11	11	12
5	6.6	4.0	46	1.3	4.3	3.7	9.4	22	12	11	12	12
6	6.6	4.5	1.9	1.3	5.3	3.8	10	23	12	11	11	13
7	4.4	4.8	2.0	1.4	4.6	8.8	19	24	12	11	9.5	13
8	5.9	4.3	3.0	1.2	3.2	4.3	20	22	11	11	12	13
9	6.2	4.8	2.8	1.2	3.4	3.2	24	20	8.3	11	15	13
10	6.0	3.9	4.0	1.4	2.3	8.3	40	18	8.3	11	16	16
11	6.1	1.7	4.3	1.9	3.2	10	31	16	8.4	11	17	20
12	6.0	4.3	4.7	1.3	3.6	4.1	25	16	9.0	12	17	19
13	5.3	4.5	3.6	2.7	3.8	4.3	26	16	9.8	12	14	16
14	3.7	4.6	2.4	1.9	4.4	2.8	30	16	9.0	12	14	15
15	5.4	4.9	1.9	2.3	4.9	6.8	28	16	9.2	12	13	15
16	5.7	5.8	2.2	93	4.2	12	26	16	8.7	12	13	13
17	5.4	5.5	2.9	88	4.3	5.0	29	15	10	12	11	13
18	5.1	2.1	3.8	48	5.3	4.0	33	15	10	11	10	13
19	5.7	5.7	3.5	3.7	4.9	6.7	40	14	10	11	12	50
20	5.9	5.8	3.1	4.0	4.2	5.0	37	15	10	12	13	35
21	4.4	6.5	3.6	1.2	4.0	5.0	30	18	10	12	13	30
22	5.9	4.9	3.3	1.1	3.8	5.0	27	19	10	11	12	25
23	6.2	6.5	2.0	1.3	3.6	5.3	26	19	10	10	12	20
24	5.4	4.9	3.2	2.1	3.4	5.5	26	17	10	12	13	20
25	13	5.3	2.2	3.8	4.2	7.2	30	18	10	13	13	20
26	5.6	5.6	3.1	4.5	4.6	5.0	29	20	11	13	13	15
27	6.5	5.2	2.9	3.3	4.2	5.6	26	17	11	13	14	15
28	2.8	5.0	2.9	3.0	3.8	6.0	27	18	11	14	14	15
29	5.9	4.5	37	3.5	4.2	17	23	18	11	15	14	15
30	5.7	4.3	84	3.5	-	11	21	16	11	15	15	15
31	5.4	-	7.8	2.9	-	19	-	17	-	12	15	-
Total	180.2	144.1	261.7	293.6	121.6	204.3	795.4	574	328.7	367	399.4	529
Mean	5.81	4.80	8.44	9.47	7.04	6.59	26.5	18.5	11.0	11.8	12.9	17.6
Ac-ft	357	286	519	582	241	405	1,580	1,140	652	728	792	1,050
(†)	13	39	64	122	115	123	119	123	119	123	123	119
(‡)	51	59	61	39	60	97	269	389	298	224	190	131

Adjusted for infiltration

Ac-ft	370	325	583	704	356	528	1,700	1,260	771	851	915	1,170

Observed

Calendar year 1951: Max 84 Min 1.7 Mean 5.59 Ac-ft 4,050
Water year 1951-52: Max 93 Min 1.1 Mean 11.5 Ac-ft 8,330

Adjusted

Calendar year 1951: Mean - Cfsm - In. - Ac-ft 4,600
Water year 1951-52: Mean - Cfsm - In. - Ac-ft 9,530

† Runoff in acre-feet from infiltration line bypassing station.
‡ Runoff in acre-feet diverted from basin 15 miles upstream.
Note.--No gage-height record Dec. 31 to Jan. 2, Sept. 19 to 30; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby stations.

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 1952.
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).
Average discharge.--5 years, 2.50 cfs.
Extremes.--Maximum discharge during year, 135 cfs Dec. 30 (gage height, 3.83 ft), from rating curve extended above 60 cfs on basis of velocity-area study; no flow Oct. 1 to Dec. 20.
1947-52: Maximum discharge, 164 cfs (revised) July 28, 1951 (gage height, 4.15 ft), from rating curve extended above 60 cfs on basis of velocity-area study; no flow during several months of each year.
Revision.--The figures of maximum discharge for water years 1948 and 1951 have been revised to 143 cfs July 22, 1948 (gage height, 3.92 ft) and 164 cfs July 28, 1951 (gage height, 4.15 ft), superseding figures published in Water-Supply Papers 1120 and 1214, respectively.
Remarks.--Records good except those for period of no gage-height record and those for discharges above 60 cfs, which are fair.
Revisions.--Revised figures of discharge, in cubic feet per second, for water years 1948 and 1951, superseding those published in Water-Supply Papers 1120 and 1214, are given herewith:

July 22, 1948..... 2.1
23, 1948..... 3.3
28, 1951..... 5.9

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
July 1948.....	5.52	3.3	0	0.178	11
Water year 1947-48.....	197.01	4.9	0	.538	390
Calendar year 1948.....	218.01	4.9	0	.596	432
July 1951.....	6.2	5.9	0	.20	12
Water year 1950-51.....	59.6	5.9	0	.16	118

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 17-30)

0.25	0	1.0	3.1
.4	.1	1.2	5.2
.5	.2	1.5	9.4
.6	.5	2.0	19
.7	1.0	2.5	40
.8	1.6	3.0	72

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	9.1	3.4	3.3	9.0	36	36	8.6	3.1	0.4
2			0	5.6	3.5	2.9	10	*41	36	*8.0	2.8	.3
3			0	*3.9	3.5	2.5	11	47	38	7.5	2.6	*.3
4	(*)		0	3.1	3.3	2.3	12	47	36	7.0	2.5	a.3
5			0	2.6	3.2	*2.1	13	46	34	6.8	2.4	a.3
6			0	2.3	3.1	2.1	15	46	33	6.2	2.6	a.3
7			0	2.1	3.0	2.6	16	47	30	5.9	2.4	a.3
8			0	1.8	2.8	3.3	15	*47	29	5.5	2.2	a.3
9			0	1.6	2.8	2.7	15	46	28	5.1	2.0	a.3
10			0	1.5	2.8	3.0	15	47	26	4.9	2.0	a.2
11			0	1.4	2.7	4.9	13	50	*25	4.8	1.8	a.2
12			0	1.4	2.6	3.9	12	52	23	4.5	*1.6	a.2
13		(*)	*0	2.7	*2.5	3.7	13	53	22	4.4	1.6	a.2
14			0	2.4	2.4	3.6	14	*55	20	4.3	1.6	a.2
15			0	1.9	2.4	3.6	14	55	20	4.1	1.5	a.2
16			0	*7.0	2.4	5.2	14	52	19	3.9	1.5	a.2
17			0	6.5	2.4	4.4	*15	48	18	3.7	1.2	*.2
18			0	18	2.4	4.3	17	48	17	3.6	1.1	.2
19			0	10	2.4	*4.4	17	52	17	3.4	.9	1.1
20			0	7.5	2.3	4.4	17	*55	16	3.4	.9	4.0
21			.1	5.9	2.2	4.3	15	58	15	3.4	.8	4.0
22			.1	4.8	2.2	4.0	16	55	14	3.2	.8	2.8
23	(*)		.1	4.1	2.1	3.8	18	53	13	*3.0	.6	2.2
24			.1	*3.7	2.0	3.9	23	51	13	3.2	.6	1.7
25			.1	4.4	2.0	5.5	29	49	12	4.1	.7	1.4
26			.1	5.9	2.0	6.8	24	47	12	3.8	.6	1.2
27			.1	4.3	2.0	8.2	22	*44	11	3.9	.5	1.2
28			.1	3.7	2.0	7.5	23	43	11	3.6	.5	1.1
29			11	3.5	2.2	7.6	27	42	10	3.7	.5	1.0
30			69	3.3	-	8.0	31	40	9.4	4.0	.4	.9
31			*15	3.2	-	7.7	-	38	-	3.7	.4	-
Total	0	0		95.8	139.2	74.6	136.5	505.0	1,490	643.4	145.2	44.7	27.2
Mean	0	0		3.09	4.49	2.57	4.40	16.8	48.1	21.4	4.68	1.44	0.91
Ac-ft	0	0		190	276	148	271	1,000	2,960	1,280	288	89	54

Calendar year 1951: Max 69 Min 0 Mean 0.42 Ac-ft 297
Water year 1951-52: Max 69 Min 0 Mean 9.02 Ac-ft 6,560

Peak discharge (base, 20 cfs).--Dec. 30 (5:45 a.m.) 135 cfs (3.83 ft); Jan. 18 (5:15 a.m.) 38 cfs (2.47 ft); May 20 (9 p.m.) 63 cfs (2.85 ft).
* Discharge measurement made on this date.
a No gage-height record; discharge estimated on basis of record at Palm Canyon Creek near Palm Springs and weather records.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 700 ft (from topographic map). Prior to Jan. 14, 1942, at datum 0.02 ft higher.

Average discharge.--16 years (1930-41, 1947-52), 5.99 cfs; median of yearly mean discharges, 1.8 cfs.

Extremes.--Maximum discharge during year, 1,010 cfs Jan. 18 (gage height, 5.10 ft), from rating curve extended above 100 cfs on basis of slope-area determination of peak flow; no flow during several months.

1930-42, 1947-52: 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 for periods of no gage-height record, which are fair. Discharge measurements generally made about three times a month during winter and twice a month rest of year.

Rating tables for water year 1951-52 (gage height, in feet, and discharge in cubic feet per second)
(Shifting-control method used Jan. 1-18, Jan. 27 to Mar. 10)

Oct. 1 to Mar. 10		Mar. 11 to Sept. 30			
2.1	8.0	1.1	0	1.7	11
2.2	14	1.2	.1	1.9	24
2.4	29	1.3	.4	2.1	43
2.7	66	1.4	1.3	2.5	102
3.0	116	1.5	3.2	2.9	190
		1.6	6.2		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	14	a3.0	14	21	7.7	1.0	0	0.7	0
2			0	6.8	a4.0	15	20	6.9	1.0	0	.4	0
3			0	5.2	a5.0	8.6	19	6.5	1.0	0	.1	0
4			0	4.0	5.2	6.4	18	5.8	.8	0	0	0
5			0	3.5	4.8	7.2	17	5.1	.7	0	0	0
6			0	3.0	4.4	6.8	16	4.8	.5	0	0	0
7			0	1.9	4.4	9.6	16	4.2	.5	0	0	0
8			0	1.4	4.4	20	18	3.9	.5	0	0	0
9			0	1.2	4.4	16	16	3.9	.5	0	0	0
10			0	1.0	4.4	20	18	3.7	.5	0	0	0
11			0	2.2	4.0	146	30	3.2	.4	0	0	0
12			0	3.2	4.0	60	21	2.7	.4	0	0	0
13			0	8.0	4.0	62	18	2.3	.3	0	0	0
14			0	9.6	4.0	51	16	2.3	.2	0	0	0
15			0	6.8	3.7	46	15	2.3	.2	0	0	0
16			0	122	3.5	168	13	2.3	.2	0	0	0
17			0	145	3.5	68	12	2.1	.1	0	0	0
18			0	374	3.7	53	11	1.9	.1	0	0	0
19			0	a110	3.2	47	11	1.7	.1	0	0	.3
20			0	a55	3.2	41	12	1.5	0	0	0	0
21			0	a25	3.2	36	11	1.5	0	0	0	.5
22			0	a15	3.0	30	9.6	1.5	0	0	0	.2
23			0	a10	3.0	27	9.1	1.3	.1	0	0	0
24			0	14	2.7	26	9.6	1.2	0	0	0	0
25			0	15	2.4	26	13	1.2	0	0	0	0
26			0	9.1	2.4	28	10	.9	0	0	0	0
27			0	4.4	2.4	28	10	.9	.1	0	0	0
28			0	3.2	2.4	26	11	1.0	0	0	0	0
29			0	3.2	2.7	24	9.6	.8	0	0	0	0
30			350	a3.0	-	23	8.1	.8	0	20	0	0
31			66	a3.0	-	22	-	.9	-	.9	0	-
Total	0	0	416	982.7	105.0	1,161.6	439.0	86.8	9.2	20.9	1.2	1.0
Mean	0	0	13.4	31.7	3.62	37.5	14.6	2.80	0.31	0.67	0.04	0.03
Ac-ft	0	0	825	1,950	208	2,300	871	172	18	41	2.4	2.0

Calendar year 1951: Max 350 Min 0 Mean 1.32 Ac-ft 957
Water year 1951-52: Max 374 Min 0 Mean 8.81 Ac-ft 6,390

Peak discharge (base, 100 cfs).--Dec. 30 (11:30 a.m.) 700 cfs (4.60 ft); Jan. 18 (8:55 a.m.) 1,010 cfs (5.10 ft); Mar. 11 (2:20 a.m.) 282 cfs (3.22 ft); Mar. 16 (6.05 a.m.) 288 cfs (3.24 ft); July 30 (5:00 p.m.) 222 cfs (3.02 ft).

a No gage-height record; discharge estimated on basis of records for Tahquitz Creek near Palm Springs.

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 upstream from mouth, and 5.4 miles south of Palm Springs.

Drainage area.--8.78 sq mi.

Records available.--October 1948 to September 1952.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 800 ft (from topographic map).

Extremes.--Maximum discharge during year, 96 cfs Dec. 30 (gage height, 2.94 ft), from rating curve extended above 70 cfs; minimum daily, 0.4 cfs Oct. 10-13.
1949-52: Maximum discharge, that of Dec. 30, 1951; minimum daily, 0.3 cfs on many days during 1950 and 1951.

Remarks.--Records good. Discharge measurements generally made twice a month. One small diversion for domestic use about 1 mile above station.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 28 to Dec. 4, Dec. 17-26, Jan. 18 to Mar. 5, Mar 12 to May 10, May 31 to June 10)

1.3	0.4	2.0	20
1.4	1.4	2.2	33
1.5	2.9	2.4	49
1.6	5.0	2.6	68
1.8	12		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.9	1.5	8.4	5.0	8.2	10	5.8	2.7	2.0	1.6	1.6
2	.5	.9	1.5	6.3	5.0	5.3	11	6.1	2.9	2.0	1.6	1.6
3	.6	.8	1.6	5.6	5.0	3.9	11	6.7	2.9	2.0	1.6	1.4
4	.6	.8	1.6	4.5	5.0	3.7	11	6.1	2.7	1.9	1.6	1.2
5	.5	.8	9.5	4.7	5.0	3.7	10	5.8	2.7	1.9	1.8	1.4
6	.5	.8	2.2	4.8	4.8	3.5	7.2	5.8	2.7	1.6	1.8	1.4
7	.5	.8	1.6	4.4	4.8	5.3	7.0	5.8	2.9	1.4	1.6	1.2
8	.5	.9	1.6	3.7	4.3	4.1	10	5.8	2.9	1.4	1.6	1.2
9	.5	.9	1.5	3.1	5.1	3.7	7.3	5.8	2.7	1.4	1.5	1.2
10	.4	.9	1.5	2.5	5.0	4.9	9.1	5.6	2.7	1.5	1.6	1.2
11	.4	1.0	1.5	2.7	5.0	10	8.3	5.6	2.5	1.5	1.5	1.6
12	.4	1.0	2.7	2.5	5.3	7.2	5.6	4.3	2.4	1.5	1.5	1.8
13	.4	1.0	1.9	5.3	4.8	6.1	5.6	5.0	2.4	1.5	1.6	1.8
14	.6	1.0	1.8	3.7	3.9	4.8	6.1	5.0	2.4	1.5	1.6	1.6
15	.6	1.0	1.6	3.3	3.7	5.9	5.8	5.0	2.4	1.5	1.8	1.5
16	.6	1.0	1.6	13	3.7	14	5.3	5.6	2.4	1.5	1.8	1.5
17	.6	1.0	1.6	15	3.9	8.5	6.2	5.3	2.4	1.4	1.6	1.8
18	.6	1.1	1.6	23	4.1	7.6	7.6	5.2	2.4	1.2	1.6	1.6
19	.6	1.1	3.9	17	3.9	7.3	8.5	4.1	2.2	1.4	1.6	5.3
20	.6	1.1	2.0	12	3.9	7.3	8.5	4.1	2.2	1.6	1.6	3.7
21	.6	1.1	1.9	8.2	3.7	6.7	8.2	4.5	2.2	1.8	1.6	2.7
22	.6	1.2	1.9	6.7	3.7	5.9	7.9	4.8	2.2	1.8	1.6	1.9
23	.6	1.4	1.8	5.8	3.7	5.8	7.6	4.5	2.2	1.6	1.5	1.8
24	.6	1.4	1.8	4.8	3.9	6.1	7.3	4.0	2.4	1.8	1.9	1.6
25	.9	1.4	1.6	8.4	3.9	7.0	7.3	5.0	2.4	2.0	1.9	1.5
26	10	1.4	1.8	7.3	3.9	8.9	6.7	4.3	2.4	2.2	1.8	1.5
27	.9	1.4	1.8	5.8	3.9	9.7	7.0	3.9	2.2	1.9	1.9	1.4
28	.9	1.4	1.8	5.6	3.7	9.6	6.1	3.7	2.2	1.9	1.9	1.2
29	.9	1.5	12	5.3	4.4	9.4	5.8	3.7	2.2	1.9	1.8	1.2
30	.9	1.5	64	5.0	-	9.6	5.8	3.6	2.2	2.0	1.8	1.2
31	.9	-	20	5.0	-	9.6	-	3.3	-	1.8	1.6	-
Total	19.3	32.5	154.7	213.4	126.0	213.3	230.8	153.8	74.1	52.4	51.8	51.6
Mean	0.62	1.08	4.99	6.88	4.34	6.88	7.69	4.96	2.47	1.69	1.67	1.72
Ac-ft	38	64	307	423	250	423	458	305	147	104	103	102

Calendar year 1951: Max 64 Min 0.3 Mean 1.43 Ac-ft 1,040
Water year 1951-52: Max 64 Min 0.4 Mean 3.75 Ac-ft 2,720

Peak discharge (base, 30 cfs).--Dec. 5 (7:30 a.m.) 30 cfs (2.27 ft.); Dec. 30 (5:30 a.m.) 96 cfs (2.94 ft); Jan 16 (4:45 p.m.) 54 cfs (2.47 ft); Jan. 18 (6:30 a.m.) 31 cfs (2.57 ft).

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 1,250 ft (from topographic map).

Extremes.--Maximum discharge during year, 312 cfs Jan. 18 (gage height, 5.10 ft), from rating curve extended above 4 cfs on basis of slope-area determination at gage height 14.14 ft; minimum daily, 1.7 cfs June 18-21.

1950-52: Maximum discharge, 3,800 cfs July 28, 1951 (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, 1951, June 18-21, 1952.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. Discharge measurements generally made twice a month.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2	2	2.3	3.4	2	6	2.9	2.3	3.4	2.2	2.2	2.2
2	2	2	2.3	3.2	2	4	2.7	2.3	2.3	2.2	2.2	2.2
3	2	2	2.7	3.0	2	2	2.5	2.3	2.3	2.2	2.2	2.0
4	2	2	2.9	2.7	2	3	2.9	2.2	2.2	2.2	2.3	2.2
5	2	2	3.1	3.0	2	3	2.9	2.2	2.0	2.2	2.3	2.5
6	2	2	2.9	3.0	2	3.0	3.6	2.0	3.6	2.2	2.3	2.7
7	2	2	3.0	3.0	2	3.0	6.4	2.0	2.5	2.2	2.3	2.9
8	2	2	3.2	3.0	2	3.0	4.8	2.2	2.2	2.2	2.3	2.8
9	2	2.2	3.2	3.0	2	3.0	3.4	2.2	2.9	2.2	2.3	3.0
10	2	2.3	3.4	3.0	2	3.0	3.5	2.2	2.2	2.2	2.3	3.2
11	2	2.3	3.6	2.9	2	6.6	5.0	2.0	2.2	2.2	2.3	3.4
12	2	2.5	2.7	3.0	3	7.6	6.4	2.0	2.0	2.2	2.3	3.4
13	2	2.7	2.7	3.2	3	7.2	4.2	2.0	2.0	2.2	2.3	3.4
14	2	2.7	2.7	3.0	3	6.2	3.6	2.0	1.8	2.2	2.3	3.4
15	2	2.9	2.7	2.5	3	4.8	2.5	2.2	2.0	2.2	2.3	3.4
16	2	3.0	2.7	7.0	3	7.4	2.5	2.2	1.8	2.2	2.2	3.4
17	2	3.0	2.7	16	3	6	2.9	2.2	1.8	2.2	2.2	3.6
18	2	3.0	2.7	85	3	5	2.3	2.2	1.7	2.2	2.2	4.4
19	2	3.0	2.7	35	2	4	2.5	2.2	1.7	2.2	2.2	4.8
20	2	3.0	2.5	20	2	3.2	2.5	2.2	1.7	2.2	2.2	4.8
21	2	3.0	2.5	9	2	3.2	2.5	2.2	1.7	2.2	2.2	4.8
22	2	3.0	2.5	5	2	3	2.5	2.3	1.8	2.0	2.2	5.0
23	2	2.9	2.3	4	2	3	2.5	2.5	1.8	2.0	2.2	7.4
24	2	2.7	2.3	3	2	3	2.7	2.5	1.8	2.2	2.2	7.4
25	2	2.3	2.3	3	2	3	2.7	2.5	2.0	2.2	2.2	7.4
26	2	2.3	2.3	2	2	3	2.7	2.5	2.2	2.2	2.2	6.9
27	2	2.3	2.3	2	2	3	2.7	2.5	4.0	2.2	2.2	6.4
28	2	2.3	2.2	2	2	3	2.7	2.5	2.2	2.3	2.2	4.8
29	2	2.2	2.3	2	2	3	2.5	2.5	2.2	2.3	2.2	3.8
30	2	2.2	29	2	-	2.5	2.5	2.5	2.2	2.3	2.2	3.0
31	2	-	4.6	2	-	2.7	-	2.5	-	2.2	2.2	-
Total	62	73.8	111.3	243.9	65	125.4	96.0	70.1	66.2	68.1	69.4	120.9
Mean	2.0	2.46	3.59	7.87	2.2	4.05	3.20	2.26	2.21	2.20	2.24	4.03
Ac-ft	123	146	221	484	129	249	190	139	131	135	138	240

Calendar year 1951: Max 200 Min 1.7 Mean 3.33 Ac-ft 2,410
Water year 1951-52: Max 85 Min 1.7 Mean 3.20 Ac-ft 2,320

Peak discharge (base, 50 cfs).-- Dec. 30 (2:30 p.m.) 99 cfs (4.82 ft); Jan. 18 (7 a.m.) 312 cfs (5.10 ft).

Note.--No gage-height record Oct. 1 to Nov. 8, Jan. 19 to Mar. 4, Mar. 17-19, 22-29; discharge estimated on basis of 13 discharge measurements and records for nearby streams.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 1,200 ft (from topographic map).

Extremes.--Maximum discharge during year, 50 cfs Jan. 18 (gage height, 2.68 ft), from rating curve extended above 10 cfs on basis of slope-area determination at gage height 2.60 ft; minimum, no flow on many days.
1950-52: Maximum discharge, that of Jan. 18, 1952; minimum, no flow on many days.

Remarks.--Records good except those for period of no gage-height record, which are fair. Discharge measurements generally made twice a month.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.96	0	1.5	4.2
1.0	.1	1.7	8.2
1.1	.3	1.9	14
1.2	.9	2.1	21
1.3	1.7	2.4	34
1.4	2.8		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.2	3.2	1.4	5.0	3.9	1.8	0.1			
2		0	.2	1.9	1.3	4.1	3.5	1.6	.1			
3		0	.2	1.4	1.2	2.9	3.2	1.5	.1			
4		0	.2	1.2	1.3	3.2	a3.0	1.4	.1			
5		0	.4	1.1	1.3	2.9	a3.0	1.2	.1			
6		0	.3	1.0	1.2	2.7	a3.0	1.1	.1			
7		0	.3	1.1	1.2	3.1	a3.0	1.1	.1			
8		0	.3	1.1	1.2	4.7	a3.5	1.1	.1			
9		0	.3	.9	1.2	4.1	a3.0	1.0	0			
10		0	.3	.9	1.2	4.9	a3.0	1.0	0			
11		0	.4	.9	1.2	15	a5.0	.8	0			
12		0	.9	.8	1.3	10	a4.0	.7	0			
13		0	.9	1.4	1.2	9.2	a3.0	.6	0			
14		0	.7	1.7	1.2	8.0	a2.5	.6	0			
15		0	.6	1.4	1.2	8.2	a2.5	.5	0			
16		0	.6	2.0	1.2	11	2.1	.5	0			
17		0	.6	4.0	1.2	10	2.1	.5	0			
18		0	.6	32	1.5	9.4	2.1	.4	0			
19		0	.7	15	1.5	9.0	2.1	.4	0			
20		0	1.3	6.9	1.5	8.2	2.3	.3	0			
21		0	.8	4.1	1.4	7.5	2.2	.3	0			
22		0	.6	3.1	1.4	6.7	2.0	.3	0			
23		0	.6	2.4	1.4	6.0	1.9	.3	0			
24		.1	.5	2.2	1.5	5.6	2.0	.2	0			
25		.1	.5	2.4	1.5	6.4	2.3	.2	0			
26		.1	.5	2.1	1.6	7.5	1.9	.2	0			
27		.2	.5	1.8	1.6	7.8	1.9	.1	0			
28		.2	.4	1.6	1.6	6.7	2.4	.1	0			
29		.2	.7	1.6	1.8	5.5	2.3	.1	0			
30		.2	19	1.5	-	4.9	2.1	.1	0			
31		-	12	1.4	-	4.4	-	.1	-			
Total	0	1.1	46.1	104.1	39.3	204.6	80.8	20.1	0.8	0	0	0
Mean	0	0.04	1.49	3.36	1.36	6.60	2.69	0.65	0.03	0	0	0
Ac-ft	0	2.2	91	206	78	408	160	40	1.6	0	0	0

Calendar year 1951: Max 19 Min 0 Mean 0.38 Ac-ft 273
Water year 1951-52: Max 32 Min 0 Mean 1.36 Ac-ft 985

Peak discharge (base, 15 cfs).-- Dec. 30 (3 p.m.) 40 cfs (2.51 a.m.) Jan. 18 (9:40 a.m.) 50 cfs (2.68 cfs); Mar. 11 (5 a.m.) 18 cfs (2.01 ft).
a No gage-height record; discharge estimated on basis of weather records and recorded range in stage.

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 1952.

Gage.--Water-stage recorder and broad-crested weir. Altitude of gage is 3,050 ft (from topographic map). Prior to Apr. 21, 1938, at same site at different datum. Apr. 21 to Dec. 10, 1938, at site 0.5 mile downstream at different datum.

Average discharge.--22 years (1930-52), 59.2 cfs; median of yearly mean discharges, 38 cfs.

Extremes.--Maximum discharge during year, 2,830 cfs Dec. 30 (gage height, 4.71 ft); minimum daily, 0.5 cfs Oct. 1, 2.
1929-52: Maximum discharge, 46,600 cfs Mar. 2, 1938, by slope-area determination of peak flow; 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. Discharge measurements generally made twice a month. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft), used principally for recreation. Hesperia Water Co.'s canal diverts water about 2½ miles above station for irrigation of about 1,500 acres and domestic use. For records of combined discharge of Deep Creek and canal, see following page.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.7	0.4	1.3	9.5	2.3	130
.8	1.0	1.5	11	2.5	209
.9	2.0	1.7	22	3.0	518
1.0	3.4	1.9	42	3.5	980
1.1	5.1	2.1	76	4.1	1,770

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	2.2	4.4	121	86	83	319	280	36	5.9	8.4	2.8
2	.5	2.2	3.2	66	100	68	344	296	34	5.5	5.1	2.5
3	.6	2.1	6.0	46	90	52	375	280	33	4.9	4.4	2.8
4	.6	2.1	7.1	41	a88	57	409	253	33	4.9	4.0	2.8
5	.6	2.2	144	33	a86	54	429	219	30	4.7	3.7	2.9
6	.6	2.2	72	30	a84	52	458	196	28	4.0	3.1	2.5
7	.6	2.2	29	30	a82	72	450	179	26	3.4	1.5	2.1
8	.6	2.2	18	25	a76	68	672	175	25	5.9	1.3	1.9
9	1.4	2.2	14	20	a67	74	534	155	24	9.0	1.4	1.9
10	1.7	2.4	12	22	a66	100	409	152	21	8.8	1.4	1.9
11	1.8	2.4	11	20	a61	141	325	144	20	9.0	1.4	2.1
12	1.9	2.4	21	28	a57	112	319	141	20	8.8	1.3	3.2
13	1.9	2.4	38	361	a56	106	280	130	18	6.8	1.2	2.2
14	1.7	2.4	23	98	a49	86	313	127	17	2.8	1.2	2.2
15	1.3	2.4	17	70	42	637	280	127	16	2.9	1.3	2.2
16	1.6	2.5	14	633	45	456	280	118	14	2.9	1.2	2.2
17	1.7	2.5	12	227	51	219	319	106	11	3.1	1.5	2.1
18	1.5	2.5	10	281	50	188	319	100	10	3.4	2.4	2.2
19	1.6	2.5	7.7	148	41	192	409	95	10	3.5	1.8	3.3
20	1.6	3.1	4.9	100	37	179	436	93	9.9	3.4	1.8	11
21	1.6	6.6	5.7	81	34	152	344	95	9.3	3.4	1.9	7.6
22	1.7	8.1	3.8	66	32	134	302	86	8.3	3.5	1.9	5.1
23	1.8	6.6	4.2	61	30	127	313	72	7.7	3.5	1.8	4.4
24	1.9	5.9	a4.4	59	33	166	302	61	8.9	3.8	1.9	4.4
25	2.5	5.5	a4.5	81	37	344	302	52	8.8	7.9	1.9	5.1
26	3.2	4.9	4.6	100	44	423	313	50	8.5	6.4	1.9	5.3
27	2.9	4.6	4.6	83	40	443	291	57	8.3	4.4	2.1	4.7
28	2.2	4.6	4.7	76	42	375	344	168	7.7	7.1	2.5	4.6
29	2.0	4.7	92	76	51	356	389	45	7.1	32	2.6	4.2
30	2.2	4.7	1,760	72	-	356	344	40	6.6	27	2.8	4.2
31	2.2	-	300	70	-	280	-	37	-	13	2.8	-
Total	48.5	103.3	2,656.8	3,225	1,657	6,152	10,923	4,129	517.1	215.6	73.5	106.4
Mean	1.56	3.44	85.7	104	87.2	198	364	133	17.2	6.95	2.37	3.55
Ac-ft	96	208	5,270	6,400	3,290	12,200	21,660	8,190	1,030	428	146	211

Calendar year 1951: Max 1,760 Min 0.3 Mean 10.2 Ac-ft 7,410
Water year 1951-52: Max 1,760 Min 0.5 Mean 81.4 Ac-ft 59,100

Peak discharge (base, 400 cfs).--Dec. 5 (10:30 p.m.) 618 cfs (3.12 ft); Dec. 30 (4 a.m.) 2,830 cfs (4.71 ft); Jan. 13 (9:30 p.m.) 850 cfs (3.37 ft); Jan. 16 (3:10 p.m.) 1,060 cfs (3.58 ft); Mar. 15 (7:20 p.m.) 2,620 cfs (4.60 ft).

a No gage-height record; discharge estimated on basis of 2 discharge measurements, weather records, and records for Hesperia Water Co.'s canal near Hesperia, and West Fork Mojave River near Hesperia.

Combined discharge, in cubic feet per second, of Deep Creek and Hesperia Water Co.'s Canal near Hesperia, Calif., water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	2.5	6.3	121	86	93	332	280	45	16	18	12
2	.5	2.5	6.0	67	100	76	356	296	43	15	15	12
3	.6	2.5	10	49	90	59	386	280	42	14	13	12
4	.6	2.5	12	42	88	64	421	253	42	13	12	12
5	.7	2.5	146	33	86	60	441	219	38	13	12	12
6	.7	2.5	72	30	84	59	470	196	36	12	11	11
7	.7	2.5	29	30	82	78	458	179	35	11	11	11
8	.7	2.6	18	25	79	68	676	175	35	13	11	11
9	1.4	2.6	14	20	74	74	540	155	35	16	11	11
10	1.7	2.9	12	22	72	100	419	152	31	15	11	11
11	1.8	3.0	11	20	69	141	337	144	30	15	10	12
12	1.9	3.0	21	28	66	112	331	141	30	14	9.7	12
13	1.9	3.1	38	361	64	106	291	130	28	12	9.5	12
14	1.7	3.2	23	98	57	86	325	127	27	8.2	9.2	12
15	1.3	3.2	17	70	50	637	292	127	26	7.9	8.9	12
16	1.6	3.4	14	633	54	456	292	118	24	8.5	8.7	12
17	1.7	3.6	12	227	60	219	331	106	21	10	11	11
18	1.5	3.7	10	281	59	188	332	100	20	11	12	12
19	1.6	3.7	8.2	148	50	192	422	95	20	11	12	14
20	1.6	4.5	5.0	100	45	179	449	93	20	10	12	23
21	1.6	8.6	7.8	81	41	152	347	95	19	10	12	20
22	1.7	10	11	66	38	136	302	86	18	10	12	17
23	1.8	8.5	11	61	36	130	313	76	18	9.9	11	16
24	1.9	7.7	8.1	59	39	169	302	69	19	10	11	16
25	2.6	7.2	4.5	81	44	347	302	61	19	14	11	17
26	5.0	6.5	7.4	100	52	428	313	60	19	14	11	18
27	3.7	6.1	6.8	83	49	449	291	67	18	13	11	18
28	2.5	6.0	4.7	76	52	381	344	178	18	17	12	17
29	2.2	6.1	92	76	62	362	389	54	17	43	12	13
30	2.3	6.1	1,760	72	-	365	344	50	16	40	12	5.9
31	2.6	-	301	70	-	293	-	47	-	22	12	-
Total	52.6	132.8	2,698.8	3,230	1,828	6,259	11,148	4,209	809	448.5	355.0	404.9
Mean	1.70	4.43	87.0	104	63.0	202	372	136	30.0	14.5	11.5	13.5
Ac-ft	104	263	5,350	6,410	3,630	12,410	22,110	8,350	1,610	890	706	803

Calendar year 1951: Max 1,760 Min 0.3 Mean 13.1 Ac-ft 9,450
Water year 1951-52: Max 1,760 Min 0.5 Mean 86.3 Ac-ft 62,640

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 3,050 ft (from topographic map).

Average discharge.--22 years, 31.6 cfs; median of yearly mean discharges, 18 cfs.

Extremes.--Maximum discharge during year, 6,780 cfs Mar. 15 (gage height, 8.89 ft), from rating curve extended above 1,200 cfs by logarithmic plotting; no flow during several months.

1930-52: Maximum discharge, 26,100 cfs Mar. 2, 1938, by slope-area determination of peak flow; no flow during several months of each year.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Discharge measurements generally made twice a month. Water diverted from Lake Gregory above station for domestic use and fire protection. One small diversion for irrigation above station.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			0	51	56	71	170	66	12			
2			0	29	54	62	167	63	12			
3			0	17	53	48	152	56	11			
4			0	14	50	39	140	53	11			
5			0	13	46	32	122	50	9.1			
6			0	5.4	45	33	109	46	7.9			
7			0	10	44	206	111	41	7.3			
8			0	7.3	41	140	224	40	6.4			
9			0	5.9	41	96	133	36	6.8			
10			0	5.9	36	357	128	34	9.1			
11			0	3.1	35	436	116	34	6.8			
12			0	15	36	252	110	40	7.3			
13			0	808	35	209	110	34	5.9			
14			0	155	32	147	110	33	3.4			
15			0	178	32	1,750	100	27	1.9			
16			0	2,340	30	780	120	27	1.3			
17			0	591	30	315	150	27	.8			
18			0	1,260	33	296	190	28	.4			
19			0	548	32	279	130	26	.3			
20			0	364	30	259	90	24	.3			
21			0	255	27	218	70	23	.3			
22			0	178	28	186	64	21	.2			
23			0	124	27	165	62	20	.1			
24			0	97	26	167	60	19	.1			
25			0	131	23	249	72	17	.1			
26			0	133	23	307	128	16	.1			
27			0	101	22	290	99	15	.1			
28			0	83	20	239	90	14	0			
29			7.0	69	24	221	78	12	0			
30			422	63	-	203	71	12	0			
31			164	56	-	181	-	12	-			
Total	0	0	593.0	7,710.6	1,011	8,213	3,476	966	122.0	0	0	0
Mean	0	0	19.1	249	34.9	265	116	31.2	4.07	0	0	0
Ac-ft	0	0	1,180	15,290	2,010	16,290	6,890	1,920	242	0	0	0

Calendar year 1951: Max 422 Min 0 Mean 1.62 Ac-ft 1,180
Water year 1951-52: Max 2,340 Min 0 Mean 60.1 Ac-ft 43,820

Peak discharge (base, 500 cfs).--Dec. 30 (2 p.m.) 543 cfs (3.87 ft); Jan. 13 (3:10 a.m.) 2,470 cfs (6.12 ft); Jan. 16 (7:10 a.m.) 4,260 cfs (7.24 ft); Mar. 7 (4:20 p.m.) 558 cfs (4.24 ft); Mar. 10 (10:25 p.m.) 1,250 cfs (5:15 ft); Mar. 15 (6:10 p.m.) 6,780 cfs (8.89 ft).

Note.--No gage-height record Apr. 12-21, June 6-30; discharge estimated on basis of 4 discharge measurements, recorded range in stage, records for Deep Creek near Hesperia, and weather records.

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., on left bank 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 1952.

Gage.--Water-stage recorder. Altitude of gage is 2,650 ft (from topographic map). February 1899 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, at present site at datum 2.00 ft higher (revised).

Average discharge.--16 years (1936-52), 91.8 cfs; median of yearly mean discharges, 54 cfs.

Extremes.--Maximum discharge during year, 3,690 cfs Mar. 15 (gage height, 6.43 ft), from rating curve extended above 1,500 cfs by logarithmic plotting; minimum daily, 7.8 cfs Aug. 22.

1930-52: Maximum discharge, 70,600 cfs Mar. 2, 1938 (gage height, 18.7 ft, present datum), by slope-area determination of peak flow; minimum daily, 6 cfs Aug. 19, 21, 26, 1951.

Remarks.--Records good except those above 1,500 cfs, which are fair. Discharge measurements generally made three times a month. Two diversions for irrigation of about 2,000 acres above station.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	32	34	54	38	39	401	265	23	26	14	13
2	19	32	32	47	38	38	437	268	29	26	14	13
3	19	32	36	47	41	36	478	274	30	27	13	16
4	18	32	38	45	39	36	504	247	32	24	12	18
5	19	30	39	43	39	38	526	208	32	22	12	16
6	18	29	36	43	39	36	525	175	29	23	12	18
7	18	29	38	47	43	47	548	140	34	26	12	19
8	19	29	36	45	41	41	725	121	36	22	15	15
9	19	30	36	43	43	39	769	109	32	20	16	15
10	19	32	36	43	45	38	559	97	27	18	16	15
11	20	30	36	41	45	59	438	85	30	19	18	20
12	20	29	43	43	47	64	452	79	27	20	18	18
13	16	27	41	121	45	69	327	74	26	20	14	14
14	22	29	38	62	45	50	350	56	26	19	13	16
15	22	27	38	38	41	438	312	50	26	20	13	18
16	23	29	36	682	45	1,340	288	43	26	20	13	14
17	23	27	36	448	43	556	284	39	26	20	13	16
18	29	27	36	858	41	436	337	41	29	16	12	18
19	26	27	36	443	45	374	334	39	24	18	11	20
20	24	32	38	174	45	358	460	32	23	13	11	20
21	24	38	36	82	41	279	402	29	27	13	9.4	19
22	24	36	36	54	43	216	278	34	32	12	7.8	19
23	26	36	38	47	38	163	262	30	32	10	8.6	18
24	24	34	38	45	41	163	272	32	29	13	10	19
25	32	36	36	41	38	279	263	29	26	11	11	20
26	32	36	39	38	38	535	293	27	34	15	10	19
27	34	34	45	38	39	619	302	26	32	12	11	18
28	34	38	43	38	41	539	300	26	29	16	12	16
29	34	38	45	38	39	490	343	29	32	16	13	14
30	32	38	86	38	-	482	407	26	27	16	13	18
31	32	-	153	39	-	396	-	26	-	16	12	-
Total	740	957	1,334	3,865	1,206	9,293	12,176	2,756	867	569	389.8	512
Mean	23.9	31.9	43.0	125	41.6	268	406	88.9	28.9	18.4	12.6	17.1
Ac-ft	1,470	1,900	2,650	7,670	2,390	16,450	24,150	5,470	1,720	1,130	773	1,020

Calendar year 1951: Max 153 Min 6 Mean 29.3 Ac-ft 21,220
Water year 1951-52: Max 1,340 Min 7.8 Mean 92.0 Ac-ft 66,790

Peak discharge (base, 200 cfs).--Dec. 31 (1 a.m.) 270 cfs (2.78 ft); Jan. 13 (5 p.m.) 322 cfs (2.89 ft); Jan. 16 (1 p.m.) 1,470 cfs (4.26 ft); Jan. 18 (11.30 a.m.) 1,530 cfs (4.32 ft); Mar. 15 (10.20 p.m.) 3,690 cfs (6.43 ft); Mar. 27 (8 p.m.) 785 cfs (3.38 ft); Apr. 8 (3.30 p.m.) 905 cfs (3.63 ft).

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 2,090 ft (from topographic map).

Average discharge.--22 years, 35.0 cfs; median of yearly mean discharges, 1.1 cfs.

Extremes.--Maximum discharge during year, 960 cfs Mar. 16 (gage height, 3.50 ft); no flow during several months.
1930-52: Maximum discharge, 64,300 cfs Mar. 3, 1938 (gage height, 8.60 ft), by slope-area method; no flow for several montns each year.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Discharge measurements generally made twice a month. Diversions above station for irrigation of about 2,000 acres.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0		0	73	252				
2				0		0	90	103				
3				0		0	103	96				
4				0		0	118	96				
5				0		0	151	73				
6				0		0	192	a30				
7				0		0	192	a20				
8				0		0	252	13				
9				0		0	481	2.0				
10				0		0	428	a.5				
11				0		0	276	a.1				
12				0		0	160	a0				
13				0		0	204	0				
14				0		0	103	0				
15				0		0	118	0				
16				0		110	90	0				
17				0		67	73	0				
18				4.3		a25	84	0				
19				57		a15	125	0				
20				0		a10	151	0				
21				0		a5	240	0				
22				0		a1	216	0				
23				0		0	96	0				
24				0		0	84	0				
25				0		0	103	0				
26				0		0	96	0				
27				0		14	142	0				
28				0		90	170	0				
29				0		110	142	0				
30				0		96	180	0				
31				0		103	-	0				
Total	0	0	0	61.3	0	646	4,933	685.6	0	0	0	0
Mean	0	0	0	1.98	0	20.8	164	22.1	0	0	0	0
Ac-ft	0	0	0	122	0	1,280	9,780	1,360	0	0	0	0

Calendar year 1951: Max 0 Min 0 Mean 0 Ac-ft 0
Water year 1951-52: Max 481 Min 0 Mean 17.3 Ac-ft 12,540

Peak discharge (base, 100 cfs).--Mar. 16 (10:30 a.m.) 960 cfs (3.50 ft); Apr. 9 (3:30 a.m.) 696 cfs (3.16 ft).

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

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 south of Valyermo.

Drainage area.--23.0 sq mi.

Records available.--January 1923 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,050 ft (from topographic map). Prior to May 4, 1938, at same site at different datums. May 4, 1938, to Jan. 26, 1939, at site 600 ft downstream (below Punchbowl Creek) at different datum.

Average discharge.--28 years (1923-37, 1938-52), 15.6 cfs; median of yearly mean discharges, 11 cfs.

Extremes.--Maximum discharge during year, 224 cfs Dec. 30 (gage height, 3.00 ft); minimum daily, 0.7 cfs Nov. 5.
1923-52: Maximum discharge, 8,300 cfs Mar. 2, 1938, by slope-area determination of peak flow; minimum daily, that of Nov. 5, 1951.

Remarks.--Records good. Discharge measurements generally made three times a month. No regulation or diversions above station. There is evidence of appreciable infiltration into stream bed in immediate vicinity of station.

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

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 6-30, Mar. 27 to June 30)

1.82	0.7	2.3	28
1.9	2.2	2.5	57
2.0	5.5	2.7	100
2.1	11	2.9	155
2.2	18		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	1.1	1.1	12	20	16	69	59	50	32	20	13
2	1.1	1.1	1.3	9.0	24	14	71	65	52	31	19	12
3	1.1	.9	1.1	9.0	25	13	77	71	52	30	19	12
4	1.1	.9	1.1	8.4	25	13	82	65	50	28	19	12
5	1.1	.7	1.6	8.4	25	13	88	57	50	30	19	13
6	1.1	.9	4.3	8.4	24	13	98	55	50	30	18	13
7	1.1	.9	4.0	9.0	23	14	98	53	50	28	18	13
8	1.1	.9	3.3	8.4	22	13	86	48	48	28	17	13
9	1.1	.9	2.8	9.0	21	14	77	47	48	28	17	13
10	1.1	.9	2.5	8.4	20	19	71	45	47	27	17	13
11	1.1	1.1	2.8	7.8	18	19	61	47	47	27	17	13
12	1.1	1.1	8.4	19	17	17	55	47	45	27	17	13
13	.9	1.1	6.4	32	17	17	55	48	44	28	17	13
14	.9	1.1	4.0	18	17	17	53	50	42	27	17	12
15	.9	1.1	3.0	20	17	44	50	50	40	27	16	12
16	.9	1.1	2.8	50	15	36	48	52	38	27	16	11
17	.9	1.1	2.2	33	15	31	50	52	38	26	17	11
18	.9	1.1	2.0	28	14	30	53	52	38	25	16	11
19	.9	1.3	2.5	24	14	28	57	55	38	25	16	12
20	.9	1.3	2.5	22	13	28	57	59	37	25	16	13
21	.9	1.3	2.5	21	13	27	57	63	37	24	16	12
22	.9	1.3	2.5	20	13	25	55	61	36	24	15	11
23	.9	1.3	2.2	19	13	25	59	59	36	23	15	11
24	.9	1.3	2.2	20	12	26	55	57	36	23	15	11
25	1.6	1.3	2.2	25	12	35	71	55	35	22	16	12
26	1.3	1.1	2.2	23	12	52	59	55	32	22	16	12
27	1.3	1.1	2.2	21	12	67	50	53	31	22	15	11
28	1.1	1.1	2.2	19	13	61	48	52	31	23	14	11
29	1.1	1.1	21	18	14	63	52	52	31	23	14	11
30	1.1	1.1	139	17	-	67	55	52	31	22	13	11
31	1.1	-	28	17	-	69	-	52	-	21	13	-
Total	32.4	32.6	265.9	563.8	500	926	1,917	1,688	1,240	805	510	361
Mean	1.05	1.09	8.58	18.2	17.2	29.9	63.9	54.5	41.3	26.0	16.5	12.0
Ac-ft	64	65	527	1,120	992	1,840	3,800	3,350	2,460	1,600	1,010	716

Calendar year 1951: Max 139 Min 0.7 Mean 2.34 Ac-ft 1,690
Water year 1951-52: Max 139 Min 0.7 Mean 24.2 Ac-ft 17,540

Peak discharge (base, 50 cfs).--Dec. 30 (6 a.m.) 224 cfs (3.00 ft); Jan. 12 (11:30 p.m.) 67 cfs (2.54 ft); Jan. 16 (5:30 a.m.) 84 cfs (2.63 ft); Mar. 15 (3:30 p.m.) 86 cfs (2.67 ft).

Little Rock Creek near Little Rock, Calif.

Location.--Lat 34°27'50", long. 118°01'05", in SW¼SW¼NE¼ sec. 3, T. 4 N., R. 11 W., on right bank 0.3 mile (revised) upstream from Santiago Creek, 1.65 miles (revised) upstream from Little Rock Palmdale Irrigation District's Dam, and 5 miles south of Little Rock.

Drainage area.--49.0 sq mi.

Records available.--October 1930 to September 1952.

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.--20 years (1930-37, 1939-52), 19.4 cfs; median of yearly mean discharges, 11 cfs.

Extremes.--Maximum discharge during year, 502 cfs Dec. 30 (gage height, 6.31 ft); no flow Oct. 1 to Nov. 27.
1930-52: Maximum discharge, 17,000 cfs (estimated) Mar. 2, 1938; no flow during periods in most years.

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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	1.2	47	64	44	169	106	19	5.1	3.0	1.2
2		0	1.2	28	69	36	171	121	17	4.8	2.4	1.0
3		0	1.4	21	58	30	167	121	17	4.7	1.8	.8
4		0	1.4	17	53	30	177	104	18	4.6	1.8	.8
5		0	9.0	13	54	30	186	89	17	4.5	1.2	.7
6		0	9.6	13	51	30	186	79	16	4.4	1.2	.7
7		0	5.3	13	49	36	173	73	14	4.3	1.3	.6
8		0	3.4	10	45	42	156	71	13	4.2	1.2	.6
9		0	2.4	9.1	43	36	146	63	12	4.1	1.2	.5
10		0	1.9	9.1	42	41	139	62	11	4.0	1.0	.4
11		0	1.9	9.1	42	40	109	63	10	3.9	1.2	.5
12		0	53	19	41	35	98	61	9.1	3.8	1.0	.6
13		0	33	69	36	33	100	58	8.3	3.7	1.2	.6
14		0	15	27	32	30	100	56	7.9	3.6	.7	.6
15		0	10	22	30	88	94	52	6.9	3.5	.7	.6
16		0	7.2	161	28	106	92	48	6.6	3.4	.6	.7
17		0	6.0	71	30	75	100	45	7.2	3.4	.7	.7
18		0	5.0	125	29	69	109	43	7.9	3.2	.7	.8
19		0	4.7	72	27	69	112	44	8.3	2.4	.6	.8
20		0	4.0	53	24	69	96	45	7.9	2.0	.6	.8
21		0	3.8	46	22	61	98	43	7.9	2.0	.6	.8
22		0	3.6	39	20	53	96	36	7.5	2.2	.6	1.0
23		0	3.4	37	19	50	106	32	7.5	2.2	.6	1.0
24		0	3.2	39	22	66	117	30	7.2	3.2	.8	1.0
25		0	3.4	77	23	170	124	28	6.9	4.2	1.0	1.0
26		0	3.4	75	24	239	98	27	6.6	3.8	1.0	1.2
27		0	3.4	58	24	247	80	24	6.3	3.2	.8	1.6
28		.4	3.6	52	24	210	80	23	6.0	3.8	1.4	1.4
29		1.2	41	48	31	190	95	22	5.7	5.0	1.4	1.3
30		1.3	311	45	-	189	96	21	5.4	4.7	1.4	1.0
31		-	93	46	-	177	-	20	-	3.6	1.2	-
Total	0	2.9	649.4	1,370.3	1,056	2,621	3,670	1,710	301.1	115.5	34.9	25.3
Mean	0	0.10	20.9	44.2	36.4	84.5	122	55.2	10.0	3.73	1.13	0.84
Ac-ft	0	5.8	1,290	2,720	2,100	5,210	7,290	3,400	598	230	69	50

Calendar year 1951: Max 311 Min 0 Mean 2.38 Ac-ft 1,690
Water year 1951-52: Max 311 Min 0 Mean 31.6 Ac-ft 22,960

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 1952. Records 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.--1912-52: 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 1951 to September 1952

Oct. 5	6,407.76	Apr. 22	6,407.97
15	6,407.64	29	6,408.00
22	6,407.57	May 5	6,408.04
29	6,407.56	12	6,408.09
Nov. 2	6,407.52	21	6,408.16
9	6,407.52	June 2	6,408.31
15	6,407.45	12	6,408.38
28	4,407.51	16	6,408.36
Dec. 10	6,407.47	26	6,408.40
14	6,407.43	30	6,408.39
21	6,407.46	July 7	6,408.43
Jan. 4	6,407.54	17	6,408.61
28	6,407.62	28	6,408.79
Feb. 4	6,407.64	Aug. 5	6,408.92
14	6,407.65	5	6,408.95
21	6,407.64	14	6,408.92
28	6,407.68	21	6,408.84
Mar. 21	6,407.82	28	6,408.72
26	6,407.81	Sept. 8	6,408.50
Apr. 3	6,407.85	15	6,408.38
14	6,407.89	25	6,408.38

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 1952. Occasional readings prior to August 1928.

Gage.--Benchmark, at United States Naval Depot, 4,053.41 ft above mean sea level, adjustment of 1912.

Extremes.--1928-52: Maximum elevation observed, 4,051.8 ft Mar. 13, 1928 (Indian Service); minimum observed, 3,996.0 ft Nov. 5, 1951.
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 1951 to September 1952

Oct. 3.....	3,997.3	Feb. 25.....	3,996.6
Nov. 5.....	3,996.0	Apr. 22.....	3,998.0

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 1952 in reports of Geological Survey. March 1926 to September 1952 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, 42,920 acre-ft July 31 (elevation, 6,460.13 ft); minimum, 7,360 acre-ft May 11, 12 (elevation, 6,441.24 ft).
1926-52: 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20,160	21,700	25,320	29,760	34,240	31,820	19,980	9,210	10,970	32,710	42,610	35,440
2	20,070	21,800	25,760	-	34,510	31,700	19,150	9,000	11,570	32,970	42,170	35,040
3	19,800	21,890	25,870	-	34,900	31,700	18,260	9,210	12,260	33,600	41,580	34,640
4	19,610	22,090	25,980	-	35,170	31,570	17,400	9,380	13,110	34,240	41,290	34,240
5	19,610	22,190	26,310	-	35,170	31,570	16,660	9,380	14,060	34,770	41,150	33,860
6	19,700	22,290	26,640	-	35,170	31,570	16,110	9,160	15,030	35,300	41,000	33,600
7	19,700	22,480	26,750	-	35,170	31,450	15,950	8,740	16,660	35,960	41,000	33,220
8	19,700	22,480	26,860	-	34,640	31,570	15,630	8,390	18,260	36,760	40,710	32,710
9	19,800	22,480	26,980	-	33,980	31,700	15,320	8,030	19,420	37,590	40,420	32,460
10	19,880	22,580	26,980	-	33,350	31,700	14,950	7,650	20,720	38,570	40,270	32,200
11	19,880	22,680	27,090	-	33,220	31,700	14,360	7,360	21,700	39,120	40,270	31,700
12	19,880	22,680	27,200	-	32,970	31,700	13,990	7,360	22,380	39,690	40,270	31,570
13	19,880	22,790	27,320	-	32,970	31,570	13,650	7,410	23,000	40,270	40,270	31,450
14	19,880	22,790	27,440	-	32,840	31,570	13,650	7,460	23,410	40,560	40,270	31,210
15	19,880	22,840	27,550	-	32,840	31,570	13,110	7,410	23,720	40,850	40,120	31,090
16	19,880	23,000	27,660	-	32,840	31,570	12,630	7,460	23,930	41,150	39,980	30,850
17	19,880	23,100	27,780	-	32,970	31,330	12,320	7,500	24,140	41,150	39,830	30,730
18	19,980	23,200	28,010	-	33,090	30,970	12,070	7,500	24,450	41,150	39,830	30,610
19	20,070	23,310	28,240	33,090	33,220	30,120	12,000	7,550	24,880	41,290	39,690	30,490
20	20,070	23,410	28,360	33,090	32,970	28,930	11,630	7,790	25,430	41,440	39,540	30,360
21	20,160	23,520	28,360	33,090	32,840	28,930	11,200	7,980	25,980	41,440	39,400	30,240
22	20,250	23,720	28,470	33,090	32,590	28,820	10,850	8,180	26,750	41,440	38,980	30,240
23	20,340	24,140	28,580	33,220	32,330	28,470	10,550	8,280	27,550	41,440	38,710	30,240
24	20,340	24,450	28,700	33,220	32,330	27,090	10,380	8,280	28,360	41,000	38,290	30,240
25	20,250	24,660	28,820	33,350	32,200	26,200	10,320	8,390	29,040	40,710	37,870	30,120
26	20,820	24,770	28,930	33,480	32,200	25,430	10,380	8,590	29,760	40,850	37,590	30,120
27	21,110	24,990	29,040	33,480	32,030	24,660	10,140	8,900	30,490	41,440	37,180	30,000
28	21,210	25,100	29,280	33,600	31,700	23,720	9,920	9,160	31,090	42,020	36,900	30,000
29	21,400	25,210	29,400	33,730	31,700	22,680	9,700	9,480	31,820	42,310	36,500	29,880
30	21,400	25,210	29,520	33,860	-	21,600	9,430	9,870	32,330	42,610	36,100	29,760
31	21,600	-	29,640	33,980	-	20,820	-	10,320	-	42,920	35,830	-

Monthly elevation and contents, water year October 1951 to September 1952

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	6,450.85	20,340	-
Oct. 31	6,451.49	21,600	+1,260
Nov. 30	6,453.27	25,210	+3,610
Dec. 31	6,455.21	29,640	+4,430
Calendar year 1951	-	-	-5,660
Jan. 31	6,456.95	33,980	+4,340
Feb. 29	6,456.05	31,700	-2,280
Mar. 31	6,451.10	20,820	-10,880
Apr. 30	6,443.29	9,430	-11,390
May 31	6,444.09	10,320	+890
June 30	6,456.28	32,330	+22,010
July 31	6,460.13	42,920	+10,590
Aug. 31	6,457.63	35,830	-7,090
Sept.30	6,455.27	29,760	-6,070
Water year 1951-52	-	-	+9,420

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 1952.

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. 22, 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.--29 years (1922-24, 1925-52), 130 cfs.

Extremes.--Maximum discharge during year, 985 cfs July 31 (gage height, 3.78 ft); minimum, 4.7 cfs Nov. 20.
1921-52: Maximum discharge, 1,240 cfs Jan. 22, 1943; maximum gage height, 4.95 ft Jan. 22, 1943 (top of surge); minimum daily discharge, 0.5 cfs Dec. 31, 1949, to Feb. 17, 1950, Feb. 22 to Mar. 3, 1950.

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

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.2	4.0	1.1	111
.3	7.5	1.5	202
.4	13	2.0	347
.5	20	3.0	691
.7	42	4.0	1,070

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	6.1	6.4	6.4	7.5	136	665	698	*607	*216	958	357
2	113	6.1	6.4	6.8	7.2	136	706	695	578	216	897	357
3	91	6.1	6.8	6.8	58	136	743	695	512	221	724	357
4	70	6.1	6.8	6.4	*109	136	735	695	516	257	614	357
5	53	5.8	6.8	6.4	115	136	728	695	519	266	530	357
6	52	5.8	6.8	6.4	164	109	732	691	471	269	444	357
7	52	5.8	6.8	6.8	210	95	728	691	405	269	398	353
8	*52	5.8	6.8	6.8	210	95	724	629	411	269	335	353
9	43	5.8	6.8	6.8	210	95	721	582	418	272	292	353
10	30	5.8	6.8	6.8	210	95	717	544	421	369	254	335
11	30	6.1	6.8	6.8	210	95	713	447	424	451	229	295
12	30	6.1	6.8	6.8	210	95	710	444	428	454	229	269
13	30	6.1	6.8	6.8	210	95	706	444	428	454	229	269
14	30	6.1	6.8	6.8	210	95	728	*444	431	454	229	269
15	22	6.1	6.8	6.8	182	95	743	444	431	454	229	269
16	16	6.1	6.8	6.8	161	158	739	444	*434	516	229	224
17	16	6.1	6.8	6.8	161	272	735	444	398	564	229	177
18	16	6.8	6.8	6.8	161	392	735	441	341	561	260	177
19	16	6.8	6.8	6.8	161	461	732	444	341	561	292	177
20	16	5.0	7.2	6.8	161	461	728	468	310	564	292	177
21	16	6.4	7.2	6.8	*161	461	724	530	260	564	332	177
22	17	6.8	7.2	7.2	161	458	724	533	263	564	360	177
23	16	6.8	7.2	7.2	161	458	*721	547	263	564	360	177
24	16	*6.8	7.2	7.2	161	458	721	582	246	561	360	177
25	11	6.8	7.2	7.2	161	454	721	582	210	495	360	177
26	6.4	6.8	7.2	7.2	161	441	717	586	210	454	360	177
27	6.4	6.8	7.2	7.2	145	492	713	589	210	454	360	177
28	6.4	6.4	*6.8	7.2	*136	629	710	593	213	522	*360	177
29	6.1	6.4	6.8	7.2	136	650	706	596	213	572	360	177
30	6.1	6.4	6.4	7.2	-	672	702	600	213	724	360	*177
31	6.1	-	6.4	7.2	-	*669	-	604	-	*939	360	-
Total	1,025.5	186.9	212.4	213.2	4,510.7	9,230	21,627	17,421	11,125	14,070	11,825	7,609
Mean	33.0	6.23	6.85	6.88	156	298	721	562	371	454	381	254
Ac-ft	2,030	371	421	423	8, 950	18,310	42,900	34,550	22,070	27,910	23,450	15,090

Calendar year 1951: Max 536 Min 5.0 Mean 122 Ac-ft 88,260
Water year 1951-52: Max 958 Min 5.0 Mean 271 Ac-ft 196,500

* 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 1952.

Gage.--Water-stage recorder. Datum of gage is 4,574.66 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 130 cfs.

Extremes.--Maximum discharge during year, 1,400 cfs July 14 (gage height, 6.21 ft), from rating curve extended above 1,040 cfs by logarithmic plotting; minimum daily, 16 cfs Jan. 3.
1947-52: Maximum discharge, that of July 14, 1952; minimum, 3.1 cfs Mar. 21, 1948.

Remarks.--Records good except those for periods of ice effect, which are fair. Diversions above station for irrigation. Flow regulated by Bridgeport Reservoir (see p.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 31 to May 16, July 19 to Sept. 17)

Oct. 1 to Mar. 11		Mar. 12 to Sept. 30	
0.8	11	1.6	94
1.0	24	2.0	168
1.3	53	3.0	392
1.7	115	4.0	645
2.3	232	5.0	946
		6.0	1,300

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	133	30	28	b26	31	156	661	787	737	259	*966	330
2	124	30	29	b17	48	152	661	796	740	264	1,000	332
3	115	30	32	b16	50	150	689	812	728	254	963	328
4	103	30	29	b17	42	150	728	790	656	257	821	319
5	101	30	30	b17	93	148	728	760	640	280	686	316
6	80	29	31	b18	110	148	720	740	689	293	597	314
7	78	28	32	b19	152	137	734	742	706	300	502	312
8	76	27	*b33	b20	200	122	*740	740	600	303	454	319
9	*74	*27	b35	*b20	204	117	728	703	*587	310	380	321
10	73	27	36	b20	212	113	737	658	589	*312	332	328
11	66	27	38	b22	*216	112	734	*626	582	387	300	326
12	59	26	36	b25	216	*111	722	553	563	469	286	303
13	56	26	b34	b25	218	109	734	535	550	489	284	282
14	54	27	b31	b26	218	108	728	527	535	551	270	280
15	54	26	b28	b28	220	111	728	527	532	502	261	273
16	53	26	26	b29	204	111	754	530	530	*482	257	266
17	47	26	28	b27	182	152	754	532	*514	517	252	226
18	43	26	b29	b27	176	245	757	524	464	561	250	178
19	41	26	30	b27	176	342	772	532	428	558	257	176
20	40	29	30	28	176	402	769	550	416	571	270	176
21	40	30	34	28	176	414	757	579	387	*566	*275	174
22	40	29	34	27	176	416	748	629	351	558	298	170
23	39	27	30	28	174	418	751	640	351	548	316	*170
24	39	28	28	29	172	426	754	656	346	550	323	172
25	40	28	29	30	174	479	778	692	332	553	323	168
26	43	27	30	32	174	522	812	697	303	553	326	170
27	39	29	28	b30	174	514	790	697	291	634	323	168
28	36	28	29	29	166	522	781	700	282	550	328	170
29	34	28	33	29	154	615	784	708	273	683	332	168
30	33	27	35	28	-	632	790	717	266	772	330	164
31	32	-	b35	30	-	653	-	722	-	787	330	-
Total	1,885	834	970	774	4,684	8,807	22,323	20,401	14,968	14,673	12,892	7,399
Mean	60.8	27.8	31.3	25.0	162	284	744	658	499	473	416	247
Ac-ft	3,740	1,650	1,920	1,540	9,290	17,470	44,280	40,460	29,690	29,100	25,570	14,680

Calendar year 1951: Max 465 Min 26 Mean 119 Ac-ft 85,860
Water year 1951-52: Max 1,000 Min 16 Mean 302 Ac-ft 219,400

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

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 6,790 ft (from topographic map). Prior to August 1910, staff gage at site 1 mile upstream at different datum.

Average discharge.--8 years (1944-52), 51.5 cfs.

Extremes.--Maximum discharge during year, 490 cfs June 7 (gage height, 2.31 ft); maximum gage height, 2.68 ft Dec. 10 (backwater from ice); minimum daily, 12 cfs Dec. 9-20, Jan. 3, 4.

1910, 1944-52: 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 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 or no gage-height record, which are poor. Small diversions above station.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	10	1.5	140
.8	21	1.9	284
1.0	39	2.3	485
1.2	70		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	18	17	15	16	16	25	206	*360	*208	173	46
2	17	18	18	14	16	16	27	252	350	231	158	45
3	18	*18	20	12	17		28	227	365	259	146	43
4	17	18	19	12	*17		31	190	365	271	132	43
5	17	18	17	13	17		37	177	390	289	124	40
6	17	17	15	14	16		47	177	422	289	118	43
7	17	17	14	14	16		52	173	422	289	113	42
8	*17	17	13	14	17		43	158	443	284	106	40
9	17	17	12	15	16		40	155	411	298	104	39
10	17	16	12	15	17		40	161	340	302	97	46
11	16	17	12	16	15	a17	40	170	289	271	88	45
12	17	17	12	16	14		49	184	242	246	86	43
13	17	18	12	16	15		53	190	208	246	84	42
14	17	17	12	16	15		47	*190	197	231	78	40
15	17	16	12	16	17		47	180	197	227	72	40
16	17	16	12	17	16		55	170	*212	227	70	38
17	17	16	12	17	16		67	170	234	250	65	37
18	17	16	12	17	16		86	187	259	234	63	*37
19	17	16	12	17	16		97	215	271	227	65	40
20	16	17	12	17	16		92	242	271	212	63	50
21	16	17	13	17	*17	a15	97	231	276	201	58	40
22	17	18	14	17	16	a15	104	*223	276	190	58	37
23	16	19	14	17	16	a15	*129	234	*276	177	56	36
24	18	*19	14	17	17	a16	132	255	250	187	56	35
25	17	18	15	18	17	a18	135	276	234	212	55	34
26	19	18	15	18	16	a19	126	293	227	212	52	35
27	19	18	15	16	16	a20	137	321	212	219	50	35
28	19	20	*17	16	*16	a21	155	335	204	*223	50	34
29	19	21	17	16	16	a22	161	330	194	197	49	33
30	18	17	17	16	-	a24	*167	345	197	212	46	*32
31	18	-	17	16	-	*26	-	375	-	197	45	-
Total	534	525	445	487	468	549	2,346	6,992	8,594	7,318	2,580	1,190
Mean	17.2	17.5	14.4	15.7	16.1	17.7	78.2	226	286	236	83.2	39.7
Ac-ft	1,060	1,040	883	966	928	1,090	4,650	13,870	17,050	14,520	5,120	2,360

Calendar year 1951: Max 293 Min 12 Mean 50.8 Ac-ft 36,790
Water year 1951-52: Max 443 Min 12 Mean 87.5 Ac-ft 63,540

Peak discharge (base, 200 cfs).--May 2 (7 p.m.) 350 cfs (2.04 ft); June 7 (10:30 p.m.) 490 cfs (2.31 ft); July 27 (8 p.m.) 321 cfs (2.00 ft); July 30 (4 p.m.) 289 cfs (1.93 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 Nov. 16-18, 21-26, Dec. 2 to Feb. 7, Feb. 12-14, 17-21, 25 (no gage-height record Jan. 1-27; discharge extimated on basis of weather records and records for nearby streams.

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 1952.

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.--14 years, 262 cfs.

Extremes.--Maximum discharge during year, 2,650 cfs June 8 (gage height, 5.51 ft); minimum, 15 cfs Nov. 17, but may have been less during period of ice effect.
1938-52: Maximum discharge, 6,220 cfs Nov. 20, 1950 (gage height, 8.10 ft), from rating curve extended above 1,900 cfs on basis of slope-area determination of peak flow; minimum, 4.0 cfs Nov. 18, 1948, result of freezeup.

Remarks.--Records good except those above 2,000 cfs, which are fair, and those for periods of ice effect or no gage-height record, which are poor. Station is above diversions except for 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 table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	27	2.5	401
.8	43	3.0	607
1.1	78	4.0	1,260
1.5	140	5.0	2,100
2.0	246	6.0	3,250

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	a42	*54	45	51	55	133	946	*1,950	*1,060	656	142
2	42	a43	42		51	55	140	1,160	1,830	1,190	598	140
3	45	*44	50		51	55	149	1,120	1,880	1,400	566	140
4	45	47	41		50	58	166	905	*1,960	1,460	518	140
5	43	48	40		50	55	196	878	2,170	1,450	477	137
6	42	48	38	35	50	53	238	884	2,300	1,450	454	135
7	41	47	36		50	53	257	858	2,160	1,430	442	140
8	*40	47	34		49	54	224	693	2,300	1,440	408	132
9	39	43	33		49	54	219	646	2,010	1,400	380	121
10	38	41	32		48	54	207	693	*1,550	1,480	359	144
11	38	44	33		46	54	200	839	1,390	1,290	327	145
12	37	45	34		45	54	226	981	1,040	1,100	324	142
13	38	44	36		45	50	257	1,080	926	1,160	324	133
14	a38	48	37		45	50	238	*1,140	939	1,090	296	130
15	a38	44	38		46	50	234	1,090	1,020	1,020	270	123
16	a38	37	38	40	48	50	254	960	1,090	1,050	251	115
17	a38	36	40		50	50	296	981	1,290	1,160	234	112
18	a37	38	40		50	a50	366	1,120	*1,450	1,140	226	107
19	a36	42	46		50	a50	442	1,280	1,500	1,030	219	113
20	a35	29	48		50	a45	434	1,480	1,430	926	212	142
21	a32	30	50		*50	a40	454	1,360	1,430	898	200	130
22	a31	36	52		49	a40	493	1,300	1,380	832	200	125
23	a33	36	54		49	a43	*584	1,340	1,400	760	196	117
24	a38	40	55	45	50	a48	688	1,490	1,220	808	192	112
25	a52	48	56		53	a55	749	1,650	1,080	865	185	106
26	a50	50	56		57	a70	632	1,670	981	820	175	106
27	a50	51	57		54	a85	598	*1,780	891	872	168	109
28	a47	50	*58	*47	*54	a95	698	1,840	946	*912	*160	101
29	a43	50	52	48	54	a110	778	1,760	872	852	153	98
30	41	49	52	49	-	a125	784	1,800	939	858	149	*91
31	a41	-	50	50	-	*140	-	2,000	-	749	140	-
Total	1,246	1,297	1,382	1,269	1,444	1,900	11,334	37,724	43,324	33,952	9,459	3,728
Mean	40.2	43.2	44.6	40.9	49.8	61.3	378	1,217	1,444	1,095	305	124
Ac-ft	2,470	2,570	2,740	2,520	2,860	3,770	22,480	74,820	85,930	67,340	18,760	7,390

Calendar year 1951: Max 1,940 Min 29 Mean 251 Ac-ft 181,800
Water year 1951-52: Max 2,300 Min 29 Mean 405 Ac-ft 293,600

Peak discharge (base, 1,120 cfs).--May 2 (8 p.m.) 1,320 cfs (4.07 ft); June 8 (12:30 a.m.) 2,650 cfs (5.51 ft); July 28 (9 p.m.) 1,160 cfs (3.87 ft).

* Discharge measurement made on this day.

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

Note.--Stage-discharge relation affected by ice Nov. 23-25, Dec. 5-17, 20-26, Dec. 31 to Feb. 25, Mar. 2, 3, 5, 11, 13-17 (no gage-height record Jan. 1-27; discharge estimated on basis of 1 discharge measurement, weather records, and records for nearby streams.

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 1952.

Gage.--Float and staff gages at outlet works of Topaz Reservoir. Datum of gage is at mean sea level (levels by Walker River Irrigation District).

Extremes.--Maximum contents during year, 59,070 acre-ft Aug. 1 (elevation, 5,004.84 ft); minimum, 15,660 acre-ft Oct. 22 (elevation, 4,982.16 ft).
1931-52: 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 Walker River Irrigation District.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16,920	16,490	-	27,330	-	41,840	35,410	21,470	30,060	56,210	59,070	46,540
2	16,650	-	21,140	-	34,290	-	34,870	21,640	31,370	56,390	59,000	46,220
3	16,470	-	21,300	-	-	-	34,320	22,240	32,640	56,680	58,940	45,590
4	16,340	-	-	-	36,330	-	33,760	22,800	33,780	57,020	58,800	44,970
5	16,170	16,900	-	-	-	-	33,310	23,260	35,110	57,300	58,730	44,300
6	16,040	-	-	-	-	-	32,910	25,530	36,580	57,360	58,660	43,680
7	15,990	-	-	28,310	-	-	32,600	23,700	38,620	57,360	58,590	43,020
8	15,910	-	-	-	-	-	32,330	23,530	40,630	57,300	58,520	42,410
9	15,880	-	22,760	-	-	-	31,980	23,290	43,020	57,320	58,340	41,820
10	15,910	-	22,920	-	38,230	43,640	31,460	22,950	44,220	57,340	58,230	41,250
11	15,830	-	-	-	-	-	30,840	22,660	45,110	57,360	58,070	40,710
12	15,740	17,760	-	-	-	-	30,110	22,590	45,660	57,300	57,910	40,280
13	15,730	-	-	-	-	-	29,390	22,590	45,990	-	57,640	39,570
14	-	-	-	29,720	-	-	28,690	22,680	46,310	56,980	57,250	39,270
15	15,740	17,900	-	-	-	-	28,060	22,760	46,460	57,090	56,770	38,980
16	15,710	-	-	-	39,230	45,160	27,400	22,830	46,790	57,110	56,320	38,640
17	15,740	-	24,980	-	-	44,570	26,760	22,800	47,200	57,160	55,850	38,330
18	15,710	-	-	-	39,710	-	26,170	22,810	47,710	57,160	55,560	38,130
19	15,710	18,370	-	-	-	43,230	25,620	22,970	48,410	57,160	55,020	37,840
20	15,700	-	-	-	-	42,570	24,620	23,200	49,080	57,050	54,510	37,610
21	15,680	-	-	31,260	-	41,940	24,520	23,430	50,000	56,820	53,930	-
22	15,660	-	-	-	-	40,990	23,940	23,600	51,110	56,710	53,330	37,030
23	15,700	-	-	-	-	40,160	23,260	23,750	51,880	56,660	52,670	36,730
24	15,700	-	25,290	-	-	39,390	22,800	23,840	52,870	56,620	52,030	36,460
25	-	-	-	-	40,890	38,800	22,320	23,990	53,530	56,770	51,330	36,220
26	15,840	19,740	-	-	-	38,620	22,000	24,450	54,130	57,020	50,650	35,930
27	-	-	-	-	-	38,290	21,900	25,140	54,710	57,570	50,000	35,760
28	-	-	-	33,180	-	37,710	21,730	26,020	55,180	58,180	49,350	-
29	16,140	-	-	-	a41,650	37,210	21,690	26,850	55,690	58,620	48,600	35,170
30	16,220	a20,650	-	-	-	36,610	21,510	27,610	56,080	58,800	48,110	34,870
31	a16,350	-	27,140	a33,850	-	36,050	-	28,640	-	58,980	47,300	-

a No elevation record; contents estimated on basis of records for stations on West Walker River near Coleville, Calif., and near Hudson, Nev., or interpolated.

Monthly elevation and contents, water year October 1951 to September 1952

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30.....	4,983.03	17,100	-
Oct. 31.....	-	16,350	-750
Nov. 30.....	-	20,650	+4,300
Dec. 31.....	4,988.95	27,140	+6,490
Calendar year 1951...	-	-	-22,370
Jan. 31.....	-	33,850	+6,710
Feb. 29.....	-	41,650	+7,800
Mar. 31.....	4,993.93	36,050	-5,600
Apr. 30.....	4,985.66	21,510	-14,540
May 31.....	4,989.81	28,640	+7,130
June 30.....	5,003.52	56,080	+27,440
July 31.....	5,004.80	58,980	+2,900
Aug. 31.....	4,999.51	47,300	-11,680
Sept.30.....	4,993.30	34,870	-12,430
Water year 1951-52...	-	-	+17,770

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,670 ft (from topographic map). May 7, 1921, to Mar. 1, 1925, at approximately same site at different datum.

Average discharge.--8 years (1921-24, 1947-52), 188 cfs.

Extremes.--Maximum discharge during year, 1,410 cfs June 5 (gage height, 4.69 ft); minimum, 38 cfs Jan. 4, Feb. 13-15, but may have been less during period of ice effect. 1921-25, 1947-52: Maximum discharge, 2,530 cfs June 7, 1922; minimum daily, 14 cfs Sept. 27 to Oct. 3, 1924.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow somewhat regulated by storage in Poor Lake Reservoir (capacity unknown), and by off-channel storage in Topaz Reservoir (see p. 177). Many diversions above station for irrigation.

Rating table, water year 1951-52, except periods of ice effect (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	1,120
1.6	174	5.0	1,540

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	91	50	61	b46	65	47	490	626	1,070	546	822	218
2	85	51	68	b41	101	49	478	682	1,090	618	797	228
3	85	53	65	b39	96	49	466	699	1,050	654	678	238
4	87	51	67	b38	70	49	458	662	1,030	776	594	242
5	80	50	70	b39	60	46	454	578	1,090	879	498	235
6	80	49	65	b40	51	42	446	562	1,140	945	414	242
7	83	47	58	b41	49	43	442	810	1,180	1,000	356	242
8	85	46	*b53	b42	46	46	*450	666	1,060	986	321	249
9	*78	*45	b49	*b43	45	46	426	*642	*1,110	969	298	232
10	72	45	b48	b43	43	47	486	594	1,180	*949	238	232
11	65	45	b46	43	*42	45	518	586	1,110	986	207	242
12	58	43	b46	43	39	*43	534	618	973	953	187	246
13	56	42	47	b43	38	42	530	658	805	879	207	238
14	58	43	47	b43	36	41	522	699	723	900	253	246
15	60	43	46	43	39	42	530	727	707	834	268	268
16	61	45	46	45	45	50	514	736	707	752	246	228
17	60	46	46	b44	47	292	502	694	*699	715	221	187
18	58	47	46	43	50	352	514	694	707	744	204	159
19	61	50	45	b42	50	366	486	744	756	744	197	136
20	60	60	b44	41	49	434	490	867	789	744	207	133
21	58	60	b42	b42	49	458	518	1,000	658	690	228	136
22	58	56	45	42	49	462	506	1,020	602	586	242	147
23	60	55	46	43	49	470	570	982	594	478	268	*141
24	61	56	46	49	49	470	618	1,010	634	418	264	138
25	68	56	47	70	47	490	630	1,080	570	368	249	133
26	70	55	50	63	47	526	686	1,120	538	383	224	127
27	61	56	53	60	47	502	622	1,080	494	474	224	133
28	56	56	56	60	46	490	610	1,110	470	522	221	144
29	53	58	96	56	46	490	622	1,130	478	570	218	133
30	51	58	87	53	-	502	634	1,090	454	358	214	133
31	51	-	b62	55	-	502	-	1,100	-	781	207	-
Total	2,070	1,517	1,693	1,435	1,492	7,535	15,752	25,066	24,468	22,501	9,772	5,806
Mean	66.8	50.6	54.6	46.3	51.4	243	525	809	816	726	315	194
Ac-ft	4,110	3,010	3,360	2,850	2,960	14,950	31,240	49,720	48,530	44,630	19,380	11,520

Calendar year 1951: Max 1,370 Min 37 Mean 191 Ac-ft 138,200
Water year 1951-52: Max 1,180 Min 38 Mean 325 Ac-ft 236,300

Peak discharge (base, 500 cfs).--June 5 (4 p.m.) 1,410 cfs (4.69 ft); June 10 (5 p.m.) 1,260 cfs (4.32 ft); July 7 (10 a.m.) 1,050 cfs (3.78 ft); July 31 (9 p.m.) 846 cfs (3.32 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 1952.

Gage.--Water-stage recorder. Altitude of gage is 6,500 ft (from topographic map).

Average discharge.--5 years (1947-52), 48.6 cfs.

Extremes.--Maximum discharge during year, 556 cfs July 27 (gage height, 4.33 ft); minimum daily, 1.3 cfs Nov. 20.
1946-52: Maximum discharge, 1,260 cfs Nov. 20, 1950 (gage height, 7.95 ft), from rating curve extended above 350 cfs on basis of slope-area determination of peak flow; minimum, 1.1 cfs Nov. 10, 1949.

Remarks.--Records good. Flow partly regulated by three small reservoirs (total capacity, about 1,700 acre-ft).

Rating table, water year 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 4 to July 20, Sept. 24-30)

0.5	1.3	1.5	76
.6	5.0	2.0	141
.8	15	3.0	300
1.1	37	4.0	480

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	5.9	7.8	5.9	8.3	8.8	29	190	358	186	78	28
2	14	5.9	7.4	6.9	9.7	8.8	31	218	343	203	75	28
3	10	5.9	7.4	7.4	8.3	8.8	35	203	329	208	70	27
4	6.9	6.4	7.4	6.9	7.4	8.8	*44	179	343	205	63	27
5	6.9	6.4	6.9	6.4	6.9	9.2	55	184	394	214	56	27
6	5.5	5.5	6.9	5.9	6.9	9.2	65	185	377	202	52	31
7	5.0	5.5	6.9	5.9	*7.8	9.2	61	*170	403	203	46	33
8	4.6	5.0	6.9	5.9	8.3	8.8	48	140	412	191	40	40
9	4.3	4.3	6.9	5.9	8.3	8.8	46	141	*343	182	37	55
10	*3.5	*4.6	6.9	5.9	8.8	9.2	42	162	269	179	35	58
11	3.5	5.0	6.9	6.4	8.8	8.8	38	206	235	196	31	57
12	3.2	6.4	6.9	6.9	8.8	8.8	41	239	192	170	29	41
13	3.5	5.5	6.4	6.9	8.8	8.8	46	273	190	156	28	30
14	3.5	6.9	6.4	6.5	8.8	8.8	41	258	198	152	24	27
15	3.2	6.4	6.4	6.9	8.8	9.2	41	226	206	144	20	26
16	3.5	4.3	6.4	6.9	8.8	8.8	50	*205	*222	*144	18	25
17	3.5	4.6	6.4	6.4	9.2	8.8	63	224	244	135	16	24
18	3.5	5.0	6.4	6.4	9.7	8.8	82	254	268	137	15	24
19	3.5	4.6	6.4	6.4	9.2	8.8	87	278	254	123	*20	31
20	3.2	1.3	*6.4	6.4	9.2	8.8	82	305	254	117	20	36
21	3.2	1.7	6.4	5.5	8.8	8.3	86	269	254	109	35	35
22	3.2	2.0	6.4	5.5	8.8	8.3	100	254	240	104	31	32
23	3.2	2.8	5.9	5.5	8.3	8.3	123	264	224	98	16	24
24	3.9	3.5	5.9	5.5	8.3	10	145	309	206	99	16	*8.8
25	3.5	4.6	5.9	5.5	8.3	22	131	*318	*190	93	14	7.8
26	4.3	5.9	5.9	5.5	8.3	27	105	327	174	106	14	8.3
27	4.6	6.9	5.9	5.5	8.3	26	109	361	173	119	13	7.8
28	5.0	6.9	5.9	5.0	8.3	30	145	349	179	105	13	10
29	5.5	6.4	5.5	5.0	8.8	30	148	336	173	98	12	25
30	5.5	6.4	6.4	5.5	-	31	134	350	179	90	12	23
31	5.5	-	5.5	6.4	-	29	-	383	-	93	14	-
Total	154.2	152.5	202.0	189.5	247.0	407.9	2,253	7,760	7,826	4,561	963	856.7
Mean	4.97	5.08	6.52	6.11	8.52	13.2	75.1	250	261	147	31.1	28.6
Ac-ft	306	302	401	376	490	809	4,470	15,390	15,520	9,050	1,910	1,700

Calendar year 1951: Max 284 Min 1.3 Mean 38.1 Ac-ft 27,600
Water year 1951-52: Max 412 Min 1.3 Mean 69.9 Ac-ft 50,720

Peak discharge (base, 190 cfs).--June 7 (6:30 p.m.) 488 cfs (3.90 ft); July 11 (6:30 p.m.) 395 cfs (3.40 ft); July 26 (3 p.m.) 298 cfs (2.91 ft); July 27 (3 p.m.) 556 cfs (4.33 ft).
* Discharge measurement made on this day.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,880 ft (from river-profile map, extended).

Average discharge.--6 years, 29.0 cfs.

Extremes.--Maximum discharge during year, 513 cfs May 31 (gage height, 5.75 ft); minimum, not determined.

1946-52: Maximum discharge, 1,740 cfs Nov. 20, 1950 (gage height, 8.49 ft), from rating curve extended above 330 cfs on basis of slope-area determination of peak flow; minimum, 0.2 cfs Aug. 20, 23, Sept. 1-5, Oct. 13-16, 1949.

Remarks.--Records fair above 20 cfs and poor below.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8		3.8		8.4	6.5	21	167	345	95	33	4.3
2	1.2		2.7		8.7	6.1	*21	195	325	102	30	4.2
3	1.2				7.0	7.0	21	205	298	102	27	4.1
4	1.0				6.7	6.7	25	158	*305	101	25	3.9
5	1.0				6.3	7.0	32	141	342	106	22	3.9
		2.0		3.5								
6	.9		3.0		6.1	7.0	40	*143	*308	100	20	3.8
7	.9				6.7	7.0	38	132	318	95	18	3.7
8	.8				6.7	7.0	30	93	310	90	17	3.6
9	.8				7.0	7.0	28	90	237	85	17	3.5
10	*.8				7.0	7.0	27	112	192	83	14	3.4
11	.8	2.0			7.0	7.0	25	169	171	83	12	3.3
12	.8	1.9			7.0	7.0	28	201	138	76	12	3.2
13	.8	1.9	3.5		7.0	7.0	31	213	135	67	9.7	3.1
14	.9	2.0			6.7	7.0	27	220	143	62	8.2	3.1
15	.9	2.0			6.7	7.0	27	186	143	59	7.9	3.0
16	.9	2.0		4.0	7.0	7.0	31	166	150	*63	7.8	2.9
17		*1.9			7.0	7.0	38	190	165	59	7.7	2.8
18		1.7	3.8		6.5	7.0	48	*218	*182	59	7.6	*2.8
19		1.9			6.3	7.0	54	245	*174	52	*7.7	2.7
20	.9	1.6			6.3	7.0	53	288	165	47	7.7	2.7
21		1.6	*3.8		5.9	6.5	54	245	164	45	6.9	2.7
22		1.6		4.2	5.9	6.5	63	224	151	42	6.6	2.6
23		1.3		4.3	5.9	6.5	87	230	148	37	6.3	2.6
24	2.0	1.3		4.4	5.9	9.0	106	268	131	38	6.1	*2.6
25	2.0	1.4		4.5	5.9	15	100	*295	117	36	5.8	2.6
26		1.3	3.5	4.5	5.9	17	90	293	102	34	5.5	2.6
27		1.3		4.5	5.9	17	97	340	96	40	5.2	2.5
28	2.0	1.6		4.5	6.1	19	121	315	101	53	5.0	2.5
29		1.6		4.5	*6.1	20	126	310	91	50	4.8	2.5
30		1.6		*4.5	-	22	129	318	91	41	4.6	2.5
31		-		4.5	-	22	-	390	-	38	4.5	-
Total	36.8	53.5	105.8	123.4	191.6	298.8	1,618	6,760	5,738	2,040	372.6	93.7
Mean	1.19	1.78	3.41	3.98	6.61	9.64	53.9	218	191	65.8	12.0	3.12
Ac-ft	73	106	210	245	380	593	3,210	13,410	11,380	4,050	739	186

Calendar year 1951: Max 144 Min - Mean 19.7 Ac-ft 14,260
Water year 1951-52: Max 390 Min - Mean 47.6 Ac-ft 34,580

Peak discharge (base, 175 cfs).--May 31 (7 p.m.) 513 cfs (5.75 ft); July 28 (4 p.m.) 187 cfs (4.27 ft).

* Discharge measurement made on this day.

Note.--Backwater from beaver dams Oct. 1-9, Oct. 17 to Nov. 10, Nov. 13-16, Dec. 3-20, Dec. 22 to Jan. 29, Mar. 5-24, Aug. 16-18, Aug. 21 to Sept. 30; discharge estimated on basis of 9 discharge measurements, weather records, and records for nearby streams.

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 1952.

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.--25 years (1890-93, 1901-3, 1908-10, 1925-28, 1935-37, 1939-52), 412 cfs.

Extremes.--Maximum discharge during year, 3,560 cfs June 6 (gage height, 5.40 ft); minimum, 48 cfs Nov. 22.
1890-93, 1900-1906, 1908-10, 1917, 1924-29, 1935-37, 1939-52: Maximum discharge, 12,100 cfs Nov. 21, 1950 (gage height, 9.66 ft), from rating curve extended above 6,000 cfs on basis of slope-area determination of peak flow; minimum observed, 8 cfs Dec. 4-10, 19-23, 1904.

Remarks.--Records good except those for periods of ice effect or 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 (water years).--W 1060: Drainage area. W 1214: 1938(M), 1942(M), 1943(M), 1945(M).

Rating table, water year 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	53	3.0	1,060
1.0	108	4.0	1,950
1.5	238	5.0	3,080
2.0	420	6.0	4,320

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	83	205	100	394	211	671	1,760	2,940	1,190	775	191
2	67	83	188	90	544	183	716	2,260	2,700	1,270	632	191
3	72	83	157	90	304	172	762	2,220	2,740	1,370	544	186
4	70	83	167	95	254	183	852	1,930	2,660	1,370	*488	180
5	68	84	147	100	226	164	999	1,770	2,980	1,380	444	175
6	68	81	117	110	214	167	1,190	1,760	3,130	1,390	416	180
7	67	81	126	115	208	162	1,180	1,740	*2,880	1,350	407	180
8	67	79	119	115	200	164	964	1,500	3,100	1,350	399	172
9	65	77	110	120	191	162	880	1,360	2,760	1,290	386	*180
10	62	77	110	115	188	172	803	1,430	2,090	1,260	326	194
11	63	81	110	110	197	162	697	1,600	1,970	1,290	297	214
12	65	86	100	110	180	157	756	1,910	1,540	1,240	290	208
13	68	88	100	100	164	147	866	*2,130	1,430	1,110	280	183
14	65	86	100	85	164	152	768	2,300	1,440	*1,100	277	170
15	63	88	100	95	167	167	723	2,100	1,460	1,080	267	162
16	63	79	95	110	183	157	810	1,820	1,490	1,030	257	152
17	65	70	95	115	175	157	*957	1,870	1,640	1,010	248	144
18	67	75	95	120	157	159	1,140	2,100	1,780	971	244	142
19	67	86	90	130	164	135	1,240	2,300	1,810	929	232	144
20	65	90	104	130	162	110	1,120	*2,540	*1,710	831	*226	172
21	*63	65	110	a130	154	120	1,150	2,480	1,710	803	229	164
22	60	60	121	a130	152	130	1,260	2,220	1,650	756	229	152
23	58	81	112	a130	152	140	1,450	2,250	1,610	678	217	147
24	75	88	112	a140	152	186	1,660	2,460	1,480	658	214	132
25	104	86	106	a160	149	329	1,820	2,650	1,360	690	211	121
26	83	102	*108	a180	164	458	1,540	2,630	1,260	756	205	119
27	90	110	110	a200	172	483	1,350	*2,790	1,200	852	205	123
28	86	119	201	a210	*183	*593	1,530	2,880	1,190	817	197	123
29	84	*117	188	a180	200	645	1,720	2,630	1,150	756	194	126
30	84	110	140	a185	-	704	1,680	2,690	1,150	749	186	126
31	83	-	106	*191	-	723	-	2,950	-	749	180	-
Total	2,187	2,578	3,849	3,991	5,914	7,754	33,254	67,030	58,010	32,075	9,702	4,853
Mean	70.5	85.9	124	129	204	250	1,108	2,162	1,934	1,035	313	162
Ac-ft	4,340	5,110	7,630	7,920	11,730	15,380	65,960	133,000	115,100	63,620	19,240	9,630

Calendar year 1951: Max 1,730 Min 58 Mean 312 Ac-ft 225,500
Water year 1951-52: Max 3,130 Min 58 Mean 632 Ac-ft 458,700

Peak discharge (base, 1,300 cfs).--Apr. 6 (8:30 p.m.) 1,520 cfs (3.58 ft); May 1 (10:30 p.m.) 2,520 cfs (4.52 ft); June 6 (1:30 a.m.) 3,560 cfs (5.40 ft); July 11 (11 p.m.) 1,590 cfs (3.66 ft); July 27 (9 p.m.) 1,310 cfs (3.33 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 1 discharge measurement, recorded range in stage, weather records, and records for Carson River near Carson City.

Note.--Stage-discharge relation affected by ice Dec. 11-19, Jan. 1-20, Mar. 20-23.

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 1952. April 1890 to March 1892, June 1907 to September 1920 (except portions of 1910-11) 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 same site at different datum.

Average discharge.--16 years (1901-3, 1905-6, 1939-52), 117 cfs.

Extremes.--Maximum discharge during year, 1,100 cfs May 20 (gage height, 5.29 ft); minimum, 16 cfs Dec. 2.

1900-1907, 1910-11, 1938-52: Maximum discharge, 4,730 cfs Nov. 20, 1950 (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 (1900-1907, 1938-52), 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, by slope-area determination of peak flow).

Remarks.--Records good except those for periods of no gage-height record, 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 table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	20	2.5	220
1.0	42	3.0	322
1.5	88	4.0	600
2.0	144	5.0	960

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	28	32	27	32	34	71	683	788	268	a200	52
2	30	28	20	28	32	33	77	872	746	280	a150	45
3	31	30	28	29	30	33	91	802	*724	302	a130	46
4	26	30	25	28	31	33	111	746	710	298	*124	51
5	24	30	24	28	31	33	128	718	752	307	124	53
6	23	29	25	28	31	33	153	721	746	304	117	54
7	23	28	31	28	31	33	168	679	696	290	110	53
8	22	27	29	28	31	33	163	594	710	286	103	70
9	21	26	29	28	32	33	161	615	*654	288	99	*88
10	21	26	29	27	32	33	157	690	555	302	94	92
11	20	27	31	28	32	34	147	788	519	264	86	85
12	20	37	32	28	32	33	150	816	438	248	83	88
13	21	31	32	28	32	33	160	*848	402	234	80	74
14	21	33	30	25	33	32	150	848	394	*228	77	53
15	22	32	29	24	33	32	144	791	394	220	74	48
16	22	27	29	27	33	32	160	763	*394	220	72	46
17	21	25	29	27	32	32	*194	788	421	226	70	50
18	*21	25	23	27	32	31	260	833	450	213	66	54
19	21	27	23	27	32	25	318	*860	450	199	63	54
20	21	21	28	27	32	27	318	932	430	180	60	54
21	21	23	28	27	33	27	335	812	421	172	58	48
22	21	26	29	27	33	28	386	760	405	157	56	a42
23	21	30	29	26	33	28	459	760	413	a150	54	a40
24	26	29	29	27	33	34	555	798	373	149	54	a40
25	26	29	28	27	33	42	537	816	354	a150	58	52
26	27	30	*28	26	34	47	444	812	331	a160	62	65
27	28	33	28	26	33	47	474	836	302	a150	61	91
28	27	33	30	26	*34	*52	609	798	296	236	66	62
29	28	*33	25	26	34	57	640	774	276	279	78	44
30	28	30	26	27	-	63	585	763	268	252	77	a40
31	27	-	26	*28	-	68	-	794	-	220	75	-
Total	734	863	864	840	936	1,135	8,305	24,110	14,812	7,232	2,681	1,734
Mean	23.7	28.8	27.9	27.1	32.3	36.6	277	778	494	233	86.5	57.8
Ac-ft	1,460	1,710	1,710	1,670	1,860	2,250	16,470	47,820	29,380	14,340	5,320	3,440

Calendar year 1951: Max 344 Min 19 Mean 84.8 Ac-ft 61,400
Water year 1951-52: Max 932 Min 20 Mean 176 Ac-ft 127,400

Peak discharge (base, 500 cfs).--May 20 (7 p.m.) 1,100 cfs (5.29 ft); July 29 (7 p.m.) 543 cfs (3.81 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and trend of flow.

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 1952.

Gage.--Water-stage recorder and sharp-crested weir. Altitude of gage is 4,700 ft (from river-profile map).

Extremes.--Maximum discharge during year, 49 cfs Apr. 25 (gage height, 1.67 ft); minimum, 2.4 cfs Oct. 1.
1948-52: Maximum discharge, 56 cfs Dec. 3, 1950 (gage height, 1.95 ft); minimum, 1.0 cfs Aug. 4, 5, 6, 20, 1949.

Remarks.--Records good. Four small diversions for irrigation of about 150 acres of hay meadows and pasture above station.

Rating table, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

0.2	1.4	0.6	11
.3	2.9	1.0	28
.4	5.0	1.5	44

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	5.0	11	6.0	*12	11	26	*34	21	11	7.4	5.0
2	3.3	5.0	8.0	6.0	18	9.4	26	36	21	10	7.2	4.8
3	3.3	5.0	8.4	5.5	13	9.0	28	35	20	10	7.4	4.2
4	3.1	5.0	8.4	5.5	11	9.4	30	33	20	9.7	6.9	4.0
5	2.9	5.0	7.4	5.5	9.7	9.0	32	30	20	9.7	6.6	*4.2
6	2.9	5.0	6.9	5.5	9.4	8.7	*36	30	20	9.4	6.4	4.6
7	2.9	5.0	6.6	5.3	9.4	8.4	33	29	19	9.4	6.4	4.6
8	2.8	5.0	6.0	5.3	9.0	8.7	30	26	18	9.0	*6.1	4.6
9	2.8	5.0	5.5	5.0	9.0	8.7	29	26	22	8.0	5.8	5.0
10	2.8	5.0	5.0	5.3	9.0	9.0	28	26	19	8.0	6.1	5.5
11	*3.1	6.1	5.0	5.3	9.4	8.4	28	27	17	*7.7	6.4	9.4
12	3.3	5.5	5.0	5.5	8.7	8.4	31	27	14	8.0	6.1	7.7
13	3.3	5.5	5.0	5.3	8.7	8.0	31	28	13	8.4	5.8	7.4
14	3.3	5.5	5.0	5.0	8.4	8.0	28	27	*13	8.4	5.8	6.9
15	3.3	5.5	5.0	5.3	8.4	8.7	27	*26	13	8.4	5.8	6.4
16	3.5	5.0	5.0	5.3	11	8.4	*26	25	13	7.4	5.3	5.8
17	3.5	5.0	5.3	5.3	9.7	8.0	30	25	13	7.4	5.3	5.8
18	3.5	5.0	5.5	5.3	8.7	8.0	32	26	12	7.4	5.3	5.8
19	3.5	5.8	5.5	5.3	8.4	8.0	32	27	12	7.2	5.3	5.8
20	3.7	5.8	5.8	5.3	8.0	8.0	30	28	12	6.6	5.3	5.8
21	4.0	5.8	5.5	5.3	8.0	8.7	29	26	12	6.6	5.3	5.8
22	4.0	5.8	5.8	5.3	8.0	8.4	30	25	12	6.6	5.0	5.5
23	4.0	5.8	5.8	5.3	8.0	8.0	33	24	12	6.4	5.0	5.5
24	7.7	5.8	5.5	5.8	8.0	13	35	25	12	6.4	5.0	5.5
25	6.1	5.8	5.3	6.4	8.0	18	37	24	11	6.6	5.0	5.5
26	5.5	6.6	5.3	5.8	8.4	18	35	24	13	7.2	5.0	5.8
27	5.5	7.7	6.1	5.8	*9.0	*18	33	24	12	7.2	5.3	6.1
28	5.5	*6.9	*8.0	5.8	10	21	36	23	12	7.2	5.0	6.4
29	5.3	6.6	6.9	5.8	12	23	34	22	11	7.2	5.0	6.4
30	5.3	6.4	6.1	6.1	-	25	32	22	11	9.4	5.0	6.1
31	5.0	-	6.1	8.0	-	24	-	21	-	9.0	5.0	-
Total	121.5	167.9	191.7	173.2	278.3	358.3	927	831	450	250.9	178.3	171.9
Mean	3.92	5.60	6.18	5.59	9.60	11.6	30.9	26.8	15.0	8.09	5.75	5.73
Ac-ft	241	333	380	344	552	711	1,840	1,650	893	498	354	341

Calendar year 1951: Max 31 Min 2.1 Mean 5.75 Ac-ft 4,160
Water year 1951-52: Max 37 Min 2.8 Mean 11.2 Ac-ft 8,140

Peak discharge (base, 15 cfs).--Dec. 1 (12 m.) 19 cfs (0.79 ft); Feb. 1 (11 p.m.) 20 cfs (0.85 ft); Apr. 6 (6 p.m.) 42 cfs (1.45 ft); Apr. 25 (6:30 p.m.) 49 cfs (1.67 ft); June 9 (1 p.m.) 32 cfs (1.10 ft).

* Discharge measurement made on this day.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,620 ft (from river-profile map).

Average discharge.--13 years, 425 cfs.

Extremes.--Maximum discharge during year, 3,750 cfs June 9 (gage height, 5.64 ft); minimum, 36 cfs Oct. 1.
1939-52: Maximum discharge, 15,500 cfs Nov. 22, 1950 (gage height, 11.40 ft), from rating curve extended above 6,000 cfs on basis of computation of peak flow over dam; 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 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.4	35	2.5	680
.7	60	3.0	1,000
1.0	97	4.0	1,910
1.3	160	5.0	3,000
1.6	257	6.0	4,220
2.0	430		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	131	211	b350	*1,050	323	986	2,220	3,380	1,240	1,020	84
2	40	122	510	b300	1,890	318	937	2,320	3,520	1,220	951	94
3	51	118	408	b250	1,410	301	972	2,790	*3,360	1,190	824	90
4	52	122	440	*b200	752	293	1,050	2,910	3,220	1,240	692	84
5	51	124	480		570	285	1,210	2,690	3,080	1,300	580	91
6	48	131	b372		485	277	1,400	2,430	3,270	1,360	555	81
7	48	138	b265	b250	435	281	1,610	2,330	*3,580	1,340	475	68
8	53	138	b232		421	301	1,460	2,300	3,560	1,300	403	61
9	53	133	b208		398	310	1,250	2,000	3,700	1,280	314	57
10	58	131	b189	261	385	362	1,170	1,830	3,580	1,260	239	56
11	62	133	b186	273	376	394	1,060	1,870	2,850	1,250	215	63
12	61	135	b195	232	372	362	972	2,090	2,430	1,300	205	96
13	*64	138	218	b230	344	318	1,030	2,360	2,000	1,180	186	140
14	67	142	b221	b150	323	297	1,020	2,570	*1,740	1,130	166	150
15	67	138	b202	118	323	285	916	*2,680	1,700	1,170	142	166
16	68	138	221	b160	354	310	909	2,600	1,690	1,140	127	172
17	73	131	b218	b200	398	340	1,000	2,350	1,690	1,080	118	140
18	78	120	235	b220	331	327	1,160	2,300	1,770	944	122	131
19	79	129	239	b240	306	285	1,400	2,540	1,870	881	127	120
20	64	160	b205	b240	293	265	1,420	2,700	1,920	830	116	129
21	69	189	b200	b220	293	257	1,390	2,880	1,860	758	99	135
22	66	172	215	205	289	269	*1,410	3,000	1,840	*665	*84	133
23	70	160	239	243	281	293	1,570	2,800	*1,760	605	79	120
24	77	170	239	285	281	331	1,800	2,750	1,730	490	90	120
25	112	176	228	376	277	600	1,970	2,870	1,640	460	94	114
26	158	*183	218	b480	273	1,090	*2,240	3,070	1,610	435	90	100
27	124	189	232	b560	*281	1,380	2,230	*3,090	1,510	650	87	104
28	114	218	277	b575	285	*1,350	2,000	3,180	1,380	860	90	114
29	120	228	692	b510	301	1,330	2,120	3,360	1,330	842	83	*104
30	129	215	655	460	-	1,150	2,260	3,240	1,230	860	83	109
31	140	-	b420	615	-	1,110	-	3,180	-	993	82	-
Total	2,354	4,552	9,070	9,203	13,777	15,394	41,922	81,300	69,800	31,253	8,538	3,226
Mean	75.9	152	293	297	475	497	1,397	2,623	2,327	1,008	275	108
Ac-ft	4,670	9,030	17,990	18,250	27,330	30,530	83,150	161,300	138,400	61,990	16,930	6,400

Calendar year 1951: Max 1,640 Min 18 Mean 328 Ac-ft 237,300
Water year 1951-52: Max 3,700 Min 38 Mean 793 Ac-ft 576,000

Peak discharge (base, 1,600 cfs).--Feb. 2 (9:30 p.m.) 2,060 cfs (4.15 ft); Apr. 7 (5 p.m.) 1,710 cfs (3.80 ft); May 4 (2 a.m.) 2,980 cfs (4.98 ft); June 9 (12 m.) 3,750 cfs (5.64 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 1952.

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.--41 years, 373 cfs.

Extremes.--Maximum daily discharge during year, 3,650 cfs June 11; no flow Oct. 1-19. 1911-52: Maximum daily discharge, 7,850 cfs 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 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	100	155	356	705	314	1,100	2,230	3,340	1,160	728	50
2	0	100	169	401	1,190	325	1,020	2,270	3,420	1,140	744	47
3	0	117	250	452	1,440	320	1,020	2,350	3,560	1,100	744	47
4	0	108	234	503	1,030	304	1,060	2,780	3,530	1,100	712	47
5	0	100	252	516	758	304	1,140	3,030	3,390	1,140	638	47
6	0	100	252	484	616	297	1,320	2,940	3,280	1,170	557	44
7	0	108	221	484	520	283	1,370	2,710	3,350	1,190	475	41
8	0	110	203	484	466	304	1,490	2,580	3,560	1,180	414	40
9	0	110	235	484	449	314	1,310	2,490	3,610	1,140	379	39
10	0	112	220	484	422	331	1,210	2,330	3,640	1,130	349	38
11	0	114	198	484	412	385	1,130	2,150	3,650	1,120	283	37
12	0	114	196	471	401	385	1,060	2,150	3,140	1,110	209	36
13	0	117	174	356	395	347	1,060	2,270	2,750	1,140	196	37
14	0	119	171	452	374	314	1,070	2,450	2,220	1,100	152	38
15	0	122	174	388	358	297	1,030	2,650	1,960	1,060	108	44
16	0	124	174	292	358	280	957	2,810	1,880	1,060	108	51
17	0	124	191	305	412	320	980	2,810	1,840	1,020	105	58
18	0	121	178	388	412	336	1,070	2,650	1,800	968	101	66
19	0	115	178	407	358	331	1,210	2,580	1,820	864	98	71
20	10	117	174	465	331	276	1,370	2,750	1,900	824	95	71
21	15	129	169	465	331	256	1,370	2,860	1,940	744	91	63
22	10	143	169	407	325	263	1,370	3,030	1,930	683	88	63
23	10	140	169	394	320	276	1,430	3,190	1,900	609	85	60
24	20	135	178	420	314	331	1,550	3,030	1,840	534	82	58
25	35	140	178	516	314	509	1,830	2,910	1,800	470	78	58
26	60	142	169	612	304	1,020	2,090	3,010	1,770	432	75	58
27	90	143	173	708	304	1,250	2,270	3,190	1,770	432	72	53
28	90	148	178	805	304	1,370	2,250	3,240	1,670	520	68	53
29	90	160	227	817	314	1,280	2,150	3,360	1,510	658	62	53
30	90	169	322	753	-	1,250	2,150	3,570	1,430	683	62	53
31	98	-	275	773	-	1,160	-	3,540	-	705	58	-
Total	818	3,701	6,206	15,326	14,237	15,332	41,437	85,910	75,200	28,186	8,016	1,521
Mean	19.9	123	200	494	491	495	1,380	2,771	2,507	909	259	50.7
Ac-ft	1,230	7,340	12,310	30,400	28,240	30,410	82,190	170,400	149,200	55,910	15,900	3,020

Calendar year 1951: Max 1,280 Min 0 Mean 256 Ac-ft 185,700
Water year 1951-52: Max 3,650 Min 0 Mean 808 Ac-ft 586,600

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 1952.

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.--9 years, 68.1 cfs.

Extremes.--Maximum discharge during year, 1,250 cfs Apr. 29 (gage height, 6.57 ft); minimum, 0.9 cfs Sept. 8.
1943-52: Maximum discharge, that of Apr. 29, 1952; minimum, 0.1 cfs Sept. 5, 1950.

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

Rating tables, water year 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 29						Apr. 30 to Sept. 30			
0.9	0.8	1.5	30	5.5	630	0.3	0.7	1.4	41
1.0	2.2	2.0	68	6.0	875	.4	1.6	2.0	97
1.1	5.2	3.0	158	6.5	1,190	.5	2.9	3.0	214
1.2	9.7	4.0	275			.6	4.7	4.0	385
1.3	15	5.0	468			.8	9.8	5.0	600
						1.0	17	6.4	1,140

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	*3.7	14	8	15	21	119	1,010	443	90	7.8	1.2
2	2.2	3.7	14	6	17	b20	121	942	421	79	8.1	1.2
3	2.5	4.3	13	6	17	b20	126	942	409	63	7.8	1.2
4	2.5	4.6	14	8	17	22	134	1,010	389	46	7.3	1.2
5	2.2	4.6	12	10	18	b22	144	1,060	371	44	*7.0	1.3
6	2.5	5.2	*13	12	b18	b22	163	*977	363	41	6.8	1.4
7	2.5	5.6	10	14	b17	23	203	914	363	38	6.5	1.2
8	2.5	6.1	8	14	b17	24	242	882	361	33	6.8	*1.1
9	2.5	7.4	6	*11	b17	24	282	826	*341	29	6.8	1.0
10	*2.8	7.9	8	11	b18	26	264	738	310	28	6.5	1.1
11	2.8	8.8	10	11	b17	26	240	657	288	*30	6.1	1.2
12	2.8	11	12	11	15	b26	238	*590	274	28	5.8	1.2
13	2.5	13	12	12	b15	b26	261	578	244	29	5.4	1.2
14	2.8	16	10	14	b15	b27	315	595	213	26	4.9	1.3
15	2.8	14	10	13	16	28	398	619	185	24	4.5	1.3
16	2.8	12	12	10	17	30	479	648	173	24	4.0	1.2
17	2.5	11	12	b9	17	*31	433	627	161	21	3.4	1.2
18	2.5	10	14	12	b19	34	*460	550	136	19	3.1	1.2
19	2.8	10	12	13	*21	30	580	477	131	18	2.5	1.2
20	2.8	11	10	13	22	30	810	449	124	16	2.4	1.2
21	3.4	11	12	15	21	30	924	473	116	14	2.2	1.2
22	3.4	11	14	16	b20	28	826	516	106	13	2.1	1.2
23	3.4	11	12	14	19	30	790	487	108	11	2.0	1.3
24	3.4	12	10	17	b19	32	810	437	124	10	1.9	1.3
25	3.7	11	10	14	b18	40	842	407	155	9.5	1.7	1.3
26	3.4	11	12	14	b20	50	930	405	146	9.2	1.5	1.4
27	2.8	11	14	14	b20	58	972	435	143	8.7	1.5	1.3
28	2.8	13	14	15	b20	69	1,030	467	133	8.1	1.4	1.5
29	2.8	13	12	17	b21	83	1,180	477	115	8.1	1.3	1.4
30	3.1	14	12	14	-	105	1,130	465	105	7.8	1.2	1.5
31	3.1	-	10	14	-	122	-	459	-	7.3	1.2	-
Total	86.4	287.9	358	382	523	1,159	15,446	20,119	6,951	832.7	131.5	37.5
Mean	2.79	9.60	11.5	12.3	18.0	37.4	515	649	232	26.9	4.24	1.25
Ac-ft	171	571	710	758	1,040	2,300	30,640	39,910	13,790	1,650	261	74

Calendar year 1951: Max 447 Min 0.9 Mean 84.5 Ac-ft 61,160
Water year 1951-52: Max 1,180 Min 1.0 Mean 127 Ac-ft 91,880

Peak discharge (base, 200 cfs).--Apr. 29 (9 p.m.) 1,250 cfs (6.57 ft).
* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 7 to Jan. 8; discharge estimated on basis of 2 discharge measurements, weather records and records for North Fork Humboldt River at Devils Gate, near Halleck.

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 powerplant, and 3 miles south of Lamoille.

Drainage area.--25 sq mi, approximately.

Records available.--May 1915 to June 1923, October 1943 to September 1952.

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.--15 years (1915-16, 1917-22, 1943-52), 45.2 cfs.

Extremes.--Maximum discharge during year, 415 cfs June 5; minimum, 1.6 cfs Nov. 2.
1915-23, 1943-52: 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 or no gage-height record, which are fair. Records include flow of McDermott ditch which diverts about 200 ft upstream from gage. Elko-Lamoille powerplant diverts about 6 miles upstream but flow is returned to channel at powerplant 300 ft upstream from station.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	4.6	4.9		a4.0	4.4	6.2	110	336	153	57	12
2	7.8	4.0	4.0		3.8	4.0	6.7	128	319	144	52	12
3	7.4	5.1	4.4		4.0	4.4	6.7	149	318	146	47	11
4	6.9	4.6	4.9		4.9	4.4	7.6	157	*337	151	43	11
5	6.4	4.6	4.9		4.9	4.0	9.0	164	356	153	38	11
6	6.4	4.2	4.4		4.9	4.0	12	170	356	149	*36	10
7	6.4	4.6	4.4		4.9	4.0	15	168	*338	144	34	10
8	6.9	4.2	a4.3		4.9	4.4	14	148	336	137	33	9.7
9	7.4	4.2	a4.1		4.9	4.4	13	136	336	132	31	9.7
10	7.4	4.2	*3.8		4.9	4.9	13	141	289	130	30	9.6
11	8.2	4.6	3.8		4.9	4.9	13	159	234	120	28	9.7
12	7.5	5.6	3.6		4.4	4.4	14	194	208	112	26	9.7
13	7.5	5.1	3.6		4.4	*4.4	15	220	199	119	25	9.1
14	7.5	5.6	3.6		b4.5	4.9	17	*227	210	109	23	9.1
15	*6.9	4.6	3.6		b4.7	4.9	16	200	188	*101	22	8.6
16	6.4	3.4	3.6	a4.5	b5.0	4.9	16	163	177	100	20	8.1
17	6.0	3.5	3.6	(*)	4.9	4.9	17	141	186	99	18	7.7
18	6.0	3.7	3.6		4.9	4.4	24	131	200	94	18	7.7
19	6.4	3.7	3.6		a4.5	4.4	30	137	201	93	18	7.2
20	6.0	*4.5	a4.0		*4.0	4.9	32	161	*192	86	16	7.2
21	6.0	4.4	a4.2		4.0	4.9	32	144	164	79	15	*7.3
22	5.6	4.4	a4.2		4.0	4.9	36	132	144	75	15	6.7
23	5.6	4.4	a4.0		4.4	4.9	44	138	158	72	15	6.7
24	6.0	4.4	a4.2		4.4	4.9	56	165	152	71	15	8.0
25	5.6	4.4	a4.3		4.4	5.4	*69	226	125	72	14	7.6
26	6.0	4.9	a4.3		4.9	4.9	81	261	114	85	14	7.6
27	5.6	4.9	a4.2		4.4	5.4	94	283	104	76	14	8.0
28	5.6	4.9	a4.2		4.4	5.4	109	288	109	*77	14	8.0
29	4.6	4.9	a4.3		4.0	5.8	106	302	126	70	13	6.7
30	5.1	4.9	a4.3		4.0	6.2	99	331	136	60	12	5.4
31	4.6	-	a4.4		-	6.2	-	330	-	61	12	-
Total	197.3	135.1	127.3	139.5	131.2	148.8	1,023.2	5,804	6,648	3,270	768	262.1
Mean	6.36	4.50	4.11	4.5	4.52	4.80	34.1	187	222	105	24.8	8.74
Ac-ft	391	268	252	277	260	295	2,030	11,510	13,190	6,490	1,520	520

Calendar year 1951: Max 426 Min 3.4 Mean 48.0 Ac-ft 34,750
Water year 1951-52: Max 356 Min 3.4 Mean 51.0 Ac-ft 37,000

Peak discharge (base 310 cfs). -- June 5 (8:45 p.m.) 415 cfs.

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 3 discharge measurements, weather records, and records for stations on South Fork Humboldt River.

b Stage-discharge relation affected by ice.

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 1952.

Gage.--Water-stage recorder. Datum of gage is 5,368 ft above mean sea level (U.S.G.S. plane table benchmark). November 1913 to September 1951 at site a quarter of a mile upstream at different datum.

Average discharge.--14 years (1914-19, 1943-52), 76.5 cfs.

Extremes.--Maximum discharge during year, 2,450 cfs Apr. 20 (gage height, 9.63 ft); minimum, 7.0 cfs Sept. 5.
1913-21, 1943-52: Maximum discharge, that of Apr. 20, 1952; minimum, 1 cfs Aug. 20-28, Sept. 30, 1913.

Remarks.--Records good except those for periods of ice effect, which are poor. Many diversions above station.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 31 to Apr. 18)

Oct. 1 to Apr. 13				Apr. 14 to Sept. 30			
1.5	4.6	3.0	139	2.1	5.0	5.0	395
1.6	8.9	4.0	283	2.3	14	7.0	900
1.8	20	5.0	461	2.6	34	8.0	1,180
2.1	42	7.0	900	3.0	68	9.0	1,780
2.5	81			3.5	127	9.6	2,410
				4.0	203		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.5	*13	24			26	134	1,160	496	162	51	8.6
2	9.9	20	26			26	133	1,120	465	146	48	8.2
3	11	15	24			25	138	1,160	449	135	44	7.8
4	12	12	21			27	178	1,170	442	123	41	8.2
5	13	12	18			28	259	*1,110	428	109	*40	7.8
6	12	14	*16			28	384	1,000	422	95	39	8.6
7	11	14	15			30	612	920	428	88	36	9.0
8	9.9	13	14			30	782	931	452	82	33	*8.6
9	*9.4	13	12			30	*598	970	456	80	31	8.6
10	9.4	15	14	(*)		32	580	825	424	77	28	8.6
11	9.4	15	16			33	604	730	406	*81	25	8.2
12	9.4	17	18			32	675	672	428	91	23	8.6
13	9.4	18	18			32	858	635	408	108	24	10
14	9.9	19	16			35	1,330	625	402	108	22	9.5
15	9.4	17	16	20	25	37	1,380	*625	373	99	21	9.0
16	9.4	16	18			40	*1,080	668	327	81	19	8.2
17	9.4	16	18			45	1,150	662	300	70	16	7.8
18	9.4	20	20			50	1,540	582	284	61	15	7.8
19	9.4	22	20			45	*2,050	518	279	56	14	8.2
20	9.4	26	16			45	2,340	510	268	56	14	8.6
21	10	24	18			*50	1,560	612	257	60	13	8.6
22	10	22	20			45	1,360	780	246	55	12	8.6
23	10	20	18			36	1,390	630	259	50	11	9.0
24	11	20	16			39	1,380	545	260	46	10	12
25	11	21	16			64	1,430	498	*292	45	10	12
26	11	21	18			90	1,480	484	342	44	9.5	12
27	18	21	20			88	1,420	*488	311	45	9.0	12
28	14	22	20			82	1,410	515	268	51	9.0	12
29	13	21	18			81	1,790	528	223	63	9.0	12
30	13	22	17		-	116	1,360	512	185	54	9.0	10
31	13	-	16		-	146	-	508	-	49	8.6	-
Total	334.6	541	557	620	725	1,513	31,385	22,693	10,580	2,470	694.1	278.1
Mean	10.8	18.0	18.0	20	25	48.8	1,046	732	353	79.7	22.4	9.27
Ac-ft	664	1,070	1,100	1,230	1,440	3,000	62,250	45,010	20,990	4,900	1,380	552

Calendar year 1951: Max 757 Min - Mean 89.7 Ac-ft 64,920
Water year 1951-52: Max 2,340 Min 7.8 Mean 198 Ac-ft 143,600

Peak discharge (base, 170 cfs).--Mar. 31 (2:30 a.m.) 178 cfs (3.20 ft); Apr. 8 (4 a.m.) 825 cfs (6.53 ft); Apr. 14 (11 p.m.) 1,790 cfs (8.81 ft); Apr. 20 (12:30 a.m.) 2,450 cfs (9.63 ft); May 22 (6 a.m.) 832 cfs (6.75 ft); June 26 (5 p.m.) 356 cfs (4.82 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 16-19, 22-26, Dec. 3 to Mar. 22 (no gage-height record Dec. 18-25, Jan. 4 to Feb. 21, Mar. 9-21; discharge computed on basis of 2 discharge measurements, weather records, and records for nearby streams).

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 1952.

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.--13 years (1897-1902, 1944-52), 258 cfs.

Extremes.--Maximum discharge during year, 3,860 cfs Apr. 30 (gage height, 9.60 ft); minimum, 1.2 cfs Oct. 1-5, 7, 8.
1895-1902, 1944-52: Maximum discharge, that of Apr. 30, 1952; no flow for several days in August and September 1948.

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

Rating tables, water year 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 1-25, Apr. 15-25, June 17 to July 15, Sept. 10-21)

Oct. 1 to Apr. 14, July 5 to Sept. 30

0.9	0.7	1.4	11	3.0	241
1.0	1.3	1.6	24	4.0	480
1.1	2.2	1.8	44	5.0	803
1.2	3.9	2.0	71	7.0	1,640
1.3	6.7	2.5	149		

Apr. 15 to July 4

2.9	401	5.0	1,110
3.2	479	7.0	2,030
3.5	568	9.0	3,240
4.0	734	9.5	3,750

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	*9.9	50	35	52	58	570	*3,400	1,670	556	85	2.4
2	1.2	10	45	34	56	58	654	3,060	1,720	499	79	2.2
3	1.2	10	34	34	62	58	820	2,860	1,700	455	74	2.2
4	1.2	12	42	34	68	58	922	2,750	1,680	421	67	2.1
5	1.2	13	47	34	64	62	1,000	2,710	1,660	379	*61	1.9
6	1.3	12	*45	34	60	60	1,160	*2,670	1,620	338	57	1.9
7	1.2	12	40	34	60	57	1,310	2,640	1,590	301	53	1.9
8	1.2	14	34	34	60	70	1,420	2,580	1,610	260	47	2.0
9	1.3	16	25	34	58	97	*1,600	2,530	1,620	227	42	1.8
10	1.4	18	25	34	57	105	1,540	2,500	1,580	210	36	1.8
11	*1.6	18	26	34	57	92	1,390	2,320	1,500	*215	34	1.9
12	1.6	22	26	34	56	*97	1,360	2,140	1,460	219	30	*1.8
13	1.5	24	26	34	56	91	1,350	2,000	1,420	237	24	1.8
14	1.5	36	26	34	56	96	1,480	1,880	1,330	227	21	1.8
15	1.5	33	26	33	56	88	1,770	1,800	1,190	217	19	1.8
16	1.5	29	26	*33	56	90	2,140	1,850	1,060	208	23	1.7
17	1.5	24	26	33	56	97	2,030	1,940	955	184	23	1.7
18	1.5	23	26	33	57	113	2,040	2,020	851	161	20	1.7
19	1.5	27	26	33	58	113	2,290	1,900	776	146	18	1.8
20	1.5	36	26	33	64	110	2,740	1,710	690	134	13	1.7
21	1.6	30	27	34	*71	110	*3,100	1,650	633	*124	9.5	1.8
22	1.6	29	27	35	67	114	2,890	1,660	574	118	7.9	3.2
23	2.4	29	28	36	58	127	2,720	1,740	576	106	7.1	3.9
24	3.0	33	28	37	56	184	2,740	1,640	*610	92	5.9	4.5
25	3.7	29	29	39	60	256	2,660	1,500	663	82	4.7	5.0
26	4.5	35	30	41	58	328	2,660	1,420	790	81	4.2	5.6
27	5.3	34	32	44	58	426	2,770	*1,390	880	77	3.6	6.1
28	5.9	37	34	47	58	396	2,920	1,420	808	74	3.2	6.7
29	9.9	38	37	49	58	415	3,220	1,520	720	74	2.9	6.7
30	9.9	47	37	50	-	452	3,720	1,600	630	84	2.7	7.5
31	9.5	-	36	49	-	509	-	1,640	-	86	2.7	-
Total	84.9	739.9	992	1,136	1,713	4,987	58,986	64,440	34,568	6,592	880.4	88.9
Mean	2.74	24.7	32.0	36.6	59.1	161	1,966	2,079	1,152	213	28.4	2.96
Ac-ft	168	1,470	1,970	2,250	3,400	9,890	117,000	127,800	68,560	13,080	1,750	176

Calendar year 1951: Max 1,560 Min 0.9 Mean 262 Ac-ft 189,500
Water year 1951-52: Max 3,720 Min 1.2 Mean 479 Ac-ft 347,500

Peak discharge (base, 550 cfs).--Apr. 30 (1 p.m.) 3,860 cfs (9.60 ft); June 27 (1 p.m.) 894 cfs (4.73 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 5 to Mar. 6; discharge computed on basis of 3 discharge measurements, weather records, and records for other Humboldt River stations.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,970 ft (from topographic map).

Average discharge.--7 years, 74.9 cfs.

Extremes.--Maximum discharge during year, 687 cfs June 5 (gage height, 3.48 ft); minimum, 2.6 cfs Nov. 2.
1945-52: Maximum discharge, 935 cfs May 27, 1951 (gage height, 3.81 ft); minimum, that of Nov. 2, 1951.

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

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 12-22)

0.7	3.4	1.5	78
.8	6.6	2.0	179
.9	11	2.5	326
1.0	17	3.3	619
1.2	36		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.0	6.0	7.0	b11	a10	11	27	278	598	211	58	8.8
2	8.4	4.7	7.0	b9	a10	11	32	310	578	213	52	9.2
3	10	6.0	b8	b9	a10	b11	33	349	*574	213	49	7.5
4	8.8	6.0	7.9	10	a10	10	44	362	570	225	44	8.8
5	7.5	5.3	8.4	9.2	a10	10	65	362	615	225	41	10
6	7.9	4.7	b9	8.8	a10	b10	109	376	611	219	36	9.7
7	7.5	5.3	*b10	8.8	*a10	9.7	137	366	574	208	*33	9.7
8	7.5	5.3	b10	8.4	b10	10	111	326	555	200	30	7.9
9	7.0	5.3	b9	8.4	b10	11	99	294	547	184	27	*7.5
10	7.0	5.6	b9	8.4	b11	12	92	294	494	174	24	7.0
11	7.5	6.3	b8	7.9	b12	12	88	313	424	162	23	8.8
12	7.5	7.0	7.5	7.9	13	b11	97	362	373	148	21	8.8
13	7.0	6.6	7.5	7.9	b12	11	125	418	346	153	20	9.2
14	7.0	7.0	7.0	7.9	b12	b11	133	*424	342	140	17	7.9
15	7.0	6.0	7.0	7.9	b11	11	115	393	323	*129	16	6.0
16	7.5	4.4	7.0	b8	11	11	111	342	300	125	17	5.3
17	7.0	b5	6.6	b8	12	11	119	304	*307	119	18	5.3
18	7.0	b6	6.6	7.9	b11	12	148	278	316	111	17	5.3
19	6.6	7.5	7.5	7.9	b11	*12	174	278	316	108	16	5.0
20	6.6	7.9	9.2	7.9	b11	b12	174	329	307	100	15	5.3
21	7.0	*7.9	9.2	7.9	b11	b12	160	326	285	90	15	5.3
22	6.6	7.0	8.8	8.4	b11	b12	169	310	254	83	15	4.7
23	7.5	b7	9.2	8.4	9.7	b12	192	310	269	80	14	4.7
24	7.5	6.6	9.7	8.8	b10	13	236	349	266	78	13	4.4
25	7.5	b7	9.2	9.7	b10	13	282	432	225	78	13	4.4
26	7.5	6.3	9.2	10	b10	15	307	494	205	85	12	4.4
27	7.0	6.6	8.8	a10	9.7	17	313	528	184	78	12	4.4
28	7.0	6.6	9.2	a10	11	20	326	562	174	78	11	4.4
29	*6.6	6.6	9.2	a10	b11	23	313	582	187	70	8.8	4.4
30	6.3	7.5	10	a10	-	27	278	603	197	72	8.4	4.0
31	6.0	-	11	a10	-	26	-	611	-	67	8.8	-
Total	224.8	187.0	262.7	273.4	310.4	409.7	4,609	11,865	11,316	4,226	705.0	198.1
Mean	7.25	6.23	8.47	8.82	10.7	13.2	154	383	377	136	22.7	6.60
Ac-ft	446	371	521	542	616	813	9,140	23,530	22,440	8,380	1,400	393

Calendar year 1951: Max 802 Min 4.4 Mean 80.0 Ac-ft 57,960
Water year 1951-52: Max 615 Min 4.0 Mean 94.5 Ac-ft 68,590

Peak discharge (base, 450 cfs).--June 5 (9 p.m.) 687 cfs (3.48 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 other South Fork Humboldt River stations.
b Stage-discharge relation affected by ice.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,290 ft (from river-profile map).

Extremes.--Maximum discharge during year, 1,210 cfs Apr. 29 (gage height, 6.54 ft), from rating curve extended above 530 cfs on basis of logarithmic plotting; minimum, 3.3 cfs Sept. 10 (gage height, 1.02 ft).
1948-52: Maximum discharge, that of Apr. 29, 1952; minimum, 1.0 cfs Aug. 10, 1949.
Revisions.--The maximum discharge for water year 1949 has been revised to 532 cfs May 16 (gage height, 4.52 ft), superseding figure published in Water-Supply Paper 1180.

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

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 7				Apr. 8 to Sept. 30			
1.2	3.2	2.5	108	1.0	2.8	2.5	121
1.3	6.3	3.0	175	1.1	5.1	3.0	198
1.4	11	4.0	394	1.2	8.3	4.0	410
1.6	24	4.8	611	1.4	17	5.0	670
2.0	57			1.6	30	6.2	1,070
				2.0	64		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	6.8	14		11	16	*173	736	271	34	16	4.0
2	5.7	6.6	14		12	15	185	667	265	28	17	4.0
3	7.3	6.8	12		13	13	175	649	*253	25	15	3.7
4	7.3	6.8	11		13	13	224	652	236	22	13	4.0
5	6.8	6.3	9.0		13	14	337	646	218	22	12	3.7
6	6.3	6.6	8.5		12	15	459	605	212	20	11	3.7
7	6.3	6.8	*9.0		11	*15	599	578	212	17	*10	3.7
8	6.3	6.8	9.0		11	16	*530	538	193	15	9.5	3.7
9	6.0	6.3	8.0		11	20	375	490	179	13	9.1	3.7
10	17	6.8	7.0		12	23	286	435	153	12	8.3	3.5
11	11	7.3	7.0		11	22	251	390	144	13	7.7	4.6
12	7.7	11	7.0		10	22	220	366	125	17	7.3	4.9
13	6.3	9.7	7.0		9.0	25	227	347	66	22	7.3	4.6
14	6.0	9.7	6.8		9.0	27	336	338	50	*24	7.3	4.9
15	6.3	8.2	6.5		10	28	460	331	38	21	7.0	5.1
16	6.3	8.2	6.5	10	12	27	388	359	38	21	6.4	5.1
17	6.8	8.0	6.5		13	26	*312	395	37	19	6.4	*5.4
18	7.3	8.0	6.5	(*)	12	28	301	343	34	20	6.4	5.7
19	a7.3	8.2	7.0		12	25	345	292	29	19	6.4	5.7
20	a7.0	8.2	8.0		13	20	425	261	26	17	5.7	5.7
21	a7.2	*8.2	8.0		14	30	435	277	25	17	4.9	5.7
22	a7.0	8.0	8.0		13	29	390	286	26	15	5.7	5.7
23	a7.3	8.0	8.5		12	36	385	261	29	12	4.9	5.7
24	a7.3	8.2	8.5		13	41	395	240	54	11	4.6	5.7
25	a7.3	9.0	8.0		12	115	435	232	89	10	4.6	5.7
26	a7.2	9.7	8.0		11	142	535	236	*95	17	4.4	5.7
27	a6.8	9.2	8.0		12	149	608	245	94	18	4.4	5.7
28	a6.5	9.7	8.0		14	131	685	257	75	17	4.4	5.7
29	*6.3	10	8.0		15	155	1,070	275	54	16	4.2	5.7
30	6.3	11	8.5		-	182	897	284	40	15	4.0	5.7
31	6.8	-	9.0		-	165	-	286	-	16	3.7	-
Total	221.8	244.1	260.8	310	346.0	1,585	12,443	12,297	3,360	565	238.6	146.4
Mean	7.15	8.14	8.41	10	11.9	51.1	415	397	112	18.2	7.70	4.88
Ac-ft	440	484	517	615	686	3,140	24,680	24,390	6,660	1,120	473	290

Calendar year 1951: Max 311 Min 2.6 Mean 42.3 Ac-ft 30,610
Water year 1951-52: Max 1,070 Min 3.5 Mean 87.5 Ac-ft 63,500

Peak discharge (base, 200 cfs).--Apr. 7 (11 a.m.) 682 cfs (5.04 ft); Apr. 15 (6:30 a.m.) 472 cfs (4.25 ft); Apr. 29 (3:30 a.m.) 1,210 cfs (6.54 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records for nearby streams.
Note.--Stage-discharge relation affected by ice Nov. 2, 3, 6, 7, 16-19, 22, 23, 25, Dec. 3 to Feb. 29, Mar. 2-6, 11-14.

South Fork Humboldt River above Dixie Creek, near Elko, Nev.

Location.--Lat 40°41', long. 115°49', in SE¼ 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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,140 ft (from river-profile map).

Extremes.--Maximum discharge during year, 1,540 cfs Apr. 29 (gage height, 5.46 ft); minimum, 8.1 cfs Oct. 1, Sept. 10 (gage height, 2.11 ft).
1948-52: Maximum discharge, that of Apr. 29, 1952; minimum, 2.5 cfs Sept. 6, 1949.

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

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.1	7.7	3.2	156
2.2	12	3.5	244
2.4	24	4.0	458
2.6	42	4.5	765
2.9	88	5.3	1,360

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.6	21	24		20	29	228	*1,140	944	276	88	8.6
2	10	20	21		22	26	244	1,080	929	276	81	9.0
3	13	21	18		25	24	258	1,080	*900	276	75	9.4
4	12	22	16		30	25	296	1,120	871	269	66	9.4
5	12	*21	14		32	27	385	1,130	885	273	58	9.4
6	11	20	15		28	28	518	1,090	936	269	52	9.4
7	12	21	15		25	*30	738	1,080	936	251	*50	9.4
8	11	21	14		24	30	878	1,020	878	238	46	9.4
9	12	21	13		23	28	671	914	842	212	43	8.6
10	17	21	12		22	28	518	821	800	198	38	8.1
11	23	21	12		23	26	448	765	690	200	35	9.0
12	14	24	*12		22	25	428	738	582	203	31	10
13	13	24	12		20	25	458	779	485	183	25	11
14	15	24	12		19	27	645	807	423	*175	25	11
15	13	23	12		21	30	717	800	399	156	23	12
16	13	22	13	18	26	35	652	828	358	141	19	12
17	*14	23	13		25	38	553	821	340	129	18	12
18	14	24	13		23	38	524	690	332	122	19	11
19	14	24	14		25	38	582	607	323	120	19	*11
20	13	24	17		27	40	658	601	328	110	18	11
21	14	23	17		27	45	664	658	323	98	18	10
22	15	23	16		24	48	613	658	292	86	16	10
23	16	21	17		24	47	607	607	296	81	17	9.8
24	18	22	18		26	100	620	582	380	75	15	9.4
25	19	21	19		24	200	690	620	399	75	14	9.4
26	19	22	18		24	300	786	711	*362	92	14	9.0
27	18	22	17		24	266	900	786	367	86	14	9.0
28	19	23	17		27	231	1,020	849	319	88	13	9.0
29	20	23	18		28	255	1,360	914	284	88	12	9.4
30	20	22	19		-	280	1,340	944	280	92	11	9.4
31	21	-	20		-	241	-	958	-	96	9.4	-
Total	461.6	664	488	558	710	2,610	18,999	26,198	16,483	5,034	982.4	295.1
Mean	14.9	22.1	15.7	18	24.5	84.2	633	845	549	162	31.7	9.84
Ac-ft	916	1,320	968	1,110	1,410	5,180	37,680	51,960	32,690	9,980	1,950	585

Calendar year 1951: Max 1,160 Min 5.1 Mean 124 Ac-ft 89,910
Water year 1951-52: Max 1,360 Min 8.1 Mean 201 Ac-ft 145,700

Peak discharge (base, 400 cfs).--Apr. 8 (6 p.m.) 958 cfs (4.74 ft); Apr. 29 (1 p.m.) 1,540 cfs (5.46 ft); June 25 (4 a.m.) 433 (3.99 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 18, 19, Dec. 2 to Mar. 21, Mar. 24-26.

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 1952.

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.--44 years (1896-1903, 1904-9, 1910-18, 1923-26, 1927-32, 1936-52), 132 cfs.

Extremes.--Maximum discharge during year, 1,700 cfs Apr. 29 (gage height, 5.37 ft); maximum gage height, 8.41 ft Mar. 24 (ice jam); minimum discharge, 4.6 cfs Sept. 28. 1896-1922, 1923-32, 1936-52: 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 period of ice effect, which are poor. 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.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*5.0	16	18		23	32	332	1,300	965	221	76	7.0
2	6.6	17	18		26	28	370	1,180	955	213	70	7.0
3	9.9	16	17		30	25	366	1,210	920	210	62	7.4
4	8.3	17	16		34	29	409	1,240	885	199	56	7.4
5	7.8	17	15		36	29	619	1,230	880	199	52	7.4
6	7.4	17	16		35	30	813	1,180	*930	199	*47	7.0
7	7.4	17	17		29	32	1,050	1,140	935	194	46	7.0
8	7.4	17	16		*27	32	1,060	1,070	876	188	44	6.6
9	7.4	17	15		26	30	*789	980	822	183	42	6.2
10	9.4	17	14		25	30	640	861	784	172	37	5.8
11	27	17	13		26	28	556	765	675	172	35	6.2
12	14	18	13		25	27	556	728	560	*170	34	7.0
13	12	21	*13		23	27	619	780	450	164	27	7.8
14	12	21	13		21	29	813	789	391	157	25	7.8
15	11	21	13		25	35	817	765	359	150	23	8.3
16	11	18	14	20	30	40	770	803	325	140	18	7.8
17	12	21	14		26	40	679	837	308	129	17	7.8
18	12	23	14		25	40	666	728	302	124	17	7.8
19	12	27	16		27	40	761	644	292	120	17	7.0
20	11	20	19		30	45	817	636	299	114	17	6.6
21	12	19	19		30	50	789	701	299	105	16	6.6
22	12	19	18		25	50	733	701	286	95	15	*6.2
23	13	20	19		25	75	719	697	*277	90	15	5.8
24	14	22	20		30	150	742	619	338	82	14	5.0
25	15	21	21		25	230	827	653	373	82	12	5.0
26	15	18	20		25	350	970	*742	332	90	12	5.4
27	15	18	19		26	488	1,090	827	332	86	11	5.4
28	15	18	20		28	373	1,220	890	280	82	11	5.0
29	16	19	20		30	380	1,530	970	242	82	11	5.0
30	16	*18	21		-	431	*1,470	980	227	86	9.9	5.4
31	16	-	22		-	366	-	985	-	93	8.3	-
Total	369.6	567	523	620	793	3,591	23,592	27,631	15,899	4,391	897.2	197.7
Mean	11.9	18.9	16.9	20	27.3	116	786	891	530	142	28.9	6.59
Ac-ft	733	1,120	1,040	1,230	1,570	7,120	46,790	54,810	31,540	8,710	1,780	392

Calendar year 1951: Max 1,100 Min 3.2 Mean 120 Ac-ft 87,130
Water year 1951-52: Max 1,530 Min 5.0 Mean 216 Ac-ft 156,800

Peak discharge (base, 410 cfs).--Mar. 24 (time and discharge unknown); Apr. 8 (time unknown) about 1,200 cfs; Apr. 29 (2:30 p.m.) 1,700 cfs (5.37 ft); May 30 (4:30 p.m.) 1,020 cfs (4.30 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 2 to Mar. 26.

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 1952.

Gage.--Water-stage recorder.

Average discharge.--9 years, 406 cfs.

Extremes.--Maximum discharge during year, 5,220 cfs May 1 (gage height, 9.35 ft); minimum, 12 cfs Oct. 1 (gage height, 0.79 ft).
1943-52: Maximum discharge, that of May 1, 1952; minimum, 3.6 cfs Sept. 7, 1948.
Flood of February 1943 reached a stage of 9.8 ft (discharge, 5,900 cfs, by slope-area determination of peak flow.

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

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	8.0	1.7	128	4.0	980
.8	13	2.0	193	6.0	2,220
1.0	28	2.3	274	8.0	3,900
1.2	49	2.7	405	9.3	5,170
1.4	76	3.0	520		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	28	54	68	100	117	935	5,150	2,320	910	206	22
2	15	28	58	67	110	118	1,000	4,790	2,360	812	179	22
3	19	28	59	67	125	107	1,060	4,420	2,400	741	163	20
4	19	29	60		136	97	1,140	4,220	2,420	677	150	19
5	19	29	61		128	107	1,360	4,110	2,390	620	138	19
6	19	30	58		120	113	1,690	4,020	2,380	578	*136	19
7	19	30	52		118	107	2,100	3,940	2,370	532	120	19
8	19	31	46	66	117	118	2,590	3,870	2,320	496	115	18
9	19	31	40		117	130	2,510	3,730	2,230	*442	104	18
10	18	31	40		117	208	2,320	3,530	2,180	388	95	17
11	19	32		(*)	115	179	*2,300	3,420	2,180	367	87	19
12	35	33			111	155	2,130	3,190	2,040	391	81	20
13	26	33		65	108	142	2,070	2,980	1,880	388	76	19
14	25	37	41	65	104	146	2,190	2,800	1,740	405	68	19
15	24	44	(*)		105	142	2,430	2,660	1,660	398	61	19
16	24	42			109	166	2,550	2,600	1,550	370	56	20
17	24	40		64	122	163	2,920	2,600	1,420	350	49	20
18	24	40			118	*177	2,890	2,610	1,300	340	46	19
19	24	41			104	221	2,800	2,610	1,200	318	45	20
20	24	46	42	65	103	193	3,050	2,550	1,080	286	44	19
21	22	47		66	104	161	3,570	2,380	*1,010	*262	42	19
22	22	46	43	68	105	163	*3,940	2,240	935	240	41	18
23	*22	45	45	69	106	161	3,840	2,160	870	218	40	17
24	24	47	46	70	109	230	3,580	2,160	860	203	38	*16
25	25	48	48	74	109	848	3,650	2,160	940	186	35	16
26	26	*47	51	81	107	990	3,720	*2,060	930	179	32	16
27	26	49	54	84	99	1,020	3,810	2,010	970	179	30	17
28	26	50	58	84	109	940	4,140	2,000	1,020	170	28	17
29	26	53	64	85	*106	935	4,590	2,030	1,040	168	26	16
30	27	56	72	85	-	970	*5,010	2,120	995	163	25	16
31	28	-	71	92	-	980	-	2,250	-	188	23	-
Total	701	1,171	1,536	2,169	3,241	10,304	81,885	93,370	48,990	11,965	2,379	555
Mean	22.6	39.0	49.5	70.0	112	332	2,730	3,012	1,633	386	76.7	18.5
Ac-ft	1,390	2,320	3,050	4,300	6,430	20,440	162,400	185,200	97,170	23,730	4,720	1,100

Calendar year 1951: Max 1,990 Min 12 Mean 395 Ac-ft 286,000
Water year 1951-52: Max 5,150 Min 12 Mean 706 Ac-ft 512,200

Peak discharge (base, 900 cfs).--Mar. 27 (5 a.m.) 1,260 cfs (4.52 ft); Apr. 8 (8 p.m.) 2,760 cfs (6.67 ft); May 1 (1:20 p.m.) 5,220 cfs (9.35 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 17, 18, Dec. 3, 4, Dec. 7 to Feb. 3, Feb. 7, 13, 15, 18-22.

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 1952.

Gage.--Water-stage recorder. Datum of gage is 4,825.55 at above mean sea level, datum of 1929. 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.--44 years (1903-6, 1911-52), 375 cfs.

Extremes.--Maximum discharge during year, 6,050 cfs May 2 (gage height, 9.53 ft); minimum, 26 cfs Oct. 1.
1902-6, 1911-52: Maximum discharge, 6,250 cfs Feb. 26, 1943 (gage height, 9.92 ft); minimum, 2 cfs Aug. 25-28, 1931.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Diversion above station for irrigation of about 150,000 acres of hay and pasture land.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 19-22)

Oct. 1 to Apr. 22				Apr. 23 to Sept. 30			
1.8	23	4.0	739	1.6	20	3.0	351
2.0	45	5.0	1,400	1.7	31	4.0	800
2.2	76	7.0	3,190	1.8	46	5.0	1,480
2.5	141	8.8	5,040	2.0	84	7.0	3,350
3.0	293			2.5	199	9.5	6,010

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	45	74	80	113	136	1,130	5,930	2,600	1,000	232	38
2	30	43	78	78	154	146	1,180	5,910	2,620	903	204	36
3	32	43	79	78	184	134	1,240	*5,580	2,630	822	189	36
4	33	43	80	77	173	124	1,460	5,240	2,640	760	174	34
5	37	43	80	77	159	127	1,780	5,000	2,610	705	164	31
6	38	44	71		*146	134	2,210	4,810	2,600	660	155	31
7	37	41	63		139	134	2,950	4,690	2,590	606	145	31
8	37	41	56		136	146	3,760	4,620	2,550	559	136	31
9	37	46	50	76	134	167	3,740	4,480	2,450	*527	127	30
10	37	48	50		136	242	*3,410	4,240	2,400	466	118	30
11	35	52	50		134	242	3,310	4,070	2,410	429	109	34
12	40	53	51		134	195	3,250	3,900	2,290	441	103	36
13	45	56		75	127	178	3,310	3,630	2,130	466	99	34
14	41	58		74	115	181	3,870	3,440	1,980	466	90	34
15	40	60		74	115	167	3,940	3,260	1,870	446	*82	34
16	41	58		73	131	201	3,670	3,180	1,760	417	76	36
17	41	55	52	72	151	210	3,860	3,130	1,590	391	70	36
18	41	55	(*)	70	149	232	4,290	3,090	1,440	380	64	37
19	41	55		72	122	262	4,330	3,040	1,300	358	60	37
20	41	59		74	119	251	4,500	3,010	1,180	331	60	37
21	41	61		76	124	207	4,690	2,980	1,100	301	59	37
22	40	59	53	77	122	192	5,020	2,840	1,030	276	57	37
23	40	58	53	78	129	195	*5,150	2,690	963	*252	55	36
24	43	61	57	82	124	340	*4,870	2,590	951	235	55	34
25	44	63	60	87	127	1,100	4,870	2,590	1,000	218	53	34
26	44	62	63	93	115	1,260	5,130	2,520	1,030	204	50	34
27	44	64	66	93	117	1,210	5,150	2,440	1,060	207	48	32
28	44	67	71	95	124	1,100	5,300	2,420	*1,110	196	46	32
29	44	71	80	95	127	1,050	5,600	*2,410	1,120	189	43	34
30	*44	*74	83	93	-	1,080	5,810	2,430	1,080	*186	40	*34
31	45	-	82	106	-	*1,140	-	2,550	-	204	38	-
Total	1,224	1,638	1,918	2,481	3,880	12,483	112,780	112,710	54,084	13,601	3,001	1,027
Mean	39.5	54.6	61.9	80.0	134	403	3,759	3,636	1,803	439	96.8	34.2
Ac-ft	2,430	3,250	3,800	4,920	7,700	24,760	223,700	223,600	107,300	26,980	5,950	2,040

Calendar year 1951: Max 1,940 Min 26 Mean 429 Ac-ft 310,700
Water year 1951-52: Max 5,930 Min 27 Mean 877 Ac-ft 636,400

Peak discharge (base, 560 cfs).--Mar. 26 (8 p.m.) 1,540 cfs (5.17 ft); May 2 (2:30 a.m.) 6,050 cfs (9.53 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Nov. 13-29, Dec. 3-17, Jan. 17-19 (stage-discharge relation affected by ice most of periods); discharge estimated on basis of 2 discharge measurements, weather records, and records for other stations on Humboldt River. Stage-discharge relation affected by ice Dec. 18 to Jan. 15, Jan. 20-22.

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 right 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 1952.

Gage.--Water-stage recorder. Prior to Jan. 1, 1946, staff gages at site about half a 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.--8 years (1912-14, 1946-52), 17.7 cfs.

Extremes.--Maximum discharge during year, 1,010 cfs Mar. 27 (gage height, 4.69 ft), from rating curve extended above 330 cfs on basis of slope-area determination of peak flow, no flow Oct. 1.
1912-14, 1946-52: Maximum discharge, that of Mar. 27, 1952; no flow on several days during 1951.

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

Revisions (water years).--W 1120: 1946 (calendar year mean).

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 22-30)

Oct. 1 to Mar. 27

0.6	0	1.1	4.5	2.5	141
.7	.4	1.2	7.0	3.0	229
.8	1.1	1.4	15	4.0	465
.9	2.0	1.7	37		
1.0	3.0	2.0	70		

Mar. 28 to Sept. 30

0.2	0.3	0.8	9.5	2.5	167
.3	.7	1.0	17	3.0	254
.4	1.4	1.3	34	3.7	413
.5	2.6	1.6	58	4.1	575
.6	4.3	2.0	100		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	11	13	b10	14	15	226	256	6.4	7.8	5.9	1.9
2	.8	10	13	b9	22	14	222	214	6.1	6.6	3.6	1.3
3	1.7	10	b10	b8	17	b14	214	198	5.4	8.3	2.5	1.3
4	1.5	11	b8	b7	15	b14	237	177	4.5	5.4	2.0	.6
5	2.7	11	b10	b7	14	15	274	158	4.8	1.9	1.8	.4
6	4.2	11	b9	b8	15	15	375	142	4.5	1.1	1.3	.4
7	3.9	11	b8	b9	b15	15	545	126	4.3	.8	1.2	.4
8	4.0	11	b7	b8	b14	16	426	110	4.1	.9	1.2	.4
9	4.0	11	b7	b7	b14	17	296	94	4.1	1.0	1.1	.4
10	4.0	11	b8	b8	b13	17	228	79	4.0	1.3	1.0	.4
11	4.4	12	b9	b8.5	b13	16	190	74	4.1	1.3	1.0	2.4
12	5.2	13	b9	8.5	13	15	178	61	4.1	.8	.9	4.0
13	6.0	13	b8	8.5	14	16	203	39	3.6	.7	.8	3.8
14	6.2	14	b7	b9	b13	15	317	34	3.3	.7	.8	4.0
15	6.5	14	b8	b9	b15	13	317	35	3.1	.7	*.9	4.0
16	7.4	12	b8.5	8.9	16	17	239	41	2.8	.7	.9	3.8
17	10	12	b8.5	b8	16	19	212	49	2.0	1.6	.9	4.0
18	10	12	*8.9	b7	b15	19	217	46	2.0	1.2	.8	6.4
19	10	11	8.9	b7	b16	17	272	32	2.1	1.0	.8	6.4
20	10	14	9.3	8.9	b16	16	294	32	1.8	.8	.7	6.6
21	10	13	b10	b9	b15	13	270	32	1.5	.8	.8	3.8
22	10	12	11	8.5	b14	14	228	28	1.6	.8	.7	3.3
23	10	12	14	8.9	15	16	*210	24	1.6	.8	.5	2.5
24	10	12	14	9.7	14	33	207	19	4.3	.8	.5	3.4
25	11	12	13	11	b13	50	210	22	6.1	.8	.5	3.1
26	11	12	11	12	b14	136	228	23	9.5	.9	.5	3.3
27	10	12	11	b11	14	*424	274	22	12	.8	.4	2.9
28	10	12	12	11	14	413	294	21	*7.5	.8	.4	2.5
29	11	12	15	b10	14	334	335	*13	11	.8	.4	2.1
30	*11	*12	13	b10	-	296	333	8.9	9.5	*7.4	1.3	*2.2
31	11	-	13	13	-	*264	-	7.8	-	13	2.2	-
Total	217.5	356	315.1	278.4	427	2,308	8,071	2,217.7	141.7	72.3	38.3	82.0
Mean	7.02	11.9	10.2	8.98	14.7	74.5	269	71.5	4.72	2.33	1.24	2.73
Ac-ft	431	706	625	552	847	4,580	16,010	4,400	281	143	76	163

Calendar year 1951: Max 315 Min 0 Mean 13.3 Ac-ft 9,640
Water year 1951-52: Max 545 Min 0 Mean 39.7 Ac-ft 28,810

Peak discharge (base, 50 cfs).--Mar. 27 (7 p.m.) 1,010 cfs (4.69 ft); Apr. 7 (5:30 a.m.) 615 cfs (4.18 ft); Apr. 14 (7:15 p.m.) 352 cfs (3.47 ft); Apr. 19 (8 p.m.) 319 cfs (3.32 ft); July 30 (10:15 p.m.) 75 cfs (1.77 ft).

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

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 1952.

Gage.--Water-stage recorder.

Average discharge.--6 years, 366 cfs.

Extremes.--Maximum daily discharge during year, 5,700 cfs May 2; minimum daily, 1.3 cfs Oct. 8.
1946-52: Maximum daily discharge, that of May 2, 1952; minimum, 0.5 cfs Oct. 11, 1948.

Remarks.--Records good except those for periods of ice effect or indefinite stage-discharge relation, which are fair. Many diversions above station for irrigation.

Rating tables, water year 1951-52, except periods of ice effect and indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 4				Apr. 5 to Sept. 30			
1.5	0.6	2.6	60	2.1	3.5	3.5	131
1.6	1.4	3.0	110	2.2	6.7	4.0	214
1.7	3.4	4.0	287	2.4	16	5.0	449
1.8	6.6	6.0	861	2.6	29	7.0	1,180
2.0	16	7.5	1,380	3.0	65	9.5	2,310
2.3	33						

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	32	69	100	130	172	1,340	5,600	2,040	1,020	196	33
2	1.8	32	73	90	160	172	1,350	5,700	2,100	944	196	31
3	1.6	34	76	83	190	182	1,340	5,650	2,110	876	191	29
4	1.6	34	61	79	220	177	1,380	5,550	2,120	811	179	27
5	1.6	33	60	80	230	172	1,450	5,300	*2,140	741	165	26
6	1.4	35	56	80	220	167	1,560	5,100	2,140	682	144	25
7	1.4	36	54	84	220	174	1,870	4,850	2,120	632	134	24
8	1.3	33	52	88	220	177	2,400	4,700	2,100	584	130	22
9	1.4	30	50	90	210	188	2,850	4,550	2,060	539	128	21
10	1.4	30	50	92	200	211	*3,100	4,300	1,990	*510	122	20
11	1.4	32	54	95	200	254	3,050	4,100	1,960	468	*115	21
12	1.4	35	54	96	200	266	3,000	3,900	1,960	434	103	19
13	1.4	37	55	96	190	236	3,000	3,700	1,920	422	94	18
14	1.6	43	*56	95	190	222	3,100	3,550	1,830	425	84	18
15	9.8	44	58	92	190	218	3,450	3,400	1,720	419	78	18
16	12	46	55	90	195	214	3,600	3,200	1,640	399	72	17
17	14	48	55	85	185	233	3,500	3,100	1,570	375	68	16
18	*13	44	56	85	180	248	3,700	3,000	1,470	354	64	16
19	13	49	57	90	180	266	4,000	2,950	1,360	344	62	12
20	23	52	58	100	175	283	4,200	2,850	1,260	325	59	6.7
21	24	55	60	100	170	279	4,400	2,800	1,170	306	57	7.9
22	24	59	64	105	166	248	4,600	2,700	1,110	*287	54	8.8
23	25	58	66	105	162	235	4,800	2,600	1,050	266	53	*8.3
24	26	63	70	110	166	240	4,900	2,500	1,020	244	50	7.1
25	26	63	72	115	155	426	4,800	2,400	1,010	229	48	6.1
26	27	64	75	115	*149	858	4,900	2,250	1,020	214	40	6.1
27	28	*66	80	115	149	976	5,000	2,140	1,040	201	38	5.7
28	26	66	85	115	162	1,120	5,100	2,080	1,040	196	37	5.1
29	24	67	90	110	160	1,270	5,200	2,040	1,040	188	36	4.8
30	25	68	93	110	-	1,320	5,400	2,020	1,040	182	34	4.8
31	30	-	96	110	-	1,330	-	2,020	-	189	34	-
Total	390.7	1,388	2,010	3,000	5,324	12,534	102,340	110,600	48,150	13,806	2,865	484.4
Mean	12.6	46.3	64.8	96.8	184	404	3,411	3,568	1,605	445	92.4	16.1
Ac-ft	775	2,750	3,990	5,950	10,560	24,860	203,000	219,400	95,500	27,380	5,680	961

Calendar year 1951: Max 1,610 Min 1.3 Mean 393 Ac-ft 284,800
Water year 1951-52: Max 5,700 Min 1.3 Mean 828 Ac-ft 600,800

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 5 to Jan. 2, Jan. 5 to Feb. 22. Stage-discharge relation indefinited Apr. 8 to May 26; discharge estimated on basis of 1 discharge measurement, gage heights, and records for other stations on Humboldt River.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,600 ft. Prior to Jan. 3, 1946, at different datum.

Average discharge.--11 years (1918-23, 1946-52), 38.6 cfs.

Extremes.--Maximum discharge during year, 3,000 cfs Apr. 7 (gage height, 5.60 ft); no flow Oct. 1.
1918-25, 1927-29, 1946-52: Maximum discharge, that of Apr. 7, 1952; no flow at times during July, August, September, and October nearly every year.

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.

Revisions (water years).--W 1214: 1950(M).

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 7				Apr. 8 to Sept. 30			
0.2	0	1.2	24	0.2	0.4	1.5	61
.3	.1	1.4	41	.3	.8	1.8	108
.4	.4	1.7	78	.4	1.4	2.1	174
.5	.9	2.0	132	.5	2.5	2.5	295
.6	2.0	2.5	269	.6	4.2	3.0	505
.7	3.9	3.0	484	.8	9.8	4.0	1,140
.8	6.5	4.0	1,140	1.0	19	5.1	2,320
1.0	14	5.3	2,580	1.2	32		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0.8	6.5	1.0	2.5	3.0	342	737	73	35	1.9	0.7
2		.8	7.2	1.0	3.0	3.0	428	707	65	30	1.4	.7
3		.8	6.1	1.1	3.5	3.0	510	701	51	26	1.3	.7
4		.8	4.4	1.3	3.0	3.5	680	695	47	24	1.1	.8
5		.9	3.0	1.5	2.5	3.0	999	654	*43	23	1.0	.8
6		.8	2.0	1.4	2.5	2.5	1,510	545	45	19	1.0	.8
7		.8	1.5	1.3	2.8	3.0	2,540	*495	52	17	1.0	.7
8		.9	.8	1.5	3.0	3.5	2,290	495	43	13	.9	.7
9		.9	.8	1.4	3.0	3.8	1,480	455	35	10	.8	.7
10	a0.8	.8	.9	1.3	3.0	4.0	*1,150	297	32	*8.5	.8	.8
11		1.2	1.0	1.5	3.0	3.5	*1,160	195	26	43	*.8	1.3
12		1.3	1.1	1.5	3.0	3.0	*1,320	174	26	20	.8	2.1
13		2.4	1.0	1.5	2.5	2.5	1,430	162	30	11	.8	1.4
14		5.7	*.9	1.3	2.5	3.0	*1,980	152	29	7.6	.8	1.2
15		3.5	.9	1.6	2.5	4.0	*1,760	148	38	6.4	.8	1.1
16		1.7	1.0	1.5	3.0	4.0	1,280	157	36	6.6	.7	1.0
17		1.3	.9	1.2	3.0	3.5	1,190	148	24	5.6	.7	1.0
18	*.7	1.1	.8	1.4	3.0	3.5	1,240	126	24	3.9	.7	1.0
19	.7	1.2	.9	1.6	2.5	3.5	1,320	108	27	3.2	.7	1.0
20	.8	1.7	.9	1.6	2.5	5.0	1,290	92	25	2.8	.7	1.0
21	.8	1.2	.9	1.6	2.5	7.0	1,090	114	24	2.5	.7	1.0
22	.8	.8	1.1	1.6	3.0	11	976	120	24	1.9	.7	1.0
23	.8	.8	1.3	1.6	3.0	12	941	99	37	1.8	.7	*1.0
24	1.1	1.1	1.2	1.7	3.5	301	913	84	46	1.6	.7	.9
25	1.3	.9	1.1	1.7	3.0	510	927	74	53	1.6	.7	1.0
26	1.1	5.8	1.0	1.7	*3.0	*329	990	69	65	1.6	.7	1.0
27	.8	*30	1.1	1.6	3.0	194	997	68	60	2.0	.7	1.0
28	.8	16	1.2	1.5	3.0	255	920	77	51	1.8	.7	1.0
29	.8	9.1	1.3	1.5	3.0	259	871	88	45	3.5	.8	1.0
30	.8	8.2	1.1	1.8	-	359	804	87	39	3.2	.8	1.0
31	.8	-	.9	2.0	-	412	-	82	-	2.1	.7	-
Total	24.9	103.3	54.8	45.8	83.3	2,716.8	35,326	8,205	1,215	339.2	26.6	29.4
Mean	0.80	3.44	1.77	1.48	2.87	87.6	1,178	265	40.5	10.9	0.86	0.98
Ac-ft	49	205	109	91	165	5,390	70,070	16,270	2,410	673	53	58

Calendar year 1951: Max 868 Min 0 Mean 39.1 Ac-ft 28,330
Water year 1951-52: Max 2,540 Min 0 Mean 132 Ac-ft 95,540

Peak discharge (base, 75 cfs).--Mar. 25 (12:30 a.m.) 1,420 cfs (4.32 ft); Apr. 7 (5 p.m.) 3,000 cfs (5.60 ft); Apr. 14 (6 p.m.) 2,350 cfs (5.12 ft); July 11 (12:40 a.m.) 118 cfs (1.85 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 1 discharge measurement and engineer's note.
Note.--Stage-discharge relation affected by ice Dec. 5 to Mar. 21.

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 1952.

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.--7 years (1921-22, 1946-52), 367 cfs.

Extremes.--Maximum daily discharge during year, 5,800 cfs May 3, 4; minimum daily, 0.9 cfs Oct. 11-15.
1921-24, 1946-52: Maximum daily discharge, that of May 3, 4, 1952; no flow Sept. 8 to Oct. 22, 1948, Sept. 21-26, 1949.

Remarks.--Records good except those for periods of ice effect or no gage-height record or indefinite stage-discharge relation, which are fair. 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 1951-52, except periods of ice effect and indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 23 to Mar. 22)

1.1	0.8	2.5	86
1.2	1.9	3.0	144
1.3	3.9	4.0	285
1.4	7.0	6.0	710
1.6	16	8.5	1,380
2.0	40		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.4	32	65	b90	127	178	1,130	5,500	2,000	1,080	198	37
2	1.5	33	67	b80	149	178	1,180	5,700	2,000	1,060	205	36
3	1.9	34	71	b66	164	174	1,210	5,800	2,030	1,020	201	34
4	2.1	35	b66	b60	197	180	1,240	5,800	2,050	940	190	32
5	1.9	36	64	b65	221	176	1,260	5,700	2,070	858	179	30
6	1.6	34	63	b75	214	170	1,290	5,500	2,080	765	162	29
7	1.5	35	b60	b84	205	174	1,310	5,300	2,080	700	149	27
8	1.5	37	b54	84	180	178	1,420	5,000	2,080	650	139	26
9	1.2	35	b50	83	174	183	1,600	4,700	2,070	601	136	24
10	1.1	33	b48	77	170	196	*1,800	4,500	*2,040	*553	132	23
11	.9	33	48	79	167	215	2,300	4,300	2,000	513	*125	24
12	.9	36	b51	84	164	248	2,800	4,100	1,980	473	118	26
13	.9	40	b54	87	166	229	2,750	4,000	1,950	448	107	23
14	.9	44	*56	84	147	214	2,850	3,800	1,900	454	98	21
15	.9	46	53	84	136	203	3,000	3,600	1,800	448	90	21
16	1.7	48	53	b80	133	203	3,300	3,400	1,700	429	85	20
17	8.2	49	b52	b79	b155	203	3,500	3,250	1,600	403	79	19
18	*9.8	50	53	b78	b160	217	3,450	3,150	1,500	383	74	18
19	11	46	59	b82	b160	228	3,500	3,050	1,400	367	70	18
20	9.8	50	60	b78	b155	239	3,800	3,000	1,330	349	67	16
21	20	51	62	b90	b150	245	4,100	2,850	1,260	329	65	11
22	21	52	60	b90	b160	226	4,300	2,750	1,200	*306	61	9.4
23	22	54	65	b90	183	208	4,500	2,650	1,140	288	59	*9.4
24	25	55	69	*b92	183	208	4,600	2,550	1,100	264	56	9.0
25	26	58	74	b100	169	230	4,700	2,450	1,070	248	54	8.2
26	26	61	78	b105	*165	518	4,700	2,350	1,050	233	52	7.0
27	27	*63	78	113	158	696	4,800	2,300	1,060	224	46	6.4
28	27	63	83	112	162	770	5,000	2,150	1,070	212	44	6.1
29	26	64	87	113	166	865	5,100	2,050	1,090	203	41	5.8
30	26	65	b92	115	-	952	5,300	2,000	1,090	194	40	5.4
31	27	-	b92	118	-	1,050	-	2,000	-	196	39	-
Total	333.7	1,372	1,987	2,717	4,840	9,954	91,790	115,250	48,790	15,191	3,161	581.7
Mean	10.8	45.7	64.1	87.6	167	321	3,060	3,718	1,626	490	102	19.4
Ac-ft	662	2,720	3,940	5,390	9,600	19,740	182,100	228,600	96,770	30,130	6,270	1,150

Calendar year 1951: Max 1,370 Min 0.9 Mean 395 Ac-ft 286,200
Water year 1951-52: Max 5,800 Min 0.9 Mean 809 Ac-ft 587,100

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 2-27; discharge estimated on basis of 1 discharge measurement, weather records, and records for other Humboldt River stations. Stage-discharge relation indefinite Apr. 8 to June 19; discharge estimated on basis of 2 discharge measurements and records for other Humboldt River stations.

Reese River near Ione, Nev.

Location.--Lat 38°51', long. 117°28', in sec. 4, T. 11 N., R. 40 E., on right bank 2½ miles upstream from Indian Creek, 8 miles southeast of Ione, and 58 miles southwest of Austin.
Drainage area.--44 sq mi, approximately.
Records available.--August 1951 to September 1952.
Gage.--Water-stage recorder. Altitude of gage is 7,350 ft (from topographic map).
Extremes.--1951: Maximum discharge during period August to September, 2.6 cfs Aug. 6 (gage height, 0.49 ft); maximum gage height, 1.04 ft Oct. 30 (backwater from beaver dams); minimum discharge, 0.6 cfs Sept. 16, but may have been less during period of backwater from beaver dams.
1951-52: Maximum discharge during water year, 266 cfs Apr. 28 (gage height, 3.07 ft), from rating curve extended above 190 cfs by logarithmic plotting; minimum not determined (occurred during period of backwater from beaver dams).
Remarks.--Records fair except those for periods of ice effect, no gage-height record, or backwater from beaver dams, which are poor. No diversions above station.

Discharge, in cubic feet per second, 1951-52

1951

Day	Aug.	Sept.	Day	Aug.	Sept.
1	-		16	1.4	0.7
2	-		17	1.4	
3	-		18	1.4	
4	-	c1.0	19	1.4	
5	2.5		20		
6	*2.5		21		
7	2.4		22		
8	2.1		23		
9	2.1		24		.8
10	2.0		25	c1.0	
11	1.7		26		
12	1.5	c.9	27		
13	1.5		28		
14	1.5		29		c.9
15	1.4	*.8	30		c1.0
			31		-
Total				-	26.3
Mean				-	0.88
Ac-ft				-	50

* Discharge measurement made on this day.
c Backwater from beaver dams.

1951-52

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				b1.7	2.3		24	162	121	24	15	4.4
2				b1.7	2.3		26	179	115	24	13	4.2
3				b1.7	2.0	a2.0	30	194	110	23	11	4.2
4		c2.0		b1.7	1.8		41	194	101	21	11	4.2
5				b1.8	1.7	*2.1	57	175	99	21	a10	4.2
6				b1.9	2.1	2.5	84	160	96	21	a10	4.2
7			c1.8	b1.9	2.3	2.1	68	150	91	20	a10	4.2
8	c1.0	*2.1		b1.9	2.3	2.3	49	134	85	*20	a9.0	4.2
9		2.0		b1.9	2.4	2.4	40	114	80	20	a9.0	4.2
10		1.8		b2.0	2.4	2.5	35	118	79	21	a9.0	5.1
11		1.7		b2.1	2.5	2.5	34	115	*71	21	a8.0	6.6
12				b2.1	2.3	2.5	39	129	64	20	a8.0	6.9
13				b2.1	2.3	2.5	58	*151	58	19	a8.0	6.3
14			*1.8	b2.2	2.4	2.5	53	157	54	18	a7.0	5.4
15			2.1	b2.2		2.0	*49	154	49	17	a7.0	5.1
16			2.3	2.3		2.4	57	139	47	16	a7.0	4.9
17			2.1	2.4		2.1	68	124	45	15	a6.0	4.6
18			2.3	2.4		2.4	79	115	42	14	*6.0	4.6
19			2.3	2.4		2.4	78	117	40	14	5.6	4.6
20	c1.5	c1.7	2.1	2.5		2.3	71	132	39	13	5.4	7.9
21			2.3	2.3	a2.0	2.4	78	136	38	13	5.4	8.2
22			2.3	2.5		3.4	86	132	36	12	5.4	*5.6
23			2.1	2.5		3.8	97	128	34	12	5.4	5.1
24			1.8	2.4		4.0	111	125	32	11	5.1	4.6
25	c3.0		1.7	2.4		4.4	148	129	31	24	5.1	4.4
26			2.0	2.3		5.4	150	131	33	21	5.1	4.4
27			2.1	2.1		6.6	144	128	31	16	4.9	4.4
28			2.1	2.3		9.3	165	124	27	16	4.9	4.4
29	c2.5		2.1	*2.4		13	*191	125	26	16	4.9	4.4
30			1.8	2.3	-	15	156	125	25	16	4.9	4.2
31		-	1.7	2.3	-	19	-	124	-	14	4.4	-
Total	46.5	53.9	60.4	66.7	61.1	131.8	2,364	4,320	1,799	553	230.5	149.7
Mean	1.50	1.80	1.95	2.15	2.11	4.25	78.8	139	60.0	17.8	7.44	4.99
Ac-ft	90	107	120	132	121	261	4,690	8,570	3,570	1,100	457	297

Calendar year 1951: Max - Min - Mean - Ac-ft -
Water year 1951-52: Max 194 Min - Mean 26.9 Ac-ft 19,520

Peak discharge (base, 130 cfs).--Apr. 6 (7 p.m.) 160 cfs (2.42 ft); Apr. 25 (4 p.m.) 213 cfs (2.76 ft); Apr. 28 (11:30 p.m.) 266 cfs (3.07 ft); May 3 (10 p.m.) 222 cfs (2.85 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of recorded range in stage and weather records.
b Stage-discharge relation affected by ice.
c Backwater from beaver dams.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,440 ft (from topographic map).

Extremes.--Maximum daily discharge during year, 5,800 cfs May 5, 6; no flow Oct. 1, 2, 7-21. 1950-52: Maximum daily discharge, that of May 5, 6, 1952; no flow Sept. 26-30, Oct. 1, 2, 7-21, 1951.

Remarks.--Records good except those for periods of indefinite stage-discharge relation or no gage-height record, which are fair. Diversions above station for irrigation.

Rating table, water year 1951-52, except periods of indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second) (Shifting-control method used July 3 to Aug. 4)

1.2	0	1.7	7.6	2.5	140
1.3	0.1	1.8	13	3.0	256
1.4	.9	1.9	19	4.0	449
1.5	1.7	2.0	28	6.0	840
1.6	4.4	2.2	54	8.0	1,310

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	19	58	82	100	173	806	5,200	2,000	958	208	30
2	0	21	61	79	120	178	858	5,400	1,950	944	211	29
3	.1	23	65	69	150	178	898	5,600	1,920	930	208	28
4	.1	24	61	58	170	176	922	5,700	1,910	910	200	26
5	.1	25	74	52	150	180	948	5,800	1,930	872	188	25
6	.1	26	76	54	140	178	984	5,800	1,960	822	180	23
7	0	26	63	67	140	173	1,030	5,650	1,980	762	170	22
8	0	26	51	82	140	*176	1,080	5,400	1,980	*707	157	21
9	0	27	52	89	140	180	1,140	5,200	1,970	665	146	19
10	0	27	48	82	140	186	1,230	4,900	1,940	624	140	19
11	0	28	45	76	140	200	1,300	4,650	1,900	599	140	20
12	0	28	45	76	140	223	1,400	4,500	1,840	567	*134	20
13	0	29	51	76	140	252	1,550	4,250	1,770	523	124	19
14	0	31	52	79	135	238	1,800	4,050	1,700	496	111	19
15	0	34	54	74	140	226	2,200	3,900	1,580	486	95	18
16	0	36	51	69	150	221	2,700	3,700	1,450	475	89	17
17	0	37	*50	69	160	219	3,100	3,500	1,340	455	79	16
18	0	38	50	65	170	226	3,450	3,350	1,300	432	72	16
19	0	40	50	63	170	250	3,500	3,200	*1,260	409	67	15
20	0	40	51	65	160	262	3,600	3,100	1,240	387	63	15
21	0	46	52	67	155	269	3,800	3,000	1,210	368	58	15
22	*2.2	46	54	72	155	273	3,950	2,900	1,180	*347	54	14
23	11	46	56	76	155	256	4,100	2,800	1,140	324	50	12
24	16	50	61	*76	155	242	4,300	2,700	1,120	303	46	10
25	16	52	63	80	155	248	4,400	2,650	1,080	281	45	*11
26	18	54	67	82	160	304	4,550	2,550	1,060	264	42	11
27	18	54	69	84	160	507	4,700	2,450	1,040	256	40	10
28	19	*56	74	84	*165	614	4,700	2,300	1,020	236	38	10
29	19	56	82	84	168	674	4,900	2,200	988	221	36	9.8
30	21	58	86	86	-	727	5,000	2,100	966	211	34	9.8
31	19	-	79	90	-	764	-	2,050	-	206	31	-
Total	159.6	1,103	1,851	2,307	4,323	8,973	78,896	120,550	45,724	16,040	3,256	529.6
Mean	5.15	36.8	59.7	74.4	149	289	2,630	3,889	1,524	571	105	17.7
Ac-ft	317	2,190	3,670	4,580	8,570	17,800	156,500	239,100	90,690	31,810	6,460	1,050

Calendar year 1951: Max 1,050 Min 0 Mean 353 Ac-ft 255,400
Water year 1951-52: Max 5,800 Min 0 Mean 775 Ac-ft 562,700

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 25 to Feb. 28; discharge estimated on basis of 2 discharge measurements, weather records, and records for other stations on Humboldt River. Stage-discharge relation indefinite Apr. 12 to June 18; discharge computed on basis of gage-height record, and records for other stations on Humboldt River.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,350 ft (from topographic map). Prior to February 1946, staff gage at site half a mile downstream at different datum.

Average discharge.--11 years (1917-22, 1946-52), 302 cfs.

Extremes.--Maximum discharge during year, 5,860 cfs May 6 (gage height, 11.52 ft); minimum daily, 0.1 cfs Oct. 1-10.
1917-23, 1925-26, 1946-52: Maximum discharge, that of May 6, 1952; no flow during periods in 1918-20.

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

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 16				Apr. 17 to Sept. 30			
1.5	0.1	3.0	170	2.0	6.0	7.0	950
1.6	.5	3.5	257	2.1	11	9.0	1,450
1.7	1.7	4.0	347	2.3	29	9.5	1,580
1.8	6.5	6.0	768	2.7	79	9.8	1,880
2.0	23	9.3	1,530	3.5	207	10.0	2,270
2.3	57			4.0	300	11.5	5,810

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.7	52	58	110	200	616	5,030	2,090	1,100	225	37
2	.1	2.7	54	56	150	200	629	5,190	1,990	1,060	221	34
3	.1	4.6	54	52	160	202	638	5,290	1,880	1,040	218	32
4	.1	7.2	50	50	160	200	669	5,580	1,700	1,020	211	31
5	.1	9.5	45	48	170	198	737	5,760	1,720	990	205	29
6	.1	12	41	48	180	200	805	5,810	1,830	962	196	27
7	.1	15	37	49	190	198	832	5,760	1,750	912	187	26
8	.1	15	35	52	190	195	858	*5,630	1,720	*862	175	24
9	.1	17	32	55	180	200	880	5,370	1,740	799	164	22
10	.1	21	35	60	175	210	920	5,130	1,750	740	153	22
11	.2	22	37	62	170	230	968	4,930	1,780	694	145	24
12	.2	22	35	64	170	250	1,110	4,700	1,820	666	*142	29
13	.2	19	35	64	180	255	1,180	4,500	1,850	622	136	23
14	.2	22	38	64	185	255	1,290	4,300	1,750	567	128	21
15	.2	21	40	64	190	260	1,400	4,130	1,700	520	118	20
16	.2	23	35	62	190	250	1,530	3,930	1,680	*498	110	19
17	.2	25	*35	60	201	240	1,850	3,700	1,660	480	104	18
18	.2	27	37	60	184	242	2,450	3,540	1,630	460	98	17
19	.2	31	40	58	180	248	3,070	3,330	*1,590	436	90	17
20	.2	30	40	60	180	264	3,540	3,220	1,550	414	83	16
21	.2	31	41	62	180	270	3,680	3,130	1,530	392	80	15
22	.2	32	43	65	190	277	*3,680	*2,980	1,520	374	75	13
23	.2	35	45	68	204	282	3,720	2,930	1,490	356	71	12
24	.3	37	47	70	216	275	3,930	2,870	1,490	334	65	10
25	.3	41	50	70	214	268	4,100	2,760	1,450	312	61	*10
26	.2	43	52	70	192	262	4,300	2,680	1,390	292	56	9.5
27	.2	44	54	72	194	306	4,500	2,580	1,310	279	*52	9.0
28	.2	*47	58	75	*194	422	4,740	2,470	1,270	268	51	8.5
29	.2	51	60	76	198	493	4,740	2,390	1,200	249	47	8.5
30	.2	51	60	76	-	550	4,800	2,270	1,150	*236	44	8.5
31	*.2	-	58	80	-	596	-	2,170	-	232	40	-
Total	5.4	758.7	1,375	1,930	5,277	8,498	68,162	124,060	48,980	18,166	3,751	592.0
Mean	0.17	25.3	44.4	62.3	182	274	2,272	4,002	1,633	586	121	19.7
Ac-ft	11	1,500	2,730	3,830	10,470	16,860	135,200	246,100	97,150	36,030	7,440	1,170

Calendar year 1951: Max 993 Min 0.1 Mean 334 Ac-ft 242,000
Water year 1951-52: Max 5,810 Min 0.1 Mean 769 Ac-ft 558,500

* Discharge measurement made on this day.

Note.--No gage-height record Feb. 28 to Mar. 18; discharge estimated on basis of 1 discharge measurement, weather records, and records for station near Valmy, Stage-discharge relation affected by ice Nov. 18, Dec. 3 to Feb. 15, Feb. 19-22 (no gage-height record Dec. 9-17; discharge estimated on same basis as above).

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 1952.

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.--9 years (1943-52), 28.4 cfs.

Extremes.--Maximum discharge during year, 1,100 cfs Feb. 2 (gage height, 7.71 ft); minimum, 5.6 cfs Oct. 1.
1921-28, 1943-52: Maximum discharge, that of Feb. 2, 1952; minimum, 4.7 cfs Aug. 11, 1951.

Remarks.--Records good except those above 500 cfs, which are fair. Bullshead Ranch diverts water for irrigation above station. Station is above all diversions in Paradise Valley.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	7.6	7.6	8.7	329	34	196	449	178	84	15	8.1
2	6.6	7.6	7.6	8.1	861	27	184	403	174	*74	14	7.6
3	6.6	7.6	8.1	8.1	385	21	200	390	168	68	13	7.6
4	6.6	8.1	7.6	8.1	212	20	240	403	165	60	12	7.1
5	6.1	7.6	7.6	7.6	103	20	285	410	161	54	12	7.6
6	6.1	7.6	7.6	7.6	62	17	360	380	161	47	12	7.6
7	6.1	7.6	7.6	7.6	38	17	*607	337	160	42	12	7.6
8	6.1	7.6	7.1	7.6	31	20	*876	*328	157	39	11	7.6
9	6.1	7.6	7.1	7.6	28	24	654	330	159	37	11	7.6
10	6.6	7.6	7.1	7.6	27	28	*485	322	150	35	10	7.6
11	6.6	7.6	7.1	7.6	28	28	423	280	139	36	9.4	8.1
12	7.1	7.6	7.1	7.6	25	22	458	246	*132	36	8.7	8.1
13	7.1	7.6	7.1	7.6	22	20	467	231	135	34	8.1	7.6
14	6.6	7.6	7.1	*7.6	17	20	569	226	137	33	8.1	7.6
15	7.1	7.6	7.1	8.1	17	20	788	227	124	32	8.7	7.6
16	7.1	7.6	7.1	8.1	*30	22	518	241	109	30	8.7	7.1
17	7.1	7.6	7.1	8.1	37	23	377	243	101	27	8.1	7.1
18	6.6	7.6	7.1	8.1	34	24	383	*232	93	25	8.1	7.1
19	7.6	7.6	*7.1	7.6	27	23	445	209	87	23	8.1	7.1
20	7.6	7.6	7.1	7.6	23	22	532	201	82	23	8.1	7.1
21	8.1	7.6	6.6	7.6	19	20	471	215	78	21	8.1	7.1
22	8.1	7.6	8.1	7.6	18	20	343	237	75	20	8.1	6.7
23	7.6	7.6	8.7	7.6	15	20	*307	247	75	20	8.1	6.7
24	*8.1	7.6	8.7	7.6	16	49	356	220	101	18	8.1	6.1
25	8.1	7.1	8.1	8.1	16	49	410	196	111	17	*8.1	6.7
26	7.6	7.1	8.1	9.4	16	122	509	184	117	16	8.1	6.7
27	7.6	7.1	8.1	10	17	169	585	181	115	15	8.7	*6.7
28	8.1	7.6	9.4	8.7	24	*163	593	184	113	15	8.1	7.1
29	8.1	*7.6	10	8.7	32	160	550	186	104	*15	8.1	7.1
30	7.6	7.6	10	8.7	-	*192	519	184	93	17	8.1	7.1
31	7.6	-	8.7	86	-	*201	-	182	-	16	8.1	-
Total	219.6	227.0	240.5	326.6	2,509	1,617	13,690	8,304	3,754	1,029	295.8	218.5
Mean	7.08	7.57	7.76	10.5	86.5	52.2	456	26.8	125	33.2	9.54	7.28
Ac-ft	436	450	477	648	4,980	3,210	27,150	16,470	7,450	2,040	587	433

Calendar year 1951: Max 124 Min 5.2 Mean 30.2 Ac-ft 21,840
Water year 1951-52: Max 876 Min 5.6 Mean 88.6 Ac-ft 64,330

Peak discharge (base, 35 cfs).--Feb. 2 (5:20 a.m.) 1,100 cfs (7.71 ft); Feb. 16 (5:30 p.m.) 64 cfs (2.22 ft); Feb. 29 (6:30 p.m.) 51 cfs (2.12 ft); Mar. 30 (6 p.m.) 224 cfs (3.71 ft); Apr. 8 (10 a.m.) 950 cfs (7.40 ft); Apr. 15 (12:30 p.m.) 847 cfs (7.23 ft); Apr. 20 (7 p.m.) 614 cfs (6.57 ft); Apr. 27 (9 p.m.) 663 cfs (6.43 ft); May 23 (4 a.m.) 254 cfs (3.90 ft).
* Discharge measurement made on this day.

Martin Creek near Paradise Valley, Nev.

Location.--Lat 41°32'10", 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 1952.

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.--30 years (1921-26, 1927-52), 30.2 cfs.

Extremes.--Maximum discharge during year, 955 cfs Apr. 6 (gage height, 5.55 ft); minimum, 4.8 cfs Nov. 24.
1921-52: Maximum discharge, 9,000 cfs Jan. 21, 1943 (gage height, 11.1 ft, datum ther in use), by slope-area determination of peak flow; minimum, 1.8 cfs Feb. 6, 1945.

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

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 14 to May 7)

Oct. 1 to Apr. 6				Apr. 7 to Sept. 30			
1.1	5.4	2.5	161	1.5	6.3	2.5	101
1.3	14	3.0	248	1.6	9.4	3.0	200
1.5	27	4.0	472	1.8	19	4.0	464
1.8	58	5.0	780	2.1	45	5.0	780
2.1	99						

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.5	7.7	12	9.7	17	17	210	366	254	64	13	6.3
2	6.9	7.3	15	6.9	31	15	245	385	250	*60	13	6.3
3	6.9	7.7	11	7.7	24	15	289	414	247	56	12	6.3
4	6.9	8.1	12	8.1	23	17	396	411	237	53	12	6.3
5	6.5	8.1	11	8.8	19	16	516	372	235	51	11	6.6
6	6.5	7.7	8.8	9.7	16	15	616	347	237	49	10	6.6
7	6.5	8.1	8.4	9.7	15	16	*626	350	225	45	9.8	6.6
8	6.5	8.1	6.5	10	15	16	383	342	202	41	9.1	6.6
9	6.2	8.4	6.5	9.7	15	16	290	290	193	39	8.8	6.6
10	6.5	8.4	7.7	9.2	17	18	375	264	200	38	8.5	6.9
11	6.5	9.2	8.8	10	18	17	466	257	185	40	8.5	9.1
12	6.5	11	9.7	10	19	15	510	272	*151	39	8.5	10
13	6.5	11	9.7	11	16	16	565	294	131	45	8.2	9.1
14	6.5	11	9.2	*11	12	15	563	313	116	31	7.8	8.8
15	6.9	9.2	9.2	11	18	17	449	313	106	27	7.5	8.2
16	7.3	7.3	9.7	10	19	17	420	274	96	25	7.5	7.8
17	7.3	7.3	9.2	8.1	18	16	469	240	91	23	7.5	7.5
18	7.3	8.1	9.7	8.8	13	17	530	*237	87	22	7.2	7.2
19	7.3	9.2	*10	9.7	15	16	545	270	85	23	7.2	7.2
20	7.3	10	9.7	11	15	16	402	320	84	21	7.2	7.2
21	7.7	10	10	11	12	15	336	320	88	19	6.9	7.2
22	7.7	8.8	11	11	11	15	353	274	82	18	6.9	7.2
23	7.7	7.7	12	11	17	16	*383	260	78	17	6.9	6.9
24	*8.8	8.8	12	12	15	290	420	264	82	16	6.6	6.9
25	9.2	8.4	9.2	12	13	178	480	292	85	16	*6.6	6.9
26	8.4	9.7	11	12	13	205	555	310	98	16	6.6	6.9
27	8.1	9.7	11	11	15	186	507	318	84	16	6.6	*6.9
28	8.1	9.7	12	9.7	15	*237	489	313	78	16	6.6	6.9
29	8.1	*9.7	12	9.7	16	276	434	297	74	*15	6.6	6.9
30	8.1	9.7	11	12	-	*265	394	284	70	14	6.6	6.9
31	8.1	-	8.8	13	-	214	-	267	-	13	6.6	-
Total	225.3	265.1	313.8	314.5	482	2,220	13,216	9,530	4,231	968	257.8	216.8
Mean	7.27	8.84	10.1	10.1	16.6	71.6	441	307	141	31.2	8.32	7.23
Ac-ft	447	526	622	624	956	4,400	26,210	18,900	8,390	1,920	511	430

Calendar year 1951: Max 221 Min 4.9 Mean 37.6 Ac-ft 27,240
Water year 1951-52: Max 626 Min 6.2 Mean 88.1 Ac-ft 63,940

Peak discharge (base, 100 cfs).--Mar. 24 (4 p.m.) 356 cfs (3.53 ft); Apr. 6 (7 p.m.) 955 cfs (5.55 ft); June 26 (3 a.m.) 133 cfs (2.68 ft); July 13 (12:30 p.m.) 250 cfs (3.21 ft).
* Discharge measurement made on this day.

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 1952.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during year, 5,810 cfs May 8 (gage height, 11.41 ft); minimum, 34 cfs Oct. 1.
1948-52: Maximum discharge, that of May 8, 1952; 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 tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 27 to Apr. 25)

Oct. 1 to Apr. 19				Apr. 20 to Sept. 30			
2.0	28	3.0	212	1.8	71	6.0	1,250
2.2	59	4.0	460	2.0	99	8.0	2,230
2.5	112	5.1	780	2.5	189	10.0	3,970
				3.0	300	11.4	5,800
				4.0	579		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	34	38	61	65	120	216	438	4,460	2,150	*1,400	341	105
2	36	38	62	65	144	216	474	4,540	2,060	1,330	330	104
3	36	38	64	75	152	214	491	4,680	1,970	1,270	318	101
4	36	40	66	82	170	212	508	4,890	1,890	1,210	308	99
5	37	38	66	80	204	208	522	5,020	1,820	1,160	298	96
6	37	38	64	80	216	212	530	5,200	1,780	1,110	281	94
7	37	38	60	80	214	216	547	5,550	1,760	1,070	262	92
8	37	37	52	80	212	219	566	5,790	1,720	*1,030	255	88
9	36	37	50	78	206	221	603	*5,760	1,660	998	246	87
10	36	43	56	78	210	223	618	5,690	1,650	967	242	88
11	36	43	60	78	206	223	630	5,460	1,650	892	238	92
12	36	45	64	80	214	223	645	5,230	*1,640	848	*233	93
13	36	45	65	80	208	225	666	4,970	1,620	827	227	92
14	36	46	65	80	180	227	687	4,680	1,600	798	218	87
15	36	46	64	82	176	230	702	4,390	1,580	771	197	83
16	36	46	60	82	204	241	720	4,280	1,580	*733	169	81
17	36	46	58	82	214	254	726	4,090	1,580	688	156	81
18	36	47	60	80	216	259	741	3,870	1,590	613	154	80
19	36	46	*62	78	178	263	768	3,660	1,560	516	150	79
20	37	48	66	82	178	265	834	3,460	1,540	510	146	79
21	37	49	70	84	195	272	*919	3,380	1,550	564	143	78
22	37	49	70	84	172	272	1,100	*3,220	1,540	519	139	76
23	37	51	70	85	187	279	2,140	3,030	1,560	490	134	75
24	43	53	71	87	206	286	2,760	2,900	1,620	467	*129	74
25	45	56	71	87	214	296	3,030	2,780	1,620	447	124	*75
26	*42	56	71	92	212	306	3,270	2,670	1,620	413	120	122
27	42	56	73	96	214	*328	3,610	2,570	1,590	389	117	127
28	42	*56	78	98	*216	333	*3,830	2,480	1,540	381	115	99
29	40	56	80	*96	216	336	3,970	2,380	1,520	373	112	84
30	40	57	80	98	-	357	4,290	2,310	1,460	*362	107	78
31	38	-	75	105	-	398	-	2,230	-	348	105	-
Total	1,166	1,382	2,034	2,579	5,654	8,029	41,335	125,620	50,020	23,494	6,114	2,689
Mean	37.6	46.1	65.6	83.2	195	259	1,378	4,050	1,667	758	197	89.6
Ac-ft	2,310	2,740	4,030	5,120	11,210	15,930	81,990	249,200	99,210	46,600	12,130	5,330

Calendar year 1951: Max 744 Min 34 Mean 307 Ac-ft 222,100
Water year 1951-52: Max 5,790 Min 34 Mean 738 Ac-ft 535,800

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 17, 18, Dec. 6-23, Dec. 30 to Jan. 24; discharge computed on basis of 1 discharge measurement, weather records, and records for station near Imlay.

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 headgates.

Records available.--October 1946 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,170 ft (from topographic map).

Extremes.--Maximum discharge during year, 117 cfs Apr. 25 (gage height, 3.69 ft); no flow most of year.
1946-52: Maximum discharge, that of Apr. 25, 1952; no flow for long periods.

Remarks.--Records poor. 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. No diversion made during year but river overflowed into canal causing flow for four day.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							0					
2							0					
3							0					
4							0					
5							0					
6							0					
7							0					
8							0					
9							0					
10							0					
11							*0					
12							0					
13							0					
14							0					
15							0					
16							0					
17							0					
18							0					
19							0					
20							0					
21							0					
22							0					
23							0					
24							2.5					
25							60					
26							2.3					
27							.1					
28							0					
29							0					
30							0					
31							-					
Total	0	0	0	0	0	0	64.9	0	0	0	0	0
Mean	0	0	0	0	0	0	2.16	0	0	0	0	0
Ac-ft	0	0	0	0	0	0	129	0	0	0	0	0

Calendar year 1951: Max 58 Min 0 Mean 3.50 Ac-ft 2,530
Water year 1951-52: Max 60 Min 0 Mean 0.18 Ac-ft 129

* Observation of no flow on this day.

Humboldt River near Imlay, Nev.

Location.--Lat 40°41'30", long. 118°12'10", in SE¼ sec. 25, T. 33 N., R. 33 E., on right bank 1 mile upstream from old Calahan Dam and 4 miles northwest of Imaly.

Drainage area.--13,500 sq mi, approximately.

Records available.--June 1935 to September 1941, April 1945 to September 1952.

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.--13 years, 175 cfs.

Extremes.--Maximum discharge during year, 6,080 cfs May 9 (gage height, 12.15 ft); minimum, 14 cfs Nov. 9.
1935-41, 1945-52: Maximum discharge, that of May 9, 1952; no flow at times in several years.

Remarks.--Records good except those for period of ice effect, which are fair. Humboldt-Lovelock Irrigation, Light & Power Co.'s feeder canal diverts water from river above station to Pitt-Taylor Reservoirs. This water is ordinarily released during 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 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	20	4.0	360	10.5	2,550
1.6	41	6.0	758	11.0	3,440
2.0	79	8.0	1,250	12.2	6,210
2.5	136	9.0	1,545		
3.0	203	10.0	2,040		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	37	61	60	115	209	373	4,010	2,130	1,500	380	105
2	33	36	62	58	144	207	416	4,290	2,060	1,430	369	102
3	35	36	64	64	150	209	448	4,380	2,000	1,370	355	100
4	35	36	65	70	157	207	471	4,550	1,950	1,300	343	99
5	34	35	62	74	171	204	488	4,800	1,900	1,240	331	96
6	34	35	60	76	207	200	500	4,980	1,860	1,180	318	94
7	34	33	55	76	222	207	510	5,310	1,820	1,120	*304	92
8	33	29	50	76	220	207	530	5,680	1,780	1,080	288	89
9	32	23	45	73	218	206	550	6,020	1,750	1,040	278	88
10	32	27	50	72	211	210	576	*5,990	1,740	1,010	270	96
11	32	32	*57	74	214	211	*598	5,840	1,690	975	264	99
12	32	37	60	74	210	210	614	5,500	*1,670	929	259	*101
13	32	39	62	74	211	213	631	5,190	1,660	875	253	97
14	32	40	62	76	203	214	654	4,820	1,640	849	246	93
15	32	42	61	76	179	214	671	4,600	1,620	822	236	89
16	32	*43	57	78	179	220	681	4,330	1,600	795	216	84
17	32	43	54	76	200	235	696	4,160	1,580	760	195	83
18	33	46	56	74	207	242	704	3,990	1,580	*721	179	81
19	33	47	60	70	213	250	721	3,760	1,580	656	171	78
20	32	46	63	76	188	253	747	*3,570	*1,570	566	166	77
21	32	47	66	82	176	253	789	3,300	1,560	558	161	75
22	32	47	66	78	188	258	840	3,200	1,540	590	154	74
23	32	47	66	82	172	259	900	3,050	1,570	556	150	73
24	42	48	64	*82	175	265	1,060	2,870	1,600	524	144	72
25	61	50	66	83	195	*272	1,620	2,720	1,640	502	136	70
26	*54	55	66	86	*209	276	2,350	2,580	1,660	482	131	71
27	44	56	66	90	209	288	2,820	2,460	1,640	448	126	99
28	42	56	68	92	207	308	3,110	2,390	1,620	424	122	117
29	41	57	72	93	207	316	3,460	2,310	1,590	410	120	101
30	39	58	72	90	-	331	3,710	2,240	1,550	400	113	87
31	39	-	65	100	-	338	-	2,180	-	394	110	-
Total	1,114	1,263	1,903	2,405	5,557	7,492	32,238	125,070	51,150	25,506	6,888	2,682
Mean	35.9	42.1	61.4	77.6	192	242	1,075	4,035	1,705	823	222	89.4
Ac-ft	2,210	2,510	3,770	4,770	11,020	14,860	63,940	248,100	101,500	50,590	13,660	5,320

Calendar year 1951: Max 730 Min 23 Mean 299 Ac-ft 216,200
Water year 1951-52: Max 6,020 Min 23 Mean 719 Ac-ft 522,200

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 5 to Feb. 1.

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, 2 miles northwest of Rye Patch.

Drainage area.--13,700 sq mi, approximately.

Records available.--February 1936 to September 1952.

Gage.--Mercury indicating gage. Datum of gage is at mean sea level (Southern Pacific Railroad datum).

Extremes.--Maximum contents during year, 173,700 acre-ft May 15, 16 (elevation, 4,132.50 ft); minimum, 81,310 acre-ft Oct. 22-24 (elevation, 4,122.30 ft).
1936-52: 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.

Cooperation.--Records of daily elevation furnished by Pershing County Water Conservation District of Nevada.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85,380	82,050	83,900	87,260	92,300	102,300	115,200	139,600	160,100	168,900	168,900	154,500
2	85,010	82,420	83,900	87,260	92,690	102,300	115,600	141,600	159,600	169,500	169,500	154,000
3	84,640	82,420	83,900	87,650	92,690	102,800	116,100	143,600	159,600	170,000	170,500	153,500
4	84,640	82,420	84,270	87,650	93,080	103,200	116,500	146,000	161,100	170,000	170,000	152,500
5	84,640	82,790	84,270	87,650	93,460	103,600	117,000	149,500	161,700	170,000	168,900	151,000
6	84,640	82,790	84,270	88,040	93,850	104,000	117,800	152,500	162,200	e170,200	168,900	150,000
7	84,640	82,790	84,270	88,040	94,240	104,500	118,300	156,000	163,200	e170,400	168,900	149,500
8	84,640	82,790	84,640	88,040	94,650	104,900	119,200	159,100	163,200	170,500	168,400	148,500
9	84,640	82,790	84,640	88,040	95,050	105,300	120,000	162,700	163,200	170,500	168,400	147,000
10	84,640	82,790	84,640	88,430	95,460	105,700	121,400	165,800	162,700	170,500	167,900	146,500
11	84,640	82,790	84,640	88,430	95,860	105,700	121,900	168,400	163,200	170,500	167,900	145,500
12	84,640	82,790	84,640	88,430	96,270	106,100	122,800	170,500	163,200	170,000	167,400	146,500
13	84,640	82,790	84,640	88,430	96,270	106,100	e122,800	172,100	163,200	170,000	167,400	147,000
14	84,270	83,160	84,640	88,430	96,670	106,600	122,800	173,200	163,200	171,100	166,800	147,500
15	84,270	83,160	85,010	88,820	96,670	106,600	123,700	173,700	162,700	171,100	166,300	147,500
16	83,900	83,160	85,010	88,820	97,080	107,000	124,200	173,700	162,200	171,600	165,300	147,900
17	83,530	83,160	85,380	88,820	97,080	107,400	125,100	173,200	162,700	171,600	164,200	147,900
18	83,160	83,160	85,380	89,200	97,480	108,300	126,000	172,700	162,700	171,100	163,200	147,900
19	82,790	83,160	85,380	89,200	97,890	109,100	e125,800	172,100	162,200	e171,600	163,200	147,500
20	82,420	83,160	85,380	89,200	98,290	110,000	e125,700	170,000	161,700	172,100	162,200	147,500
21	82,050	83,160	85,750	89,590	98,700	110,400	125,500	170,000	161,700	170,000	162,200	147,500
22	81,310	83,160	85,750	89,590	99,100	110,400	126,400	168,400	161,700	170,000	161,700	147,500
23	81,310	83,160	85,750	89,590	99,510	111,700	127,400	165,800	161,700	169,500	161,700	147,000
24	81,310	83,160	85,750	90,360	100,300	e111,900	127,400	164,200	162,200	170,500	160,600	147,000
25	e81,800	83,160	86,120	90,750	100,700	112,100	127,400	163,200	162,200	170,500	160,100	146,500
26	e82,290	83,160	86,120	91,140	101,100	112,600	128,700	162,700	163,200	168,900	159,100	146,500
27	82,790	83,530	86,120	91,140	101,500	113,000	130,600	161,100	163,200	169,500	158,500	146,500
28	82,790	83,530	86,490	91,530	101,500	113,400	133,500	159,600	163,700	168,900	158,000	146,500
29	82,790	83,530	86,490	91,530	101,900	114,300	135,800	160,100	165,300	168,400	157,000	146,500
30	82,790	83,900	87,260	91,920	-	114,300	137,200	160,100	167,400	167,900	156,500	146,000
31	82,420	-	87,260	92,300	-	114,800	-	159,100	-	168,400	155,500	-

e Elevation affected by wind; contents interpolated.

Monthly elevation and contents, water year October 1951 to September 1952

Date	Elevation (feet)	Contents (acre-feet)	Change in contents during month (acre-feet)
Sept.30	4,122.85	85,380	-
Oct. 31	4,122.45	82,420	-2,960
Nov. 30	4,122.65	83,900	+1,480
Dec. 31	4,123.10	87,260	+3,360
Calendar year 1951	-	-	+43,160
Jan. 31	4,123.75	92,300	+5,040
Feb. 29	4,124.95	101,900	+9,600
Mar. 31	4,126.45	114,800	+12,900
Apr. 30	4,128.90	137,200	+22,400
May 31	4,131.10	159,100	+21,900
June 30	4,131.90	167,400	+8,300
July 31	4,132.00	168,400	+1,000
Aug. 31	4,130.75	155,500	-12,900
Sept.30	4,129.80	146,000	-9,500
Water year 1951-52	-	-	+60,620

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 1952. 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.--38 years (1899-1909, 1910-16, 1917-22, 1930-32, 1935-41, 1943-52), 212 cfs.

Extremes.--Maximum discharge during year, 4,720 cfs May 11, 12 (gage height, 10.26 ft); minimum, 1.8 cfs Dec. 7, 18.
1896-1922, 1924-32, 1935-41, 1943-52: Maximum discharge, that of May 11, 12, 1952; practically no flow at times during most years.

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. Records of chemical analyses and water temperatures for the water year 1952 are given in Water-Supply Paper 1253.

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 25				Apr. 26 to Sept. 30					
0.9	0.8	1.5	34	1.0	8.0	3.0	369	9.5	3,040
1.0	2.3	2.0	108	1.1	13	4.0	662	10.0	3,790
1.1	4.6	3.0	316	1.3	31	5.0	1,020	10.3	4,880
1.2	9.0	4.0	599	1.5	57	7.0	1,820		
1.3	16	5.0	948	2.0	142	9.0	2,730		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	26	2.2	2.2	2.8	2.2	101	2,470	1,970	899	8.5	382
2	53	3.2	2.0	2.2	2.5	2.3	101	2,480	1,800	980	49	411
3	78	3.0	2.2	2.2	2.5	2.3	101	2,500	1,660	861	197	438
4	77	2.8	2.2	2.2	2.5	2.3	101	2,510	1,570	1,090	272	470
5	57	2.8	2.0	2.2	2.5	2.3	101	2,520	1,570	1,080	306	475
6	40	*2.8	2.0	2.2	2.5	2.3	101	2,540	1,570	1,080	*306	450
7	40	2.8	2.0	2.2	2.5	2.2	101	2,680	1,570	1,080	306	433
8	40	2.8	2.0	2.2	2.8	2.0	101	2,930	*1,570	964	287	*408
9	40	2.8	2.2	2.2	2.8	2.3	101	*3,420	1,570	847	245	411
10	40	2.8	*2.0	2.2	2.8	2.3	101	3,940	1,570	855	232	366
11	40	2.8	2.2	2.2	2.5	2.3	*105	4,280	1,570	855	240	242
12	40	2.8	2.0	2.2	2.5	2.3	105	4,680	1,570	855	277	88
13	40	2.8	2.0	2.2	2.5	2.3	334	4,680	1,570	724	316	57
14	40	2.8	2.0	2.2	2.5	25	461	4,560	1,570	604	340	56
15	44	2.5	2.0	2.3	2.5	72	461	4,520	1,570	604	340	56
16	74	2.5	2.0	2.3	2.5	57	464	4,520	1,570	604	340	56
17	106	2.8	2.0	2.3	2.5	57	466	4,440	1,560	*604	340	66
18	106	2.8	2.2	2.3	2.5	57	466	4,360	1,560	604	311	85
19	106	2.5	2.0	2.3	2.5	57	464	*4,280	*1,560	604	306	85
20	106	2.5	2.2	2.3	2.5	57	464	4,120	1,550	604	326	83
21	106	2.5	2.2	2.3	2.2	57	466	3,940	1,550	604	333	85
22	103	2.3	2.2	2.3	2.2	57	469	3,790	1,550	604	353	85
23	93	2.3	2.2	*2.3	2.2	57	585	3,610	1,550	595	340	85
24	93	2.3	2.2	3.0	2.2	*57	765	3,040	1,550	561	328	85
25	56	2.2	2.2	3.2	*2.3	57	862	2,920	1,550	498	328	85
26	64	2.2	2.2	3.2	2.3	57	1,090	2,760	1,550	513	328	68
27	68	2.2	2.2	2.8	2.3	57	1,260	2,600	1,390	513	336	56
28	68	2.2	2.3	2.8	2.5	57	*1,560	2,360	973	507	348	56
29	66	2.2	2.3	2.8	2.3	74	1,970	2,230	712	458	382	91
30	60	2.2	2.2	2.8	-	101	2,330	2,230	705	417	408	114
31	57	-	2.2	3.0	-	101	-	2,080	-	347	402	-
Total	2,045	101.2	65.8	75.1	71.7	1,143.4	16,157	103,990	45,150	22,015	9,231.5	5,926
Mean	66.0	3.37	2.12	2.42	2.47	36.9	539	3,355	1,505	710	298	198
Ac-ft	4,060	201	131	149	142	2,270	32,050	206,300	89,550	43,670	18,310	11,750

Calendar year 1951: Max 577 Min 1.0 Mean 174 Ac-ft 126,300
Water year 1951-52: Max 4,680 Min 2.0 Mean 563 Ac-ft 408,600

* Discharge measurement made on this day.

Humboldt River near Lovelock, Nev.

Location.--Lat 40°03', long. 118°28', in NE¼ sec. 11, T. 25 N., R. 31 E., on right bank 900 ft below breached dam of Lovelock Land and Development Co. and 9 miles south of Lovelock.

Drainage area.--14,200 sq mi, approximately.

Records available.--February 1912 to September 1927 (fragmentary), June 1950 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 3,900 ft (from topographic map). Prior to June 14, 1950, staff gage at site 600 ft downstream at different datum. June 14, 1950, to Nov. 13, 1951, water-stage recorder at site 300 ft upstream at same datum.

Extremes.--1950: Maximum discharge during period June to September, 50 cfs July 26 (gage height, 3.92 ft), from rating curve extended above 18 cfs by logarithmic plotting; minimum daily, 0.1 cfs July 23.

1950-51: Maximum discharge during water year, 60 cfs July 24 (gage height, 4.27 ft), from rating curve extended above 18 cfs by logarithmic plotting; minimum daily, 0.5 cfs Mar. 30.

1951-52: Maximum discharge during water year, 3,540 cfs May 19 (gage height, 9.36 ft); minimum, 1.1 cfs Oct. 4.

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor. Flow regulated by Rye Patch Reservoir and irrigation in Lovelock Valley.

Discharge, in cubic feet per second, June to September 1950

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	-	13	13	5.8	11	-	16	7.8	*3.5	21	11	1.5	11	1.8
2	-	10	20	3.9	12	-	11	10	3.3	22	11	.5	11	2.3
3	-	9.8	12	3.4	13	-	3.4	10	2.1	23	9.8	.1	10	4.4
4	-	9.9	10	3.2	14	*19	2.6	18	.6	24	8.5	1.9	6.7	4.1
5	-	9.9	11	5.4	15	19	1.8	21	2.1	25	14	4.7	5.9	3.6
6	-	10	10	8.7	16	15	2.7	18	1.3	26	15	39	5.4	3.5
7	-	10	8.0	4.9	17	13	3.0	14	2.5	27	14	30	22	3.3
8	-	11	11	4.5	18	12	3.2	*13	12	28	9.8	11	12	3.2
9	-	10	12	34	19	8.9	*1.9	12	24	29	9.4	19	6.7	3.4
10	-	11	8.8	6.1	20	9.2	1.8	11	4.8	30	14	13	6.5	3.0
										31	-	9.4	8.3	-
Total											-	282.1	356.1	168.7
Mean											-	9.10	11.5	5.62
Ac-ft											-	560	706	335

* Discharge measurement made on this day.

Discharge, in cubic 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	3.2	14	14	12	8.4	2.4	8.8	5.8	7.0	11	7.6
2	3.0	3.1	14	14	17	8.0	5.8	6.2	5.6	22	10	22
3	3.1	3.3	15	13	18	7.3	5.6	4.9	6.3	12	11	17
4	3.0	4.9	15	13	19	8.2	5.4	4.4	5.8	11	10	10
5	3.1	4.6	14	*12	15	8.2	5.3	4.0	6.8	11	3.5	8.9
6	2.9	4.6	15	12	14	7.4	5.0	5.5	9.9	9.2	2.0	9.2
7	2.9	4.4	15	13	14	7.9	3.8	7.6	11	4.3	8.8	6.0
8	2.9	4.6	15	13	13	7.6	3.4	7.8	5.9	5.4	20	3.2
9	2.9	4.9	15	11	13	7.9	2.5	6.7	4.1	2.4	18	3.2
10	2.4	5.0	15	9.6	11	7.6	3.1	5.3	7.6	8.4	14	3.4
11	2.8	5.4	15	9.6	11	7.5	5.4	3.7	11	9.4	19	5.9
12	2.8	5.4	15	9.5	11	7.5	2.9	2.8	7.1	7.0	16	6.7
13	2.6	5.4	15	8.9	10	8.0	2.3	3.2	6.1	6.1	14	6.5
14	2.6	5.4	15	9.2	10	7.6	4.3	7.2	2.3	5.5	4.4	6.7
15	2.7	5.3	*15	8.8	*10	6.1	5.7	6.2	.8	6.0	5.4	7.5
16	2.8	6.2	14	8.7	9.8	5.4	15	5.5	1.7	5.9	5.8	14
17	*2.6	8.0	14	8.8	9.6	3.1	29	4.9	2.3	3.6	9.0	40
18	2.5	10	14	8.3	10	3.4	6.4	4.1	1.9	3.2	11	36
19	2.5	19	14	7.9	8.6	5.8	4.4	4.5	*2.5	3.0	6.3	24
20	2.5	14	14	8.5	9.1	6.0	4.4	3.4	2.4	3.2	4.6	20
21	2.5	15	13	8.0	9.1	2.6	4.9	3.7	2.4	4.0	8.5	11
22	2.3	14	13	7.8	9.8	2.6	2.4	3.4	3.2	7.1	*9.4	7.1
23	2.0	14	13	7.5	9.1	2.3	2.4	*12	3.0	36	9.4	16
24	1.5	14	13	7.4	8.8	2.4	2.8	10	2.7	56	9.4	15
25	1.8	14	13	7.1	8.9	14	3.4	2.9	2.4	43	11	11
26	4.4	14	13	7.1	9.2	21	6.0	5.8	2.7	*20	8.5	7.1
27	3.3	14	13	7.0	8.8	*18	*7.6	5.3	3.5	17	13	*5.8
28	2.9	14	13	7.1	8.4	7.8	17	2.6	3.4	18	19	4.3
29	3.3	14	13	7.1	-	.6	23	2.1	3.7	25	11	4.1
30	3.4	14	13	8.9	-	.5	13	2.4	8.7	17	4.9	3.5
31	3.5	-	13	8.8	-	.9	-	5.8	-	13	4.4	-
Total	86.4	267.7	435	296.6	317.2	211.6	204.6	162.7	142.6	401.7	312.3	342.7
Mean	2.79	8.92	14.0	9.57	11.3	6.83	6.82	5.25	4.75	13.0	10.1	11.4
Ac-ft	171	531	863	588	629	420	406	323	283	797	619	680

Calendar year 1951: Max - Min - Mean - Ac-ft -
Water year 1951-52: Max 56 Min 0.5 Mean 8.72 Ac-ft 6,310

* Discharge measurement made on this day.

Humboldt River near Lovelock, Nev.--Continued

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.9	11	9.5	11	44	15	71	1,570	1,940	415	a50	49
2	2.1	12	10	9.0	48	14	94	2,180	1,650	442	a20	33
3	1.3	16	10	10	64	15	79	2,250	1,450	616	a25	13
4	1.2	8.7	11	12	49	19	85	2,300	1,170	531	a35	8.9
5	1.4	8.0	11	12	36	15	108	2,320	*1,050	616	a38	8.9
6	19	6.1	10	12	31	15	119	2,290	1,010	789	*a40	36
7	9.2	7.4	9.5	12	28	15	119	2,290	1,020	724	40	46
8	9.5	7.9	9.2	12	27	15	108	2,360	1,100	676	50	*73
9	8.7	7.6	9.0	13	26	14	60	2,660	1,100	570	71	69
10	5.6	7.4	*9.2	15	24	15	56	*2,990	1,140	400	64	99
11	4.8	7.4	9.5	16	24	9.5	*58	3,270	1,330	323	58	183
12	4.9	7.5	9.5	17	23	19	48	3,310	1,320	321	58	268
13	4.8	*7.3	10	16	22	6.3	40	3,430	1,300	347	30	122
14	4.8	a7.3	11	15	21	4.9	82	3,480	1,270	254	7.6	100
15	4.8	a7.2	13	15	20	4.5	266	3,490	1,230	137	31	84
16	4.8	a7.2	12	12	20	4.1	332	3,510	1,240	130	46	73
17	4.7	7.2	11	10	20	3.5	270	3,480	1,210	*132	72	54
18	4.2	8.9	13	9.0	17	5.6	268	3,510	1,260	130	61	46
19	4.0	10	14	9.0	19	7.6	254	3,520	*1,310	132	96	41
20	4.0	9.5	13	9.0	19	7.6	235	3,510	1,270	151	47	43
21	4.0	11	12	9.0	19	8.2	268	*3,480	1,260	156	39	40
22	4.0	11	13	8.9	18	8.9	273	3,460	1,270	152	36	39
23	4.0	10	14	*9.5	18	10	244	3,440	1,270	146	22	36
24	5.0	9.5	15	10	17	*13	244	3,430	1,350	144	46	33
25	18	9.5	15	46	*17	15	*339	3,260	1,340	a140	51	28
26	9.5	9.5	15	78	17	19	409	3,090	1,270	a145	62	26
27	14	9.5	16	103	17	15	506	2,940	1,240	a145	44	25
28	13	16	17	107	16	15	735	2,830	1,200	a140	31	24
29	12	9.5	17	91	15	16	780	2,410	892	a125	20	11
30	11	8.9	16	63	-	24	985	2,100	531	a110	14	3.4
31	11	-	13	48	-	55	-	2,070	-	a90	9.5	-
Total	212.2	276.0	377.4	819.4	736	423.7	7,535	90,230	36,993	9,329	1,314.1	1,715.2
Mean	6.85	9.20	12.2	26.4	25.4	13.7	251	2,911	1,233	301	42.4	57.2
Ac-ft	421	547	749	1,630	1,460	840	14,950	179,000	73,370	18,500	2,610	3,400

Calendar year 1951: Max 56 Min 0.5 Mean 8.92 Ac-ft 6,460
Water year 1951-52: Max 3,520 Min 1.2 Mean 410 Ac-ft 297,500

* 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 Rye Patch.
Note.--Stage-discharge relation affected by ice Dec. 5-23, Dec. 25 to Jan. 11, Jan. 13, 14, 16-21.

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 1952.

Gage.--Benchmark 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 benchmark 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.--1926-52: Maximum elevation observed, 3,848.5 ft, June 1926; minimum observed, 3,801.43 ft Nov. 15, 1950.

Cooperation.--Three observations of elevation furnished by Federal Court Watermaster.

Elevation, in feet, above mean sea level, water year 1951-52

Oct. 18	3,803.33	Mar. 28	3,804.62
Dec. 5	3,802.85	May 21	3,808.45
Jan. 3	3,802.71	June 15	3,810.16
Feb. 20	3,803.65	Aug. 12	3,810.13
22	3,803.78		

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 1952.

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

Average discharge.--7 years (1945-52), 365 cfs.

Extremes.--Maximum discharge during year, 2,640 cfs June 5 (gage height, 5.08 ft); minimum, 33 cfs Oct. 23.
1944-52: Maximum discharge, 6,480 cfs Nov. 20, 1950 (gage height, 7.62 ft), from rating curve extended above 2,300 cfs on basis of slope-area determination of peak flow; minimum, 11 cfs Jan. 27, 1948.

Remarks.--Records good. Flow regulated by Lake Tahoe.

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 5-9)

Oct. 1 to June 9				June 10 to Sept. 30			
0.9	30	2.5	578	1.1	32	2.5	557
1.1	55	3.0	920	1.3	67	3.0	870
1.3	93	4.0	1,740	1.6	144	4.0	1,620
1.6	171	5.0	2,660	2.0	296	5.0	2,600
2.0	322						

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	38	373	162	1,630	1,450	1,450	1,820	2,360	379	157	46
2	65	38	318	60	1,680	1,440	1,440	*2,050	2,310	415	141	46
3	57	38	301	60	1,640	1,420	1,440	2,130	2,300	441	135	46
4	47	39	280	70	1,630	1,420	1,460	2,010	2,350	441	127	46
5	44	40	280	70	1,630	1,400	1,510	1,930	2,450	441	115	45
6	42	40	272	72	*1,620	1,400	1,550	1,910	2,390	420	112	45
7	42	39	272	67	1,610	1,400	1,560	1,880	2,320	420	105	45
8	41	39	268	240	1,590	1,420	1,510	1,810	2,390	430	*97	43
9	41	39	264	561	1,580	1,400	1,480	1,810	2,350	*436	92	43
10	41	40	260	527	1,580	1,410	1,460	1,860	*2,230	410	89	43
11	41	45	260	527	1,580	1,400	1,440	*1,970	2,130	349	82	45
12	41	85	260	532	1,580	1,400	1,460	2,040	2,010	330	82	45
13	41	62	260	532	1,570	1,400	1,480	2,080	1,940	334	80	43
14	41	72	260	544	1,560	1,400	1,450	2,080	1,640	334	76	42
15	41	91	260	688	1,540	1,410	1,430	2,060	1,180	325	71	40
16	41	148	260	974	1,560	1,400	1,470	2,050	1,030	325	69	*40
17	41	145	260	1,150	1,580	1,400	1,520	2,100	*857	315	67	40
18	41	145	257	1,320	1,560	1,410	1,580	2,150	702	315	65	40
19	41	148	257	1,510	1,550	1,450	1,610	2,180	634	278	65	40
20	41	159	260	1,220	1,550	1,460	1,580	2,310	622	248	63	40
21	40	211	260	1,220	1,530	1,450	1,570	2,290	622	240	59	38
22	34	204	260	1,280	1,520	1,420	1,610	2,220	598	228	58	38
23	36	197	260	1,530	1,510	1,400	1,690	2,220	646	205	56	38
24	65	197	260	1,630	1,500	1,400	1,730	2,250	586	183	56	149
25	49	201	260	1,650	1,490	1,410	1,770	2,330	517	183	56	330
26	41	208	264	1,640	1,480	1,420	1,750	2,330	484	183	54	330
27	*38	*241	*264	1,630	1,470	*1,430	1,770	2,410	478	198	54	330
28	37	241	280	1,630	1,460	1,450	1,860	2,430	457	190	52	330
29	38	245	280	1,620	1,460	1,460	1,840	*2,360	441	183	50	330
30	38	293	284	1,610	-	1,460	1,770	2,340	394	187	48	330
31	37	-	280	1,610	-	1,460	-	2,400	-	173	48	-
Total	1,341	3,728	8,434	27,936	45,240	44,050	47,240	65,810	41,418	9,539	2,481	3,106
Mean	43.3	124	272	901	1,560	1,420	1,570	2,120	1,380	308	80.0	104
Ac-ft	2,660	7,390	16,730	55,410	89,730	87,370	93,700	130,500	82,150	18,920	4,920	6,160

Calendar year 1951: Max 1,570 Min 30 Mean 360 Ac-ft 260,800
Water year 1951-52: Max 2,450 Min 34 Mean 821 Ac-ft 595,600

Peak discharge (base, 700 cfs).--Jan. 9 (10 a.m.) 761 cfs (2.78 ft); Feb. 1 (6 p.m.) 1,690 cfs (3.93 ft); June 5 (8 p.m.) 2,640 cfs (5.08 ft).
* Discharge measurement made on this day.

Prosser Creek near Boca, Calif.

Location.--Lat 39°22', long. 120°07', in NW¼ sec. 32, T. 18 N., R. 17 E., on left bank a quarter of a mile upstream from mouth and 2 miles southwest of Boca.
Drainage area.--51 sq mi, approximately.
Records available.--April 1889 to November 1890, October 1902 to June 1903 (gage heights only), June 1951 to September 1952.
Gage.--Water-stage recorder. Datum of gage is 5,574.66 ft above mean sea level (levels by Bureau of Reclamation). Prior to June 12, 1951, staff gages at same site at different datums.
Extremes.--1951: Maximum discharge during period June to September, 184 cfs June 17 (gage height, 2.65 ft, from graph based on gage readings); minimum, 8.0 cfs Sept. 14, 16.
1951-52: Maximum discharge during water year, 1,130 cfs May 2 (gage height, 5.14 ft); minimum, 10 cfs Oct. 1.
Maximum discharge known, 4,320 cfs Nov. 20, 1950 (gage height, 9.0 ft, present datum, from floodmarks), from rating curve extended above 1,100 cfs on basis of slope-area determination of peak flow.
Remarks.--Records good except those for periods of ice effect, which are fair.
Cooperation.--Three discharge measurements furnished by Bureau of Reclamation.

Discharge, in cubic feet per second, 1951-52

1951

Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.	Day	June	July	Aug.	Sept.
1	-	67	14	10	11	-	39	10	8.6	21	121	23	*11	10
2	-	63	13	10	12	*116	36	10	8.6	22	106	22	12	10
3	-	58	13	9.6	13	124	34	10	8.6	23	97	*20	*12	9.2
4	-	54	13	9.2	14	135	31	10	8.6	24	92	19	11	9.2
5	-	49	12	9.2	15	141	30	10	8.6	25	89	18	10	8.9
6	-	48	12	8.9	16	155	*28	9.6	8.3	26	87	17	10	8.9
7	-	45	12	8.9	17	146	27	9.6	8.6	27	85	16	9.2	9.2
8	-	43	11	8.9	18	131	26	9.6	9.2	28	78	15	8.9	9.2
9	-	41	11	8.9	19	123	26	9.6	22	29	72	15	8.6	9.6
10	-	40	11	8.9	20	116	24	10	*12	30	68	15	9.6	10
										31	-	14	10	-
Total											-	1,003	332.7	289.8
Mean											-	32.4	10.7	9.66
Ac-ft											-	1,990	660	575

Peak discharge (base, 300 cfs).--No peak above base.
* Discharge measurement made on this day.
Note.--Discharge for June 12 to July 13 computed on basis of gage-height record of Federal Court Water Master gage 100 ft downstream.

1951-52

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	24	126	33	43	42	*166	740	643	207	100	22
2	33	26	97	32	47	42	178	*918	598	226	91	22
3	36	27	77	31	58	42	180	929	577	251	85	21
4	20	27	66	30	53	42	194	759	585	246	79	21
5	16	30	55	30	56	42	233	669	635	248	72	20
6	15	27	45	30	*56	42	286	643	602	237	67	20
7	14	28	43	30	55	42	322	627	518	228	62	19
8	14	27	40	30	54	42	294	545	585	235	58	19
9	13	24	40	30	52	42	284	506	602	242	53	19
10	13	26	39	*31	52	42	262	522	452	237	50	21
11	*14	31	38	31	52	42	251	602	*403	198	46	27
12	14	59	36	31	52	41	289	660	327	188	45	29
13	13	45	36	31	52	40	306	656	302	182	44	25
14	13	41	33	32	49	39	262	643	296	184	42	23
15	12	42	31	32	49	38	265	614	292	184	39	21
16	13	35	30	32	50	37	314	606	299	178	36	20
17	12	30	30	32	51	35	372	648	327	176	34	19
18	12	30	30	32	52	35	452	*669	*343	172	33	18
19	12	25	30	32	51	36	491	678	343	159	31	18
20	12	24	30	32	50	37	452	727	335	141	30	18
21	12	34	30	32	47	38	449	704	332	137	29	17
22	12	40	32	32	46	39	514	648	314	*129	29	17
23	14	40	32	32	45	40	602	643	363	121	28	17
24	48	45	34	32	45	42	652	674	327	118	27	17
25	36	45	35	34	45	55	674	704	282	118	*26	17
26	32	50	35	35	44	70	643	682	248	118	26	16
27	30	*56	40	37	42	76	700	700	*246	115	25	16
28	27	73	40	38	42	96	764	687	239	131	24	16
29	27	64	38	40	42	118	704	*635	230	115	24	16
30	26	65	36	40	-	161	614	627	202	121	23	16
31	24	-	34	42	-	166	-	669	-	116	23	-
Total	600	1,140	1,338	1,018	1,432	1,701	12,169	20,734	11,847	5,458	1,381	587
Mean	19.4	38.0	43.2	32.8	49.4	54.9	406	669	395	176	44.5	19.6
Ac-ft	1,190	2,260	2,650	2,020	2,840	3,370	24,140	41,130	23,500	10,830	2,740	1,160

Calendar year 1951: Max - Min - Mean - Ac-ft -
Water year 1951-52: Max 929 Min 11 Mean 162 Ac-ft 117,800

Peak discharge (base, 300 cfs).--Apr. 7 (1:30 a.m.) 325 cfs (3.26 ft); May 2 (7 p.m.) 1,130 cfs (5.14 ft); May 20 (11 p.m.) 872 cfs (4.66 ft); June 24 (12:30 a.m.) 412 cfs (3.56 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 16-19, 23-26, Dec. 5 to Mar. 24 (no gage-height record Dec. 17-25, Jan. 6-8, Feb. 9-22; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby streams).

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 6,330 ft (from topographic map).

Average discharge.--5 years (1947-52), 99.3 cfs.

Extremes.--Maximum discharge during year, 1,050 cfs June 8 (gage height, 5.30 ft); minimum, 3.4 cfs Oct. 1.
1946-52: Maximum discharge, 7,010 cfs Nov. 20, 1950 (gage height, 7.53 ft), from rating curve extended above 1,100 cfs on basis of slope-area determination of peak flow; minimum, 1.1 cfs Aug. 19, 20, 23, 24, 1949.

Remarks.--Records good except those for periods of ice effect or indefinite stage-discharge relation, which are fair. One transmountain diversion to Sierra Valley above station.

Rating tables, water year 1951-52, except periods of ice effect and indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 21				May 22 to Sept. 30			
1.0	3.8	2.0	84	1.1	4.0	3.0	195
1.1	6.8	2.5	166	1.3	9.9	3.5	300
1.2	11	3.0	267	1.5	18	4.0	440
1.4	21	4.0	542	1.7	31	5.0	880
1.6	35	5.0	1,010	2.0	57	5.2	990
1.8	56			2.5	114		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.7	12	35	18	21	19	48	455	920	337	122	7.4
2	18	14	40	18	25	20	55	612	875	380	105	6.8
3	13	15	36	18	27	20	64	694	885	428	96	6.5
4	5.9	15	27	17	26	20	72	566	885	434	86	6.5
5	4.4	16	27	16	26	21	84	501	948	440	77	6.5
6	4.7	15	27	16	24	21	99	494	900	416	68	6.5
7	9.1	16	25	16	23	21	128	494	850	398	59	6.0
8	8.8	15	25	16	23	21	140	*420	920	401	54	5.7
9	8.4	14	25	16	23	21	138	398	920	389	47	6.0
10	8.8	14	25	16	23	21	141	426	730	353	43	6.8
11	9.5	13	25	16	23	21	145	516	*675	293	38	10
12	8.8	25	25	16	23	21	148	580	518	266	37	11
13	8.4	21	*24	16	22	21	155	623	461	264	33	9.3
14	8.0	24	22	16	22	20	153	616	454	298	26	7.1
15	8.0	19	20	16	22	20	150	601	454	368	23	6.2
16	8.0	15	17	17	23	19	*150	*594	492	295	20	5.7
17	7.6	14	15	17	24	19	172	658	*570	270	18	5.1
18	7.6	14	15	17	*26	19	208	690	626	259	16	4.8
19	7.6	14	15	17	25	20	243	694	630	224	16	4.6
20	7.6	14	16	17	25	21	239	722	610	197	15	6.0
21	7.6	21	18	17	24	21	241	699	610	181	14	6.8
22	7.6	21	20	17	24	22	269	e700	574	*163	14	5.7
23	9.1	19	21	17	22	23	322	e750	635	153	13	6.0
24	18	19	21	17	22	25	378	e820	602	143	12	5.7
25	14	18	22	18	21	26	412	*895	478	142	*11	5.4
26	12	17	21	18	20	27	398	880	383	136	9.9	5.1
27	*13	22	24	19	19	28	409	905	*371	134	9.6	5.1
28	14	25	26	19	19	29	464	925	371	162	9.0	5.4
29	14	25	23	20	19	32	423	*860	356	193	8.4	5.7
30	12	27	21	20	-	34	384	865	322	179	8.0	6.2
31	12	-	20	21	-	39	-	915	-	148	7.7	-
Total	300.2	533	723	535	666	712	6,432	20,568	19,005	8,442	1,115.6	191.6
Mean	9.68	17.8	23.3	17.3	23.0	23.0	214	663	634	272	36.0	6.39
Ac-ft	595	1,060	1,430	1,060	1,320	1,410	12,760	40,800	37,700	16,740	2,210	380

Calendar year 1951: Max 472 Min 2.7 Mean 74.3 Ac-ft 53,800
Water year 1951-52: Max 948 Min 4.4 Mean 162 Ac-ft 117,500

Peak discharge (base, 500 cfs).--May 2 (8 p.m.) 744 cfs (4.52 ft); June 8 (12 p.m.) 1,050 cfs (5.30 ft); June 23 (11 p.m.) 725 cfs (4.69 ft).

* Discharge measurement made on this day.

e Stage-discharge relation indefinite; discharge estimated on basis of record for Prosser Creek near Boca, weather records, and trend of flow.

Note.--Stage-discharge relation affected by ice Nov. 24, 25, Dec. 6 to Mar. 25.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,440 ft (from topographic map). July 1906 to September 1919 staff gage at site 1 mile upstream at different datum.

Average discharge.--18 years, 869 cfs.

Extremes.--Maximum discharge during year, 7,950 cfs May 3 (gage height, 9.39 ft); minimum, 160 cfs Aug. 14.
1906-19, 1947-52: Maximum discharge, 19,900 cfs Nov. 21, 1950; maximum gage height, 13.83 ft Nov. 21, 1950; minimum observed, 18 cfs July 2, 3, 1912.

Remarks.--Records excellent except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Lake Tahoe, Boca Reservoir, Donner and Independence Lakes, and by several powerplants. Many diversions above station.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.2	168	6.0	2,860
2.5	282	8.0	5,430
3.0	530	10.0	9,210
4.0	1,120		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	227	425	873	a500	2,400	1,780	2,710	5,730	5,570	1,090	314	223
2	200	420	825	a500	2,430	1,740	2,720	6,840	5,320	1,130	278	215
3	242	425	717	b500	2,120	1,720	*2,770	*7,630	5,220	1,280	230	223
4	219	430	723	b500	2,090	1,720	2,880	7,080	*5,200	1,340	215	219
5	200	430	*663	b500	*2,040	1,690	3,090	6,260	5,410	1,340	208	211
6	a200	420	597	b520	2,010	1,680	3,390	5,920	5,560	1,310	211	211
7	a200	415	574	b510	1,990	1,680	3,650	5,720	5,120	1,250	200	215
8	a220	420	663	b510	2,000	1,680	3,580	5,330	5,120	1,270	190	223
9	a220	415	651	b590	1,970	1,670	*3,480	4,910	5,350	*1,220	194	242
10	a230	435	669	855	1,970	1,710	3,370	4,840	*4,910	1,210	190	273
11	a230	445	675	717	2,010	*1,680	3,260	5,030	4,510	1,050	178	362
12	a230	450	675	711	1,970	1,670	3,390	5,350	4,090	1,000	*178	391
13	a230	460	615	729	1,960	1,640	3,520	5,430	3,750	957	178	391
14	a240	450	502	819	1,960	1,640	3,330	5,460	3,420	921	178	366
15	a240	486	502	873	1,970	1,650	3,240	5,330	2,780	945	181	342
16	a247	460	502	1,080	2,130	1,650	3,370	5,160	2,480	933	181	*347
17	247	455	497	*1,360	2,040	1,650	3,610	5,290	2,260	855	187	314
18	247	460	497	1,440	1,980	1,670	3,910	*5,410	*2,000	915	187	310
19	256	465	475	1,760	1,950	1,650	4,180	5,560	1,600	867	181	319
20	264	486	465	1,560	1,950	1,650	4,040	5,650	1,300	645	187	310
21	273	486	486	1,530	1,910	1,670	3,940	5,950	1,280	591	181	305
22	*291	536	486	1,520	1,880	1,670	4,050	5,690	1,190	497	184	305
23	282	541	492	1,600	1,860	1,670	4,370	5,590	1,210	405	194	237
24	420	508	497	1,800	1,840	2,050	4,670	5,640	1,220	333	197	231
25	420	502	492	1,870	1,830	2,160	5,040	5,870	1,060	296	194	300
26	440	514	492	1,870	1,800	2,180	*5,300	5,610	969	305	204	231
27	440	552	508	1,860	1,760	2,200	*5,690	5,460	1,200	328	211	231
28	425	621	621	1,840	1,770	2,370	6,390	5,720	1,310	381	219	236
29	430	546	597	1,830	1,790	2,510	6,280	5,610	1,270	362	197	300
30	430	568	552	1,830	-	2,640	5,920	5,450	1,220	396	208	300
31	425	-	514	1,940	-	2,720	-	5,530	-	376	219	-
Total	8,865	14,226	18,097	36,024	57,380	57,460	119,140	176,050	92,899	25,798	6,254	8,633
Mean	286	474	584	1,162	1,979	1,854	3,971	5,679	3,097	832	202	239
Ac-ft	17,580	28,220	35,890	71,450	113,800	114,000	236,300	349,200	184,300	51,170	12,400	17,180

Calendar year 1951: Max 2,260 Min 106 Mean 653 Ac-ft 472,900
Water year 1951-52: Max 7,630 Min 178 Mean 1,696 Ac-ft 1,231,000

Peak discharge (base, 1,600 cfs).--Jan. 19 (9 a.m.) 2,000 cfs (5.10 ft); Feb. 1 (8 p.m.) 3,430 cfs (6.52 ft); Mar. 24 (5 p.m.) 2,700 cfs (5.84 ft); May 3 (2 a.m.) 7,950 cfs (9.39 ft); July 12 (9 p.m.) 1,700 cfs (4.81 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of unpublished record for Truckee River at Farad, Calif.

b Stage-dischärge relation affected by ice.

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 1952.

Gage.--Water-stage recorder. Altitude of gage is 5,200 ft.(from topographic map). Gage destroyed by flood Dec. 3 or 4, 1950; replaced May 21, 1951, at same site at different datum.

Extremes.--Maximum discharge during year, 164 cfs May 1 (gage height, 3.22 ft), from rating curve extended above 85 cfs by logarithmic plotting; minimum, 5.6 cfs Dec. 29.
1948-52: Maximum discharge, 800 cfs Dec. 3 or 4, 1950 (gage height unknown), by slope-area determination of peak flow; minimum, 0.2 cfs Feb. 7-9, 1949 (flow dammed by snowslide).

Remarks.--Records good except those above 85 cfs and those for periods of ice effect, 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 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 30		May 1 to Sept. 30	
1.2	5.6	1.5	7.0
1.4	10	1.7	15
1.7	22	2.0	31
2.2	50	2.5	70
2.7	89	3.0	130

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.8	10	20	b8.0	14	12	25	*107	90	46	22	13
2	10	9.4	15	b8.0	16	10	26	119	90	41	21	13
3	9.4	8.8	15	b8.0	20	10	*26	111	90	*41	20	12
4	8.6	8.8	14	b8.0	20	9.9	26	97	90	39	20	12
5	8.3	8.8	14	b8.5	*17	9.4	28	93	89	39	18	*11
6	8.6	8.6	13	b9.0	15	9.4	36	93	89	39	18	11
7	8.3	8.6	13	*10	14	9.4	33	96	89	38	18	11
8	7.8	8.6	13	10	13	9.6	30	81	89	37	*17	10
9	7.8	8.1	12	10	12	9.9	28	80	93	36	16	11
10	7.8	8.8	13	10	12	10	28	83	89	35	16	14
11	7.8	12	12	10	12	*9.4	28	95	86	33	16	16
12	*7.8	14	12	10	12	9.1	30	97	79	32	16	16
13	7.8	9.9	11	10	11	9.1	31	98	77	30	14	14
14	7.8	9.6	11	10	11	9.1	28	95	74	34	14	13
15	7.8	8.6	11	9.4	11	9.1	30	*87	72	33	13	13
16	7.8	7.8	11	10	12	9.1	*33	91	66	29	13	13
17	8.1	8.3	*9.9	11	12	8.8	39	93	62	27	13	12
18	8.1	8.3	8.3	11	12	7.8	48	96	*60	26	13	12
19	8.1	7.6	8.8	10	11	b8.0	49	98	60	26	13	12
20	8.1	6.0	8.8	9.9	11	b8.0	42	106	59	24	13	12
21	8.3	*7.4	8.8	9.9	11	b8.0	42	95	59	24	13	12
22	8.3	10	9.1	9.6	10	b8.5	53	90	58	22	13	11
23	8.1	10	9.6	9.4	10	9.6	66	89	60	22	13	11
24	18	9.4	11	9.9	10	15	75	93	56	21	12	10
25	13	8.8	9.9	10	10	20	78	96	59	21	12	9.8
26	12	9.9	9.9	10	10	20	78	96	60	22	12	10
27	12	17	10	10	10	20	70	97	59	21	13	11
28	11	15	8.3	10	11	22	88	95	58	20	13	11
29	11	15	6.9	10	12	25	85	90	54	21	13	10
30	10	14	7.4	10	-	26	77	89	51	23	13	9.8
31	10	-	b8.0	11	-	26	-	92	-	23	13	-
Total	286.3	297.1	344.7	300.6	363	387.2	1,356	2,938	2,167	925	464	356.6
Mean	9.24	9.90	11.1	9.70	12.5	12.5	45.2	94.8	72.2	29.8	15.0	11.9
Ac-ft	568	589	684	596	720	768	2,690	5,830	4,300	1,830	920	707

Calendar year 1951: Max - Min - Mean - Ac-ft -
Water year 1951-52: Max 119 Min 6.0 Mean 27.8 Ac-ft 20,200

Peak discharge (base, 50 cfs).--May 1 (5 p.m.) 164 cfs (3.22 ft); May 20 (5 p.m.) 117 cfs (2.91 ft).

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

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 ½ mile southwest of McDermitt.

Records available.--October 1948 to September 1952.

Gage.--Water-stage recorder and concrete control.

Extremes.--Maximum discharge during year, 1,240 cfs Apr. 26 (gage height, 6.83 ft), from rating curve extended above 600 cfs; minimum, 0.7 cfs Nov. 25.
1948-52: Maximum discharge, that of Apr. 26, 1952; minimum, 0.5 cfs Jan. 13, 1949.

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

Revisions (water years).--W 1214: 1949-50(P).

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 25				Apr. 26 to Sept. 30			
1.7	1.7	2.5	54	1.8	3.8	2.5	59
1.8	2.8	3.0	147	1.9	6.1	3.0	151
1.9	4.7	4.0	390	2.0	10	4.0	392
2.0	7.8	5.0	672	2.2	25	5.6	850
2.1	13	6.1	1,010				
2.3	29						

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.2	4.0	7.8	b6.0	13	20	267	426	143	62	14	4.3
2	2.8	3.6	13	b6.0	19	24	280	410	134	*54	14	4.3
3	3.2	2.9	11	b6.5	17	14	335	458	128	50	13	4.0
4	3.1	3.8	8.2	b7.0	20	15	430	392	126	46	12	4.0
5	2.9	4.2	7.8	b7.0	21	17	645	324	128	45	10	4.3
6	2.9	3.8	7.4	b7.0	20	15	820	296	140	44	9.9	4.7
7	2.8	3.8	b7.0	b7.0	21	14	992	326	155	42	9.5	5.2
8	2.7	4.4	b6.0	b6.5	20	15	*776	389	122	40	8.6	5.0
9	2.5	4.2	5.8	b8.0	20	17	505	294	116	38	8.2	5.0
10	2.5	4.2	4.2	b8.0	19	18	493	265	116	36	8.2	6.1
11	2.5	4.4	4.7	b8.0	20	17	549	255	*108	44	8.2	11
12	2.7	5.2	5.2	b7.0	21	14	567	248	95	47	8.2	12
13	2.9	5.8	7.4	b6.5	20	16	702	245	91	52	7.4	8.6
14	3.1	5.8	8.2	b7.0	b18	14	684	245	72	46	7.4	6.9
15	3.1	5.0	6.5	7.1	16	17	493	229	65	39	6.5	5.9
16	3.2	3.6	5.5	7.1	22	17	502	214	59	35	6.5	5.6
17	3.1	2.7	4.4	5.8	18	14	598	205	55	34	6.1	5.4
18	3.1	2.5	b6.0	7.4	b16	15	755	194	52	31	5.9	5.2
19	3.1	4.0	b6.5	7.8	14	12	797	*196	50	31	5.9	5.0
20	3.2	6.2	*b5.4	7.8	14	13	521	250	49	28	5.6	4.7
21	3.2	5.2	b6.0	*7.8	b16	9.4	466	233	50	25	5.4	4.7
22	3.4	5.0	b7.5	7.8	18	11	555	196	52	26	5.2	4.7
23	3.4	4.0	b7.0	8.2	18	13	648	*178	54	25	5.2	4.7
24	4.2	4.0	b6.8	8.2	13	53	*651	173	65	23	5.0	4.7
25	*4.7	3.6	6.8	8.9	17	241	779	182	72	23	5.8	4.5
26	4.7	5.2	7.0	8.9	14	552	850	184	76	24	*3.8	*4.7
27	4.2	6.2	7.5	7.4	*18	387	684	180	64	45	4.5	5.0
28	4.2	6.5	7.6	7.8	17	*393	651	171	62	22	4.7	5.0
29	4.2	*6.2	8.0	8.2	19	420	544	162	70	*20	4.7	5.2
30	4.2	6.5	7.0	8.5	-	*330	453	153	72	15	4.3	5.2
31	4.2	-	6.2	10	-	*284	-	145	-	14	4.3	-
Total	102.2	136.5	215.4	232.2	519	3,011.4	17,992	7,818	2,641	1,106	226.0	165.6
Mean	3.30	4.55	6.95	7.49	17.9	97.1	600	252	88.0	35.7	7.29	5.52
Ac-ft	203	271	427	461	1,030	5,970	35,690	15,510	5,240	2,190	448	328

Calendar year 1951: Max 215 Min 1.1 Mean 30.3 Ac-ft 21,930
Water year 1951-52: Max 992 Min 2.2 Mean 93.3 Ac-ft 67,770

Peak discharge (base, 150 cfs).--Mar. 26 (5 a.m.) 630 cfs (4.84 ft); Apr. 7 (1:45 a.m.) 1,180 cfs (6.62 ft); Apr. 14 (1:30 a.m.) 874 cfs (5.68 ft); Apr. 19 (3 a.m.) 1,040 cfs (6.20 ft); Apr. 26 (1 a.m.) 1,240 cfs (6.83 ft); May 20 (5:30 p.m.) 296 cfs (3.62 ft); June 7 (4 a.m.) 189 cfs (3.17 ft); July 27 (5 p.m.) 196 cfs (3.20 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 1952.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during year, 940 cfs Apr. 6 (gage height, 6.63 ft); minimum, 1.1 cfs Oct. 1.
1948-52: Maximum discharge, that of Apr. 6, 1952; minimum, 0.4 cfs Aug. 18, 1951.

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

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 10-22, May 20-28)

Oct. 1 to Apr. 18				Apr. 19 to Sept. 30			
0.9	0.6	2.0	44	2.7	2.7	4.0	84
1.0	1.5	3.0	122	2.8	5.1	4.5	143
1.1	3.3	4.0	234	2.9	8.2	5.0	222
1.2	5.9	5.0	429	3.0	12	6.0	445
1.4	13	6.0	725	3.3	29	6.8	669
1.7	27			3.6	50		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	3.3	5.6	b5.0	16	24	199	345	144	49	8.2	3.4
2	1.4	2.6	6.2	b5.0	36	20	221	340	142	*44	8.2	3.4
3	1.5	3.1	5.6	b5.3	29	19	263	360	135	40	7.9	3.4
4	1.5	3.6	5.6	5.6	24	22	405	320	130	35	7.6	3.4
5	1.5	3.3	5.9	5.6	22	20	573	290	129	34	6.6	4.4
6	1.5	3.3	3.6	5.6	22	19	704	260	135	31	6.3	4.1
7	1.4	3.8	3.3	5.6	22	18	692	250	124	30	5.7	3.9
8	1.4	3.8	2.6	5.9	22	17	*493	290	111	27	5.4	3.7
9	1.3	3.8	2.8	b5.5	22	18	348	250	104	25	4.9	3.9
10	1.3	4.1	2.9	5.6	23	22	321	240	111	24	5.4	4.6
11	1.3	4.9	3.6	5.9	25	21	345	230	*104	24	5.1	7.3
12	1.4	5.4	4.3	5.9	25	19	404	225	94	25	4.9	7.9
13	1.5	5.6	4.6	5.9	22	20	530	225	81	24	4.4	6.6
14	1.7	6.2	4.3	4.9	20	19	545	220	72	21	4.4	6.0
15	2.0	4.3	4.6	4.6	20	20	371	210	68	19	4.1	5.4
16	2.1	2.9	4.6	b5.0	28	20	337	200	63	18	4.1	5.1
17	2.3	3.1	4.3	b5.0	27	20	406	190	60	16	4.1	4.6
18	2.3	3.6	4.9	6.5	24	22	559	180	56	16	4.1	4.6
19	2.3	4.3	5.1	6.2	22	20	532	185	54	18	3.9	4.4
20	2.5	5.1	*4.9	6.2	22	20	329	226	53	16	3.9	4.1
21	2.7	4.9	4.9	5.9	17	17	320	212	58	14	3.7	4.1
22	2.9	3.8	5.6	6.2	18	16	381	188	53	13	3.4	4.1
23	3.1	3.6	5.9	6.5	19	20	442	*183	56	12	3.4	4.1
24	4.0	4.3	5.9	7.2	19	120	*504	178	63	11	3.4	4.1
25	*4.3	3.8	5.4	7.5	15	181	614	178	63	11	3.4	4.1
26	4.1	4.9	6.2	7.5	17	201	660	180	68	11	*3.7	*3.7
27	3.6	4.9	5.9	6.2	*18	206	580	174	64	10	3.7	3.7
28	3.3	5.4	6.2	6.5	20	269	520	170	58	10	3.7	3.9
29	3.3	*5.1	7.2	7.2	22	*286	450	163	60	*9.8	3.7	3.9
30	3.6	5.1	6.2	7.5	-	*238	350	157	55	9.0	3.4	4.1
31	3.3	-	5.1	8.8	-	*201	-	151	-	8.2	3.4	-
Total	71.7	125.9	153.8	187.8	638	2,155	13,398	6,970	2,568	655.0	148.1	134.0
Mean	2.31	4.20	4.96	6.06	22.0	69.5	447	225	85.6	21.1	4.78	4.47
Ac-ft	142	250	305	372	1,270	4,270	26,570	13,820	5,090	1,300	294	266

Calendar year 1951: Max 257 Min 0.6 Mean 27.5 Ac-ft 19,900
Water year 1951-52: Max 704 Min 1.3 Mean 74.3 Ac-ft 53,950

Peak discharge (base, 100 cfs).--Mar. 28 (7:15 p.m.) 412 cfs (4.93 ft); Apr. 6 (9:30 p.m.) 940 cfs (6.63 ft); Apr. 13 (11 p.m.) 811 cfs (6.57 ft); Apr. 18 (11 p.m.) 818 cfs (6.89 ft); Apr. 25 (9 p.m.) 872 cfs (7.44 ft); May 20 (4 p.m.) 261 cfs (5.11 ft); June 6 (5 p.m.) 164 cfs (4.62 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Oct. 5-24, Apr. 26 to May 19; discharge estimated on basis of 2 discharge measurements and records for nearby streams.

Quinn River near McDermitt, Nev.

Location.--Lat 41°37', long. 117°48', in SW¼ sec. 15, T. 45 N., R. 37 E., on left bank 1½ miles above Flat Creek and 15½ miles south of McDermitt.

Records available.--October 1948 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,240 ft (from river-profile map).

Extremes.--Maximum discharge during year, 1,580 cfs Apr. 27 (gage height, 8.39 ft); minimum, 0.5 cfs Nov. 17.
1948-52: Maximum discharge, that of Apr. 27, 1952; minimum, 0.2 cfs Dec. 22, 1948.

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

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 14-29, Apr. 15 to May 23)

Oct. 1 to Apr. 8				Apr. 9 to Sept. 30			
1.3	0.5	2.3	40	0.9	1.4	2.0	55
1.4	1.2	2.6	68	1.0	2.9	2.5	101
1.5	2.4	3.0	115	1.1	4.8	3.0	163
1.6	4.2	4.0	277	1.2	7.3	4.0	352
1.8	10	6.0	767	1.4	14	6.0	834
2.0	19	7.8	1,330	1.7	32	8.5	1,550

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	0.8	1.0	1.0	12	5.2	410	1,020	274	142	7.6	2.0
2	.7	.8	1.0	1.0	13	4.2	405	966	252	*125	7.3	2.0
3	.7	.8	1.0	1.0	6.4	4.0	426	983	240	111	7.3	2.0
4	.7	.8	1.0	1.0	4.2	5.0	478	1,010	225	100	6.3	2.2
5	.7	.9	1.0	1.0	3.8	5.7	590	910	213	89	5.8	2.2
6	.7	.9	1.0	1.0	3.5	6.0	752	794	208	81	5.3	2.2
7	.7	.9	1.0	1.0	3.3	6.4	1,070	768	218	72	4.8	2.2
8	.7	.9	1.0	1.0	3.3	6.7	*1,320	904	225	67	4.4	2.2
9	.7	1.0	1.0	1.0	3.3	8.0	1,190	891	211	61	4.0	2.2
10	.7	1.0	1.0	1.0	3.5	11	*947	789	204	55	4.0	2.3
11	.7	1.0	1.0	1.0	3.8	12	872	702	*211	51	3.8	3.3
12	.8	1.1	1.0	1.0	3.1	9.3	853	637	201	52	3.8	2.9
13	.8	1.1	1.0	.9	2.6	9.7	910	601	184	53	3.7	2.5
14	.9	1.1	1.0	1.0	2.3	9.3	1,180	563	168	50	3.5	2.2
15	.9	1.1	1.0	1.0	2.2	9.7	1,180	534	149	47	3.3	2.2
16	.9	1.1	1.0	.9	5.0	12	964	532	141	42	3.1	2.0
17	1.0	.9	1.0	.9	6.7	13	883	479	132	37	2.9	2.0
18	.8	.9	1.0	1.0	4.4	18	953	447	124	32	2.8	1.9
19	.9	1.0	1.0	1.0	4.7	16	1,140	*426	113	31	2.8	1.9
20	.9	1.0	*1.0	.9	3.5	13	1,250	451	105	28	2.6	1.9
21	.9	1.0	1.0	.9	3.1	13	1,070	527	108	25	2.6	1.9
22	.9	1.0	1.0	.9	3.3	13	956	525	109	21	2.5	1.9
23	.9	1.0	1.0	.9	3.3	13	961	476	112	17	2.3	1.7
24	1.0	1.0	1.0	.9	3.7	22	*1,090	421	139	15	2.3	1.7
25	*.9	1.0	1.0	.9	3.1	43	1,220	381	156	14	2.2	1.7
26	.9	1.0	1.0	.9	3.3	82	1,430	363	163	12	*2.2	*1.6
27	.9	1.0	1.0	.9	*3.5	142	1,530	345	168	10	2.2	1.7
28	.9	1.0	1.0	.9	4.7	196	1,430	332	156	12	2.2	1.7
29	.9	*1.0	1.1	.9	5.4	*295	1,300	324	157	*13	2.0	1.7
30	.9	1.0	1.0	.9	-	*390	1,130	311	159	9.9	2.0	1.7
31	.9	-	1.0	.9	-	*440	-	294	-	8.9	2.0	-
Total	25.6	29.1	31.1	29.5	128.0	1,833.2	29,890	18,706	5,225	1,483.8	113.6	61.6
Mean	0.83	0.97	1.00	0.95	4.41	59.1	996	603	174	47.9	3.66	2.05
Ac-ft	51	58	62	59	254	3,640	59,290	37,100	10,360	2,940	225	122

Calendar year 1951: Max 214 Min 0.6 Mean 29.3 Ac-ft 21,220
Water year 1951-52: Max 1,530 Min 0.7 Mean 157 Ac-ft 114,200

Peak discharge (base, 100 cfs).--Apr. 8 (5:30 p.m.) 1,400 cfs (8.01 ft); Apr. 14 (10:30 p.m.) 1,300 cfs (7.61 ft); Apr. 20 (4 a.m.) 1,310 cfs (7.48 ft); Apr. 27 (12:30 a.m.) 1,580 cfs (8.39 ft).
* Discharge measurement made on this day.

Susan River at Susanville, Calif.

Location.--Lat 40°25', long. 120°40', in NE¼ sec. 31, T. 30 N., R. 12 E., on left bank 0.5 mile west of Susanville and 1.1 miles upstream from Piute Creek.

Drainage area.--192 sq mi.

Records available.--June 1900 to December 1905 (gage heights only 1902), March to May 1913, February 1917 to June 1921, October 1950 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,000 ft (from topographic map). Prior to Oct. 1, 1950, staff gages at several sites in vicinity of old powerplant about 0.9 mile upstream at various datums.

Average discharge.--5 years (1917-20, 1950-52), 85.0 cfs.

Extremes.--1950-51: Maximum discharge during water year, 2,230 cfs Nov. 19 (gage height, 5.30 ft), from rating curve extended above 210 cfs; minimum recorded, 2.4 cfs Sept. 11.
1951-52: Maximum discharge during water year, 1,930 cfs Apr. 4 (gage height, 5.32 ft, result of ice jam or debris on control), from rating curve extended above 850 cfs; minimum, 3.2 cfs Oct. 1.
1900-1905, 1913, 1917-21, 1950-52: Maximum discharge, that of Nov. 19, 1950; minimum, 0.8 cfs Aug. 10, 1918.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by McCoy Flat and Hog Flat Reservoirs (combined capacity, 25,300 acre-ft). Diversions for irrigation of about 1,400 acres above station.

Rating tables, Oct. 1, 1950, to Sept. 30, 1952, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 28 to Apr. 30, 1952)

Oct. 1, 1950, to Apr. 4, 1952				Apr. 4 to Sept. 30, 1952			
1.1	2.4	2.6	105	0.8	5.8	2.6	200
1.3	4.6	3.0	186	1.0	8.7	3.0	325
1.5	8.2	3.5	365	1.2	14	3.5	550
1.7	15	4.0	650	1.5	28	4.0	870
2.0	32	4.5	1,100	1.8	52	5.0	1,800
2.3	60			2.2	108		

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a5	37	54	45	b75	b65	131	121	60	118	96	4.6
2		31	44	45	74	b50	136	119	45	116	96	4.4
3		29	488	45	87	b40	146	131	38	116	43	4.2
4		26	405	47	453	69	161	150	34	116	12	4.0
5		22	*213	43	472	63	177	146	31	121	7.7	3.8
6		20	308	36	347	60	191	163	29	119	6.5	3.7
7		19	242	b36	415	64	202	161	29	123	*5.8	3.7
8		18	374	b36	406	68	213	157	33	119	5.6	3.2
9		18	273	36	338	68	229	150	31	114	5.3	*2.6
10		16	202	36	329	b45	245	144	29	112	5.0	2.5
11	8.8	16	282	35	396	53	226	161	28	107	4.7	2.5
12	8.5	16	202	b30	370	59	213	165	28	102	4.6	2.7
13	8.5	17	163	b30	284	79	213	155	26	91	4.4	2.8
14	8.5	18	522	38	235	100	219	165	24	86	4.3	2.8
15	8.8	18	334	34	205	*119	*213	163	22	84	4.3	2.7
16	8.8	37	235	*37	179	132	223	155	21	98	*3.9	2.6
17	9.3	190	189	38	163	112	252	150	19	116	3.4	3.5
18	9.6	937	161	61	148	103	210	134	*18	127	3.3	3.7
19	9.0	721	142	45	129	103	191	103	16	127	3.3	5.1
20	9.0	1,070	121	b47	129	116	177	90	*16	125	5.0	4.2
21	9.0	1,030	107	67	119	136	159	90	17	114	5.4	3.7
22	8.8	268	93	537	110	138	146	98	18	112	5.0	3.7
23	9.0	157	84	304	b85	131	138	96	16	109	5.0	3.6
24	9.9	114	74	216	b80	129	129	93	16	107	5.6	3.4
25	11	88	69	170	93	138	125	98	15	105	5.0	3.4
26	79	72	64	152	86	140	127	100	88	103	4.3	3.3
27	80	60	58	138	82	144	116	90	131	102	3.8	2.9
28	44	53	56	116	b65	142	168	70	129	98	3.7	2.9
29	53	47	54	b90	-	150	144	72	123	100	4.3	3.1
30	296	68	53	b60	-	148	127	70	119	100	4.6	3.3
31	54	-	48	b70	-	132	-	65	-	98	4.7	-
Total	792.5	5,233	5,714	2,720	5,954	3,096	5,347	3,825	1,249	3,387	375.5	102.6
Mean	25.6	174	184	87.7	213	99.9	178	123	41.6	109	12.1	3.42
Ac-ft	1,570	10,380	11,330	5,400	11,810	6,140	10,610	7,590	2,480	6,720	745	204

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 1,070 Min 2.5 Mean 104 Ac-ft 74,980

Peak discharge (base, 300 cfs).--Oct. 26 (9 p.m.) 388 cfs (3.55 ft); Oct. 30 (1 a.m.) 792 cfs (4.19 ft); Nov. 19 (2 a.m.) 2,230 cfs (5.30 ft); Dec. 3 (5:30 p.m.) 1,190 cfs (4.58 ft); Dec. 11 (8:30 a.m.) 562 cfs (3.87 ft); Dec. 14 (9 a.m.) 1,030 cfs (4.44 ft); Jan. 22 (7 a.m.) 706 cfs (4.08 ft); Feb. 4 (7 p.m.) 728 cfs (4.11 ft); Feb. 11 (6 p.m.) 568 cfs (3.88 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of unpublished records for State of California station just downstream.

b Stage-discharge relation affected by ice.

Susan River at Susanville, Calif.--Continued

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.0	9.0	227	b25	425	b60	562	1,270	423	71	169	7.0
2	7.3	9.0	113	b25	696	b60	632	1,340	393	67	164	7.0
3	8.0	9.6	57	b25	242	b60	748	1,420	345	67	160	*7.0
4	6.5	9.9	43	b25	163	b60	1,030	1,240	255	61	160	6.9
5	6.3	9.6	b32	b25	132	b60	1,210	1,140	*234	55	152	7.0
6	6.0	9.6	b28	b25	114	b60	1,210	1,080	243	51	81	7.2
7	5.6	9.6	b25	b25	103	60	835	1,130	240	47	64	7.0
8	5.4	9.9	b23	b25	95	59	664	1,120	258	43	58	7.2
9	5.3	9.6	b22	24	90	70	604	1,020	280	*40	58	7.7
10	5.4	10	*b22	26	86	100	610	1,000	325	38	55	11
11	6.1	14	b22	26	85	84	640	1,020	304	37	54	18
12	6.0	17	b20	25	b60	78	670	988	268	35	51	15
13	6.1	17	20	26	b50	b60	694	956	246	33	51	12
14	6.0	15	18	22	b60	68	598	919	222	*30	*50	12
15	5.4	15	18	b13	60	68	550	*870	200	27	48	11
16	5.6	12	19	b13	120	61	580	856	179	25	24	9.8
17	5.8	12	18	b13	123	58	658	793	164	100	10	9.8
18	5.8	12	20	b13	100	*60	*758	744	152	146	9.2	11
19	6.5	13	20	b14	90	58	793	688	141	162	8.9	11
20	6.5	16	18	b20	82	b35	658	670	132	169	8.5	11
21	6.1	14	16	28	74	b30	628	640	106	167	8.2	9.2
22	6.1	b11	18	27	68	b35	658	610	90	172	7.8	7.8
23	6.7	b11	28	26	65	b45	730	580	101	172	7.5	7.7
24	22	b12	66	27	65	93	793	598	94	169	7.3	8.0
25	22	b12	34	30	63	205	940	598	88	169	7.3	8.0
26	15	14	120	31	63	276	964	592	86	169	*7.3	8.2
27	12	19	299	30	63	284	996	586	84	172	7.3	8.4
28	9.9	26	181	28	b62	425	1,040	568	82	172	7.3	8.2
29	8.5	27	132	28	b62	*631	898	550	86	172	7.3	8.2
30	9.0	31	85	29	-	754	1,040	525	78	190	7.3	8.2
31	9.3	-	b30	52	-	678	-	495	-	179	7.2	-
Total	246.2	415.8	1,794	771	3,561	4,735	23,391	26,606	5,899	3,207	1,517.4	277.5
Mean	7.94	13.9	57.9	24.9	123	153	780	858	197	103	48.9	9.25
Ac-ft	488	825	3,560	1,530	7,060	9,390	46,400	52,770	11,700	6,360	3,010	550

Calendar year 1951: Max 537 Min 2.5 Mean 78.1 Ac-ft 56,570
Water year 1951-52: Max 1,420 Min 4.0 Mean 198 Ac-ft 143,600

Peak discharge (base, 300 cfs).--Dec. 1 (7 p.m.) 615 cfs (3.95 ft); Dec. 27 (1 a.m.) 615 cfs (3.95 ft); Feb. 1 (12 p.m.) 1,460 cfs (4.80 ft); Apr. 4 (6 p.m.) 1,930 cfs (5.32 ft); May 2 (12 p.m.) 1,510 cfs (4.76 ft).

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

Willow Creek near Susanville, Calif.

Location.--Lat 40°29', long. 120°32', in NW¼ sec. 5, T. 30 N., R. 13 E., on left bank 4 miles upstream from Peters Valley Creek and 8 miles northeast of Susanville.

Records available.--October 1950 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,500 ft (from base map).

Extremes.--1950-51: Maximum discharge during water year, 241 cfs Jan. 23 (gage height, 3.89 ft); minimum, 9.1 cfs Aug. 31, Sept. 1.
1951-52: Maximum discharge during water year, 626 cfs Apr. 6 (gage height, 5.32 ft), from rating curve extended above 420 cfs; minimum, 8.1 cfs Nov. 16.

Remarks.--Records good except those for periods of no gage-height record during 1952 water year, which are fair. Diversions for irrigation of about 5,200 acres above station.

Rating table, Oct. 1, 1950, to Sept. 30, 1952 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 17-19, 1950, July 16 to Oct. 7, 1951, June 4-10, 1952)

2.0	9.0	3.2	109
2.2	13	3.6	180
2.4	22	4.0	266
2.6	35	4.6	415
2.9	67	5.3	620

Discharge, in cubic 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	26	31	29	22	12	13	11	9.6	9.9	9.2
2	10	15	24	31	31	18	12	13	11	9.6	9.7	9.2
3	10	14	63	31	37	18	12	13	12	9.6	9.7	9.2
4	10	14	86	33	77	18	12	31	12	9.6	9.6	9.2
5	10	14	56	34	100	20	12	13	11	9.7	9.6	9.2
6	10	14	46	32	83	20	12	14	11	9.7	9.6	9.2
7	10	14	*44	31	67	23	12	14	11	9.7	9.6	9.2
8	10	14	60	30	61	25	12	14	11	9.9	9.6	9.2
9	10	14	50	32	53	25	12	14	11	9.9	9.6	9.2
10	10	14	42	32	47	23	12	14	11	9.9	9.6	*9.2
11	10	14	44	33	55	22	12	14	10	10	9.6	9.4
12	11	14	42	30	71	21	12	14	10	10	9.6	9.4
13	11	14	37	30	61	20	*12	13	10	10	9.6	9.4
14	11	14	53	31	55	18	12	13	10	10	9.6	9.4
15	11	14	62	28	48	18	12	13	10	10	9.6	9.4
16	11	15	46	*30	43	*17	12	13	10	10	9.6	9.6
17	*11	24	37	29	40	15	12	13	9.9	10	9.4	9.7
18	11	40	35	42	40	15	12	13	9.9	10	9.4	9.7
19	11	37	32	37	37	15	12	13	9.9	10	9.6	9.7
20	11	88	32	37	37	15	12	12	9.9	10	9.7	9.7
21	11	123	33	41	37	15	12	12	*9.9	10	9.7	9.7
22	11	72	35	164	37	15	12	12	9.9	10	9.7	9.7
23	11	44	37	223	37	14	12	12	9.9	10	9.7	9.7
24	12	36	37	170	36	14	12	12	9.9	10	9.6	9.9
25	12	31	37	112	33	14	12	11	9.9	10	9.6	9.9
26	14	29	35	86	32	14	12	11	9.9	10	9.4	9.9
27	14	28	34	68	27	13	12	11	9.7	10	9.4	9.9
28	13	26	34	55	23	12	12	11	9.7	10	9.4	9.9
29	13	26	34	37	-	12	13	12	9.7	10	9.4	9.9
30	16	24	36	27	-	12	13	11	9.6	10	9.4	9.9
31	16	-	26	28	-	12	-	11	-	10	9.2	-
Total	352	855	1,295	1,655	1,334	535	362	392	309.7	307.2	296.7	285.8
Mean	11.4	28.5	41.8	53.4	47.6	17.3	12.1	12.6	10.3	9.91	9.57	9.53
Ac-ft	698	1,700	2,570	3,280	2,650	1,060	718	778	614	609	588	567

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 223 Min 9.2 Mean 21.9 Ac-ft 15,830

Peak discharge (base, 200 cfs).--Jan. 23 (5 p.m.) 241 cfs (3.89 ft).
* Discharge measurement made on this day.
Note.--No gage-height record Oct. 1-16, Sept. 3-9; discharge estimated on basis of weather records and range in stage.

Willow Creek near Susanville, Calif.--Continued

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	12		23	22		491	72	12	11	12	12
2	10	12		20	40		509	65	11	12	12	12
3	10	12		20	59		515	60	11	12	12	12
4	11	12		20	63		548	53	11	11	12	12
5	11	12	a16	20	61		590	47	11	11	12	12
6	11	12		20	45	a28	605	42	*11	11	12	12
7	11	12		20	44		596	42	11	11	12	12
8	11	12		19	46		545	37	11	11	12	12
9	11	12	*14	18	42		515	33	11	11	12	12
10	11	12	14	16	37		488	30	11	11	13	12
11	11	13	14	16	34		420	26	11	11	13	13
12	11	13	14	16	30		390	23	11	11	12	12
13	11	12	15	17	26		372	21	11	11	12	12
14	11	12	15	14	24		362	20	11	11	*12	12
15	11	12	15	13	25	a50	320	*17	11	11	12	12
16	11	12	17	12	39		276	15	11	11	12	13
17	11	12	18	12	51	(*)	257	14	11	11	12	13
18	11	12	20	12	41	46	217	14	11	12	12	13
19	11	13	21	12	37	41	190	13	11	12	12	13
20	11	14	21	12		42	144	13	11	11	12	13
21	11	13	20	12		43	122	12	11	12	12	14
22	11	13	20	12		44	108	12	11	11	12	14
23	11		22	12		44	102	12	12	11	12	14
24	13		23	12		54	97	12	12	11	12	14
25	13		22	12	a30	97	104	12	11	11	12	14
26	13	a14	22	12		215	100	12	11	11	12	16
27	12		34	12		278	100	12	11	11	12	16
28	12		54	12		328	93	12	11	11	12	16
29	12		54	12		388	83	12	11	11	12	16
30	12		38	13	-	*438	75	12	11	11	12	16
31	12	-	30	13	-	470	-	12	-	11	12	-
Total	349	383	665	466	1,066	3,158	9,334	789	333	346	374	396
Mean	11.3	12.8	21.5	15.0	36.8	102	311	25.5	11.1	11.2	12.1	13.2
Ac-ft	692	760	1,320	924	2,110	6,260	18,510	1,560	660	686	742	785

Calendar year 1951: Max 223 Min 9.2 Mean 18.8 Ac-ft 13,640
Water year 1951-52: Max 605 Min 10 Mean 48.2 Ac-ft 35,010

Peak discharge (base, 200 cfs).--Apr. 6 (5 p.m.) 626 cfs (5.32 ft).
* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of range in stage and records for Susan River at Susanville.

Pine Creek near Westwood, Calif.

Location.--Lat 40°35', long. 121°06', in SE¼ sec. 5, T. 31 N., R. 8 E., on right bank 1 mile southwest of Bogard Guard Station and 19 miles north of Westwood.

Drainage area.--22.6 sq mi.

Records available.--October 1950 to September 1952.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,700 ft (from topographic map).

Extremes.--1950-51: Maximum discharge during water year, 40 cfs Oct. 30 (gage height, 3.39 ft; minimum daily, 0.7 cfs Nov. 16.
1951-52: Maximum discharge during water year, 154 cfs May 26 (gage height, 3.91 ft), from rating curve extended above 90 cfs; minimum, 0.8 cfs Nov. 20.

Remarks.--Records good except those for periods of ice effect or no gage-height record and those above 100 cfs, which are poor. No regulation or diversion above station.

Rating table, Oct. 1, 1950, to Sept. 30, 1952, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.5	0.5	3.1	16
2.6	1.0	3.3	30
2.7	1.7	3.5	59
2.8	3.6	3.9	151
2.9	6.6		

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	a0.9	3.6	3.3	2.9				21	8.9	3.6	1.8	1.7
2	a.9	3.3	2.9	5.0				19	8.5	3.6	1.7	1.6
3	a.8	3.1	3.6	5.3				19	8.5	3.3	1.8	1.5
4	a1.0	2.5	5.0	3.6				19	8.1	3.3	1.7	1.5
5	a1.3	2.1	4.4	4.1			a12	18	8.1	3.1	1.7	1.5
6	a1.5	1.9	*6.6	5.6				18	7.7	3.1	1.7	1.5
7	a1.1	1.8	8.9	8.9				18	7.7	3.1	1.7	1.5
8	*1.0	1.7	8.1	11				18	7.3	2.9	1.7	1.4
9	1.0	1.6	11	8.9				19	7.3	2.7	1.7	1.4
10	.9	1.3	7.0	7.3			17	21	7.3	2.7	1.6	*1.3
11	.9	1.3	13	7.0			18	31	7.0	2.7	1.6	1.3
12	.9	1.5	8.9	7.0			18	25	6.6	2.7	1.5	1.3
13	.9	1.5	6.6	8.9			20	21	6.6	2.7	1.6	1.3
14	.8	1.5	18	7.0			*23	18	6.3	2.7	1.5	1.3
15	.8	1.3	14		a6	a7	25	18	5.9	2.7	1.5	1.3
16	.9	.7	9.4				25	19	5.9	2.5	1.4	1.3
17	1.1	1.3	7.3				26	22	5.6	2.5	1.5	1.3
18	1.1	4.9	5.9				25	23	5.3	2.3	1.6	1.3
19	1.0	5.6	6.6				23	23	5.3	2.3	1.7	1.3
20	.9	20	5.6				23	22	5.6	2.3	1.8	1.2
21	.9	18	5.0				22	21	*7.0	2.3	1.7	1.2
22	.9	9.4	5.0				22	19	6.6	2.1	1.7	1.2
23	.9	6.6	4.4	a5			23	18	5.6	2.1	2.5	1.2
24	1.1	5.3	4.4				23	16	5.0	1.9	3.3	1.1
25	3.0	5.0	4.1				22	14	4.7	1.9	2.1	1.1
26	19	4.7	3.8				22	14	4.4	1.9	1.9	1.2
27	11	4.7	4.7				22	13	4.4	1.8	1.7	1.3
28	5.3	4.1	4.1				17	12	4.1	1.8	1.7	1.3
29	15	3.3	4.1		-		26	11	3.8	1.8	1.7	1.3
30	20	4.7	3.6		-		23	10	3.6	1.8	1.7	1.4
31	5.0	-	3.1		-		-	9.4	-	1.8	1.7	-
Total	101.8	128.3	202.4	177.7	168	217	573	569.4	188.7	78.0	54.5	40.1
Mean	3.28	4.28	6.53	5.73	6	7	19.1	18.4	6.29	2.52	1.76	1.34
Ac-ft	202	254	401	352	333	430	1,140	1,130	374	155	108	80

Calendar year 1950: Max - Min - Mean - Ac-ft -
Water year 1950-51: Max 31 Min 0.7 Mean 6.85 Ac-ft 4,960

Peak discharge (base, 35 cfs).--Oct. 30 (1:30 a.m.) 40 cfs (3.39 ft); Apr. 15 (7:30 p.m.) 36 cfs (3.36 ft); May 11 (4 a.m.) 35 cfs (3.35 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Butt Creek above Almanor-Butt Creek tunnel near Prattville.

Pine Creek near Westwood, Calif.--Continued

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	3.8	7.3				3.8	29	96	15	6.6	2.5
2	5.3	3.6	12				4.1	32	96	14	5.9	2.5
3	2.9	3.6	16				4.1	35	93	13	5.3	2.5
4	1.9	3.8	15				5.0	34	89	12	5.0	2.5
5	1.8	3.3	8.9				5.6	35	*89	12	4.7	2.5
6	1.7	2.9					6.3	39	89	11	4.7	2.5
7	1.7	2.9					6.6	43	78	11	4.7	2.5
8	1.6	2.9					6.3	43	74	10	4.4	2.5
9	1.6	2.5					5.9	45	72	9.8	4.4	2.7
10	1.8	2.5					5.9	55	55	9.8	4.1	3.3
11	2.1	1.9					6.6	64	46	9.4	4.1	5.0
12	1.9	4.1					7.3	66	39	9.8	4.1	3.6
13	1.8	4.4					7.7	74	34	10	3.8	2.9
14	1.7	4.4					7.7	72	32	9.4	*3.6	2.7
15	1.6	5.6				3	7.3	74	30	8.1	3.6	2.5
				2	3							
16	1.7	5.6					7.7	80	28	7.7	3.6	2.4
17	1.7	5.0					9.4	82	27	7.7	3.5	2.3
18	1.7	5.0	4				11	85	25	7.3	3.3	2.1
19	1.7	2.1					11	85	24	7.0	3.3	2.1
20	1.7	1.1					10	87	23	7.0	3.1	2.1
21	1.7	2.5					11	89	23	6.6	3.1	2.1
22	1.7	3.6					13	98	21	6.3	3.1	1.9
23	2.5	3.1					15	107	22	6.3	3.1	1.9
24	5.9	2.1					18	119	21	6.3	2.9	1.9
25	5.0	2.5					21	124	19	5.9	2.9	1.9
26	5.6	2.9					25	135	19	5.9	2.9	1.9
27	4.4	2.7					29	129	18	5.6	2.9	2.1
28	2.8	3.1				(*)	30	124	24	5.6	2.9	2.1
29	3.8	3.6				4.4	31	114	20	7.0	2.7	1.9
30	3.8	5.6			-	4.4	30	110	17	8.9	2.7	1.9
31	3.6	-			-	4.1	-	105	-	10	2.6	-
Total	82.5	102.7	163.2	62	87	96.6	362.3	2,413	1,343	275.4	117.3	73.4
Mean	2.66	3.42	5.26	2	3	3.13	12.1	77.8	44.8	8.88	3.78	2.45
Ac-ft	164	204	324	123	173	192	719	4,790	2,660	546	233	146

Calendar year 1951: Max 31 Min - Mean 6.62 Ac-ft 4,790
Water year 1951-52: Max 135 Min - Mean 14.1 Ac-ft 10,270

Peak discharge (base, 35 cfs).--May 26 (8 p.m.) 154 cfs (3.91 ft); June 6 (7 p.m.) 107 cfs (3.73 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 6 to Mar. 28.

Twentymile Creek near Adel, Oreg.

Location.--Lat 42°04', long. 119°57', in NW¼ sec. 25, T. 40 S., R. 23 E., on left bank 2 miles downstream from Twelvemile Creek and 8 miles southwest of Adel. Prior to June 29 at site 70 ft upstream.
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 "near Warner Lake"), September 1940 to September 1952.
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. Mar. 12, 1945, to June 28, 1952, water-stage recorder at site 70 ft upstream at datum 2.9 ft higher.
Average discharge.--17 years (1910-15, 1918-19, 1940-44, 1945-52), 48.3 cfs.
Extremes.--Maximum discharge during year, 2,360 cfs Apr. 6 (gage height, 9.85 ft, site and datum then in use); minimum, 1.7 cfs Dec. 24 (gage height, 0.38 ft, site and datum then in use).
1910-16, 1917-19, 1921-22, 1940-52: 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 fair 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 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 25				Apr. 26 to June 28		June 29 to Sept. 30	
0.5	3.2	2.0	133	1.8	61	0.9	2.0
.6	5.4	4.0	475	2.0	88	1.0	4.8
.7	8.8	6.0	950	3.0	265	1.2	14
1.0	27	8.0	1,600	5.0	690	1.5	36
1.5	71	8.5	1,800	5.4	790	1.9	86

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	4.4	22	b9	50	21	559	375	199	62	16	5.2
2	5.1	4.4	16	b7	180	22	718	335	177	56	14	5.2
3	4.6	4.6	10	b8	133	21	882	327	177	53	13	4.8
4	3.9	4.6	7.4	b8.5	122	19	1,200	267	172	53	13	*4.5
5	3.3	4.6	b6.5	b8.5	100	18	1,510	267	170	57	12	4.5
6	3.3	4.4	b6	b8.1	82	17	1,740	271	176	53	11	4.5
7	3.3	4.4	b5	b7.8	71	16	1,600	*265	159	47	11	4.8
8	3.2	4.6	a4.5	b7.1	57	16	*1,160	361	149	45	11	4.8
9	3.3	4.4	a4.5	b7.4	48	17	932	240	142	41	10	5.2
10	*3.5	4.6	a5	7.4	41	21	970	177	139	39	9.6	6.9
11	3.7	5.1	a5.5	7.4	40	22	1,130	190	107	44	9.6	11
12	4.1	7.8	a6	7.4	34	22	1,200	204	*102	46	9.0	11
13	4.1	6.8	*6.1	b7	32	21	1,100	210	93	41	8.6	7.7
14	4.1	6.1	a6	b7	31	19	804	269	87	36	8.2	6.5
15	4.1	5.4	5.7	b8	24	22	729	291	75	33	8.2	6.1
16	4.1	4.4	5.4	b7	34	21	831	289	71	31	8.2	5.2
17	4.1	4.1	b5.1	b6	30	*20	954	293	70	29	7.3	4.8
18	4.4	5.1	5.1	a6.5	29	21	*1,100	291	71	*27	*6.5	4.8
19	4.4	6.1	b5.4	a7	26	21	918	317	75	27	6.5	4.8
20	4.4	6.1	5.4	a8	22	20	531	341	74	24	6.5	4.5
21	4.6	5.7	b5.4	a8.5	*b27	b20	549	309	77	23	6.1	4.5
22	4.6	4.6	5.4	a9	31	b20	644	285	70	22	6.1	4.2
23	5.1	4.5	6.4	a9.5	21	19	696	281	81	22	5.6	4.2
24	6.1	4.6	6.4	b10	20	86	571	305	*96	21	5.6	4.2
25	5.7	4.6	b6	7.1	20	232	1,260	331	85	20	5.2	4.2
26	4.8	5.7	7.4	7.1	19	315	758	325	75	19	5.6	4.2
27	4.4	5.7	b9	7.1	18	*371	537	305	69	18	5.6	4.2
28	4.4	7.1	b12	6.8	19	579	507	299	82	19	5.2	4.5
29	4.4	7.4	b15	7.1	19	712	397	293	76	18	5.2	4.8
30	4.6	7.1	13	7.4	-	611	353	261	77	16	5.2	*4.8
31	4.6	-	b10	11	-	527	-	197	-	16	5.2	-
Total	131.6	159.0	238.6	240.7	1,380	3,889	26,840	8,771	3,273	1,058	259.8	160.6
Mean	4.25	5.30	7.70	7.76	47.6	125	895	283	109	34.1	8.38	5.35
Ac-ft	261	315	473	477	2,740	7,710	53,240	17,400	6,490	2,100	515	319

Calendar year 1951: Max 1,480 Min 2.4 Mean 48.7 Ac-ft 35,250
Water year 1951-52: Max 1,740 Min 3.2 Mean 127 Ac-ft 92,040

Peak discharge (base, 400 cfs).--Mar. 28 (7 p.m.) 888 cfs (5.79 ft); Apr. 6 (9 p.m.) 2,360 cfs (9.85 ft); Apr. 18 (9 p.m.) 1,900 cfs (8.74 ft); Apr. 25 (6:30 p.m.) 2,350 cfs (9.83 ft); May 8 (3 a.m.) 415 cfs (3.75 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 Camas Creek near Lakeview, Deep Creek above Adel, and Honey Creek near Plush.
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 1952.

Gage.--Water-stage recorder. Datum of gage is 5,472.41 ft above mean sea level (Oregon State Highway Department construction survey benchmark). 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, 660 cfs Apr. 28 (gage height, 4.24 ft); minimum, 4.4 cfs Nov. 2 (gage height, 0.55 ft).
1912-14, 1949-52: Maximum discharge, that of Apr. 28, 1952; minimum, 2 cfs Sept. 17-23, 1913.

Remarks.--Records good except those for periods of ice effect, which are poor. Diversion for irrigation of about 1,200 acres above station.

Revisions.--W 410: Drainage area.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 6				Apr. 7 to Sept. 30			
0.5	3.5	2.0	88	0.5	4.0	2.0	102
.7	7.4	2.5	151	.7	8.5	2.5	175
.9	13	3.0	250	.9	15	3.0	270
1.2	26	3.3	325	1.2	30	3.5	390
1.5	44			1.5	50	4.1	600

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	7.2	46	b9	15	b15	106	390	106	44	9.7	6.0
2	9.7	6.3	22	b5	b19	b14	119	355	94	37	9.4	6.0
3	*8.2	6.3	17	b7	b25	b14	151	338	87	32	9.1	*5.8
4	7.0	7.0	14	b8	b28	b14	203	280	79	28	9.4	5.8
5	6.1	6.5	b13	b10	b30	b13	272	274	*72	25	8.8	5.8
6	5.6	6.3	*b14	b8	b29	13	318	278	*86	22	8.2	6.0
7	5.4	6.3	b14	b8	b28	13	325	312	100	20	8.0	6.2
8	5.2	6.5	b14	b8	*b27	b12	282	*408	75	19	7.8	6.2
9	5.0	6.3	14	b9	b26	13	262	338	63	17	7.8	8.5
10	5.0	6.3	15	b10	b25	b13	262	312	61	17	7.8	13
11	5.4	7.2	15	b9	25	b13	276	315	60	17	7.5	13
12	6.5	6.7	15	*b8	24	b13	302	305	61	20	7.5	13
13	6.1	5.9	16	b7	b24	b12	318	292	55	18	7.2	10
14	5.6	7.7	17	b8	24	b13	286	282	50	16	7.2	8.5
15	7.0	6.7	16	b10	22	13	*278	252	49	15	7.0	8.0
16	7.0	b6.3	15	b8	21	13	305	248	44	13	7.2	7.5
17	6.1	b6.3	b14	b6	b19	b12	340	242	40	12	6.8	7.0
18	5.9	b6.7	b13	b8	b19	b12	390	232	35	*12	*6.5	6.8
19	6.1	b7.0	b12	b10	b19	b12	441	232	32	11	6.8	6.8
20	6.3	7.4	b13	b12	b21	b12	362	246	31	11	6.8	6.5
21	6.5	7.9	b15	b14	b22	b12	360	211	34	11	6.8	6.5
22	7.0	b7.4	17	b16	b22	b12	380	191	29	10	6.5	6.8
23	11	b7.2	18	b18	21	b12	432	179	*44	10	6.5	6.5
24	15	b6.7	22	b20	b20	17	460	168	62	10	6.5	6.5
25	12	b7.0	b20	b18	b19	36	600	163	73	9.7	6.5	6.2
26	11	7.0	21	b15	*b17	b110	540	152	63	9.4	6.5	6.5
27	9.2	7.7	22	b12	b16	128	528	139	51	8.5	6.5	6.5
28	9.2	11	22	b10	b16	135	*548	130	76	9.4	6.5	6.5
29	8.7	15	22	b11	b15	189	454	122	63	9.1	6.5	*6.5
30	8.2	35	b18	b13	-	139	411	113	53	9.1	6.2	6.5
31	7.4	-	b13	b14	-	101	-	108	-	9.4	6.2	-
Total	231.6	244.8	539	329	638	1,150	10,311	7,607	1,828	511.6	227.7	221.4
Mean	7.47	8.16	17.4	10.6	22.0	37.1	344	245	60.9	16.5	7.35	7.38
Ac-ft	459	486	1,070	653	1,270	2,280	20,450	15,090	3,630	1,010	452	439

Calendar year 1951: Max 337 Min 4.2 Mean 49.8 Ac-ft 36,070
Water year 1951-52: Max 600 Min 5.0 Mean 65.1 Ac-ft 47,290

Peak discharge (base, 200 cfs).--Mar. 29 (7:30 a.m.) 234 cfs (2.93 ft); Apr. 6 (9 p.m.) 376 cfs (3.47 ft); Apr. 19 (4 a.m.) 536 cfs (3.94 ft); Apr. 28 (3 a.m.) 660 cfs (4.24 ft); May 8 (7 a.m.) 447 cfs (3.69 ft).

* Discharge measurement made on this day.
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 1952.

Gage.--Water-stage recorder. Datum of gage is 5,076.42 ft above mean sea level (Oregon State Highway Department construction survey benchmark). Prior to May 9, 1923, staff gage at highway bridge at different datum. Dec. 16, 1949, to June 21, 1951, water-stage recorder at site 900 ft upstream at different datum.

Extremes.--Maximum discharge during year, 866 cfs Apr. 5 (gage height, 3.58 ft), from rating curve extended above 160 cfs by logarithmic plotting; minimum, 2.7 cfs Dec. 4 (gage height, 0.53 ft).
1915, 1922-23, 1949-52: Maximum discharge, that of Apr. 5, 1952, minimum, 2.5 cfs Jan. 2-4, 12-14, 1950.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 620 acres above station.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
0.5	2.0	1.0	24	0.7	6.3	2.0	175
.6	4.2	1.2	41	.8	10	2.5	320
.7	7.3	1.5	78	1.0	22	3.0	530
.8	12			1.2	40	3.2	630
Note.--Same as following table above 1.5 ft.				1.5	78		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.1	6.4	4.8	b4.5	a10	b4.8	198	40	13	10	10	8.9
2	9.4	6.7	4.0	a4	a11	b4.8	234	34	13	9.6	9.6	8.5
3	8.6	7.0	4.5	a5	a12	b4.8	305	29	12	9.3	9.3	*8.5
4	8.1	6.7	3.5	a6	a13	4.8	391	28	12	9.3	10	8.9
5	7.3	7.0	b3.5	a8	a14	4.8	536	24	11	9.3	9.6	8.9
6	7.0	7.0	b3.5	a7	a15	4.8	595	21	12	9.6	9.6	9.3
7	7.0	7.0	3.8	a6	a10	4.8	380	26	12	9.6	9.6	9.3
8	6.7	7.3	a3.5	a6.5	*6.7	4.8	*202	*39	11	9.6	9.6	9.3
9	6.7	7.0	a3	a7	b6.1	5.4	175	27	11	9.3	9.3	11
10	*6.7	7.3	a3.5	a8	b6.1	5.4	168	23	12	9.6	9.3	11
11	6.7	7.7	a4	a7	5.4	5.1	160	21	12	13	9.3	14
12	7.0	9.0	a5	*6.1	b5.4	5.1	171	20	*12	72	9.6	11
13	6.7	8.1	*b6.5	5.8	b5.4	b4.8	182	19	11	42	9.6	9.3
14	6.1	8.6	b7.0	4.8	b5.4	b5.1	118	19	12	22	9.3	8.9
15	6.1	7.3	7.3	7.0	5.1	5.1	77	17	11	17	8.9	8.9
16	5.8	b6.7	7.3	6.7	5.8	5.4	98	17	11	13	8.9	8.9
17	5.8	b6.7	b7.0	a5	b5.8	*b5.1	132	16	10	10	8.9	8.5
18	5.8	b7.0	6.4	a6.5	b5.8	5.1	*180	16	10	*9.6	*9.3	8.9
19	5.4	6.4	b6.7	a8	b5.4	5.4	171	16	10	9.3	9.3	8.9
20	5.8	6.4	7.0	a9	5.4	b5.1	59	18	10	9.6	9.3	8.5
21	5.8	5.8	7.3	a10	b5.8	b5.1	56	17	10	9.3	9.3	8.5
22	5.8	b4.2	6.7	a11	b5.8	b5.1	68	16	10	9.3	9.3	8.5
23	6.7	b4.2	7.3	a13	5.4	b5.1	84	15	*12	9.3	9.3	8.5
24	7.0	b4.2	7.3	a15	b5.1	12	70	14	13	9.6	8.9	8.5
25	6.7	b4.2	b6.7	a13	b5.1	41	172	14	14	9.3	9.3	8.2
26	6.4	4.2	b7.0	a10	4.8	74	156	13	13	9.3	9.3	8.2
27	6.4	4.0	8.1	a8	4.8	99	70	13	12	10	8.9	8.2
28	6.1	4.5	7.7	a8	4.8	232	61	13	12	10	8.9	8.2
29	6.1	4.2	6.7	a8.5	4.8	296	47	13	12	10	8.9	*8.2
30	6.1	4.5	6.1	a9	-	264	37	13	10	10	8.5	8.5
31	6.4	-	b5.5	a9.5	-	215	-	13	-	10	8.9	-
Total	206.3	187.3	178.2	242.9	205.2	1,348.8	5,353	624	346	418.8	287.8	272.9
Mean	6.65	6.24	5.75	7.84	7.08	43.5	178	20.1	11.5	13.5	9.28	9.10
Ac-ft	409	372	353	482	407	2,680	10,620	1,240	686	831	571	541

Calendar year 1951: Max 252 Min 3 Mean 13.4 Ac-ft 9,700
Water year 1951-52: Max 595 Min 3 Mean 26.4 Ac-ft 19,190

Peak discharge (base, 150 cfs).--Mar. 28 (6 p.m.) 408 cfs (2.72 ft); Apr. 5 (7 p.m.) 866 cfs (3.58 ft); Apr. 18 (12 p.m.) 340 cfs (2.55 ft): Apr. 25 (12 p.m.) 436 cfs (2.79 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 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 1952 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 benchmark). Prior to Dec. 21, 1922, staff gage at same site and datum.

Average discharge.--24 years (1922-23, 1929-52), 111 cfs.

Extremes.--Maximum discharge during year, 2,140 cfs Apr. 5 (gage height, 5.55 ft); minimum, 16 cfs Oct. 1, Nov. 21, 23.
1922-23, 1929-52: 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 table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	14	2.5	310
.8	25	3.0	470
1.0	41	4.0	950
1.5	101	5.0	1,650
2.0	190		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	27	124	b30	a80	b48	613	1,050	541	206	36	18
2	28	25	59	b25	a120	b52	720	956	505	182	35	18
3	36	25	63	b28	a100	b51	914	902	484	164	34	*18
4	28	27	36	b30	a85	45	1,150	735	477	148	33	19
5	22	26	32	b34	a80	b43	1,370	685	456	137	31	19
6	20	26	b30	b32	a75	44	1,640	685	470	122	28	20
7	19	26	b28	b30	a70	43	1,340	*782	494	98	27	20
8	18	26	b25	b30	a70	44	998	1,020	432	90	26	20
9	18	25	b25	b30	b68	46	872	884	379	90	24	24
10	18	25	b28	b34	b67	50	*836	755	391	88	24	40
11	18	27	b30	b34	61	b47	884	782	364	127	23	45
12	23	26	b34	*b32	b59	50	968	788	*337	272	23	55
13	23	25	*b40	b28	b61	b49	1,020	776	295	176	22	41
14	21	32	b40	b30	b56	b50	824	794	260	118	21	34
15	21	31	b36	b32	53	46	735	725	240	94	21	30
16	24	30	b34	b25	53	46	812	700	210	78	21	27
17	21	29	b32	a20	b53	*47	938	715	188	66	21	27
18	20	29	b30	a25	b53	44	*1,110	715	176	*53	*21	26
19	20	28	b30	a28	b51	44	1,310	735	174	48	21	25
20	21	29	b30	a30	b49	b44	926	878	172	48	20	24
21	21	27	b34	a32	*b56	b44	884	788	188	46	21	24
22	21	28	b38	a34	b51	b44	944	700	178	40	22	24
23	27	25	40	a38	48	50	1,090	666	220	39	21	23
24	50	28	b38	a40	b46	72	1,120	666	*305	38	20	23
25	40	29	b34	a38	b47	161	1,560	700	313	36	20	23
26	36	28	b40	a34	46	290	1,540	690	288	34	20	23
27	29	28	b44	a30	b45	365	*1,370	661	240	31	21	23
28	29	40	46	a32	48	621	1,420	652	325	38	21	23
29	29	49	43	a36	b47	854	1,190	643	292	39	20	*23
30	29	80	36	a40	-	735	1,060	589	242	37	19	22
31	28	-	b32	a50	-	609	-	549	-	37	19	-
Total	776	906	1,211	991	1,798	4,778	32,158	23,366	9,636	2,820	736	781
Mean	25.0	30.2	39.1	32.0	62.0	154	1,072	754	321	91.0	23.7	26.0
Ac-ft	1,540	1,800	2,400	1,970	3,570	9,480	63,780	46,350	19,110	5,590	1,460	1,550

Calendar year 1951: Max 854 Min 12 Mean 149 Ac-ft 108,000
Water year 1951-52: Max 1,640 Min 18 Mean 218 Ac-ft 158,600

Peak discharge (base, 600 cfs).--Mar. 29 (6:30 p.m.) 998 cfs (4.08 ft); Apr. 5 (9:30 p.m.) 2,140 cfs (5.55 ft); Apr. 19 (4 a.m.) 1,550 cfs (4.87 ft); Apr. 26 (1 a.m.) 2,060 cfs (5.47 ft); May 8 (8:30 a.m.) 1,100 cfs (4.25 ft)

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Twentymile Creek near Adel, Camas Creek near Lakeview, and Drake 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 1952 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. Datum of gage is 4,538.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1947. 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.--22 years (1910-14, 1930-41, 1945-52), 25.4 cfs.

Extremes.--Maximum discharge during year, 1,490 cfs Mar. 25 (gage height, 9.25 ft), from rating curve extended above 320 cfs by logarithmic plotting; minimum, 0.2 cfs Sept. 7. 1909-15, 1921-22, 1930-52: 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 Apr. 10-24, poor at other times. About 2,300 acres are irrigated above station.

Revisions.--W 410: Drainage area.

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	3.2	6.8	b6	12	b18	a150	260	111	a38	9.6	0.3
2	1.4	3.2	5.9	b5	15	b18	a160	227	99	*32	7.9	.3
3	*1.7	3.4	5.0	b4.4	22	b19	a180	223	91	a30	8.2	.3
4	1.6	3.8	3.4	b4.8	41	b16	a220	183	86	a28	9.0	**.3
5	1.3	3.5	2.8	b5.5	b34	16	a260	171	*79	a26	5.3	.3
6	1.2	3.5	**3.2	b6.5	b28	b16	a300	169	86	a24	3.5	.3
7	1.0	3.5	b3.2	b6	b24	15	a300	*192	90	23	2.8	.2
8	1.1	3.8	b3.2	b5.5	b22	15	a240	261	76	a22	2.8	.3
9	1.3	3.8	b3.2	b5	b20	16	a200	213	*71	a21	2.8	.4
10	1.4	3.8	b3.4	b5.5	b19	22	*185	192	70	a20	2.6	1.2
11	1.3	4.4	b3.4	b6	b19	b20	190	195	72	a20	2.6	1.8
12	1.7	5.0	b3.6	*b5	b18	b17	188	196	69	a22	3.2	2.8
13	2.2	4.7	b4.0	b4.6	b17	b14	225	186	62	a18	2.8	1.9
14	2.4	4.4	4.4	b5	b15	b14	205	185	55	a15	2.6	1.4
15	2.8	4.4	b4.2	b5.5	17	17	175	163	52	a13	1.7	1.3
16	2.8	2.8	b3.8	b4.6	17	16	171	162	48	a11	1.7	1.1
17	2.6	2.9	b3.6	b4.0	b14	14	186	163	45	9.0	2.3	.9
18	2.3	3.0	b3.4	b3.6	b16	16	237	161	43	8.2	2.3	.8
19	2.4	3.4	b3.2	b4.0	16	14	360	165	40	7.2	1.9	.6
20	2.8	3.5	b3.4	b4.6	b15	b13	251	199	39	6.5	**1.9	.6
21	2.9	3.4	b3.8	b5	b17	13	215	169	40	5.6	1.9	.4
22	2.9	3.0	b4.4	b5.5	b16	b10	226	149	40	*5.3	2.0	.4
23	2.9	2.9	b4.6	b6	16	13	292	137	41	5.3	2.0	.4
24	4.1	2.8	5.0	b6.5	15	597	*321	132	*59	5.6	2.2	.4
25	4.1	3.0	b4.0	b7	14	820	547	132	64	5.3	2.0	.4
26	3.2	3.8	5.3	b6.5	15	599	530	130	64	4.4	2.0	.4
27	3.0	4.1	8.2	b6	16	464	407	123	49	3.8	2.0	.6
28	3.0	4.7	13	b5.5	18	666	422	122	53	5.0	2.0	.9
29	3.0	4.7	12	b6	b18	a400	302	121	49	5.3	1.8	1.1
30	3.0	5.3	8.6	6.8	-	a250	261	114	a44	5.6	1.1	*1.3
31	3.0	-	b7	7.9	-	a200	-	107	-	6.8	.6	-
Total	71.7	111.7	153.0	169.8	546	4,358	7,906	5,302	1,887	451.9	97.1	23.4
Mean	2.31	3.72	4.94	5.48	18.8	141	264	171	62.9	14.6	3.13	0.78
Ac-ft	142	222	303	337	1,080	8,640	15,680	10,520	3,740	896	193	46

Calendar year 1951: Max 392 Min 0.1 Mean 31.9 Ac-ft 23,080
Water year 1951-52: Max 820 Min 0.2 Mean 57.6 Ac-ft 41,800

Peak discharge (base, 150 cfs).--Mar. 25 (5:30 p.m.) 1,490 cfs (9.25 ft); Mar. 28 (8 p.m.) 972 cfs (7.53 ft); about Apr. 6 (time and discharge unknown); Apr. 19 (9 a.m. to 12 m.) 414 cfs (4.97 ft); Apr. 25 (11:30 p.m.) 782 cfs (6.76 ft); May 8 (4:30 a.m.) 302 cfs (4.42 ft); May 20 (10:30 a.m.) 220 cfs (3.83 ft).

* Discharge measurement made on this day.

** Field estimate made on this day.

a No gage-height record: discharge estimated on basis of 2 discharge measurements, weather records, and records for Twentymile Creek near Adel and Camas Creek near Lakeview.

b Stage-discharge relation affected by ice.

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 footbridge 20 ft downstream from former powerplant of Paisley Electric Co., 700 ft upstream from diversion dam of Conn ditch, a quarter of a mile downstream from Mill Creek, and 2⅔ miles west of Paisley.

Drainage area.--275 sq mi.

Records available.--April 1912 to September 1921, May 1924 to September 1952. Published as "above Mill Creek near Paisley" November 1912 to September 1914 and as "near Paisley" October 1914 to September 1921.

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 a 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.--37 years (1912-21, 1924-52), 126 cfs.

Extremes.--Maximum discharge during year, 1,650 cfs May 20 (gage height, 4.80 ft); minimum, 20 cfs Nov. 17 (gage height, 1.40 ft).
1912-21, 1924-52: 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 freezeup).
Maximum discharge known, 4,000 cfs Nov. 23, 1909, from records at site 2 miles downstream below Conn ditch where records are equivalent at high flows.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 2,500 acres above station.

Revisions.--W 860: Drainage area.

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	26	3.0	345
1.7	43	3.5	580
2.0	81	4.0	910
2.4	157	4.7	1,540

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	50	46	185	b80	152	86	426	1,010	1,090	a320	a95	41
2	57	37	104	b60	180	86	466	942	990	a300	a90	41
3	59	46	84	b50	146	78	495	*942	934	a280	81	*41
4	45	46	55	a60	146	77	634	812	896	255	107	40
5	39	43	39	a70	148	78	784	805	889	246	77	42
6	38	42	b40	a65	150	74	889	*826	1,010	225	68	42
7	37	45	b40	a60	136	74	805	958	926	196	67	42
8	36	42	b40	a55	130	75	616	1,010	826	182	63	42
9	36	40	b50	a50	122	78	580	903	763	172	60	50
10	36	47	b60	a50	116	92	592	958	721	160	58	62
11	38	50	*b70	*b55	111	*91	592	1,070	664	174	58	70
12	53	42	b75	b55	104	83	592	1,130	598	174	57	62
13	44	43	b80	b50	b100	73	658	1,130	530	164	55	52
14	41	53	b90	b55	89	77	*586	1,180	495	146	*54	51
15	48	43	b80	b60	89	83	558	1,100	457	130	52	48
16	51	32	b75	b55	100	81	592	1,120	403	120	50	47
17	43	43	b70	b50	102	78	640	1,200	369	112	48	46
18	42	54	b65	b40	*94	81	742	1,220	361	107	48	44
19	44	64	b60	b45	91	75	847	1,270	353	102	46	43
20	45	54	b55	b50	83	71	721	1,470	341	99	46	43
21	44	47	b60	b55	b80	68	694	1,360	365	94	46	42
22	43	41	b70	b60	b80	62	742	1,300	325	89	45	41
23	57	b40	86	b65	b75	77	819	1,290	421	*a85	44	41
24	77	42	91	b70	b75	203	903	*1,300	*434	a85	43	41
25	58	57	b90	b80	75	298	1,160	1,310	a420	a85	42	40
26	50	63	b120	b75	77	361	1,140	1,300	a400	a85	42	40
27	46	55	b160	b70	81	381	1,210	1,290	a370	a85	43	44
28	47	68	228	b65	86	510	1,320	1,280	a400	a85	43	43
29	47	68	150	b65	87	485	1,200	1,260	a370	a85	42	41
30	*46	109	a110	68	-	430	1,120	1,240	a350	a90	42	39
31	45	-	a90	75	-	421	-	1,220	-	a100	42	-
Total	1,442	1,502	2,662	1,863	3,105	4,887	23,123	35,206	17,471	4,632	1,754	1,361
Mean	46.5	50.1	85.9	60.1	107	158	771	1,136	582	149	56.6	45.4
Ac-ft	2,860	2,980	5,280	3,700	6,160	9,690	45,860	69,830	34,650	9,190	3,480	2,700

Calendar year 1951: Max 990 Min 28 Mean 188 Ac-ft 136,000
Water year 1951-52: Max 1,470 Min 32 Mean 271 Ac-ft 196,400

Peak discharge (base, 500 cfs).-Mar. 28 (7 p.m.) 749 cfs (3.77 ft); Apr. 5 (9 p.m.) 1,090 cfs (4.22 ft); Apr. 28 (9 a.m.) 1,390 cfs (4.55 ft); May 20 (11 a.m.) 1,650 cfs (4.80 ft); June 25 (7 a.m.) 592 cfs (3.52 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 3 discharge measurements and records for Deep Creek above Adel and Silver Creek near Silver Lake.
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 diversion dam and 2 miles northeast of Summer Lake Post Office.

Records available.--June 1951 to September 1952 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 diversion dam). Oct. 1, 1929, to Sept. 30, 1939, at site 80 ft downstream at different datum.

Extremes.--Maximum discharge during year, 112 cfs Oct. 5 (gage height, 3.05 ft); minimum, 5 cfs May 15.
1929-39, 1951-52: Maximum discharge, 186 cfs Sept. 15, 1936 (gage height, 3.87 ft, site and datum then in use); minimum, 5 cfs Apr. 29, 1937, May 15, 1952.

Remarks.--Records good. Summer Lake Canal diverts 300 ft upstream for irrigation of lands along west side of Summer Lake.

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 23		Jan. 24 to Sept. 30			
2.8	75	1.7	6	2.5	49
3.1	119	2.0	16	2.9	97
		2.2	25		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81	96	*94	94	94	96	97	94	38	56	66	48
2	86	96	94	94	94	96	97	94	38	56	77	*48
3	92	96	94	94	94	96	97	94	38	56	88	48
4	92	96	94	92	94	97	97	94	38	56	89	48
5	101	96	94	92	94	97	97	*94	41	56	89	47
6	*107	96	94	92	94	97	97	94	37	56	88	47
7	107	96	94	92	94	97	97	94	37	56	84	47
8	106	96	94	90	94	97	97	94	37	56	65	47
9	104	96	94	89	94	97	97	94	37	56	51	47
10	104	96	94	89	94	97	97	96	37	51	53	47
11	102	96	94	89	94	97	97	96	37	50	53	47
12	102	96	94	89	96	97	97	96	37	51	52	46
13	101	96	94	*89	*96	97	97	96	36	51	51	43
14	101	95	94	89	96	97	97	97	36	51	50	48
15	101	95	94	89	96	97	97	44	35	51	50	51
16	100	95	94	90	96	97	97	6	35	51	49	57
17	98	95	92	90	96	97	*97	14	35	51	48	59
18	96	94	92	90	97	97	97	36	35	51	48	58
19	96	94	92	92	97	97	97	37	*35	51	49	58
20	96	94	92	92	96	*97	97	53	35	51	49	57
21	96	94	92	92	97	97	97	*61	35	51	49	57
22	96	94	92	94	97	97	97	33	35	51	49	57
23	96	94	94	94	97	97	97	35	35	*51	49	64
24	96	94	94	94	97	97	96	37	35	51	49	66
25	95	94	94	94	97	97	96	37	*40	51	49	66
26	95	94	94	94	96	97	96	37	47	57	49	65
27	*95	94	94	94	96	97	96	37	46	58	49	70
28	95	94	94	94	96	97	96	37	46	60	*49	72
29	96	94	94	94	96	97	96	38	46	61	49	72
30	96	94	94	94	-	97	94	38	53	61	48	72
31	96	-	94	94	-	97	-	38	-	61	48	-
Total	3,025	2,850	2,902	2,849	2,769	3,004	2,901	1,945	1,152	1,677	1,786	1,659
Mean	97.6	95.0	93.6	91.9	95.5	96.9	96.7	62.7	38.4	54.1	57.6	55.3
Ac-ft	6,000	5,650	5,760	5,650	5,490	5,960	5,750	3,860	2,280	3,330	3,540	3,290

Adjusted for diversion in Summer Lake Canal

Mean	97.6	95.0	93.6	91.9	95.5	96.9	96.7	83.7	84.5	84.1	85.4	84.4
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Ac-ft	6,000	5,650	5,760	5,650	5,490	5,960	5,750	5,150	5,030	5,170	5,250	5,020

Observed

Calendar year 1951: Max - Min - Mean - Ac-ft -
Water year 1951-52: Max 107 Min 6 Mean 77.9 Ac-ft 56,560

Adjusted

Calendar year 1951: Mean - Cfsm - In. - Ac-ft -
Water year 1951-52: Mean 90.8 Cfsm - In. - Ac-ft 65,880

* Discharge measurement made on this day.

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.--January 1905 to March 1907, January 1909 to September 1952.

Gage.--Water-stage recorder and, since Sept. 15, 1932, concrete control. Datum of gage is 4,361.22 ft (revised) above mean sea level, datum of 1929, supplementary adjustment of 1947. Prior to May 24, 1932, staff gages, 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.--40 years (1905-6, 1909-27, 1929-41, 1943-52), including Silver Lake Irrigation District Canal, 25.0 cfs.

Extremes.--Maximum discharge during year, 544 cfs Apr. 26 (gage height, 5.82 ft), from rating curve extended above 250 cfs by logarithmic plotting; minimum, 4.5 cfs Nov. 17, Mar. 17.

1905-7, 1909-52: 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 or no gage-height record, 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 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.7	4.2	3.0	100
1.8	7.4	4.0	225
2.0	18	5.0	380
2.2	30	5.8	540
2.5	53		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	8.3	*12	13	12	b14	63	334	71	67	24	15
2	12	7.4	12	8	12	b13	66	309	65	66	*24	*14
3	12	7.1	12	9	13	b13	78	292	59	64	23	14
4	12	7.4	b12	10	14	b13	99	268	56	62	24	13
5	12	7.4	b12	12	16	b13	123	*243	59	62	24	13
6	*11	7.1	b12	10	[illegible]	13	147	236	63	61	23	12
7	11	7.1	b12	9	[illegible]	b12	155	260	65	61	23	12
8	11	7.1	b12	8	b19	b11	147	290	64	60	23	11
9	10	6.8	12	10	b19	12	138	270	63	60	22	11
10	10	7.1	12	12	b19	13	134	246	63	59	22	11
11	9.7	7.9	13	11	19	b12	143	244	67	59	22	11
12	9.7	8.3	14	10	b19	12	151	243	65	59	22	11
13	10	8.3	14	*9.7	*b18	b11	161	238	61	59	22	11
14	10	7.9	15	9.2	17	b11	165	226	58	59	22	11
15	10	7.4	14	9.2	17	b12	156	212	56	58	22	10
16	11	b6.4	13	b9	17	12	153	197	54	58	21	10
17	11	b4.8	12	b8	b17	11	*156	190	53	57	21	10
18	10	5.2	11	b7	b16	b11	164	186	51	57	20	9.7
19	9.7	5.8	10	b7	b16	b11	188	178	*53	57	20	9.7
20	9.7	6.8	11	b8	b16	b11	231	174	56	57	20	9.7
21	9.7	b7.1	13	b9	b15	b11	252	*167	62	57	20	9.7
22	10	b7.1	15	b10	b15	b11	285	157	64	57	19	9.2
23	11	b6.8	17	b11	15	11	333	145	66	44	19	9.2
24	11	b6.4	19	12	b14	13	374	134	69	31	19	9.2
25	11	6.4	22	11	b14	17	474	128	71	28	18	8.8
26	10	7.1	25	11	14	22	536	119	72	25	18	8.8
27	9.7	7.4	23	10	b14	29	530	110	71	24	17	8.8
28	9.2	7.9	23	9.7	b14	49	524	102	71	23	*17	8.3
29	9.2	8.8	22	9.7	b14	64	480	92	70	23	16	8.3
30	8.8	9.7	20	10	-	62	414	85	*68	23	16	8.3
31	8.8	-	15	11	-	63	-	78	-	23	16	-
Total	322.2	216.3	461	303.5	463	593	7,020	6,153	1,886	1,560	639	317.7
Mean	10.4	7.21	14.9	9.79	16.0	19.1	234	198	62.9	50.3	20.6	10.6
Ac-ft	639	429	914	602	918	1,180	13,920	12,200	3,740	3,090	1,270	630

Calendar year 1951: Max 352 Min 4.8 Mean 52.7 Ac-ft 38,130
Water year 1951-52: Max 536 Min 4.8 Mean 54.5 Ac-ft 39,530

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

Note.--No gage-height record Dec. 9 to Jan. 12; discharge estimated on basis of 1 discharge measurement, weather records, and records for Deep Creek above Adel and Chewaucan River near Paisley.

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 1952.

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 23, 1917, water-stage recorder at site 1½ miles downstream at different datum. Apr. 7, 1922, to Oct. 1, 1941, water-stage recorder at site 400 ft upstream at present datum. Oct. 2, 1941, to Oct. 3, 1951, water-stage recorder at site 400 ft downstream at present datum.

Average discharge.--39 years (1903-5, 1909-12, 1917-21, 1922-52), 156 cfs.

Extremes.--Maximum discharge during year, 4,960 cfs about Apr. 6 (gage height, 15.2 ft); minimum, 12 cfs Oct. 9-11, Nov. 6.
1903-6, 1908-52: Maximum discharge, that of about Apr. 6, 1952; no flow July 19 to Sept. 22, 1934.

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

Revisions.--W 860: Drainage area.

Rating tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-3

0.6	12
.9	22

Oct. 4 to Apr. 6

0.7	10	10.0	1,120
1.0	21	12.0	1,610
1.5	48	13.0	2,100
2.0	81	14.0	2,920
3.0	163	15.0	4,490
6.0	514	15.2	4,960

Apr. 7 to Sept. 30

1.0	13	3.0	151
1.5	34	6.0	514
2.0	64		

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

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	24	59	45	70	45	1,090	1,980	328	131	29	15
2	20	22	75	40	90	45	1,200	1,810	298	125	29	15
3	18	29	66	*42	60	45	1,500	1,630	*279	116	28	15
4	*17	27	55	45	50	48	2,000	1,530	258	108	30	15
5	16	29	50	50	45	45	3,000	1,410	238	100	*30	15
6	15	25	45	50	45	48	4,500	1,280	229	89	28	16
7	14	28	40	50	50	50	4,000	1,210	222	84	26	16
8	13	30	38	45	45	50	3,500	1,200	214	82	25	17
9	12	30	35	40	45	50	3,000	*1,200	202	70	24	18
10	12	30	45	42	48	48	2,800	1,170	191	58	25	20
11	13	32	42	45	50	45	2,800	1,220	156	56	24	21
12	14	35	40	45	60	45	*2,730	1,190	161	53	24	21
13	16	37	38	42	55	45	2,850	1,050	153	51	23	20
14	17	34	35	40	*50	50	3,140	962	145	46	23	19
15	17	37	40	38	52	50	*3,140	918	147	55	23	18
16	17	*30	40	35	55	50	3,070	894	141	52	22	19
17	17	28	42	32	50	48	*2,690	856	125	45	22	18
18	16	25	45	30	45	45	2,700	818	122	46	20	17
19	17	28	44	30	50	45	3,040	746	116	43	20	16
20	17	32	40	34	50	45	3,010	702	115	42	19	16
21	18	30	45	38	45	45	2,840	661	113	41	19	16
22	20	30	50	40	40	45	2,650	622	109	40	18	16
23	22	28	45	42	45	45	2,490	595	106	38	18	15
24	26	26	42	45	45	100	2,480	557	119	36	16	*15
25	28	25	40	50	40	1,000	2,540	525	124	36	16	15
26	26	28	50	55	45	2,000	2,680	499	117	34	15	15
27	24	30	60	60	50	1,800	2,700	484	112	32	15	15
28	25	35	70	55	48	1,600	2,670	475	125	33	16	15
29	25	40	60	50	45	*1,500	2,490	428	139	31	16	15
30	25	44	55	55	-	1,350	2,180	388	138	28	15	15
31	26	-	50	60	-	1,230	-	355	-	28	15	-
Total	577	908	1,481	1,370	1,468	11,657	81,480	29,365	5,042	1,829	673	499
Mean	18.6	30.3	47.8	44.2	50.6	376	2,716	947	168	59.0	21.7	16.6
Ac-ft	1,140	1,800	2,940	2,720	2,910	23,120	161,600	58,240	10,000	3,630	1,330	990

Calendar year 1951: Max 2,090 Min 9 Mean 230 Ac-ft 166,600
Water year 1951-52: Max 4,500 Min 12 Mean 373 Ac-ft 270,400

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 3, Mar. 17-28, Apr. 2-11, discharge estimated on basis of 3 discharge measurements and records for Malheur River near Drewsey and Silver Creek near Riley. Stage-discharge relation affected by ice Nov. 17-19, 21-29, Dec. 4 to Mar. 16, Mar. 29, 30.

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 1952 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.--22 years (1911-13, 1914-16, 1917-21, 1938-52), 127 cfs.

Extremes.--Maximum discharge during year, 2,850 cfs Apr. 6 (gage height, 5.84 ft), from rating curve extended above 1,100 cfs by velocity-area studies and logarithmic plotting; minimum, 13 cfs, from recorded range in stage, date unknown.
1910-21, 1937-52: 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 excellent except those above 1,100 cfs, which are good, and those for periods of ice effect or no gage-height record, which are poor. No regulation or diversions above station.

Revisions.--W 330: Drainage area (former site). W 860: Drainage area (present site).

Rating table, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	19	3.1	245
2.0	30	3.5	425
2.2	47	4.0	730
2.5	86	4.8	1,440
2.8	149		

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	45	a42	a50	a36	a70	b40	415	639	570	277	117	57
2	59	a40	a46	a32	a55	b40	492	570	606	*277	110	57
3	54	a50	a50	a44	a60	b40	615	606	606	290	106	57
4	54	a46	a44	*b55	a50	44	881	510	652	308	102	58
5	45	a44	a38	b50	a42	42	1,390	498	691	330	95	58
6	44	a46	a36	b55	a36	42	1,330	528	758	294	90	58
7	43	a50	a32	b50	a38	42	883	546	724	245	86	59
8	43	a46	a29	b46	a34	42	552	*814	539	227	83	57
9	42	a50	a34	b40	a36	45	*598	588	658	234	80	58
10	42	a55	a42	b50	a38	61	616	534	678	231	78	61
11	43	a46	a50	54	a34	49	558	570	474	231	77	68
12	45	a48	a38	55	a34	b44	668	600	380	308	76	72
13	45	a44	a32	b42	*b36	b42	764	600	316	241	*74	63
14	45	a38	a30	b42	b38	b42	865	594	281	209	74	61
15	49	a36	a48	45	b40	45	470	498	249	193	70	58
16	50	a32	a40	b28	72	47	425	474	249	190	67	57
17	46	*b30	a42	b21	50	45	436	516	281	169	66	56
18	46	b40	a48	b24	b42	47	416	540	312	157	63	55
19	46	b46	a40	b28	b40	b40	570	613	344	169	62	54
20	50	46	a46	b38	b36	b42	405	717	326	139	62	54
21	50	46	a50	b38	b30	b38	405	594	352	142	61	52
22	50	43	a42	55	b28	b38	452	552	290	139	59	52
23	52	43	a34	46	51	51	546	582	294	135	61	52
24	56	b36	a28	43	43	359	626	646	321	123	59	51
25	47	b36	a38	43	b38	569	786	698	290	125	59	*51
26	a44	49	a48	42	44	486	868	730	316	123	59	50
27	a44	45	a60	40	44	458	915	724	316	121	59	50
28	a44	46	a55	b36	50	585	899	765	357	112	59	50
29	a44	47	a50	40	b42	576	710	779	370	121	58	50
30	a44	a65	a46	41	-	464	684	665	294	114	57	49
31	a38	-	a40	47	-	375	-	606	-	114	57	-
Total	1,449	1,331	1,306	1,306	1,251	4,680	20,240	18,896	12,994	6,088	2,286	1,685
Mean	46.7	44.4	42.1	42.1	43.1	157	675	610	433	196	73.7	56.2
Ac-ft	2,870	2,640	2,950	2,590	2,480	9,680	40,150	37,480	25,770	12,080	4,530	3,340

Calendar year 1951: Max 1,150 Min 23 Mean 123 Ac-ft 89,100
Water year 1951-52: Max 1,390 Min 21 Mean 201 Ac-ft 146,200

Peak discharge (base, 650 cfs).--Mar. 25 (8 p.m.) 1,030 cfs (4.39 ft); Apr. 6 (12:30 a.m.) 2,850 cfs (5.84 ft); Apr. 13 (9:30 p.m.) 1,920 cfs (5.20 ft); May 8 (5:30 p.m.) 1,220 cfs (4.59 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 3 discharge measurements, recorded range in stage, and weather records.

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 1952.

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.--18 years (1912-16, 1938-52), 14.2 cfs.

Extremes.--Maximum discharge during year, 180 cfs May 9 (gage height, 2.12 ft), from rating curve extended above 65 cfs by logarithmic plotting; minimum, 8.7 cfs Feb. 24-28, Mar. 2-9 (gage height, 0.95 ft).
1911-16, 1937-52: Maximum discharge, 332 cfs Feb. 22, 1943 (gage height, 2.55 ft), from rating curve extended above 65 cfs by logarithmic plotting; minimum observed, 7 cfs Feb. 24, 25, 1912, Dec. 30, 1937, to Jan. 4, 1938.

Remarks.--Records excellent except those for periods of doubtful gage-height record or backwater from aquatic vegetation, which are fair. No regulation or diversions above station. Low-water flow is maintained by large springs.

Rating tables, water year 1951-52 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 3		Jan. 4 to Sept. 30			
1.0	8.6	0.9	6.7	1.2	23
1.1	13	1.0	11	1.4	41
		1.1	16	1.7	83

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	11	11	11	10	9.1	21	d38	28	17	12	14
2	10	11	11	11	17	8.7	24	d38	27	16	12	14
3	10	11	11	11	16	8.7	25	d40	25	*15	12	14
4	10	11	11	*11	14	8.7	27	d38	24	15	12	14
5	9.9	11	11	11	13	8.7	28	d36	24	14	12	14
6	9.9	11	11	11	13	8.7	32	d40	25	14	12	14
7	10	11	11	10	12	8.7	31	61	25	14	12	14
8	10	11	11	10	12	8.7	25	*67	24	14	12	14
9	11	11	11	9.9	12	9.1	*25	70	23	14	12	14
10	10	11	11	9.9	12	10	29	61	24	14	12	14
11	11	11	11	9.9	12	11	31	39	23	14	12	14
12	11	11	11	9.5	12	10	32	37	23	13	12	14
13	10	11	11	9.5	*11	9.9	40	37	21	13	*12	14
14	10	11	11	9.5	10	9.5	49	36	19	13	12	14
15	10	11	11	9.5	9.5	9.1	41	36	18	13	12	14
16	10	*11	11	9.5	9.9	9.1	36	35	17	13	13	14
17	10	11	11	9.1	11	9.1	36	35	16	13	13	14
18	10	11	11	9.1	10	9.5	45	35	16	13	13	14
19	10	11	11	9.1	9.9	9.5	47	35	15	13	13	14
20	10	11	11	9.1	9.5	9.1	41	47	16	13	13	14
21	10	11	11	9.1	9.1	9.1	41	41	17	13	13	14
22	10	11	11	9.1	9.1	9.1	45	38	16	13	13	14
23	11	11	11	9.1	9.1	9.1	51	37	16	13	13	14
24	11	11	11	9.1	8.7	30	51	36	17	13	13	14
25	11	11	11	9.1	8.7	46	51	38	17	13	13	*14
26	11	11	11	9.1	8.7	35	49	37	17	13	13	14
27	11	11	11	9.1	9.1	28	45	35	16	13	13	14
28	11	11	11	9.1	8.7	29	d42	34	18	13	13	14
29	11	11	11	9.1	9.1	28	d40	33	19	13	13	14
30	11	11	11	9.1	-	24	d40	32	18	13	13	14
31	11	-	11	9.1	-	23	-	29	-	13	13	-
Total	321.9	330	341	299.7	316.1	455.2	1,120	1,251	604	421	388	420
Mean	10.4	11.0	11.0	9.67	10.9	14.7	37.3	40.4	20.1	13.6	12.5	14.0
Ac-ft	638	655	676	594	627	903	2,220	2,480	1,200	835	770	833

Calendar year 1951: Max 37 Min 7.6 Mean 13.4 Ac-ft 8,710
Water year 1951-52: Max 70 Min 8.7 Mean 17.1 Ac-ft 12,430

Peak discharge (base, 30 cfs).--Mar. 25 (7 p.m.) 91 cfs (1.74 ft); Apr. 14 (8 p.m.) 70 cfs (1.62 ft); May 9 (4:30 p.m.) 180 cfs (2.12 ft); May 20 (4:30 a.m.) 54 cfs (1.51 ft).

* Discharge measurement made on this day.

d Doubtful gage-height record; discharge computed on basis of gage-height record, weather records, and records for Donner und Blitzen River near Frenchglen.

Note.--Backwater from aquatic vegetation July 12 to Sept. 9.

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 1951 to September 1952.

Gage.--Water-stage recorder. Altitude of gage is 4,450 ft (by barometer).

Extremes.--Maximum discharge during year, 1,300 cfs Apr. 6 (gage height, 6.65 ft); minimum, 2.0 cfs Nov. 24, 25, Sept. 27; minimum gage height, 1.41 ft Sept. 27.
1951-52: Maximum discharge, that of Apr. 6, 1952; minimum, 0.9 cfs Sept. 13, 1951 (gage height, 1.38 ft).

Remarks.--Records good except those for period of ice effect, which are fair. Diversions above station for irrigation of about 500 acres.

Rating tables, water year 1951-52, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
1.5	1.6	2.7	73	1.4	1.9	2.5	71
1.6	2.7	3.0	112	1.5	3.6	3.0	146
1.7	4.4	3.5	205	1.7	9.5	4.0	360
1.8	7.0	4.5	470	1.9	19	5.0	640
2.0	16	5.9	970	2.2	40	6.4	1,170
2.3	35						

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.8	3.8	5.0	5.5	8.0	5.0	332	282	34	*18	5.2	3.0
2	5.5	3.6	4.6	5.0	9.5	5.0	419	240	31	16	5.0	3.2
3	5.2	3.6	4.4	5.5	6.0	5.0	482	218	29	15	4.7	3.0
4	4.6	3.8	4.0	*6.5	6.0	5.5	684	196	27	15	4.7	3.2
5	4.0	3.6	4.2	7.0	5.5	5.0	946	172	26	14	5.0	3.0
6	3.7	3.6	3.8	7.0	5.5	5.5	1,140	158	27	13	*4.7	3.0
7	3.5	3.6	3.4	7.5	6.0	5.5	1,130	*161	26	13	4.4	3.0
8	3.3	3.8	3.2	6.5	6.5	6.0	*978	190	24	13	4.4	3.2
9	3.0	3.8	3.0	5.5	6.5	6.0	810	179	23	13	4.4	3.6
10	3.2	4.0	3.8	6.0	5.5	6.0	764	151	26	13	5.0	5.0
11	3.5	4.2	3.4	5.5	5.5	5.5	789	141	26	13	4.4	4.7
12	4.4	4.2	3.4	5.5	*7.0	5.0	789	127	24	12	4.4	4.1
13	4.2	3.8	3.2	5.0	6.0	5.0	886	119	23	12	4.1	3.6
14	4.2	3.4	3.0	6.0	6.0	6.0	950	113	23	11	4.7	3.6
15	4.4	3.0	3.4	5.0	6.5	5.5	*803	115	26	11	4.4	3.4
16	4.2	*2.8	3.6	4.4	7.0	5.5	747	100	22	10	3.9	3.2
17	4.0	3.0	3.6	4.0	6.0	5.5	775	88	19	9.5	3.6	3.2
18	4.0	3.0	3.6	3.8	5.0	5.0	902	79	18	9.2	3.6	3.0
19	4.2	3.2	4.0	4.0	5.5	5.5	1,040	75	21	8.9	3.6	3.0
20	4.4	3.6	3.6	4.6	6.0	5.0	768	79	20	8.5	3.6	3.0
21	4.4	3.4	3.8	4.4	5.5	5.0	681	67	24	8.2	3.6	2.8
22	4.8	3.0	4.0	4.6	4.6	5.0	619	60	22	7.9	3.4	3.0
23	5.8	2.9	4.0	5.0	5.0	6.0	607	56	23	7.6	3.4	2.8
24	6.6	2.8	3.6	5.5	5.5	30	595	54	23	7.6	3.4	*2.6
25	6.0	2.6	3.4	5.5	5.0	*450	586	64	21	7.6	3.2	2.6
26	4.8	2.8	4.4	6.0	5.0	733	547	52	20	6.3	3.2	2.6
27	4.2	3.2	9.0	6.5	5.5	694	484	44	20	5.8	3.2	2.6
28	4.4	3.8	8.0	6.0	6.0	733	428	42	26	5.5	3.4	2.8
29	4.4	4.4	7.5	5.5	5.5	*596	355	38	25	5.2	3.2	3.0
30	4.2	4.6	7.0	6.0	-	458	305	36	21	4.7	3.0	3.0
31	4.0	-	6.0	6.5	-	374	-	35	-	5.2	3.0	-
Total	136.9	104.8	134.9	171.3	173.1	4,192.0	21,321	3,531	720	319.7	123.8	95.8
Mean	4.42	3.49	4.35	5.53	5.97	135	711	114	24.0	10.3	3.99	3.19
Ac-ft	272	208	268	340	343	8,310	42,290	7,000	1,430	634	246	190

Calendar year 1951: Max - Min - Mean - Ac-ft -
Water year 1951-52: Max 1,140 Min 2.6 Mean 84.8 Ac-ft 61,530

Peak discharge (base, 350 cfs).--Mar. 25 (8 p.m.) 1,170 cfs (6.40 ft); Apr. 6 (1 a.m.) 1,300 cfs (6.65 ft); Apr. 14 (3:30 a.m.) 1,050 cfs (6.10 ft); Apr. 19 (4 a.m.) 1,210 cfs (6.48 ft).
* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Nov. 1 to Mar. 24.

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 1952.

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, water-stage recorder at site 10 ft upstream at datum 0.50 ft higher.

Average discharge.--21 years (1922-23, 1932-52), 15.0 cfs.

Extremes.--Maximum discharge during year, 250 cfs Apr. 28; maximum gage height, 4.07 ft May 20; minimum discharge, 2.6 cfs Nov. 2.
1911-12, 1922-23, 1925-52: 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 tables, water year 1951-52, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 27-30)

Oct. 1 to Apr. 30				May 1 to Sept. 30			
1.6	3.1	2.2	20	1.8	5.5	2.5	34
1.7	4.1	2.6	47	1.9	7.6	3.0	78
1.8	5.9	3.0	96	2.0	10	3.5	136
1.9	8.3	3.5	185	2.2	18	4.0	215
2.0	12	3.8	255				

Discharge, in cubic feet per second, water year October 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	4.3	6.1	4	8	4.5	49	152	140	80	20	5.9
2	4.5	3.6	7.3	3.5	6.5	4.5	50	142	135	77	18	5.7
3	4.8	4.1	5.9	4	7	5	52	160	*136	73	18	5.5
4	*4.6	4.3	5.7	5	6	5	55	153	133	69	18	5.5
5	4.0	4.3	5.9	*6	5	5	68	143	133	68	14	5.5
6	3.8	4.3	5.2	6	4	5	83	135	139	63	13	5.9
7	3.7	4.5	5.2	5.5	4.5	5	96	152	133	57	13	6.1
8	3.6	4.5	4.1	5	4	5	88	165	123	51	12	5.7
9	3.5	4.5	4.3	4.5	4	5.5	81	139	121	48	11	5.9
10	3.4	4.3	5	5	4.5	7	76	133	132	46	10	8.5
11	3.3	4.8	6	6	4	6	73	135	116	48	10	10
12	3.8	4.8	5	5	4	5.5	74	140	97	47	*8.2	9.3
13	3.9	5.4	4	4.5	4	5	83	*152	78	47	5.5	7.9
14	3.7	5.7	3.5	3.9	4.5	5	90	154	69	43	5.7	7.6
15	3.8	5.2	5.5	4.3	5	5	82	147	63	38	5.9	7.2
16	4.0	4.0	5	3.5	7	5.5	78	133	62	35	6.3	7.0
17	3.8	*3.6	4.5	5	6	5	*79	135	60	33	6.6	7.4
18	3.8	4.8	5.7	3.5	5	5.5	90	139	54	32	6.3	7.2
19	3.8	6.1	4.5	4	4.5	4.5	110	154	56	32	6.1	7.2
20	3.8	5.5	5.0	4.5	4	5	102	*197	58	28	6.1	7.0
21	4.0	5.4	5.4	5.2	3.5	4.5	96	172	64	24	5.9	7.0
22	4.3	5.0	5	5.9	4	5	95	147	58	25	5.7	6.8
23	4.5	4.6	4	5.5	5	8.3	102	149	63	24	6.1	6.6
24	5.4	4.5	3.5	5	5.5	33	121	154	59	22	6.1	6.6
25	5.5	4.5	4	5	4.5	41	*152	165	76	22	6.1	6.6
26	5.0	4.5	5	5	5	52	187	170	70	23	6.6	*6.3
27	4.6	5	7	4.5	5	54	210	166	66	22	6.6	5.9
28	4.8	5.5	6	4	5.5	63	235	158	85	21	6.8	5.9
29	4.6	5.5	5.5	4.5	5	64	218	156	101	22	5.7	5.9
30	4.5	5.7	5	5	-	59	189	146	88	21	5.7	5.7
31	4.5	-	4.5	6	-	52	-	143	-	22	5.9	-
Total	128.9	142.8	158.3	146.3	144.5	539.3	3,164	4,686	2,768	1,263	280.9	201.3
Mean	4.16	4.76	5.11	4.72	4.98	17.4	105	151	92.3	40.7	9.06	6.71
Ac-ft	256	283	314	290	287	1,070	6,280	9,290	5,490	2,510	557	399

Calendar year 1951: Max 81 Min 2.2 Mean 15.0 Ac-ft 10,870
Water year 1951-52: Max 235 Min 3 Mean 37.2 Ac-ft 27,030

Peak discharge (base, 50 cfs).--Mar. 28 (10 p.m.) 79 cfs (2.88 ft); Apr. 7 (6 p.m.) 100 cfs (3.03 ft); Apr. 13 (10 p.m.) 102 cfs (3.04 ft); Apr. 19 (8 p.m.) 116 cfs (3.13 ft); Apr. 28 (2:30 p.m.) 250 cfs (3.93 ft); May 8 (9 a.m.) 180 cfs (3.80 ft); May 20 (12:30 p.m.) 229 cfs (4.07 ft); June 29 (11:30 a.m.) 111 cfs (3.30 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 24-27, Dec. 10-17, 19, Dec. 22 to Jan. 13, Jan. 16-20, Jan. 23 to Mar. 22.

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 1951 to September 1952

Great Salt Lake basin

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
June 20	Spring Hollow.....	Randolph Creek.....	E½ sec. 28, T. 11 N., R. 6 E., 4 miles west of Randolph, Utah.	4.4
20	Randolph Creek....	Bear River.....	SW¼ sec. 24, T. 11 N., R. 6 E., 600 ft below Randolph Dam (Randolph Creek), 2¼ miles northwest of Randolph, Utah.	5.6
20	Middle Canal.....	Randolph Creek.....	SW¼ sec. 24, T. 11 N., R. 6 E., 700 ft below Randolph Dam (Randolph Creek), 2¼ miles northwest of Randolph, Utah.	3.8
Oct. 2	South Fork Otter Creek.	Otter Creek.....	SW¼ sec. 10, T. 11 N., R. 6 E., 1⅝ miles above Middle Fork Otter Creek, 4½ miles northwest of Randolph, Utah.	4.6
Nov. 8	....do.....	....do.....	....do.....	4.3
Feb. 4	....do.....	....do.....	....do.....	4.1
Mar. 31	....do.....	....do.....	....do.....	4.2
May 2	....do.....	....do.....	....do.....	5.5
June 2	....do.....	....do.....	....do.....	5.3
17	....do.....	....do.....	....do.....	4.8
July 21	....do.....	....do.....	....do.....	4.3
Aug. 18	....do.....	....do.....	....do.....	3.7
Sept.10	....do.....	....do.....	....do.....	4.9
30	....do.....	....do.....	....do.....	4.2
Oct. 2	Middle Fork Otter Creek.	....do.....	SW¼ sec. 3, T. 11 N., R. 6 E., 1½ miles above South Fork Otter Creek, 5 miles northwest of Randolph, Utah.	4.7
Nov. 8	....do.....	....do.....	....do.....	4.9
Feb. 4	....do.....	....do.....	....do.....	5.1
Mar. 31	....do.....	....do.....	....do.....	4.7
May 2	....do.....	....do.....	....do.....	8.0
June 2	....do.....	....do.....	....do.....	5.6
17	....do.....	....do.....	....do.....	5.7
July 21	....do.....	....do.....	....do.....	4.6
Aug. 18	....do.....	....do.....	....do.....	4.5
Sept.10	....do.....	....do.....	....do.....	6.2
30	....do.....	....do.....	....do.....	4.9
Oct. 2	North Fork Otter Creek.	....do.....	NE¼ sec. 3, T. 11 N., R. 6 E., 3 miles above mouth, 5½ miles northwest of Randolph, Utah.	4.8
Nov. 8	....do.....	....do.....	....do.....	4.1
Feb. 4	....do.....	....do.....	....do.....	3.5
Mar. 31	....do.....	....do.....	....do.....	3.9
May 2	....do.....	....do.....	....do.....	6.1
June 2	....do.....	....do.....	....do.....	7.3
17	....do.....	....do.....	....do.....	6.4
July 21	....do.....	....do.....	....do.....	5.6
Aug. 18	....do.....	....do.....	....do.....	5.4
Sept.10	....do.....	....do.....	....do.....	5.0
30	....do.....	....do.....	....do.....	4.8
Aug. 28	Black Otter Canal.	Bear River.....	SW¼ sec. 8, T. 14 S., R. 45 E., ¼ mile downstream from head, 2¼ miles east of Dingle, Idaho.	37.2
28	Black Otter Canal spillway.	Black Otter Canal...	SW¼SE¼ sec. 3, T. 13 S., R. 44 E., at entrance of Black Otter Canal spillway to Rainbow inlet canal (original Black Otter Slough), 2 miles northwest of Dingle, Idaho.	3.3
28	Black Otter Canal.	Bear River.....	NW¼NE¼ sec. 10, T. 13 S., R. 44 E., at flume over Rainbow inlet canal, 2 miles northwest of Dingle, Idaho.	29.1
28	Rainbow inlet canal.	....do.....	SW¼SE¼ sec. 3, T. 13 S., R. 44 E., just upstream from Black Otter Canal spillway (original Black Otter Slough), 2 miles northwest of Dingle, Idaho.	170
22	Bear River.....	Great Salt Lake.....	SW¼SE¼ sec. 17, T. 16 S., R. 39 E., at Weston-Fairview highway bridge, 3 miles east of Weston, Idaho.	1,020
27	....do.....	....do.....	NE¼SW¼ sec. 25, T. 14 N., R. 1 W., at Trenton-Richmond road bridge, 2 miles northeast of Trenton, Utah.	1,350
Sept.27	Little Bear River.	Bear River.....	E½ sec. 17, T. 10 N., R. 1 E., just downstream from high-water contour of Hyrum Reservoir, 2½ miles northwest of Paradise, Utah.	36.2
Oct. 6	Malad River.....	....do.....	Sec. 10, T. 14 S., R. 35 E., at springs, at flow line 1 mile upstream from dam on Samaria Reservoir No. 2, 5⅞ miles northwest of Malad City, Idaho, and 8⅞ miles upstream from Little Malad River.	13.9
Nov. 18	....do.....	....do.....	....do.....	12.3
Jan. 14	....do.....	....do.....	....do.....	12.3
Feb. 28	....do.....	....do.....	....do.....	13.6
Mar. 25	....do.....	....do.....	....do.....	13.8
Apr. 19	....do.....	....do.....	....do.....	13.5
May 24	....do.....	....do.....	....do.....	14.3
June 24	....do.....	....do.....	....do.....	15.7
Aug. 5	....do.....	....do.....	....do.....	13.6
Sept.10	....do.....	....do.....	....do.....	11.9

Miscellaneous discharge measurements in the Great Basin during water year October 1951 to September 1952--Continued

Great Salt Lake basin--Continued

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
May 15	Jordan River.....	Great Salt Lake.....	SW¼NW¼ sec. 13, T. 5 S., R. 1 W., 4 miles west of Lehi, Utah.	1,150
Apr. 21	....do.....	....do.....	Sec. 28, T. 1 N., R. 1 W., at 9th North and 15th West in Salt Lake City, Utah.	449
28	....do.....	....do.....	....do.....	535
30	....do.....	....do.....	....do.....	548
May 5	....do.....	....do.....	....do.....	667
9	....do.....	....do.....	....do.....	454
13	....do.....	....do.....	....do.....	428
17	....do.....	....do.....	....do.....	403
22	....do.....	....do.....	....do.....	326
26	....do.....	....do.....	....do.....	360
June 2	....do.....	....do.....	....do.....	346
9	....do.....	....do.....	....do.....	295
16	....do.....	....do.....	....do.....	178
5	Little Cottonwood Creek.	Jordan River.....	NW¼NE¼ sec. 12, T. 2 S., R. 1 W., at 2nd West in Salt Lake City, Utah.	222
9	....do.....	....do.....	SE¼ sec. 2, T. 3 S., R. 1 E., about 1 mile below mouth of Little Cottonwood Canyon near Salt Lake City, Utah.	406
5	Big Cottonwood Creek.	....do.....	NW¼NE¼ sec. 1, T. 2 S., R. 1 W., at 2nd West in Salt Lake City, Utah.	372
9	....do.....	....do.....	SW¼ sec. 20, T. 2 S., R. 2 E., at mouth of canyon, near Salt Lake City, Utah.	429
May 1	Red Butte Creek...	....do.....	NE¼SE¼ sec. 34, T. 1 N., R. 1 E., Utah, 50 ft below footbridge at campground.	47.3
28	Rockyford Canal...	Beaver River.....	NE¼ sec. 12, T. 30 S., R. 10 W., at head, Utah.	68.9
June 12	....do.....	....do.....	....do.....	59.8
May 29	Beaver River.....	....do.....	Sec. 18, T. 28 S., R. 10 W., 1½ miles south of Milford, Utah.	31.1
June 13	....do.....	....do.....	....do.....	169

Humboldt River basin, Nev.

Apr. 16	Humboldt River....	Humboldt Sink.....	Sec. 15, T. 34 N., R. 55 E., at Fifth Street Bridge, Elko.	2,100
May 1	....do.....	....do.....	....do.....	3,700
5	....do.....	....do.....	....do.....	2,860

Pyramid and Winnemucca Lakes basin

May 22	Truckee River.....	Pyramid Lake.....	NE¼ sec. 12, T. 18 N., R. 17 E., at former station at Farad, Calif.	5,590
June 12	....do.....	....do.....	At Vista, Nev. NW¼NE¼ sec. 13, T. 19 N., R. 20 E., 1½ miles below Steamboat Creek.	5,060

Silver Lake basin, Oreg.

June 24	Silver Creek.....	Silver Lake.....	5½ miles east of Silver Lake Post Office.	81.0

Malheur and Harney Lakes basin, Oreg.

Sept. 25	Donner und Blitzen River.	Malheur Lake.....	Former gaging station near Voltage.	5.93
24	Malheur Lake outlet.	Harney Lake.....	Narrows, 22 miles south of Burns.	45.2

Alvord Lake basin, Oreg.

Apr. 17	Stonehouse Creek..	Wildhorse Creek.....	NW¼SE¼ sec. 15, T. 35 S., R. 33 E., above North Fork, 2½ miles north of Andrews.	3.98
June 4	....do.....	....do.....	....do.....	2.93
Apr. 17	North Fork Stonehouse Creek.	Stonehouse Creek....	At mouth, 2½ miles north of Andrews.	1.60
June 4	....do.....	....do.....	....do.....	0
Apr. 17	Spring Creek.....	Wildhorse Creek.....	SE¼NE¼ sec. 22, T. 35 S., R. 33 E., 1½ miles north of Andrews.	6.12
17	Wildhorse Creek...	Alvord Lake.....	SE¼SE¼ sec. 23, T. 35 S., R. 33 E., at road crossing 1¼ miles northeast of Andrews.	36.4
25	....do.....	....do.....	....do.....	67.8
May 6	....do.....	....do.....	....do.....	49.0
20	....do.....	....do.....	....do.....	77.4
June 2	....do.....	....do.....	....do.....	57.0
17	....do.....	....do.....	....do.....	25.9
19	....do.....	....do.....	....do.....	45.9
Apr. 17	Butte Creek.....	Wildhorse Creek.....	SW¼NE¼ sec. 34, T. 35 S., R. 33 E., at road crossing ¼ mile south of Andrews.	5.71
June 4	....do.....	....do.....	....do.....	1.65
Apr. 14	Juniper Creek.....	....do.....	NE¼NW¼ sec. 3, T. 36 S., R. 33 E., at road crossing 1¼ miles southwest of Andrews.	3.92

Miscellaneous discharge measurements in the Great Basin during water year October 1951 to September 1952--Continued

Alvord Lake basin, Oreg.--Continued

Date	Stream	Tributary to or diverting from--	Locality	Discharge (cfs)
June 4	Juniper Creek.....	Wildhorse Creek.....	NE¼NW¼ sec. 3, T. 36 S., R. 33 E., at road crossing 1¼ miles southwest of Andrews.	0.50
Apr. 14	Miranda Creek.....	....do.....	SW¼SW¼ sec. 3, T. 36 S., R. 33 E., at road crossing 2 miles southwest of Andrews.	7.58
June 4	....do.....	....do.....	....do.....	0.62
Apr. 25	Willow Creek.....	Trout Creek.....	Sec. 8, T. 39 S., R. 35 E., 5 miles southeast of Fields.	23.5
May 20	....do.....	....do.....	....do.....	30.0
June 4	Blair ditch.....	Willow Creek.....	SW¼SE¼ sec. 10, T. 35 S., R. 33 E., at intake 3 miles north of Andrews.	e1.3
4	Spring Creek (or Penland) ditch.	Spring Creek.....	NE¼SE¼ sec. 22, T. 35 S., R. 33 E., 0.2 mile above road crossing and 1½ miles north of Andrews.	0.44

e Field estimate.

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