

Surface Water Supply of the United States 1957

Part 10. The Great Basin

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

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1514

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



UNITED STATES DEPARTMENT OF THE INTERIOR

FRED A. SEATON, *Secretary*

GEOLOGICAL SURVEY

Thomas B. Nolan, *Director*

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, L. B. Leopold, chief, under the general direction of J. V. B. Wells, chief, Surface Water Branch, and F. J. Flynn, chief, Basic Records Section.

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

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K. N. Phillips.....	Portland, Oreg.
J. M. Terry (succeeded by W. T. Miller).....	Denver, Colo.
M. T. Wilson.....	Salt Lake City, Utah

CALENDAR FOR WATER YEAR 1957

OCTOBER 1956

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SEPTEMBER 1957

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SURFACE WATER SUPPLY OF THE GREAT BASIN, 1957

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, 1957. Since 1888, when the United States Geological Survey first studied streamflow in relation to problems of irrigation, similar measurements have been made at more than 13,750 gaging stations in the 48 States and at many others in the Territories of Alaska and Hawaii. On September 30, 1957, the Geological Survey and cooperating organizations were maintaining 7,030 gaging stations, including those in Alaska and Hawaii. Discharge measurements only were made at many other points in the 1957 water year. The name of each stream measured at points other than gaging stations is not listed in the index of this report. Only the major river basins in which measurements were made are listed under the item "Discharge measurements" in the index.

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 Water Resources, H. O. Banks, director.

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

Nevada: Department of Conservation and Natural Resources, H. A. Shamberger, director; Office of State Engineer, Edmund Muth.

Oregon: Office of State Engineer, L. A. Stanley.

Utah: Office of State Engineer, J. M. Tracy, succeeded by W. D. Criddle; Utah Water & Power Board, Charles Redd, chairman, and G. D. Clyde, director, succeeded by J. R. Bingham; and Cedar City, A. E. Anderson, mayor.

Wyoming: Office of State Engineer, Earl Lloyd.

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 2 gaging stations in Utah and 5 in Nevada.

Assistance was also furnished by the Forest Service and the Soil Conservation Service of the Department of Agriculture; the 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: Utah Power & Light Co.

Oregon: Harney and Lake Counties.

Utah: Utah Power & Light Co.

DIVISION OF WORK

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

<u>State</u>	<u>District office</u>	<u>Address</u>
California a/.....	Menlo Park.....	4 Homewood Place.
Idaho b/.....	Boise.....	914 Jefferson Street.
Nevada.....	Salt Lake City, Utah.....	300 Federal Building.
Oregon c/.....	Portland.....	1001 NE. Lloyd Boulevard.
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 L. A. Stanley, 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 for 1 square mile.

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

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

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

The drainage area of a stream at a specified location is that area, measured in a horizontal plane, which is so enclosed by a topographic divide that direct surface runoff from precipitation normally would drain by gravity into the river above the specified point.

Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

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

DOWNSTREAM ORDER OF LISTING GAGING STATIONS

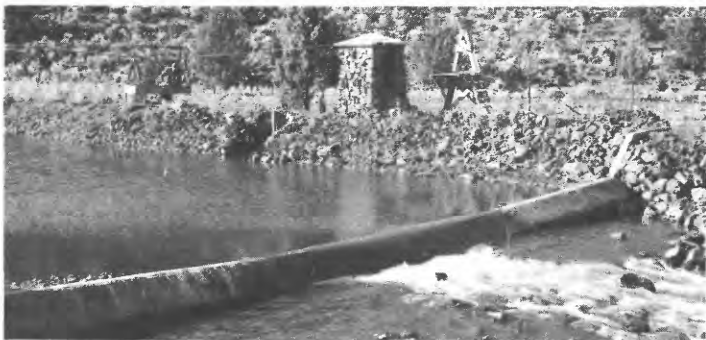
Beginning with the series of reports for the water year ending September 30, 1951, the order of listing gaging-station records was changed. In this report, in a downstream direction along the main stem all stations on a tributary entering above a main-stem station are listed before that station. If a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

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

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base 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 determinations of peak discharge (such as slope-area or contracted-opening determinations, computation of flow over dams or weirs, and by other methods), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for



A. DONNER UND BLITZEN RIVER NEAR FRENCHGLEN, OREG.



B. SEVIER RIVER NEAR JUAB, UTAH.



C. LOGAN RIVER NEAR LOGAN, UTAH.

FIGURE 1.—GAGING-STATION STRUCTURES.

a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is essentially the shifting-control method.

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

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

The data herein presented generally comprise a description of the station, a skeleton rating table, and a table showing the daily discharge and monthly and yearly discharge and runoff of the stream. Records are published for the water year which begins on October 1 and ends on September 30. A calendar for the water year 1957 is shown on page IV for the purpose of finding the day of the week for any date.

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

major floods that have occurred outside the period of record are given in the third or last paragraph under "Extremes." Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder, a crest-stage indicator, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge, it is given separately. Information pertaining to the accuracy of the records and conditions which affect the natural flow at gaging station is given under "Remarks."

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

Skeleton rating tables are generally published for all stations except those at which the daily discharge for the greater part of the open-water period was determined by the shifting-control method, the slope method, or other special methods involving an equivalent adjustment to the gage height of more than one-tenth foot. Skeleton rating tables are generally not published for stations on canals.

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

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

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

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

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

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

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents. For some reservoirs a table showing daily contents or stage is given. A skeleton table of capacity at given stages is published each year for all reservoirs for which records are published on a daily basis, but it is not published for reservoirs for which only monthly data are given.

Discharge measurements and determinations of peak flows made at sites other than gaging stations are listed at the end of each report.

At many gaging stations water samples are collected from the streams for the purpose of making chemical analyses, computing dissolved solids, suspended sediment loads, and particle-size distribution, or measuring water temperatures. For most of these samples the results are published in an annual series of water-supply papers entitled "Quality of Surface Waters of the United States" which is issued in four volumes. In this report under "Remarks" a reference is made to quality-of-water records collected at gaging stations on a regular basis and published in the quality-of-water reports. At many other gaging stations quality-of-water data are obtained at irregular intervals and published as "miscellaneous analyses" in quality-of-water reports; such records are not referred to in "Remarks" paragraph in this report. At many gaging stations water temperature is obtained also at the time a discharge measurement is made; such temperature readings are not reported in the quality-of-water annual 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, figures 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.

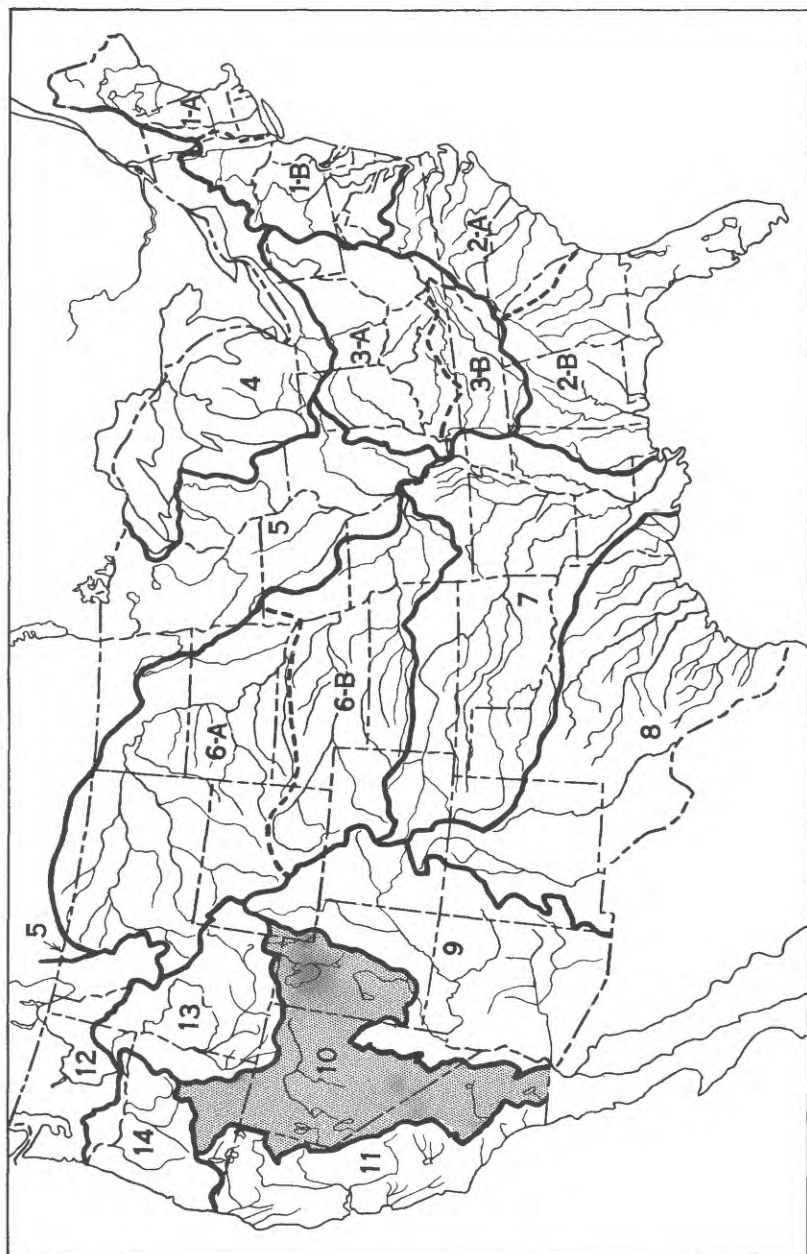


Figure 2.--Map of the United States showing areas covered by the 13 annual volumes on surface water supply. The area covered by this report is shaded.

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 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 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 Reports; B = Bulletin)

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.	
11th A, pt. 2	Monthly discharge and descriptive information.....	1884 to September 1890.
12th A, pt. 2	do.....	1884 to June 30, 1891.
13th A, pt. 3	do.....	1884-92.
14th A, pt. 2	Monthly discharge.....	1886-93.
B 131.....	Descriptions, measurements, gage heights, and ratings.....	1893-94.
16th A, pt. 2	Descriptive information only.	
B 140.....	Descriptions, measurements, gage heights, ratings, and monthly discharge.	1895.
WSP 11.....	Gage heights.....	1896.
18th A, pt. 4	Descriptions, measurements, rating, and monthly discharge..	1895-96.
WSP 15.....	Descriptions, measurements, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries above Kansas River.	1897.
WSP 16.....	Descriptions, measurements, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries above Kansas River.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge..	1897.
WSP 27.....	Measurements, ratings, and gage heights of streams east of the Mississippi River, and Missouri River and tributaries.	1898.
WSP 28.....	Measurements, ratings, and gage heights of streams west of the Mississippi River, except Missouri River and tributaries.	1898.
20th A, pt. 4	Monthly discharge.....	1898.
WSP 35 to 39.	Descriptions, measurements, gage heights, and ratings.....	1899.
21st A, pt. 4	Monthly discharge.....	1899.
WSP 47 to 52.	Descriptions, measurements, gage heights, and ratings.....	1900.
22d A, pt. 4.	Monthly discharge.....	1900.
WSP 65, 66...	Descriptions, measurements, gage heights, and ratings.....	1901.
WSP 75.....	Monthly discharge.....	1901.

Note.--Records for all stations in Oregon from the beginning of record through September 1910 have been republished in WSP 370 with some revisions, superseding all earlier reports for these stations.

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

Numbers of water-supply papers containing results of stream measurements in The Great Basin, 1899-1957

Year	WSP	Year	WSP	Year	WSP	Year	WSP	Year	WSP
1899	36, a39	1912	330	1925	610	1937	830	1949	1150
1900	51	1913	360	1926	630	1938	860	1950	1180
1901	66, 75	1914	390	1927	650	1939	880	1951	1214
1902	65	1915	410	1928	670	1940	900	1952	1244
1903	100	1916	440	1929	690	1941	930	1953	1284
1904	133, b134	1917	460	1930	705	1942	960	1954	1344
1905	176, b177	1918	480	1931	720	1943	980	1955	1394
1906	212, b213	1919-20	510	1932	735	1944	1010	1956	1448
1907-8	250, b251	1921	530	1933	750	1945	1040	1957	1514
1909	270, b271	1922	550	1934	765	1946	1060		
1910	290	1923	570	1935	790	1947	1090		
1911	310	1924	590	1936	810	1948	1120		

a Mojave River only.

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

Note.--Records for all stations in Oregon from the beginning of record through September 1910 have been republished in WSP 370 with some revisions, superseding all earlier reports for these stations.

The records at most of the stations discussed in these reports extend over many years. Discharge measurements at many points other than regular gaging stations have been made each year and are published 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 the type for The Great Basin.

Reports containing compilations of discharge by States and drainage basins		
WSP	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 or other agencies. 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 is a list of numbers and titles of these reports:

WSP

Report

- 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 floods in Utah, 1850 to 1938.
- 1137-H: Floods of November-December 1950 in western Nevada.
- 1227-D: Summary of floods in the United States during 1951.
- 1260-E: Floods of 1952 in Nevada and Utah.

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 1956 to September 1957 by agencies other than the Geological Survey. The records of these stations are not contained in publications of the Geological Survey. 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
Blackwood Creek..	Near Tahoe, Calif.....	1957	California Department of Water Resources.
City Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1957 a/	Salt Lake City.
Cottonwood Creek.	do.....	1898-1957 a/	Do.
Donner Creek.....	Above Gold Creek near Truckee, Calif.....	1929-57	Sierra Pacific Power Co.
Emigration Creek.	Salt Lake City, Utah, near mouth of canyon.	1898-1957 a/	Salt Lake City.
Ephraim Creek....	Near Ephraim, Utah.....	1914-57	Intermountain Forest & Range Experiment Station.
Little Cottonwood Creek.	Salt Lake City, Utah, near mouth of canyon.	1898-1957 a/	Salt Lake City.
Little Truckee River.	Above Boca Reservoir, near Boca, Calif.....	1942-57	Washoe County Water Conservation District.
Do.....	Below Boca Reservoir, near Boca, Calif.....	1942-57	Do.
Mill Creek.....	Salt Lake City, Utah, near mouth of canyon.	1898-1957 a/	Salt Lake City.
Otter Creek.....	Antimony, Utah, at former Geological Survey gaging station near Coyote.	1920-57 b/	Sevier River water commissioner.
Parleys Creek....	Salt Lake City, Utah, near mouth of canyon.	1898-1957 a/	Salt Lake City.
Sevier River.....	Delta, Utah, at former Geological Survey gaging station.	1920-57 b/	Sevier River water commissioner.
Trout Creek.....	Near Tahoe Valley, Calif.....	1957	California Department of Water Resources.
Truckee River....	At Derby Dam, Nev.....	1907-10 c/, 1926-57	Federal Court Water-master for Truckee River and Truckee-Carson Irrigation District.
Do.....	At Farad, Calif.....	1938-57 d/	Truckee-Carson Irrigation District.
Do.....	Near Myers, Calif.....	1957	California Department of Water Resources.
Do.....	At Pyramid Dam, Nev.....	1928-57	Federal Court Water-master for Truckee River.
Do.....	At Tahoe, Calif.....	1895-96, 1900-1957 d/	Federal Court Water-master for Truckee River and Truckee-Carson Irrigation District.
Do.....	At Vista, Nev.....	1899-1907 c/, 1927-57	Federal Court Water-master for Truckee River.
Walker River....	Near Wabusha, Nev.....	1902-8 c/, 1920-34 c/, 1940-57	Walker River Irrigation District.

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

Drought conditions prevailed throughout the 1957 water year in southern California except during the month of January when excessive runoff occurred. Portions of the area covered by this report had above median runoff each month except during April. The runoff pattern at the beginning of the water year was above median in most of the western part of the area, slightly below median in the central and northeastern portion, to extreme drought conditions in the southeastern part of the area. Below median runoff occurred generally throughout the period November to May except for a short time in southern California, northern Nevada, and Oregon. The "Southwest Drought" has included the southeastern portion of The Great Basin with much below median runoff for the past eight years except for the highwater year of 1952. The severe drought condition in southern Utah was alleviated by above median runoff during the last four months of the water year. During the latter part of the water year excessive runoff occurred in most of the eastern part of the area, while below median runoff occurred in most of the remaining area. Delayed snow-melt due to cool weather during March to May caused high rate of runoff the early part of

June for several streams in the western portion of this basin. No noteworthy floods occurred during the water year. For three key gaging stations in the area covered by this report, a comparison of the monthly and yearly mean discharges during the 1957 water year with the median for the 25-year period 1921-45 is shown in figure 3 below.

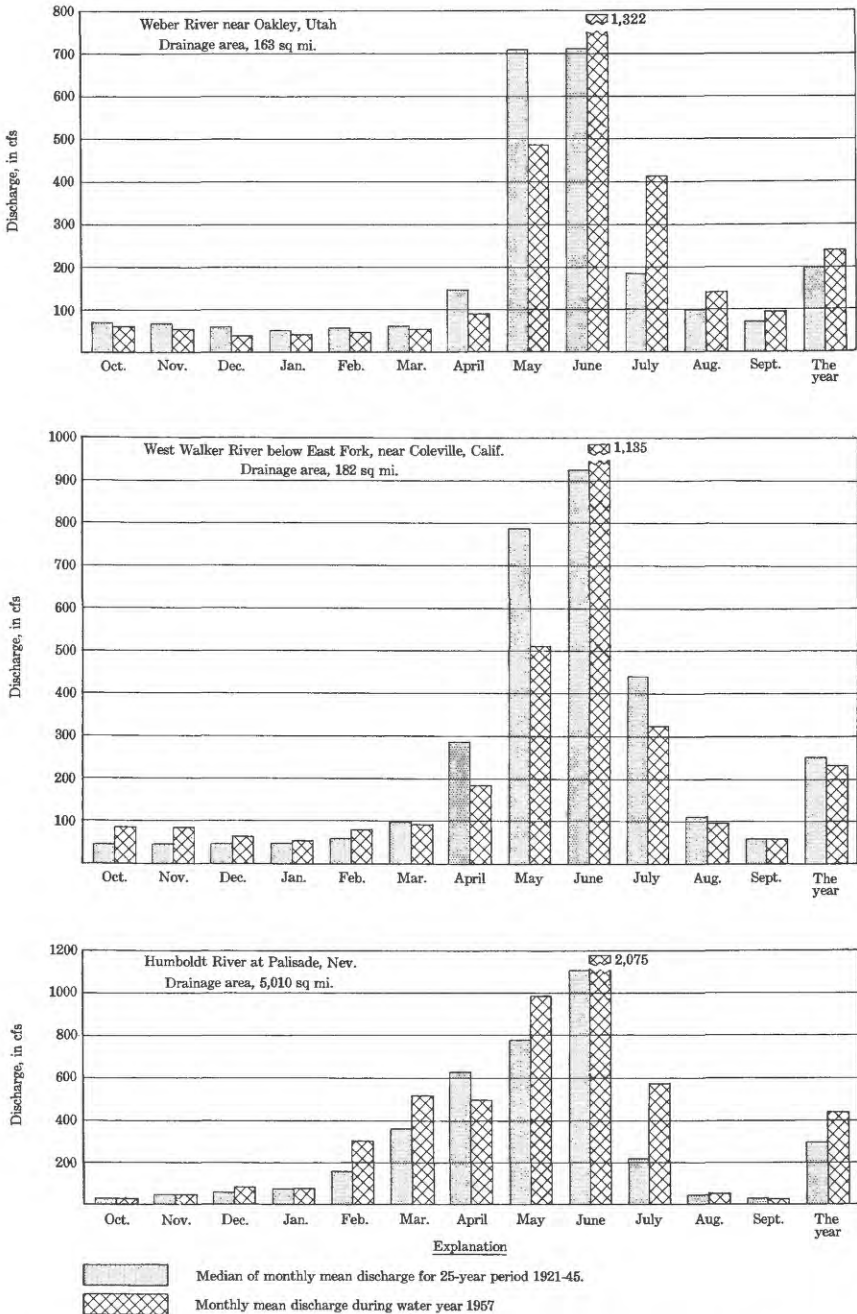


Figure 3. Comparison of discharge at three key gaging stations during 1957 water year with median discharge for 25-year period.

GAGING STATION RECORDS

GREAT SALT LAKE BASIN

Great Salt Lake, Utah

Location.--Lat 40°44'15", long 112°12'30", in NW $\frac{1}{4}$ 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.

Records available.--September 1875 to December 1899, March to July 1904, and October 1912 to September 1957 in reports of Geological Survey. July 1903 to December 1934 in reports of U. S. Weather Bureau. Diagram showing fluctuations of lake from 1851-1940 is published in WSP 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 October 1902 to September 1956 at datum 4,197.9 ft (revised) 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 Farmington Bay at datum 4,206.9 ft above mean sea level, November 1877 to November 1879 at Black Rock at datum 4,208.4 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, 4,197.55 ft June 15 at Boat Harbor gage; minimum, 4,195.9 ft Nov. 1, 15.

1875-99, 1903-57: Maximum elevation observed, 4,210.9 ft June 30, 1876; minimum, 4,193.7 ft Oct. 15, Nov. 1, 1940.

Maximum elevation since 1851, 4,211.6 ft in 1873, computed from traditional data by E. C. LaRue.

Remarks.--To compensate for wind effect, elevations given for the 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.

Gage height, in feet, water year 1956-57

Day	Boat Harbor	Day	Boat Harbor
Oct. 1	9.1	Apr. 1	9.85
15	9.05	15	9.95
Nov. 1	9.0	May 1	10.1
15	9.0	15	10.25
Dec. 1	9.0	June 1	10.55
15	9.15	15	10.65
Jan. 1	9.25	July 1	10.5
15	9.3	15	10.3
Feb. 1	9.4	Aug. 1	10.05
15	9.45	15	9.7
Mar. 1	9.65	Sept. 1	9.4
15	9.75	15	9.2

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

Records available.--October 1949 to September 1957 in reports of Geological Survey. April 1944 to September 1949 (irrigation seasons only) in reports of Bear River Hydro-metric Data (U. S. Geological Survey open-file report).

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

Average discharge.--8 years (1949-57), 6.02 cfs (4,360 acre-ft per year).

Extremes.--1949-57: Maximum daily discharge, 42 cfs June 15, 1946; no flow during winter and at other times each year.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Canal diverts from East Fork Bear River for irrigation of about 2,600 acres in Hilliard Flat area in Wyoming.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.1								2.4	13	14	12
2	*6.6								1.9	17	13	11
3	6.6								1.6	20	13	11
4	6.4								.8	*11	14	10
5	4.9							0	.9	5.2	17	10
6	2.0								.6	24	16	9.6
7	6.9								.4	36	15	9.4
8	7.3								0	35	16	9.0
9	7.1								2.1	35	14	8.8
10	7.3								4.2	34	13	8.8
11	6.9								*3.6	34	13	8.8
12	7.1								3.2	32	14	8.6
13	7.6								3.2	32	12	8.4
14	9.0							1.0	2.6	32	11	8.0
15	8.3								2.5	30	*11	7.8
16	6.6								1.9	*30	11	7.6
17	10								1.7	28	10	7.8
18	16								1.7	30	9.4	*7.6
19	15								6.5	28	8.8	8.8
20	14								9.0	26	9.2	8.4
21	10							**1.3	8.1	25	10	8.0
22	11							1.2	7.6	25	12	7.8
23	20							3.1	7.3	23	11	7.8
24	13							1.6	10	21	10	7.6
25	17							1.3	13	20	10	7.4
26	14							1.3	14	18	9.9	7.4
27	13							1.7	13	12	10	7.6
28	5.4							2.7	13	4.4	10	7.2
29	0							2.8	12	10	11	7.4
30	0							2.8	11	16	13	7.2
31	0	-----					-----	2.8	-----	15	11	-----
Total	267.1	0	0	0	0	0	0	34.6	159.8	721.6	372.3	256.8
Mean	8.62	0	0	0	0	0	0	1.12	5.35	23.3	12.0	8.56
Ac-ft	530	0	0	0	0	0	0	69	317	1,430	738	509
Calendar year 1956: Max	42				Min	0	Mean	7.29	Ac-ft	5,300		
Water year 1956-57: Max	36				Min	0	Mean	4.96	Ac-ft	3,590		

* Discharge measurement made on this day.

** Field estimate made on this day.

Note.--No gage-height record May 9-20; discharge estimated on basis of closed headgates and weather records.

Bear River near Utah-Wyoming State line

Location.--Lat 40°58', long 110°51', in SE $\frac{1}{4}$ 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 1957.

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

Average discharge.--15 years, 191 cfs (138,300 acre-ft per year).

Extremes.--Maximum discharge during year, 2,800 cfs June 6 (gage height, 4.27 ft); minimum, 16 cfs Oct. 30, but may have been less during periods of ice effect or no gage-height record.

1942-57: Maximum discharge, that of June 6, 1957; minimum determined, 16 cfs Apr. 11, 1951, Nov. 5, 1954, Nov. 1, 1955, Oct. 30, 1956.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Two diversions above station for irrigation of about 200 acres above and 2,600 acres below station.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 27 to June 4)

Oct. 1 to May 26

May 27 to Sept. 30

0.8	19	1.8	256	0.80	36	2.2	550
1.0	39	2.2	446	1.0	59	2.7	945
1.2	73	2.6	733	1.2	96	3.3	1,560
1.5	152			1.5	183	3.9	2,290
				1.8	312		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	38	b33	b34	b33		33	75	1,140	1,370	169	76
2	*28	b37	b32	34	34		33	120	1,310	1,370	156	68
3	28	b37	32	34	b33	35	35	155	1,500	1,210	146	61
4	27	b40	33	34	b33		34	191	*1,680	*1,090	143	58
5	27	44	35	b33	b32	*35	35	245	1,850	954	146	55
6	32	45	b34	b32	b32	b35	37	325	2,120	884	146	55
7	25	*44	b32	b35	31	35	37	*404	*2,120	867	129	54
8	28	42	b30	34	29	35	37	492	1,990	775	152	51
9	28	40	b32	b33	33	35	38	584	1,870	674	115	50
10	29	40	b35	b31	b31	35	39	562	1,720	614	106	50
11	26	39	b40	b32	32	35	44	512	*1,630	674	106	50
12	27	38	b40	b33	b31	35	46	392	1,430	600	140	48
13	34	37	40	34	b31	37	48	348	1,690	543	108	48
14	35	35	*40	35	33	b35	54	343	1,200	490	98	47
15	34	b35	40	35		b35	60	343	1,110	464	*103	47
16	33	b36	39			35	*60	313	974	*415	96	47
17	33	b37	b38		32	35	65	325	910	421	94	47
18	32	b36	b37			34	64	428	919	421	88	*46
19	33	b34	37			34	56	643	1,000	398	80	51
20	32	b32	b36			33	56	453	*1,210	328	88	52
21	31	b33	b35			33	54	*334	1,260	303	92	52
22	29	b35	b34			b33	54	292	964	298	115	52
23	39	b36	b34	b32		b33	56	292	945	265	90	47
24	50	b36	b35			b33	52	272	1,160	239	76	46
25	39	b35	b35		35	b33	50	264	1,440	222	71	44
26	46	b34	b36			33	45	367	1,490	210	69	44
27	44	b33	b37			b34	46	543	*1,600	206	68	44
28	44	b33	b38			35	48	720	1,690	206	71	44
29	45	b33	37			34	62	825	1,710	210	71	44
30	35	b33	35			34	69	841	*1,580	183	92	44
31	44	-----	34			33	-----	1,050	-----	176	78	-----
Total	1,049	1,107	1,105	1,013	920	1,066	1,447	13,053	43,192	17,020	3,302	1,520
Mean	33.8	36.9	35.6	32.7	32.8	34.4	48.2	421	1,440	549	107	50.7
Ac-ft	2,080	2,200	2,190	2,010	1,820	2,110	2,870	25,890	85,670	33,760	6,550	3,010
Calendar year 1956:	Max	1,630		Min	-		Mean	189	Ac-ft	136,900		
Water year 1956-57:	Max	2,120		Min	-		Mean	235	Ac-ft	170,200		

Peak discharge (base, 1,100 cfs).--June 6 (11:30 p.m.) 2,800 cfs (4.27 ft); June 28 (1 a.m.) 2,100 cfs (3.75 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Feb. 15 to Mar. 4; discharge estimated on basis of weather records and records for nearby stations.

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 1957.

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

Average discharge.--8 years, 34.9 cfs (25,270 acre-ft per year).

Extremes.--Maximum discharge during year, 690 cfs June 7 (gage height, 4.39 ft); minimum, 1.8 cfs Mar. 21.
1949-57: Maximum discharge, that of June 7, 1957; minimum, 0.9 cfs Nov. 11, 1951, result of freezeup.

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

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	4.1	1.3	50	2.8	289
.6	6.2	1.6	86	3.2	372
.8	13	2.0	143	3.7	500
1.0	24	2.4	213		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	7.9					7.9	30	320	190	16	12
2	*5.8	7.0					9.8	53	365	166	15	11
3	5.8	7.0	b7.5	b7.0		7.5	8.7	76	404	140	14	9.8
4	5.8	7.0					8.4	99	*452	114	15	8.7
5	5.6	8.4				*7.6	8.4	130	465	95	17	8.4
6	5.4	8.4				7.6	8.4	169	476	87	16	8.4
7	4.7	*8.4				7.6	8.2	*180	*497	82	14	8.2
8	5.2	8.2	b6.5			7.9	7.6	176	450	69	18	8.2
9	5.2	7.6			6.5	9.0	8.4	189	411	61	14	8.2
10	5.8	7.9				8.4	9.4	169	354	58	12	8.2
11	6.0	8.2				b8.2	11	161	*463	61	12	8.4
12	6.0	b8.0				b8.0	13	100	345	58	18	8.2
13	7.0	b8.0				b7.8	15	86	431	52	13	8.2
14	6.8	7.6	(*)			7.6	17	91	272	51	12	8.4
15	6.2	7.0				7.6	20	98	245	40	*15	8.2
16	6.0	b7.0	b7.5			7.3	*20	87	222	*35	14	8.2
17	6.0	b7.5				7.6	21	92	251	32	14	8.2
18	6.0	b7.0				8.2	20	119	278	36	11	*8.2
19	6.0	b6.5				8.4	17	164	283	30	10	11
20	5.8	b7.0		b6.0		7.9	16	103	*287	28	12	11
21	5.8	b7.2				b7.6	18	*73	266	27	12	10
22	5.8					b7.4	18	63	213	30	21	9.8
23	7.6					7.3	19	66	215	27	16	9.4
24	9.8					6.8	17	65	245	26	13	9.0
25	7.3				7.5	7.3	15	66	283	24	12	8.4
26	9.0	b7.5	b7.0			6.8	13	106	281	25	12	8.4
27	9.3			6.0		b7.0	13	174	*295	24	10	8.4
28	9.4					b7.3	14	211	289	22	10	8.4
29	8.4					7.6	21	211	281	20	12	8.4
30	7.3					7.9	27	226	234	19	14	8.4
31	8.4	-----				8.2	-----	280	-----	18	12	-----
Total	205.3	226.3	222.0	196.0	190.0	237.9	430.2	3,913	9,871	1,747	426	267.7
Mean	6.62	7.54	7.16	6.32	6.79	7.67	14.3	126	329	56.4	13.7	8.92
Ac-ft	407	449	440	389	377	472	853	7,760	19,580	3,470	845	551
Calendar year 1956: Max		360			Min 4.0		Mean 31.1		Ac-ft 22,580			
Water year 1956-57: Max		497			Min -		Mean 49.1		Ac-ft 35,570			

Peak discharge (base, 250 cfs).--May 6 (7 p.m.) 257 cfs (2.63 ft); June 7 (12:30 p.m.) 690 cfs (4.39 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Jan. 23 to Mar. 4; discharge estimated on basis of weather records and records for nearby stations.

Sulphur Creek near Evanston, Wyo.

Location.--Lat 41°10', long 110°52', in SE $\frac{1}{4}$ 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 1957 (fragmentary prior to July 1942).

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. 21, 1952, at datum 1.00 ft higher.

Average discharge.--15 years, 23.2 cfs (16,800 acre-ft per year).

Extremes.--Maximum discharge during year, 539 cfs June 16 (gage height, 4.53 ft); minimum, 0.5 cfs Oct. 1-3, 5-7, but may have been less during periods of ice effect. 1942-57: Maximum discharge, 1,220 cfs Apr. 23, 1952; maximum gage height, 6.01 ft, Apr. 21, 1948, present datum; 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 flow from irrigated areas.

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

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.				
1	0.5	1.4	1.8	3.5	2.5	24	31	76	157	33	10	3.2				
2	.5	1.4				22	12	69	145	24	7.0	3.0				
3	*.5	1.4				21	19	66	147	16	5.2	3.2				
4	.5	1.5				20	24	61	*134	11	4.6	2.8				
5	.5	1.8				19	25	65	149	9.3	5.2	2.2				
6	.5	2.2	*1.6	2.0	8.0	19	30	73	155	8.9	4.6	2.4				
7	.5	*2.5	1.4			19	26	*95	118	12	3.9	2.2				
8	.8	3.0	1.3			20	34	95	92	23	4.9	1.6				
9	.8	2.5	1.3			26	42	94	74	20	4.4	1.4				
10	.8	2.0	1.5			23	59	111	*91	*22	4.2	1.4				
11	.8	1.5	2.5	3.0	5.0	21	79	163	*250	65	3.4	1.6				
12	.9	1.5				20	127	104	138	143	4.4	1.6				
13	1.2	1.4				19	191	74	258	54	4.2	1.0				
14	1.1	1.4				19	258	63	230	52	3.9	1.0				
15	1.0	1.3				18	*287	123	245	35	*3.6	1.0				
16	1.0	1.4	3.0	2.0	32	17	*221	101	419	*27	3.6	1.0				
17	1.0	1.5				18	*204	90	319	24	3.4	1.0				
18	1.0	1.5				20	149	106	195	29	3.0	*1.0				
19	1.1	1.3				22	*118	197	134	42	2.6	1.6				
20	1.0	1.2				25	97	169	85	41	2.8	1.2				
21	1.0	1.3	1.8	2.5	40	23	87	106	82	39	3.4	1.2				
22	1.0	1.5				12	21	87	*68	66	58	4.2	1.8			
23	2.2					17	19	56	69	58	72	3.9	2.0			
24	2.0					30	18	*103	94	52	51	2.8	2.0			
25	1.5					50	17	104	94	43	42	2.4	1.8			
26	2.2	1.8				2.5	40	16	97	64	52	42	2.0	2.2		
27	1.9						32	*18	111	94	55	48	1.8	2.4		
28	1.6						*27	23	97	118	51	37	1.6	2.4		
29	1.6						-	30	87	123	45	25	3.0	2.4		
30	1.5										38	*84	100	39	18	3.6
31	1.6					41			112	13	3.2					
Total	34.2	50.9	73.1	64.5	291.0	676	2,946	3,055	4,074	1,136.2	120.8	56.0				
Mean	1.10	1.70	2.36	2.08	10.4	21.8	98.2	98.5	136	36.7	3.90	1.87				
Ac-ft	68	101	145	128	577	1,340	5,840	6,060	8,080	2,250	240	111				
Calendar year 1956: Max 250 Min 0.5 Mean 15.3 Ac-ft 11,070																
Water year 1956-57: Max 419 Min 0.5 Mean 34.5 Ac-ft 24,940																

Peak discharge (base, 300 cfs).--Apr. 15 (8 p.m.) 494 cfs (4.42 ft); Apr. 24 (7:30 p.m.) 340 cfs (3.98 ft); June 16 (11:30 p.m.) 539 cfs (4.53 ft); July 11 (12 p.m.) 502 cfs (3.85 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 15 to Mar. 11, Mar. 13-16, 18-27 (no gage-height record Jan. 10-17, Jan. 29 to Feb. 27; discharge estimated on basis of 1 discharge measurement, weather records, and records for nearby stations.

Yellow Creek near Evanston, Wyo.

Location--Lat 41°09', long 111°03', in SW $\frac{1}{4}$ sec. 21, T. 5 N., R. 8 E., in Utah, on left bank 600 ft downstream from Sage Creek, $1\frac{1}{2}$ miles upstream from Coyote Creek, and $9\frac{1}{2}$ miles southwest of Evanston.

Drainage area--80 sq mi, approximately.

Records available--February 1943 to September 1945, October 1949 to September 1957. Records prior to October 1944, not equivalent to later records; would be equivalent by adding flow of Wright No. 2 and Cook Canals, in reports on Bear River Hydrometric Data, 1944 (Geological Survey open-file report).

Gage--Water-stage recorder. Altitude of gage is 6,920 ft (from river-profile map). Prior to Oct. 1, 1944, staff gage at site $1\frac{1}{2}$ miles downstream and Oct. 1, 1944, to Sept. 30, 1945, water-stage recorder at site 500 ft upstream at different datums (revised).

Average discharge--9 years (1944-45, 1949-57), 11.1 cfs (8,040 acre-ft per year).

Extremes--Maximum discharge during year, 147 cfs May 20 (gage height, 5.28 ft); no flow about half of the year.
1944-45, 1949-57: Maximum discharge, 477 cfs Apr. 28, 1952 (gage height, 7.04 ft); 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.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-17)

Oct. 1 to Apr. 11

Apr. 12 to Sept. 30

1.3	0.4	2.0	15	0.4	0.2	2.3	35
1.4	1.1	2.2	26	.5	1.2	2.7	72
1.5	2.2	2.5	50	.6	3.2	3.2	151
1.6	3.8	2.9	95	.8	8.9	3.7	260
1.8	8.1			2.0	17	4.3	448

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	*3.0	8.7	*28	80	7.2	0.4	
2					0	2.5	8.0	*38	76	5.7	.3	
3					0	2.0	3.8	45	70	4.8	.3	
4					0	1.5	4.5	41	*61	3.6	.3	
5					0	1.4	4.2	42	55	2.9	2.1	
6					0	1.3	8.3	*48	48	2.5	.6	
7					0	1.2	6.6	*56	45	2.1	.6	
8					0	3.2	5.7	*57	37	2.1	.5	
9					0	1.1	6.3	66	31	2.0	.4	
10					0	1.1	8.3	71	*28	1.7	.3	
11					0		12	66	38	1.6	.3	
12					0		15	58	42	1.8	.3	
13					0		16	44	37	3.2	.2	
14					0		19	46	52	3.4	.2	
15					0		*24	50	42	3.8	**2	
16					0	1.5	22	47	58	*3.2	.1	
17					0		*20	44	56	2.7	.1	
18					0		18	48	58	2.5	.1	
19					0		*18	73	53	2.7	.1	
20					0		18	*123	38	2.3	.1	
21					0		16	77	32	2.0	.1	
22					0		16	*53	32	1.6	0	
23					0	1.3	21	45	25	.7	0	
24					0		21	56	22	.6	0	
25					1.0		24	53	18	.6	0	
26					3.0	1.5	18	46	15	.6	0	
27					5.0	*2.0	17	54	14	.6	0	
28					4.0	2.5	18	69	12	.6	0	
29						3.8	20	86	9.1	.7	0	
30						6.3	25	78	8.7	.6	0	
31						7.6		78		.6	0	
Total	0	0	0	0	13.0	63.3	442.4	1,786	1,192.8	71.0	7.6	0
Mean	0	0	0	0	0.46	2.04	14.7	57.6	39.8	2.29	0.25	0
Ac-ft	0	0	0	0	26	126	877	3,540	2,370	141	15	0

Calendar year 1956: Max 52 Min 0 Mean 6.57 Ac-ft 4,770
Water year 1956-57: Max 123 Min 0 Mean 9.80 Ac-ft 7,100

Peak discharge (base, 100 cfs)--May 20 (9 a.m.) 147 cfs (5.28 ft); May 29 (5:30 p.m.) 114 cfs (4.50 ft).

* Discharge measurement made on this day.

** Field estimate made on this day.

Note.--No gage-height record Feb. 25-28; discharge estimated on basis of notes by rancher and records for nearby stations. Stage-discharge relation affected by ice Mar. 1-4, 9-27.

Chapman Canal at State line, near Evanston, Wyo.

Location.--Lat 41°24', long 111°02', in SE¹ 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 1957 in reports of Geological Survey. April to September 1942 and May to September 1943 in upper Bear River water commissioner's reports, Utah; April 1944 to September 1948 in upper Bear River water commissioner's reports, Utah, and reports of Bear River Hydrometric Data (Geological Survey open-file report).

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

Average discharge.--12 years (1945-57), 17.0 cfs (12,310 acre-ft per year).

Extremes.--1942-57: Maximum daily discharge observed, 129 cfs Apr. 14, 1946; no flow at times each year.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Canal diverts water from Bear River in NW¼ sec. 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.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 6, 7)

0.4	0	1.1	19
.5	.8	1.4	40
.6	2.2	1.8	78
.7	4.2	2.2	118
.9	9.7		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	22			0	1.4	55	*5.0	74	85	36	19
2	0	16			0	.9	53	5.0	68	80	35	17
3	0	11			0	.5	58	5.2	*65	83	32	14
4	0	13			0	0	58	5.8	74	79	30	6.8
5	0	18			0	0	58	5.5	93	71	20	4.0
6	0	30			0	0	75	6.3	88	74	10	3.2
7	0	*36			0	1.5	73	6.8	77	83	12	2.6
8	0				0	b10	73	*8.2	75	81	12	1.2
9	0				0	b10	74	8.5	83	76	12	.8
10	0				0	b10	81	8.2	84	*77	10	.9
11	0				0	b5.0	68	8.8	83	88	9.1	1.2
12	0				0	b15	40	8.5	79	107	9.1	2.2
13	0		40		0	b40	44	6.3	71	114	10	2.2
14	0				0	b40	46	5.8	83	103	*9.1	1.9
15	0				0	b40	36	5.5	65	80	7.4	1.1
16	0			(*)	0	42	12	5.5	82	69	5.2	.7
17	0				0	41	*11	42	82	*66	18	0
18	0	20			0	41	8.5	43	48	64	20	*0
19	0	0			0	b41	6.5	52	31	63	19	0
20	0	0			0	b40	5.8	44	48	61	17	0
21	0	0			b0.2	b40	5.5	37	87	54	18	0
22	0	0			b5.8	b40	5.8	*33	86	49	21	0
23	0	0			b10	b40	8.5	30	69	46	25	0
24	3.8	0			b8.0	b40	6.0	30	63	49	25	0
25	8.2	0			b5.0	b40	6.5	29	73	46	23	0
26	12	0			b3.0	b40	5.8	38	87	40	20	2.1
27	19	0			2.2	*40	5.0	64	89	38	18	1.5
28	23	0			*1.8	40	4.7	67	*93	40	18	.2
29	21	0			-	45	4.7	70	92	40	20	.4
30	20	0			-	49	5.2	74	88	44	28	0
31	16	0			-	54	-	79	-	40	30	4
Total	122.0	566	0	0	36.0	847.3	993.5	836.9	2,280	2,090	578.9	83.4
Mean	3.94	18.9	0	0	1.29	27.3	33.1	27.0	76.0	67.4	18.7	2.78
Ac-ft	242	1,120	0	0	71	1,680	1,970	1,660	4,520	4,150	1,150	165

Calendar year 1956: Max 90 Min 0 Mean 16.6 Ac-ft 12,020
Water year 1956-57: Max 114 Min 0 Mean 23.1 Ac-ft 16,730

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

b Stage-discharge relation affected by ice.

Note.--No gage-height record Nov. 8-18; discharge estimated on basis of records for Bear River near Woodruff, Utah.

Bear River near Woodruff, Utah

Location--Lat 41°31'25, long 111°01'00", in SW¹/₄ 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 1957.

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

Average discharge--15 years, 219 cfs (158,500 acre-ft per year).

Extremes--Maximum discharge during year, 2,380 cfs June 15 (gage height, 4.84 ft); no flow Oct. 1-23, 25-29.

1942-57: Maximum discharge, 3,010 cfs Apr. 28, 1952 (gage height, 5.32 ft); maximum gage height, 5.98 ft Mar. 21, 1951 (ice jam); no flow at times each year 1942-49, 1954-57.

Remarks--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions for irrigation of about 45,000 acres above station.

Rating table, water year 1956-57, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	0	1.2	30	2.7	542
.6	.2	1.5	80	3.3	935
.7	1.6	1.8	158	4.0	1,520
.8	3.4	2.2	299	4.8	2,340
1.0	13				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	3.0	42	40	40	110	141	359	1,280	1,400	46	9.2
2	0	2.7				110	141	350	1,380	1,180	35	9.8
3	0	3.2				105	76	382	1,480	1,040	30	9.8
4	0	2.9				105	67	420	1,590	907	24	8.7
5	0	3.0	(*)			100	65	439	*1,720	810	22	14
6	0	*3.0	40	42	40	100	82	514	1,850	653	26	19
7	0	3.0				98	119	621	2,020	508	37	18
8	0	6.8				98	106	*724	2,130	481	33	17
9	0	11				98	101	780	2,280	429	30	14
10	0	8.7				100	121	892	2,250	*386	33	12
11	0	7.6	48	45	45	105	174	935	2,240	364	33	11
12	0	8.5				110	256	921	*2,210	497	32	9.8
13	0	9.0				90	328	731	2,130	536	30	7.6
14	0	9.5				70	400	672	2,010	382	30	6.8
15	0	10				70	508	666	2,270	303	28	6.8
16	0	10	45	45	45	70	584	679	1,860	256	*26	7.2
17	0	15				70	536	596	1,900	*216	26	7.6
18	0					70	481	602	1,770	183	19	8.7
19	0					70	*391	817	*1,480	167	12	*11
20	0					70	337	1,140	1,290	152	9.2	9.2
21	0	45	40	40	40	75	303	958	1,310	126	109	9.8
22	0					80	295	*712	1,390	111	26	11
23	0					72	359	566	1,090	94	11	14
24	.1					61	341	634	950	94	8.7	15
25	0					59	400	647	988	87	7.6	15
26	0	42	45	45	45	100	52	368	560	1,130	72	7.2
27	0					110	*56	341	560	1,230	61	6.3
28	0					110	46	346	757	*1,300	61	7.6
29	0					-	52	333	914	1,440	59	8.1
30	1.9					78	359	1,010	1,460	59	8.7	8.7
31	2.5					113		1,010		54	9.2	
Total	4.5	686.9	1,385	1,270	1,465	2,563	8,459	21,578	49,588	11,728	770.6	335.7
Mean	0.15	22.9	44.7	41.0	52.3	82.7	282	696	1,646	378	24.9	11.2
Ac-ft	8.9	1,360	2,750	2,520	2,910	5,080	16,780	42,800	97,960	23,260	1,530	666
Calendar year 1956: Max 1,700 Min 0 Mean 193 Ac-ft 140,100												
Water year 1956-57: Max 2,280 Min 0 Mean 273 Ac-ft 197,600												

Peak discharge (base, 1,300 cfs)--June 15 (9 a.m.) 2,580 cfs (4.84 ft); June 30 (1 p.m.) 1,540 cfs (4.02 ft).

* Discharge measurement made on this day.

Note--Stage-discharge relation affected by ice Nov. 12 to Mar. 22 (no gage-height record Nov. 30 to Mar. 6; discharge estimated on basis of 3 discharge measurements, weather records, and records for nearby stations on Bear River).

Woodruff Creek near Woodruff, Utah

Location.--Lat 41°29', long 111°16', in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T. 9 N., R. 6 E., on left bank $\frac{1}{4}$ miles upstream from Birch Creek and 6 miles southwest of Woodruff.

Drainage area.--65 sq mi, approximately.

Records available.--October 1949 to September 1957 in reports of Geological Survey. October 1937 to September 1943 records for site $\frac{1}{4}$ miles upstream available in files of Logan project office, Geological Survey, under name of South Fork Woodruff Creek near Woodruff.

Gage.--Water-stage recorder. Altitude of gage is about 6,600 ft (from topographic map). Prior to June 21, 1939, staff gage half a mile downstream at different datum. June 22, 1939, to Sept. 30, 1943, water-stage recorder at site $\frac{1}{4}$ miles upstream at different datum.

Average discharge.--8 years (1949-57), 35.5 cfs (25,700 acre-ft per year).

Extremes.--Maximum discharge during year, 276 cfs June 3 (gage height, 4.60 ft); minimum, 1.9 cfs Feb. 26, result of freezeup. 1949-57: Maximum discharge, 528 cfs May 25, 1950 (gage height, 5.72 ft); minimum, that of Feb. 26, 1957.

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

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Mar. 19, May 20-31)

Oct. 1 to Mar. 26		Mar. 27 to May 19		May 20 to Sept. 30	
1.4	6.7	1.6	12	1.4	7.5
1.5	11	1.8	19	1.5	13
1.6	16	2.1	34	1.7	34
1.8	33	2.5	56	2.1	70
				2.7	111
				3.5	173
				4.4	256

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	b11	11	b8.5	8.5	14	20	49	240	33	14	11
2	11	b10	11			14	18	*68	245	30	13	11
3	12	b9.0	11			14	16	84	*256	28	12	11
4	*11	10	11			12	15	89	250	27	13	11
5	12	11	11			13	15	95	236	26	14	11
6	13	11	b9.0	b7.5	9.5	9.4	21	*109	217	26	13	11
7	13	11	*b7.5			13	17	125	191	26	12	10
8	14	*11	b7.0			18	17	*140	150	25	12	10
9	14	11	b7.0			25	19	141	128	24	12	10
10	15	11	b8.0			24	23	132	116	23	12	11
11	15	11	9.0	8.5	9.8	14	28	131	108	25	12	11
12	16	11	10			18	32	106	*94	26	12	11
13	18	11	10			13	35	91	95	24	12	11
14	17	9.8	10			b12	40	91	83	21	*12	11
15	18	b9.0	10			b12	41	91	76	*21	12	11
16	18	10	10	(*)	9.0	11	41	92	70	21	13	10
17	18	9.8	10			b9.0	12	*41	99	84	21	*10
18	17	b9.0	9.4			b9.0	11	42	118	80	21	12
19	16	b8.0	9.0			b9.0	13	38	187	*57	20	11
20	15	9.4	10			9.8	15	32	*181	56	19	11
21	14	10	b7.5	9.8	9.4	20	29	139	54	18	12	11
22	14	11				17	29	*117	50	18	13	11
23	15	11				10	13	35	107	47	17	12
24	18	11				12	b13	*32	102	45	16	11
25	14	11				14	14	31	98	43	16	11
26	16	11	b9	7.5	14	14	29	116	42	16	11	10
27	16	11				*11	27	163	41	16	11	10
28	16	11				13	28	195	*38	15	12	10
29	15	11				-	15	34	236	37	15	12
30	12	11				18	18	*44	244	35	14	13
31	13	-----				18	-----	*247	-----	14	12	10
Total	458	313.0	288.9	248.5	274.3	453.4	869	3,983	3,224	662	376	319
Mean	14.7	10.4	9.32	8.02	9.80	14.6	29.0	128	107	21.4	12.1	10.6
Ac-ft	908	621	573	493	544	899	1,720	7,900	6,390	1,310	746	633
Calendar year 1956: Max 292 Min - Mean 37.0 Ac-ft 26,870												
Water year 1956-57: Max 256 Min - Mean 31.4 Ac-ft 22,740												

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Jan. 6-19. Jan. 24 to Feb. 13; discharge estimated on basis of 1 discharge measurement, weather records, and records for nearby stations.

Big Creek near Randolph, Utah

Location.--Lat 41°37', long 111°15', in SE $\frac{1}{4}$ sec. 10, T. 10 N., R. 6 E., on left bank $\frac{3}{4}$ miles downstream from main forks and $\frac{4}{5}$ miles southwest of Randolph.

Drainage area.--52.2 sq mi.

Records available.--October 1949 to September 1957. March 1939 to September 1944 (fragmentary), at site a quarter of a mile downstream, records equivalent except during a few short periods each irrigation season.

Gage.--Water-stage recorder. Altitude of gage is 6,390 ft (from topographic map). March 1939 to September 1944, at site a quarter of a mile downstream at different datum.

Average discharge.--8 years (1949-57), 21.6 cfs (15,640 acre-ft per year).

Extremes.--Maximum discharge during year, 337 cfs July 11 (gage height, 3.75 ft); minimum, 7.3 cfs Mar. 13, but may have been less during periods of no gage-height record. 1949-57: Maximum discharge, that of July 11, 1957; 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 diversion above station.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 27 to Apr. 8)

0.3	10
.5	16
.8	35
1.1	56

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*17	b13				12	12	14	44	27	22	20
2	17	b12				12	11	*17	41	27	22	20
3	16	b11	13		9	12	12	20	*41	27	21	19
4	16	b13				11	12	23	41	27	23	19
5	16	b14	(*)			11	12	25	40	26	23	18
6	16	*15	11			10	15	*30	40	26	22	18
7	16	15	9.0			11	12	40	40	26	21	18
8	16	14	8.0			*12	10	44	38	26	21	18
9	16	14	8.0	9		12	10	*46	37	25	21	18
10	16	14	9.0			12	10	46	36	25	21	18
11	16	14	10		10	11	10	45	37	46	21	18
12	16	14				11	11	44	34	27	21	18
13	16	14				11	12	45	36	26	21	18
14	16	b12			(*)	b10	12	46	35	25	*21	18
15	15	b11	12			b10	12	48	33	*25	21	18
16	15	b12		(*)		10	12	46	32	25	21	18
17	15	b12				10	*12	45	31	25	21	*18
18	15	b11	11		9.5	10	13	45	30	25	20	18
19	15	9.5				11	13	52	30	25	20	19
20	15	10				11	12	*48	30	24	20	18
21	15	11			11	11	12	44	30	24	20	18
22	15	12				11	12	42	30	24	21	18
23	16					b10	15	41	30	23	20	18
24	16				8	b11	*13	42	29	23	20	18
25	16		10			11	12	40	30	23	20	18
26	16	13			13	*10	12	40	30	25	20	18
27	16				*15	10	12	41	30	23	20	17
28	16				13	10	12	42	*29	23	21	17
29	16					11	12	43	28	23	21	17
30	b15					12	*13	42	25	23	21	16
31	b14					12		43	27	22	20	
Total	487	381.5	333.0	264	297.0	339	360	1,229	1,019	791	648	542
Mean	15.7	12.7	10.7	8.5	10.6	10.9	12.0	39.6	34.0	25.5	20.9	18.1
Ac-ft	966	757	660	524	589	672	714	2,440	2,020	1,570	1,290	1,080

Calendar year 1956: Max 72 Min - Mean 20.6 Ac-ft 14,950
Water year 1956-57: Max 52 Min - Mean 18.5 Ac-ft 13,280

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Nov. 19 to Feb. 26; discharge estimated on basis of 3 discharge measurements, weather records, and records for nearby stations.

Bear River near Randolph, Utah

Location.--Lat 41°48', long 111°06', in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 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 1957.

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

Average discharge.--13 years (1944-57), 209 cfs (151,300 acre-ft per year).

Extremes.--Maximum discharge during year, 2,040 cfs June 15 (gage height, 8.27 ft); minimum, 6.0 cfs Oct. 21.

1943-57: Maximum discharge, 2,660 cfs May 8, 1952 (gage height, 8.80 ft); minimum, 5.2 cfs Sept. 28, 1955.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions for irrigation of about 96,000 acres above station.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

(Shifting-control method used Mar. 11 to Apr. 15, Apr. 21-26, May 13 to June 7, June 11-25, June 27 to July 1, July 17)

1.3	6	2.8	188	5.7	875
1.5	16	3.6	337	7.0	1,390
1.8	40	4.5	532	8.0	1,990
2.2	88				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1	8.8	36	55	52	55	230	110	*238	587	853	131	14	
2	8.4	32				220	117	220	641	940	128	13	
3	8.0	28				225	120	186	744	993	120	12	
4	8.0	30				220	117	172	817	882	115	12	
5	7.6	31				210	104	156	*940	699	109	12	
6	7.6	*31	50	60	60	200	96	143	993	587	101	12	
7	8.0	30				*195	91	131	1,130	530	90	11	
8	*8.4	29				*192	91	134	1,260	423	82	11	
9	7.6	32				190	112	*181	1,340	355	77	11	
10	8.0	38				190	114	246	1,450	*320	70	11	
11	8.0	38	55	52	55	192	110	391	1,600	226	53	9.6	
12	7.2	39				202	93	510	*1,830	261	57	11	
13	6.8	38				213	94	560	1,960	274	56	11	
14	6.4	33				199	117	584	1,920	345	53	11	
15	8.0	30				179	162	650	1,970	381	52	11	
16	7.2	33	60	52	55	172	202	597	1,930	379	*52	9.6	
17	6.8	32				146	259	572	1,870	*343	52	*9.2	
18	6.8	30				138	282	554	1,900	320	52	9.2	
19	6.8	45				131	286	544	1,760	301	50	9.6	
20	6.8					128	259	592	*1,650	297	48	9.6	
21	9.6		55	52	55	133	240	705	1,570	274	53	9.6	
22	25					130	237	802	1,380	246	60	11	
23	26					123	291	*723	1,180	231	61	11	
24	27					120	*343	604	1,040	226	61	10	
25	29	55				130	347	547	856	206	51	11	
26	31	55	52	55	55	180	*112	255	525	676	192	42	12
27	33					210	107	295	470	*661	179	39	13
28	22					230	99	282	428	705	165	37	14
29	14					99	255	419	747	153	20	15	
30	24					-----	102	240	472	789	144	15	15
31	36	-----	106	-----	520	-----	136	14	-----				
Total	427.8	1,240	1,725	1,675	2,335	5,030	5,721	13,576	37,896	11,861	2,001	341.4	
Mean	13.8	41.3	55.6	54.0	83.4	162	191	438	1,263	383	64.5	11.4	
Ac-ft	849	2,460	3,420	3,320	4,630	9,980	11,350	26,930	75,170	23,530	3,970	677	
Calendar year 1956: Max 2,010 Min 6.4 Mean 202 Ac-ft 146,500													
Water year 1956-57: Max 1,970 Min 6.4 Mean 230 Ac-ft 166,300													

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 2-5, Nov. 14 to Mar. 10 (no gage-height record most of time; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby stations on Bear River).

Twin Creek at Sage, Wyo.

Location.--Lat 41°49', long 110°58', in SE $\frac{1}{4}$ sec. 7, T. 21 N., R. 119 W., on left bank half a mile southwest of Sage and 5 miles upstream from mouth.

Drainage area.--246 sq mi.

Records available.--April 1943 to September 1957.

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.--14 years, 19.9 cfs (14,410 acre-ft per year).

Extremes.--Maximum discharge during year, 56 cfs May 25 (gage height 2.55 ft); minimum, 2.1 cfs Aug. 9.

1943-57: Maximum discharge, 649 cfs Mar. 18, 1947 (gage height, 6.08 ft); minimum, 0.6 cfs Mar. 18, 1953, result of freezeup.

Remarks.--Records good except those for periods of ice effect, which are fair. Diversions for irrigation of about 1,100 acres above station.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

1.7	1.4	2.2	22
1.8	3.1	2.5	47
1.9	5.8	2.7	66
2.0	10		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.9	7.1	6.0	6.0	5.5	18	22	18	33	9.2	4.7	4.2
2	3.9	7.1				15	16	18	26	8.3	4.7	4.2
3	4.2	5.5				13	17	19	22	7.9	4.4	4.2
4	3.9	5.3				11	16	19	18	7.1	3.6	4.4
5	3.6	6.6	5.5	5.5	5.5	10	14	19	*16	6.6	3.9	3.9
6	3.6	7.5				9.5	21	19	16	6.6	3.9	4.2
7	3.9	9.2				*9.5	19	18	16	7.9	3.9	4.2
8	*3.9	*9.6				10	14	18	16	7.9	3.6	3.9
9	4.2	7.9	5.5	5.5	5.5	15	14	*17	16	7.5	2.6	3.6
10	4.4	7.1				14	19	17	16	7.1	3.6	3.9
11	4.4	6.6				13	22	24	18	8.7	4.4	4.2
12	4.4	6.6				12	21	30	18	10	5.0	4.4
13	5.5	6.6	6.5	6.0	6.0	11	20	33	18	9.6	3.9	4.4
14	6.6	5.3				11	21	33	20	8.7	3.4	3.9
15	6.6	5.5				10	*20	37	18	7.5	4.4	4.4
16	7.1	5.3				10	16	30	18	7.9	*4.0	4.7
17	6.6	5.8	6.0	5.0	5.0	11	19	29	19	*7.9	4.4	4.2
18	6.6	5.3				11	19	30	18	7.9	4.2	4.7
19	7.1	5.0				11	*15	34	16	7.5	4.4	*5.0
20	7.5	4.8				12	13	49	14	7.1	5.0	5.5
21	7.5	5.2	6.0	5.0	5.0	16	13	40	15	7.1	4.7	5.8
22	8.3	5.8				10	10	40	15	7.1	4.7	5.5
23	9.2	6.2				15	9.2	24	*38	9.2	7.1	3.9
24	11	6.2				20	9.6	38	47	11	7.1	5.8
25	8.7	5.8	6.0	5.0	5.0	*35	8.7	24	48	11	6.6	5.5
26	10	5.5				28	*9.2	18	36	11	5.8	4.4
27	9.6	6.0				*24	7.9	18	31	*10	5.8	5.5
28	9.6	6.0				20	10	18	28	10	5.8	5.3
29	9.6	6.0	6.0	5.0	5.0	-	15	15	28	10	5.5	5.5
30	8.3	6.0				21	*16	29	9.6	5.3	4.7	4.7
31	9.6	-----				20	-----	28	-----	5.3	4.2	-----
Total	203.3	188.4	187.0	165.0	275.0	373.6	555	904	463.8	227.4	136.7	141.8
Mean	6.56	6.28	6.03	5.32	9.82	12.1	18.5	29.2	16.1	7.34	4.41	4.73
Ac-ft	403	374	371	327	545	741	1,100	1,790	960	451	271	281
Calendar year 1956: Max 502 Min 2.8 Mean 20.4 Ac-ft 14,790												
Water year 1956-57: Max 49 Min 2.6 Mean 10.5 Ac-ft 7,610												

Peak discharge (base, 200 cfs).--No peak above base.

* Discharge measurement made on this day.

Note.---Stage-discharge relation affected by ice Nov. 18-21, Nov. 27 to Mar. 17.

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 Hobbie Creek, and 1½ miles northeast of Border.

Drainage area.--165 sq mi.

Records available.--May 1942 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,650 ft (from topographic map). Prior to Oct. 16, 1945, at site 0.8 mile downstream at different datum.

Average discharge.--15 years, 199 cfs (144,100 acre-ft per year).

Extremes.--Maximum discharge during year, 1,500 cfs June 7 (gage height, 4.56 ft); minimum, 50 cfs Mar. 24, but may have been less during periods of ice effect or no gage-height record.

1942-57: Maximum discharge, that of June 7, 1957; minimum, 35 cfs Mar. 21, 1955 (result of freezeup), but may have been less during periods of no gage-height record.

Remarks.--Records good except those for periods of ice effect, which are fair. One diversion for irrigation of about 200 acres above station.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	49	3.3	621
1.8	83	3.9	998
2.2	169	4.6	1,490
2.7	345		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.			
1	99	88	b74			60	63	202	998	691	243	153			
2	99	89				63	63	287	1,080	662	239	147			
3	99	b86				60	63	322	1,170	633	232	140			
4	97	b86	71			60	63	458	1,280	599	229	137			
5	97	86	73			60	66	589	1,340	562	225	137			
6	96	86	*83	b70		*58	68	638	*1,390	537	222	135			
7	94	86	b85			58	64	697	1,420	512	219	133			
8	97	*83	b70			60	64	822	1,300	489	212	128			
9	*97	83	b65			60	65	*797	1,240	467	206	130			
10	97	83	b70			60	68	784	1,160	454	202	130			
11	94	83	b72		b62	60	69	772	1,070	467	202	130			
12	96	83	b72			59	70	809	1,030	441	199	128			
13	96	82	b72			58	71	753	*1,050	415	196	126			
14	94	82	b72			60	76	710	972	399	190	124			
15	94	b82	71	(*)		62	79	691	886	386	187	121			
16	93	b82	73			59	86	656	809	370	*187	119			
17	93	82	71			59	89	673	740	*353	184	119			
18	93	80				57	89	710	685	345	178	119			
19	91	80				58	89	958	679	349	175	*128			
20	91	b78		b65		58	91	958	722	333	175	126			
21	91					60	94	816	*753	318	178	124			
22	89					62	59	103	716	314	187	119			
23	91	b74				62	57	126	*656	662	302	172	117		
24	93					62	59	119	621	656	298	169	117		
25	89		b70			62	59	*105	616	667	295	166	115		
26	94					60	58	99	644	*691	283	169	113		
27	93					59	57	96	722	716	279	166	113		
28	93	b76				59	59	109	803	728	272	158	111		
29	89					-	60	140	874	740	268	158			
30	85					62	184	912	740	261	158	109			
31	91		-----			62	952	952	-----	250	153	-----			
Total	2,905	2,420	2,222	2,072	1,728	1,841	2,631	21,618	28,077	12,604	5,936	3,759			
Mean	93.7	80.7	71.7	66.8	61.7	59.4	87.7	697	936	407	191	125			
Ac-ft	5,760	4,800	4,410	4,110	3,430	3,650	5,220	42,880	55,690	25,000	11,770	7,460			
Calendar year 1956: Max			1,220	Min	-		Mean	246	Ac-ft	178,900					
Water year 1956-57: Max		1,420		Min	-		Mean	241	Ac-ft	174,200					

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Bear River below Smiths Fork, near Cokeville, Wyo.

Location.--Lat 42°07'30", long 110°58'20", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 25 N., R. 119 W., 1.1 miles upstream from Wyman Dam, 2.8 miles northwest of Cokeville, and 3.8 miles downstream from Smiths Fork.

Drainage area.--2,460 sq mi, approximately.

Records available.--April 1954 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,140 ft (from river-profile map).

Extremes.--Maximum discharge during year, 2,570 cfs June 22 (gage height, 6.26 ft); minimum, 100 cfs Oct. 2, 5.

1954-57: Maximum discharge, 3,780 cfs Mar. 26, 1956 (gage height, 7.54 ft); minimum, 68 cfs Sept. 12, 1954.

Remarks.--Records excellent 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 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.3	87	5.0	1,500
2.6	151	6.0	2,320
3.1	325	7.0	3,240
3.9	732		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	104	162	164	b150	159	421	321	416	1,400	1,600	329	170
2	102	144	188	154	154	416	317	440	1,580	1,580	309	170
3	102	127	151	b150	b155	402	325	478	1,680	1,560	305	167
4	102	154	156	146	b155	380	325	570	1,730	1,450	301	167
5	102	170	159	b145	b155	359	325	664	1,800	1,370	297	173
6	112	170	*159	b145	b160	354	350	744	*1,960	1,300	297	178
7	112	170	b145	b140	164	346	313	778	2,170	1,200	285	184
8	116	170	b140	b135	164	350	297	838	2,250	1,160	273	178
9	119	*170	b135	b135	167	363	297	917	2,300	1,070	262	173
10	*119	170	b130	b140	170	398	313	*892	2,290	973	239	173
11	125	173	b150	b145	164	411	313	898	2,270	*938	224	170
12	136	178	170	b150	167	411	321	959	2,200	874	207	170
13	146	178	170	158	*173	411	305	1,200	*2,250	802	191	162
14	156	175	170	156	167	407	301	1,640	2,310	784	184	154
15	146	149	173	*167	170	376	309	1,700	2,340	826	181	149
16	146	164	175	b155	b170	367	346	1,620	2,430	832	194	146
17	144	178	178	b150	b170	359	407	1,550	2,490	814	*194	146
18	144	164	b175	b150	b170	342	435	1,390	2,500	*761	191	146
19	146	b155	175	b145	b175	305	402	1,350	2,500	732	184	*159
20	146	b145	b170	*b145	b175	305	435	1,730	2,510	686	184	151
21	146	159	b165	b145	175	305	425	1,840	2,550	630	184	146
22	146	173	b160	b150	178	289	407	1,690	2,550	592	188	141
23	146	162	b160	b155	184	277	464	1,710	2,460	548	194	139
24	156	162	b160	b150	188	262	495	*1,750	2,360	505	184	136
25	159	167	b155	b150	204	269	*515	1,650	2,260	490	191	132
26	164	170	b155	b150	250	*269	521	1,550	2,160	469	184	129
27	167	164	b155	b150	*350	258	459	1,500	1,990	435	175	127
28	173	162	b155	b155	416	282	402	1,390	1,780	402	167	132
29	197	156	b150	b155	-	273	411	1,320	1,690	385	173	144
30	164	175	b145	b155	-----	297	425	1,260	1,640	371	175	139
31	162	-----	b145	b155	-----	317	-----	1,330	-----	350	170	-----
Total	4,305	4,916	4,938	4,629	5,249	10,561	11,285	37,765	64,380	26,469	6,816	4,651
Mean	139	164	159	149	187	341	376	1,218	2,146	854	220	155
Ac-ft	8,540	9,750	9,790	9,180	10,410	20,950	22,380	74,910	127,700	52,500	13,520	9,220

Calendar year 1956: Max 3,460 Min 89 Mean 497 Ac-ft 360,500
 water year 1956-57: Max 2,550 Min 102 Mean 509 Ac-ft 368,800

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Bear River at Border, Wyo.

Location.--Lat 42°11', long 111°03', in NE $\frac{1}{4}$ 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 1957.

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

Average discharge.--20 years, 414 cfs (299,700 acre-ft per year).

Extremes.--Maximum discharge during year, 2,630 cfs June 22 (gage height, 7.59 ft); minimum, 117 cfs Oct. 2.

1937-57: Maximum discharge, 3,680 cfs May 11, 1952 (gage height, 8.89 ft); minimum daily, 30 cfs Aug. 18-22, 1940.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions for irrigation of about 124,000 acres above station.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 17 to Apr. 16, May 9 to June 1)

1.2	96	4.2	900
1.5	144	5.8	1,610
2.2	281	7.6	2,640
3.0	484		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	122	186	180	160	170	425	336	441	1,440	1,600	352	195
2	119	176	190	165	165	440	326	449	1,540	1,550	336	193
3	119	155	170	160	185	430	340	481	1,660	1,540	331	190
4	121	170	170	155	165	400	336	545	1,700	1,470	331	188
5	122	185	170	155	165	380	336	619	1,710	1,370	326	195
6	125	195	170	155	170	370	362	704	*1,830	1,320	314	197
7	127	199	155	150	175	360	340	743	2,040	1,230	292	210
8	132	190	150	145	175	350	317	802	2,160	1,160	277	205
9	139	*182	150	145	180	365	317	904	2,250	1,100	266	199
10	*139	182	145	150	180	390	338	*924	2,320	1,000	236	199
11	141	184	160	155	175	420	345	948	2,270	980	222	195
12	151	190	180	160	185	430	348	1,010	2,200	924	214	195
13	151	195	*180	165	*190	430	338	1,210	*2,190	840	201	191
14	169	188	180	165	180	420	331	1,520	2,250	798	195	180
15	158	170	185	*165	185	400	333	1,680	2,280	813	191	175
16	164	180	190	165	185	380	360	1,630	2,350	828	184	173
17	160	185	190	160	185	369	408	1,590	2,450	820	*186	164
18	153	180	190	160	185	357	449	1,480	2,500	*783	180	164
19	155	170	190	155	190	322	405	1,420	2,520	725	176	178
20	155	160	180	155	190	314	435	1,610	2,530	700	178	*176
21	157	170	175	155	190	314	433	1,840	2,570	639	182	175
22	160	180	170	160	195	305	416	1,740	2,620	619	190	166
23	175	175	170	165	200	290	452	1,700	2,560	590	199	160
24	178	175	170	160	205	279	496	*1,740	2,420	545	197	157
25	182	180	165	160	210	*288	*514	1,680	2,250	517	201	155
26	188	185	165	160	230	281	520	1,590	*2,170	499	207	149
27	195	180	165	160	300	274	478	1,530	2,030	472	201	149
28	193	180	165	165	375	270	419	1,440	1,820	438	191	151
29	216	175	160	165	-----	281	419	1,400	1,700	414	199	164
30	197	185	155	165	-----	299	435	1,330	1,640	400	203	167
31	182	-----	155	165	-----	321	-----	1,380	-----	382	193	-----
Total	4,845	5,405	5,290	4,925	5,465	10,954	11,682	38,080	63,970	27,066	7,151	5,355
Mean	156	180	171	159	195	353	389	1,228	2,132	873	231	178
Ac-ft	9,610	10,720	10,490	9,770	10,840	21,730	23,170	75,530	126,900	53,680	14,180	10,620
Calendar year 1956: Max	3,380					Mean	510		Ac-ft	370,200		
Water year 1956-57: Max	2,620				Min	119	Mean	521		Ac-ft	377,200	

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 3-5, Nov. 15 to Mar. 16 (no gage-height record Dec. 11, 12, Dec. 24 to Jan. 14, Jan. 18 to Feb. 25; discharge estimated on basis of 3 discharge measurements, weather records, and records for nearby stations on Bear River.

Thomas Fork near Wyoming-Idaho State line

Location.--Lat 42°24'10", long 111°01'30", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T. 28 N., R. 119 W., in Wyoming, on right bank 1.5 miles downstream from Giraffe Creek, 1.3 miles upstream from State line, and $3\frac{1}{2}$ miles northeast of Geneva, Idaho. Prior to Aug. 23, 1957, at site 0.2 mile upstream.

Drainage area.--113 sq mi.

Records available.--October 1949 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,280 ft (from topographic map). Prior to Aug. 23, 1957, at site 0.2 mile upstream at different datums.

Average discharge.--8 years, 58.1 cfs (42,060 acre-ft per year).

Extremes.--Maximum discharge during year, 766 cfs May 19 (gage height, 4.24 ft); minimum, 5.7 cfs Mar. 4, result of freezeup.

1949-57: Maximum discharge, 869 cfs May 18, 1950 (gage height, 5.55 ft, site and datum then in use); minimum, 2.6 cfs Mar. 2, 1956, result of freezeup.

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 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	17	14			14	20	*152	293	77	34	26
2	18	16	14			15	19	187	274	74	33	23
3	18	b15	14			15	22	227	257	72	32	21
4	18	b17	14			14	23	278	241	71	32	20
5	18	19	*14			14	24	345	227	68	32	20
6	17	19	b13			*14	33	371	*211	67	31	19
7	17	19	b12			14	28	392	198	67	30	19
8	18	18	b11	15		14	27	454	185	63	29	19
9	18	*17	b11			15	29	471	175	63	28	19
10	*19	16	b12			14	34	*468	173	61	27	19
11	18	16	b14		14		38	438	164	71	27	19
12	18	16			(*)		40	539	154	63	28	19
13	19	15					43	512	*155	58	27	19
14	18	14					49	461	143	56	26	19
15	18	14					54	486	139	53	25	19
16	18	15	16				62	435	137	51	25	19
17	17	15				15	74	438	131	50	*26	19
18	17	14					*73	441	120	*50	24	19
19	17	13					68	654	114	53	23	25
20	16	b12		(*)			67	*558	116	48	24	*23
21	17	b12			15		72	479	117	46	24	22
22	16	b12			16		86	438	107	46	25	21
23	17	b13		14	16		120	411	101	44	26	20
24	18	15			17		104	*403	97	43	26	20
25	17	14			17	*16	81	381	93	42	26	20
26	20	14	15		*17	15	74	366	*90	40	27	20
27	22	14			16	14	73	354	87	*40	28	20
28	20	14			14	15	90	354	86	38	26	20
29	19	14			-	16	117	342	82	38	25	19
30	17	14			-----	17	143	328	80	38	26	19
31	19	-----			-----	19	-----	*316	-----	36	26	-----
Total	558	453	452	449	408	465	1,787	12,479	4,547	1,687	848	606
Mean	18.0	15.1	14.6	14.5	14.6	15.0	59.6	403	152	54.4	27.4	20.2
Ac-ft	1,110	899	897	891	809	922	3,540	24,750	9,020	3,350	1,680	1,200

Calendar year 1956: Max 586 Min - Mean 75.0 Ac-ft 54,440

Water year 1956-57: Max 654 Min - Mean 67.8 Ac-ft 49,060

Peak discharge (base, 150 cfs).--May 12 (11 p.m.) 626 cfs (4.02 ft); May 19 (3 p.m.) 766 cfs (4.20 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Dec. 12 to Feb. 25, Mar. 11-24, Aug. 22; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby stations.

BEAR RIVER BASIN

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 1957.

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.--41 years, 517 cfs (374,300 acre-ft per year).

Extremes.--Maximum discharge during year, 2,640 cfs June 23 (gage height, 9.36 ft); minimum daily, 144 cfs Oct. 1.
1913-16, 1919-57: Maximum discharge, 4,440 cfs May 7, 1952 (gage height, 11.04 ft); minimum daily, 26 cfs Aug. 21-27, 1934.

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

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 12-26, July 2-21)

2.7	131	5.0	961
3.0	196	7.0	1,710
3.5	332	9.0	2,470
4.0	521	9.4	2,640

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	144	210	190	170	175	430	383	620	1,780	1,740	*443	225
2	150	208	*190	170	175	450	383	*634	1,820	1,700	420	228
3	148	190	180	170	175	440	397	677	1,910	*1,630	401	225
4	148	190	*180	170	180	430	405	746	1,960	1,630	401	220
5	148	210	175	170	180	415	420	855	1,960	1,500	394	218
6	148	220	170	170	180	395	471	973	1,990	1,430	387	210
7	158	228	155	165	180	400	479	1,060	2,120	1,560	355	218
8	165	230	150	160	180	425	*459	1,140	2,240	1,240	332	222
9	167	220	150	160	180	430	443	*1,220	2,310	1,170	313	220
10	171	218	150	165	180	440	475	1,280	2,370	*1,080	298	218
11	171	218	155	*164	185	455	504	1,310	2,420	1,040	272	218
12	178	218	170	165	190	475	521	1,370	2,400	1,040	261	218
13	*189	228	190	170	190	455	517	1,480	2,380	953	253	215
14	191	228	205	170	190	470	508	1,720	*2,370	896	240	213
15	198	206	210	175	190	430	508	1,970	2,400	884	235	208
16	194	191	210	175	190	450	517	*2,030	2,440	945	225	208
17	196	190	210	170	190	450	574	2,000	2,490	973	225	*203
18	189	190	205	165	190	445	634	1,950	2,550	945	*225	198
19	198	170	200	165	*188	440	634	1,870	2,590	884	225	208
20	187	160	200	165	190	410	606	1,880	2,600	855	213	222
21	189	170	185	170	195	394	620	2,090	*2,620	851	222	225
22	189	175	190	175	195	380	606	2,240	2,620	764	235	220
23	194	185	185	175	200	529	620	*2,190	2,640	742	232	210
24	208	185	185	175	205	510	686	*2,190	2,610	682	235	206
25	203	185	185	175	210	301	719	2,190	2,510	624	232	201
26	210	185	185	175	215	304	723	2,110	2,370	601	272	198
27	215	185	185	175	220	298	700	2,020	2,270	578	248	194
28	220	185	180	175	280	292	615	1,950	2,100	539	230	194
29	220	185	175	175	---	298	570	1,850	1,890	492	222	196
30	240	190	170	175	---	320	592	1,790	1,830	471	235	210
31	218	---	170	175	---	348	---	*1,760	---	467	230	---
Total	5,744	5,953	5,650	5,274	5,398	12,309	16,269	49,165	68,560	30,706	8,711	6,369
Mean	185	198	182	170	193	397	542	1,586	2,285	991	281	212
Ac-ft	11,390	11,810	11,210	10,460	10,710	24,410	32,270	97,520	136,000	60,900	17,280	12,630
Calendar year 1956:	Max 3,540			Min 117		Mean 601		Ac-ft 436,100				
Water year 1956-57:	Max 2,640			Min 144		Mean 603		Ac-ft 436,600				

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 3-5, Nov. 17 to Mar. 20, Mar. 22.

Rainbow inlet canal near Dingle, Idaho

Location.--Lat 42°13'00", long 111°17'30", in SE $\frac{1}{4}$ sec. 3, T. 14 S., R. 44 E., on left bank $\frac{1}{2}$ miles west of Dingle and $\frac{1}{4}$ miles downstream from headworks at Stewart Dam.

Records available.--October 1945 to September 1957 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 Oct. 1, 1923, at site 300 ft downstream at different datum. Oct. 1, 1923, to Oct. 27, 1944, at site half a mile downstream at different datum.

Average discharge.--35 years, 307 cfs (222,300 acre-ft per year).

Extremes.--Maximum discharge during year, 2,190 cfs June 24 (gage height, 6.23 ft); minimum daily, 7.7 cfs Oct. 9-14.

1945-57: Maximum discharge, 4,180 cfs May 7, 1952 (gage height, 8.62 ft); minimum daily, 6.5 cfs Sept. 24, 1956.

Remarks.--Records good except those for periods of ice effect, or backwater from Mud Lake, which are fair. Discharge measurements generally made three times a week. Canal diverts from Bear River at Stewart Dam in NE $\frac{1}{4}$ 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 entering at 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.

Rating tables, water year 1956-57, except period of ice effect and backwater from Mud Lake (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 21 to Dec. 13, Dec. 21 to Mar. 7, Sept. 20, 21, 29, 30)

Oct. 1 to Dec. 31

Jan. 1 to Sept. 30

0.5	5.0	1.1	86	0.8	54	3.0	606
.6	14	1.4	146	1.1	102	5.0	1,470
.8	38	1.7	209	1.5	181	6.2	2,170
				2.0	301		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	160	122	102	100	255	332	530	1,390	1,330	324	120
2	8.2	150	128	102	104	376	354	551	1,360	1,280	296	109
3	8.1	130	122	b100	106	368	351	568	1,400	1,220	285	104
4	8.1	138	118	99	111	368	360	624	1,430	1,220	278	90
5	8.0	156	b114	106	b110	351	379	698	1,440	1,220	270	87
6	7.9	168	b110	102	109	332	414	765	1,450	1,280	272	82
7	7.8	164	b96	97	111	343	435	823	1,490	1,220	278	77
8	7.8	174	b92	90	107	376	408	894	1,620	1,150	245	80
9	7.7	168	88	88	100	379	405	995	1,690	1,030	238	85
10	7.7	160	81	94	104	391	423	1,070	1,770	918	219	79
11	7.7	160	96	95	115	411	453	1,090	1,800	894	201	85
12	7.7	156	111	97	116	423	469	1,150	1,900	882	194	83
13	7.7	162	132	97	b117	414	475	1,220	1,900	815	179	83
14	7.7	166	146	99	122	429	475	1,340	1,880	754	161	90
15	67	154	150	102	120	382	456	1,560	1,900	716	172	85
16	126	130	150	b100	122	399	463	1,770	1,940	705	170	85
17	128	140	148	97	124	399	498	1,920	1,980	743	153	83
18	130	b125	143	97	126	402	554	1,860	2,010	686	124	82
19	128	b110	138	90	131	399	578	1,770	2,060	679	99	83
20	134	b100	134	87	128	368	527	1,700	2,090	628	85	83
21	130	115	130	99	124	346	551	1,790	2,120	631	82	85
22	130	116	125	106	130	351	534	1,970	2,130	588	58	94
23	162	134	b121	99	130	b320	534	2,080	2,160	561	94	99
24	154	128	116	99	131	304	578	2,060	2,170	524	94	92
25	154	126	122	102	143	268	624	2,030	2,160	488	102	92
26	162	122	122	99	155	272	631	2,000	2,060	453	116	97
27	184	122	115	99	153	268	555	1,890	1,930	447	130	97
28	176	126	122	102	177	268	578	1,710	1,790	453	116	80
29	183	126	111	101	-	270	514	1,590	1,550	414	111	58
30	191	128	103	101	-----	288	507	1,510	1,380	388	118	58
31	183	-----	99	101	-----	332	-----	1,420	-----	365	131	-----
Total	2,612.1	4,214	3,705	3,049	3,426	10,852	14,495	42,948	53,950	24,682	5,425	2,607
Mean	84.3	140	120	98.4	122	350	483	1,385	1,798	796	175	86.9
Ac-ft	5,180	8,360	7,350	6,050	6,800	21,520	28,750	85,190	107,000	48,980	10,760	5,170

Calendar year 1956: Max 3,200 Min 6.5 Mean 451 Ac-ft 327,500

Water year 1956-57: Max 2,170 Min 7.7 Mean 471 Ac-ft 341,100

b Stage-discharge relation affected by ice.

Note.--Stage-discharge relation affected by backwater from Mud Lake Oct. 1-14; discharge computed on basis of 2 discharge measurements, recorder chart, records of gate changes, and engineer's notes.

Bear River below Stewart Dam, near Montpelier, Idaho

Location.--Lat 42°15'30", long 111°17'30", in NE $\frac{1}{4}$ sec. 34, T. 13 S., R. 44 E., on right bank 300 ft downstream from Stewart Dam and $\frac{1}{2}$ miles south of Montpelier.

Records available.--October 1945 to September 1957 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).

Average discharge.--35 years, 68.1 cfs (49,300 acre-ft per year).

Extremes.--Maximum daily discharge during year, 128 cfs Oct. 14; minimum daily, 16 cfs

Oct. 1

1922-57: Maximum daily discharge, 3,050 cfs June 3, 1923; minimum daily, 0 cfs July 15, 1956.

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

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.

Rating table, water year 1956-57 (gage height, in feet,
and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Jan. 20,
July 21 to Sept. 11)

1.0	8.1
1.3	22
1.6	39
2.0	72
2.5	128

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	23	19	18	a18	23	26	27	27	29	19	21
2	44	22	18	17	a18	23	26	27	27	29	19	20
3	96	22	17	18	a18	24	27	28	28	28	19	21
4	101	21	18	18	a17	24	27	28	28	27	19	20
5	103	21	18	18	17	24	27	30	28	26	18	19
6	90	21	18	18	18	24	28	31	29	26	18	19
7	93	21	19	19	18	24	29	32	29	24	18	19
8	105	21	19	19	17	24	28	32	30	23	18	19
9	108	21	19	19	17	25	28	32	31	22	19	19
10	111	21	20	19	17	23	28	32	32	21	19	18
11	115	21	19	18	18	18	28	33	32	21	19	18
12	116	21	18	18	18	27	28	32	34	22	19	19
13	124	22	18	18	18	19	27	32	34	22	19	19
14	128	22	18	18	18	20	28	33	34	20	18	19
15	84	22	19	18	18	23	27	35	34	19	19	20
16	23	22	19	18	18	26	27	35	33	19	19	20
17	23	22	19	19	18	27	27	35	33	20	19	20
18	22	22	19	20	18	19	27	32	33	20	19	20
19	22	22	19	20	18	19	28	32	33	20	18	20
20	22	21	19	20	19	21	27	31	34	19	19	20
21	21	22	19	19	19	27	27	31	34	19	19	19
22	21	22	19	19	19	18	26	32	32	19	18	19
23	23	21	18	18	19	19	27	32	32	19	18	19
24	23	21	18	18	20	24	27	33	32	19	18	20
25	23	21	18	18	21	26	28	32	32	19	18	20
26	23	21	18	18	21	26	28	32	32	20	18	20
27	23	20	18	18	22	26	28	31	32	21	19	19
28	22	20	18	18	21	26	27	31	31	21	19	19
29	22	20	18	19	-	26	27	31	31	21	19	18
30	23	20	18	a19	-----	26	26	29	29	21	20	18
31	22	-----	18	a18	-----	26	-----	28	-----	21	20	-----
Total	1,772	639	573	573	518	727	819	971	940	677	580	581
Mean	57.2	21.3	18.5	18.5	18.5	23.5	27.3	31.3	31.3	21.8	18.7	19.4
Ac-ft	3,510	1,270	1,140	1,140	1,039	1,440	1,620	1,930	1,860	1,340	1,150	1,150
Calendar year 1956: Max	128			Min 0		Mean 24.6		Ac-ft 17,850				
Water year 1956-57: Max	128			Min 16		Mean 25.7		Ac-ft 18,580				

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

Montpelier Creek at irrigators weir, near Montpelier, Idaho

Location.--Lat 42°20', long 111°14', in SE $\frac{1}{4}$ sec. 31, T. 12 S., R. 45 E., on right bank 3 miles east of Montpelier and $\frac{3}{2}$ miles downstream from South Fork.

Drainage area.--50.9 sq mi.

Records available.--December 1942 to September 1957.

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

Average discharge.--14 years (1943-57), 22.3 cfs (16,140 acre-ft per year).

Extremes.--Maximum discharge during year, 113 cfs May 19 (gage height, 1.74 ft); minimum, 3.2 cfs Nov. 19, result of freezeup, but may have been less during periods of ice effect or no gage-height record.

1942-57: Maximum discharge, 224 cfs May 18, 1950 (gage height, 2.91 ft); minimum, 1.4 cfs Feb. 22, 1951, result of freezeup.

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

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Apr. 18		Apr. 18 to Sept. 30	
0.8	5.1	0.4	14
.9	6.6	.6	25
1.1	9.8	.9	47
1.4	15	1.3	77
1.9	26	1.7	110

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.8	9.0	8.7	7.0	8.0	7.7	10	49	83	37	20	15
2	9.8	9.0	8.5	8.5	8.0	7.5	10	58	81	35	19	15
3	9.8	9.0	8.7	7.4	7.0	7.8	11	66	79	*35	19	15
4	9.8	9.2	8.5	8.2	6.5	7.7	11	71	79	34	19	14
5	9.8	9.3	*9.2	6.8	6.5	7.7	12	77	79	34	18	14
6	9.7	9.3	8.5	6.9	6.5	7.5	17	79	*79	34	18	14
7	9.7	9.3	8.5	6.9	7.0	7.7	14	79	78	32	18	14
8	9.5	9.0	b7.5	7.8	7.5	8.3	13	84	76	31	16	13
9	9.7	*9.0	b7.5	7.8	8.0	9.2	14	84	75	30	15	14
10	9.8	9.0	b8.5	b7.0	7.5	9.2	16	*80	74	30	16	14
11	*9.8	9.0	b9.5	7.7	7.0	8.5	17	80	72	34	16	14
12	10	9.0	*10	8.2	6.5	8.7	18	86	68	34	17	14
13	10	8.8	10	8.3	*8.5	8.0	18	93	70	29	17	14
14	10	8.2	9.7	8.3	7.5	7.2	21	91	65	27	16	14
15	9.8	8.2	9.3	8.2	7.5	8.0	22	99	64	26	16	14
16	9.8	8.8	9.2	7.2	7.0	7.8	24	94	63	26	16	13
17	9.7	9.0	9.0	b6.5	6.5	7.7	25	93	61	25	*16	13
18	9.5	8.3	8.5	b6.5	6.5	7.7	*25	94	56	*24	16	13
19	9.5	6.6	8.3	7.0	7.0	7.7	23	106	54	26	17	15
20	9.3	6.4	7.8	8.2	7.5	7.8	23	*105	53	24	15	*14
21	9.5	6.6	b7.7	8.2	7.5	8.0	24	101	54	24	16	14
22	9.3	7.4	b7.5	7.8	8.0	7.8	26	96	50	24	17	14
23	9.5	8.0	b8.0	b7.2	8.0	7.5	32	93	47	23	16	13
24	9.7	8.3	8.5	b7.2	8.5	7.5	33	92	46	22	15	13
25	9.2	8.5	8.7	b7.2	8.0	*8.0	30	88	44	24	15	13
26	10	8.3	8.5	b7.2	*7.8	8.0	28	86	42	24	16	13
27	11	8.2	8.7	6.6	8.2	8.0	27	84	43	23	16	13
28	10	8.3	8.8	b7.0	8.0	8.3	30	82	41	22	15	13
29	9.7	8.5	8.3	6.5	-	8.7	38	82	38	22	15	13
30	9.0	8.5	8.3	6.0	-----	9.5	46	84	38	22	16	13
31	9.7	-----	8.2	6.5	-----	10	-----	*84	-----	21	15	-----
Total	301.4	254.0	266.6	227.8	206.0	250.7	658	2,640	1,852	858	512	412
Mean	9.72	8.47	8.60	7.35	7.36	8.09	21.9	85.2	61.7	27.7	16.5	13.7
Ac-ft	598	504	529	452	409	497	1,310	5,240	3,670	1,700	1,020	817
Calendar year 1956: Max 115 Min 5.6 Mean 23.8 Ac-ft 17,310												
Water year 1956-57: Max 106 Min 6.0 Mean 23.1 Ac-ft 16,750												

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Jan. 19, Jan. 29 to Feb. 25; discharge estimated on basis of 1 discharge measurement, weather records, and records for nearby stations.

BEAR RIVER BASIN

Bear Lake at Lifton, near St. Charles, Idaho

Location.--Lat 42°07'20", long 111°19'20", in NE¹/₄ 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 1903 to June 1906 (gage heights only), October 1945 to September 1957. January 1921 to September 1945 (elevations only) in files of Salt Lake City district office, Geological Survey. Published as Bear Lake at Fish Haven 1903-6.

Gage.--Water-stage recorder. Datum of gage is 5,900 ft above mean sea level, unadjusted (levels by Utah Power & Light Co.). October 1903 to June 1906 staff gage at different site and datum.

Extremes.--Maximum contents during year, 1,168,000 acre-ft July 10-17 (gage height, 20.05 ft); minimum, 797,600 acre-ft Oct. 17-22 (gage height, 14.65 ft).
1921-57: Maximum contents, 1,423,000 acre-ft June 10, 1923 (gage height, 23.68 ft); no usable contents Nov. 9-19, 1935 (gage height, 2.00 ft, lower limit of pumps).

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. 31). Water from Mud Lake reaches Bear Lake by a sluice at pumping plant or by gates in cause-way at south end of Mud Lake. Capacity, 1,421,000 acre-ft between gage height 2.00 (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.

Capacity table, water year 1956-57 (gage height, in feet,
and usable contents, in thousands of acre-feet)

14.6	794.2
15.0	821.0
17.0	956.9
19.0	1,095
21.0	1,235

Usable contents, in thousands of acre-feet, at 7 a.m., water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	804.2	798.2	800.2	804.9	829.0	851.9	896.1	947.3	1,057	1,159	1,132	1,053
2	802.2	798.2	800.2	804.9	829.7	853.2	897.5	948.7	1,060	1,161	1,129	1,051
3	801.6	798.2	800.2	804.9	830.4	854.6	898.8	950.1	1,065	1,164	1,126	1,050
4	800.9	798.2	800.2	805.6	831.0	856.0	900.2	951.5	1,068	1,164	1,124	1,049
5	800.2	798.2	800.9	805.6	831.7	857.3	901.6	953.5	1,072	1,166	1,121	1,047
6	799.6	798.9	801.6	805.6	831.7	859.4	903.7	954.9	1,076	1,166	1,119	1,046
7	799.6	798.9	801.6	806.3	832.4	861.4	905.7	956.2	1,079	1,166	1,117	1,044
8	799.6	798.9	802.2	806.3	833.1	863.4	907.1	958.3	1,081	1,166	1,114	1,043
9	799.6	798.9	802.2	808.3	833.7	864.8	908.4	960.4	1,084	1,167	1,111	1,041
10	799.6	798.9	802.2	808.9	834.4	866.8	910.5	963.1	1,087	1,168	1,108	1,039
11	799.6	799.6	802.2	808.9	835.7	868.9	912.5	965.8	1,090	1,168	1,105	1,037
12	799.6	799.6	802.2	809.6	836.4	870.2	913.9	968.6	1,094	1,168	1,102	1,034
13	799.6	799.6	802.2	810.3	837.1	871.6	915.9	970.6	1,098	1,168	1,099	1,031
14	798.9	799.6	802.2	811.6	837.8	873.6	917.3	972.7	1,103	1,168	1,094	1,030
15	798.2	799.6	802.2	813.0	838.4	875.0	918.6	975.4	1,106	1,168	1,091	1,028
16	798.2	799.6	802.2	814.3	838.4	877.0	920.0	979.6	1,109	1,168	1,088	1,026
17	797.6	799.6	802.9	815.0	839.1	878.4	922.0	984.4	1,112	1,168	1,085	1,025
18	797.6	799.6	802.9	815.6	839.8	879.8	924.1	988.5	1,115	1,166	1,082	1,024
19	797.6	799.6	802.9	816.3	840.4	881.1	926.2	993.4	1,120	1,166	1,078	1,022
20	797.6	799.6	802.9	817.6	841.1	881.8	927.5	998.2	1,125	1,165	1,075	1,020
21	797.6	800.2	802.9	818.3	841.8	883.2	928.9	1,004	1,130	1,164	1,072	1,019
22	797.6	800.2	803.6	819.0	842.4	884.5	930.3	1,011	1,136	1,161	1,069	1,018
23	798.2	800.2	803.6	820.3	843.8	885.9	932.3	1,015	1,140	1,159	1,067	1,015
24	798.2	800.2	803.6	821.7	845.1	887.2	935.7	1,020	1,143	1,156	1,065	1,014
25	798.2	800.2	803.6	823.0	846.5	888.6	937.8	1,026	1,148	1,153	1,062	1,013
26	798.2	800.2	804.2	824.4	847.8	890.0	939.8	1,031	1,149	1,150	1,060	1,011
27	798.2	800.2	804.2	825.0	849.2	890.6	941.2	1,035	1,151	1,147	1,058	1,009
28	798.2	800.2	804.2	826.4	850.5	891.3	942.5	1,040	1,154	1,144	1,057	1,007
29	798.2	800.2	804.2	827.0	-----	892.0	943.9	1,044	1,156	1,141	1,056	1,005
30	798.2	800.2	804.9	827.7	-----	893.4	946.0	1,050	1,158	1,138	1,054	1,004
31	798.2	-----	804.9	828.4	-----	894.7	-----	1,054	-----	1,135	1,054	-----
(†)	5914.66	5914.69	5914.76	5915.11	5915.44	5916.09	5916.84	5918.40	5919.90	5919.57	5918.40	5917.68
(‡)	-7.4	+2.0	+4.7	+23.5	+22.1	+44.2	+51.3	+108	+104	-23	-81	-50

Calendar year 1956.....† +177.9

Water year 1956-57.....‡ +198.4

† Elevation, in feet, at end of month.

‡ Change in contents, in thousands of acre-feet.

Bear Lake outlet canal near Paris, Idaho

Location.--Lat 42°13'00", long 111°20'30", in SW¹/₄ sec. 8, T. 14 S., R. 44 E., on right bank 2,000 ft downstream from headgates (at dike) and 3 miles southeast of Paris.

Records available.--October 1945 to September 1957 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 5,920 ft (from topographic map).

Average discharge.--35 years, 343 cfs (248,300 acre-ft per year).

Extremes.--Maximum discharge during year, 1,530 cfs July 29 (gage height, 18.88 ft); minimum daily, 6 cfs Apr. 24 to June 23.

1922-57: Maximum daily discharge, 1,870 cfs Aug. 8, 1924; minimum daily, 1 cfs for many days in 1937 and 1954.

Remarks.--Records good except those for periods of indefinite stage-discharge relation 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.

Rating table, water year 1956-57, except period of indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 9-12, June 26, 27, July 5-8, Sept. 19, 21)

Oct. 1 to Dec. 31

Jan. 1 to Sept. 31

12.5	12	14.0	169	12.5	2	14.0	155
12.8	34	14.5	254	12.6	8	15.0	339
13.1	60	15.0	357	13.0	38	17.0	871
13.5	102			13.5	89	19.0	1,580

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	233	14	15	20	20	20	9	6	6	320	1,450	596
2	233	14	15	20	20	20	9	6	6	719	1,450	585
3	237	14	15	20	20	20	8	6	6	957	1,450	580
4	214	13	15	20	20	20	8	6	6	964	1,450	569
5	181	13	15	20	20	20	8	6	6	867	1,460	569
6	107	13	15	20	20	20	8	6	6	568	1,450	556
7	20	13	50	20	20	20	8	6	6	374	1,440	561
8	20	13	175	20	20	20	8	6	6	509	1,450	588
9	20	13	267	20	20	9	8	6	6	780	1,440	596
10	19	13	279	20	20	9	8	6	6	896	1,430	599
11	19	13	299	20	20	9	8	6	6	937	1,430	594
12	19	13	182	20	20	9	8	6	6	944	1,440	602
13	18	14	20	20	20	9	8	6	6	1,110	1,450	613
14	18	14	20	20	20	9	7	6	6	1,240	1,440	610
15	18	14	20	20	20	9	7	6	6	1,200	1,450	596
16	17	14	20	20	20	9	7	6	6	1,230	1,400	588
17	17	14	20	20	20	9	7	6	6	1,320	1,330	580
18	17	14	20	20	20	9	7	6	6	1,330	1,300	585
19	17	14	20	20	20	9	7	6	6	1,340	1,290	585
20	16	14	20	20	20	9	7	6	6	1,340	1,220	613
21	16	14	20	20	20	9	7	6	6	1,330	1,090	594
22	16	14	20	20	20	9	7	6	6	1,320	1,010	607
23	16	14	20	20	20	9	7	6	6	1,410	1,010	624
24	16	14	20	20	20	9	6	6	543	1,480	1,000	627
25	15	14	20	20	20	9	6	6	1,080	1,480	1,000	624
26	15	15	20	20	20	9	6	6	1,070	1,500	799	632
27	15	15	20	20	20	9	6	6	894	1,490	873	627
28	15	15	20	20	20	9	6	6	235	1,480	792	624
29	14	15	20	20	20	9	6	6	12	1,460	715	498
30	14	15	20	20	-----	9	6	6	12	1,470	632	365
31	14	-----	20	20	-----	9	-----	6	-----	1,470	602	-----
Total	1,626	416	1,722	620	560	367	218	186	3,984	34,845	37,543	17,587
Mean	52.5	13.9	55.5	20	20	11.8	7.3	6	133	1,124	1,211	586
Ac-ft	3,230	825	3,420	1,230	1,110	728	432	369	7,900	69,110	74,470	34,880

Calendar year 1956: Max 1,200 Min 9 Mean 237 Ac-ft 171,900
Water year 1956-57: Max 1,500 Min 6 Mean 273 Ac-ft 197,700

Note.--Stage-discharge relation indefinite June 28 to July 1. No gage-height record Oct. 7 to Dec. 8, Dec. 13 to June 24; discharge estimated on basis of 6 discharge measurements, records of headgate changes, field notes, and records for nearby stations.

Bear River at Soda Springs, Idaho

Location.--Lat 42°36'50", long 111°35'00", in NW¼ sec. 29, T. 9 S., R. 42 E., on left bank 800 ft upstream from Bailey Creek road bridge and 2 miles south of Soda Springs.

Records available.--May to September 1896, May and June 1898, October 1953 to September 1957. Irrigation season only during 1944-49 and 1950-53 in reports on Bear River Hydrometric Data (Geological Survey open-file report).

Gage.--Water-stage recorder. Altitude of gage is 5,760 ft (from topographic map). May 25 to Oct. 2, 1898, May 22 to July 1, 1898, staff gage at different datum. During irrigation season 1944-49, 1950-53, water-stage recorder at site 800 ft downstream at different datum.

Extremes.--Maximum discharge during year, 1,570 cfs July 26 (gage height, 4.93 ft); minimum daily, 100 cfs Nov. 19.
1896, 1898, 1944-49, 1950-57: Maximum discharge, 6,380 cfs June 9, 15, 1896 (gage height, 8.40 ft, datum then in use); minimum daily, 80 cfs Nov. 13, 14, 1955.

Remarks.--Records good except those for periods of ice effect, which are fair. Many diversions above station for irrigation. Flow regulated by storage in Bear Lake.

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 31

Jan. 1 to Sept. 30

2.3	112	2.5	112	3.5	530
2.5	154	2.6	179	4.0	841
3.0	306	3.0	304	5.0	1,630
3.4	470				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	322	187	180	145	135	350	509	435	950	444	1,510	752
2	326	152	180	145	135	350	*454	444	928	580	1,500	740
3	341	126	180	140	140	304	535	453	913	1,080	1,510	720
4	390	196	175	135	135	283	530	*473	827	1,280	1,510	701
5	399	196	170	135	135	283	569	504	772	1,320	1,520	688
6	382	199	150	135	135	259	695	530	772	1,240	1,520	*682
7	337	213	150	130	140	259	695	547	766	965	1,520	688
8	237	204	160	125	140	276	682	558	793	759	1,510	701
9	210	199	180	*125	135	312	682	575	779	848	*1,500	707
10	*216	199	270	130	140	356	695	610	772	1,020	1,490	714
11	216	196	460	135	140	381	682	*639	772	1,110	1,480	726
12	225	193	460	145	140	343	664	670	759	1,160	1,480	733
13	244	193	450	155	150	283	621	733	733	*1,190	1,490	733
14	240	187	330	155	*155	324	604	779	746	1,330	1,490	733
15	247	166	240	145	155	347	569	*855	752	1,400	1,480	740
16	250	193	215	130	150	308	530	891	740	1,370	*1,480	740
17	196	201	185	135	145	276	509	*957	740	1,380	1,440	726
18	159	196	180	140	145	256	494	980	714	1,460	1,390	733
19	164	100	175	145	145	266	488	1,060	664	1,460	1,360	759
20	169	145	170	145	150	276	473	1,120	621	1,470	1,340	752
21	174	170	170	140	155	290	464	1,090	633	1,470	1,300	759
22	182	175	170	130	185	246	454	1,030	604	1,450	1,170	766
23	182	185	170	125	327	252	494	994	575	1,450	1,100	772
24	179	185	165	125	368	249	530	957	541	1,490	1,090	779
25	174	180	165	130	365	256	494	957	899	1,540	1,060	779
26	201	180	160	130	380	259	464	928	1,380	1,560	1,090	772
27	204	*185	150	140	380	236	454	899	1,430	*1,560	884	766
28	190	185	145	140	360	266	440	863	1,260	1,540	779	766
29	187	185	145	135	-	308	440	841	746	1,540	877	759
30	185	180	150	135	-----	361	435	827	509	1,510	855	651
31	196	-----	150	135	-----	473	-----	870	-----	1,510	779	-----
Total	7,324	5,451	6,400	4,240	5,385	9,308	16,350	24,075	24,090	39,466	40,524	22,037
Mean	236	182	206	137	192	300	545	777	803	1,273	1,307	735
Ac-ft	14,530	10,810	12,690	8,410	10,680	18,460	32,430	47,750	47,780	78,280	80,380	43,710
Calendar year 1956: Max	1,300			Min	100	Mean	505	Ac-ft	366,700			
Water year 1956-57: Max	1,560			Min	100	Mean	561	Ac-ft	405,900			

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 19 to Feb. 22, Feb. 26 to Mar. 2.

Bear River at Alexander, Idaho

Location.--Lat 42°39', long 111°42', in NW¹/₄ 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,650 ft (from topographic map).

Average discharge.--42 years (1911-16, 1919-20, 1921-57), 751 cfs (543,700 acre-ft per year).

Extremes.--Maximum daily discharge during year, 1,770 cfs July 24, 25; minimum daily, 135 cfs Feb. 1.
1911-16, 1919-57: 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.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-19, July 14 to Sept. 23)

0.5	124
1.0	310
1.5	579
2.0	945
3.0	1,900

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	308	207	224	137	135	540	643	509	936	805	1,390	852
2	260	252	198	341	179	150	*651	508	990	1,050	1,390	774
3	269	201	220	238	187	188	683	511	1,040	785	1,390	874
4	267	201	297	281	184	656	758	455	1,020	735	1,370	672
5	264	245	535	218	296	628	725	469	869	721	1,410	803
6	268	245	329	179	359	613	630	630	819	914	1,410	791
7	259	246	294	228	296	580	565	596	846	1,000	1,420	744
8	*264	334	244	*249	345	579	714	583	713	1,050	1,390	692
9	249	259	214	240	201	476	805	659	692	1,130	1,400	795
10	265	297	376	298	173	285	794	867	953	1,240	*1,410	805
11	319	273	231	211	280	621	842	736	738	1,160	1,380	770
12	293	326	382	163	231	637	841	732	757	1,280	1,480	768
13	322	298	494	145	210	645	686	845	720	*1,200	1,530	838
14	204	305	532	207	*211	378	654	a935	742	1,180	1,510	740
15	244	225	208	216	146	480	827	a1,130	735	1,440	*1,500	837
16	277	258	231	288	170	425	721	a980	713	1,400	1,490	874
17	370	344	277	329	169	282	762	a1,120	713	1,420	1,390	821
18	274	196	236	264	380	533	815	*a955	692	1,440	1,300	838
19	250	263	273	172	189	446	782	1,070	678	1,430	1,370	875
20	222	221	260	146	254	382	569	1,370	1,130	1,420	1,360	859
21	212	257	322	218	194	449	404	1,340	1,240	1,230	1,340	757
22	207	255	219	301	179	466	783	1,170	833	1,420	1,180	771
23	197	231	182	302	200	462	829	1,100	678	1,600	1,280	877
24	258	202	287	280	148	275	705	1,110	880	1,770	1,070	878
25	258	267	212	213	764	571	718	1,070	985	1,770	1,050	798
26	382	287	275	285	536	600	717	1,030	797	1,760	1,240	928
27	244	*283	250	175	565	578	615	1,010	816	1,730	1,110	891
28	225	424	257	330	579	359	440	991	840	1,720	904	853
29	413	248	232	225	-	447	608	950	918	1,660	794	709
30	234	244	143	238	-----	430	458	859	726	1,470	906	967
31	276	-----	225	210	-----	156	-----	934	-----	1,400	820	-----
Total	8,353	7,894	8,659	7,327	7,760	14,315	20,742	27,204	25,109	40,330	39,984	24,449
Mean	269	263	279	236	277	462	691	878	837	1,301	1,290	815
Ac-ft	16,530	15,660	17,170	14,530	15,390	28,390	41,140	53,960	49,800	79,990	79,310	48,490
Calendar year 1956:	Max 1,360	Min 143	Mean 580	Ac-ft 421,300								
Water year 1956-57:	Max 1,770	Min 135	Mean 636	Ac-ft 460,400								

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of records of Utah Power & Light Co.'s Soda Plant output.

Cottonwood Creek near Cleveland, Idaho

Location.--Lat 42°20', long 111°46', in SW $\frac{1}{4}$ sec. 34, T. 12 S., R. 40 E., on right bank 500 ft upstream from Cleveland irrigation canal, 2 $\frac{1}{2}$ miles west of Cleveland, and 4 miles downstream from proposed Cottonwood Dam.

Drainage area.--61.7 sq mi.

Records available.--November 1938 to September 1957.

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.--18 years (1939-57), 30.4 cfs (22,000 acre-ft per year).

Extremes.--Maximum discharge during year, 521 cfs May 19 (gage height, 3.44 ft); minimum, 2.0 cfs Oct. 1.

1938-57: Maximum discharge, 773 cfs Apr. 27, 1952 (gage height, 3.83 ft); minimum observed, 0.5 cfs Aug. 17, 1940.

Remarks.--Records good except those for periods of ice effect, which are fair. A few small diversions for irrigation of meadowland in Cottonwood Valley above station. Treasureton Canal diverts from Cottonwood Creek above station in SE $\frac{1}{4}$ sec. 8, T. 12 S., R. 39 E., for irrigation in Battle Creek basin in vicinity of Treasureton.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 24 to May 12)

Oct. 1 to May 12

May 13 to Sept. 30

0.5	1.9	1.3	22	0.6	2.7	1.8	77
.6	2.7	1.7	54	.8	6.2	2.3	185
.8	5.0	2.1	98	1.0	13	3.0	445
1.0	9.2	2.7	205	1.3	30		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.1	8.0	6.0	b8.0	8.7	20	32	160	114	*9.9	8.2	6.5
2	2.2	5.7	6.4	b8.0	9.0	21	31	183	103	9.2	7.8	6.5
3	2.5	5.7	7.0	b8.0	b8.5	19	38	*185	94	8.8	7.8	6.0
4	2.9	7.4	7.4	b8.0	b8.5	16	32	170	84	8.5	7.8	6.0
5	3.3	8.4	8.7	b7.0	b8.5	16	32	185	75	7.8	5.0	6.0
6	3.6	10	b8.5	b7.0	b8.5	14	*67	201	61	6.5	4.2	6.5
7	4.4	10	b7.5	b7.0	b9.0	15	48	192	52	6.2	5.2	5.2
8	5.0	9.5	b6.0	b8.0	b9.5	19	43	*190	46	6.0	6.9	4.8
9	5.3	9.8	b6.0	b9.0	b9.5	26	53	172	43	5.8	6.9	4.6
10	5.7	10	b7.0	b10	b9.5	25	63	151	*53	5.6	*6.5	4.6
11	5.7	11	9.5	11	b9.5	18	71	154	44	5.8	5.8	4.6
12	6.0	10	9.8	11	b9.5	20	77	183	37	10	6.0	3.8
13	6.5	10	*10	10	b9.5	16	79	293	37	11	6.9	3.4
14	6.5	8.2	11	*10	b9.5	16	85	319	34	10	6.2	3.4
15	6.5	8.0	10	9.5	*9.5	15	86	*274	55	9.9	6.5	3.6
16	6.7	8.0	9.8	b9.0	8.4	15	*88	220	55	9.5	8.2	*3.8
17	6.5	8.7	b9.0	b8.5	b8.5	16	88	176	52	9.9	7.8	4.0
18	6.5	7.4	b9.0	b8.0	b9.0	16	84	164	46	10	7.2	4.6
19	6.7	b6.0	9.0	b8.5	b9.5	19	80	406	37	10	6.2	6.5
20	6.7	b5.0	b8.5	b9.0	b9.5	23	70	*422	24	10	6.2	6.5
21	7.0	b5.2	b8.5	b8.5	9.5	24	74	*343	23	*10	6.5	6.5
22	7.0	b5.5	b8.5	b8.0	9.5	20	75	278	20	9.9	9.2	6.5
23	7.0	5.8	b8.5	b8.0	12	18	175	245	18	9.5	7.8	6.2
24	8.7	6.2	8.7	8.7	17	16	*132	242	16	9.9	7.5	5.8
25	8.0	6.5	b8.4	9.0	22	17	104	204	15	9.2	7.5	5.6
26	9.5	7.0	b8.0	b8.5	*26	16	93	179	13	7.5	7.5	6.0
27	11	6.4	b7.5	b8.5	27	16	85	173	13	6.9	7.5	5.0
28	11	*6.0	b7.5	b8.0	24	20	97	155	11	6.5	7.5	4.4
29	9.0	5.8	b8.0	b8.0	-	25	129	145	11	7.5	6.9	4.6
30	*8.4	6.0	b8.0	b8.0	-----	32	149	*140	9.9	7.8	5.8	4.6
31	7.2	-----	b8.0	b8.0	-----	38	-----	126	-----	7.5	6.0	-----
Total	195.1	227.2	255.7	265.7	328.6	606	2,360	6,630	1,293.9	262.6	213.0	156.1
Mean	6.29	7.57	8.25	8.57	11.7	19.5	78.7	214	43.1	8.47	6.87	5.20
Ac-ft	387	451	507	527	652	1,200	4,680	13,150	2,570	521	422	310

Calendar year 1956: Max 228 Min 1.6 Mean 28.6 Ac-ft 20,800

Water year 1956-57: Max 422 Min 1.1 Mean 35.1 Ac-ft 25,380

Peak discharge (base, 150 cfs).--Apr. 23 (10 a.m.) 233 cfs (2.74 ft); May 6 (12 m.) 252 cfs (2.70 ft); May 14 (5 p.m.) 374 cfs (2.82 ft); May 19 (2 p.m.) 521 cfs (3.44 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

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 1957 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 4,800 ft (from topographic map).

Average discharge.--35 years, 777 cfs (562,500 acre-ft per year).

Extremes.--Maximum daily discharge during year, 2,300 cfs May 20; minimum daily, 40 cfs Nov. 3, 4.
1922-57: Maximum daily discharge, 5,480 cfs May 8, 1922; minimum daily, 15 cfs May 3, 4, 1925.

Remarks.--Records excellent except those for period of ice effect, which are fair. 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.

Rating tables, water year 1956-57, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 30 to Dec. 31

Jan. 1 to Sept. 30

0.9	39	2.0	274	1.0	50	3.0	647
1.2	76	3.0	673	1.2	76	4.0	1,170
1.5	134	4.0	1,210	1.5	132	6.0	2,700
				2.0	259		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	406	85	232	445	128	941	765	764	1,360	1,120	1,130	927
2	384	84	268	704	108	654	905	944	1,090	581	1,050	856
3	385	40	463	342	84	208	1,180	920	1,150	422	1,130	829
4	437	40	726	490	640	689	1,120	1,040	1,040	456	1,140	872
5	356	151	683	230	608	*945	977	755	903	183	1,230	738
6	417	325	719	280	607	1,040	1,000	857	747	128	*1,160	963
7	439	407	558	610	572	1,000	771	961	756	151	1,170	785
8	458	471	101	570	462	1,280	860	1,050	635	846	1,220	610
9	199	612	127	555	128	833	977	1,010	182	927	1,330	845
10	201	367	538	605	206	638	1,020	1,480	1,090	894	1,320	956
11	145	438	*603	375	776	816	1,070	1,220	317	1,180	1,260	726
12	298	416	558	225	507	821	1,080	1,180	457	1,160	1,480	753
13	434	518	728	390	494	885	1,070	1,170	379	995	1,330	810
14	405	408	982	420	55	747	798	1,660	612	*743	1,150	870
15	404	492	766	455	290	557	844	1,630	514	1,130	1,320	650
16	435	481	187	845	336	656	*1,290	*1,500	375	1,520	1,600	690
17	476	429	626	340	197	532	1,010	1,620	881	1,770	962	949
18	465	342	399	365	849	766	1,510	1,640	408	1,710	1,040	889
19	429	503	469	125	390	510	1,220	1,740	1,090	971	1,400	839
20	392	227	475	325	693	622	1,030	2,300	792	186	1,370	883
21	295	404	580	485	417	906	518	2,240	970	*263	1,440	941
22	553	398	651	*730	457	773	826	1,900	247	1,880	1,340	*491
23	314	394	340	667	570	568	1,740	1,640	159	1,970	1,350	909
24	514	468	394	638	738	441	1,230	1,850	668	1,910	1,240	921
25	59	312	364	486	1,010	1,060	1,140	1,870	746	1,860	855	916
26	631	478	399	562	1,210	621	917	1,590	736	1,270	1,380	919
27	503	554	490	164	745	720	1,250	1,400	672	413	1,270	1,080
28	329	800	463	847	*1,020	468	780	1,290	723	591	1,090	950
29	692	246	396	399	-	940	747	1,500	1,090	1,700	928	920
30	*441	556	404	522	-----	891	861	1,420	167	1,470	1,010	1,290
31	203	-----	360	291	-----	52	-----	1,370	-----	993	899	-----
Total	12,309	11,404	15,049	14,487	14,297	22,641	30,286	43,491	20,966	31,383	37,594	25,877
Mean	397	380	485	467	511	730	1,010	1,403	699	1,013	1,213	863
Ac-ft	24,410	22,620	29,850	28,730	28,360	44,910	60,070	86,260	41,590	62,270	74,570	51,330
Calendar year 1956: Max			1,690	Min	40	Mean	670	Ac-ft	486,200			
Water year 1956-57: Max			2,300	Min	40	Mean	767	Ac-ft	555,000			

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan 4-21.

BEAR RIVER BASIN

Mink Creek below Dry Fork, near Mink Creek, Idaho

Location.--Lat 42°15'30", long 111°40'30", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ 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, October 1955 to September 1957.

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

Average discharge.--7 years, 84.2 cfs (60,960 acre-ft per year).

Extremes.--Maximum discharge during year, 472 cfs June 7 (gage height, 3.97 ft); minimum, 16 cfs Sept. 29, 30.

1947-52, 1955-57: Maximum discharge, 600 cfs May 29, 1948; maximum gage height, that of June 7, 1957; minimum discharge, that of Sept. 29, 30, 1957.

Remarks.--Records good except those for period of no gage-height record, which are fair. Mink Creek Canal began diverting above station in June 1950 (corrected). Diversion is routed through Glendale Reservoir in Worm Creek basin for irrigation near Preston. Records herein are not adjusted for this diversion. Two other diversions above station for irrigation of about 200 acres and below station.

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 5 June 6 to Sept. 30

1.6	21	2.7	185	1.5	16	2.9	178
1.9	41	3.1	284	1.7	27	3.4	296
2.3	97	3.6	442	2.0	48	4.0	482
				2.4	93		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	35	34	30	26	36	38	83	379	*186	44	25
2	30	36	34	30	26	36	37	99	406	178	44	25
3	31	36	34	30	25	36	38	*118	429	165	44	25
4	29	36	34	30	26	36	37	120	435	154	42	25
5	30	36	34	30	26	35	39	149	*439	139	40	23
6	31	36	33	30	26	34	47	176	462	131	40	23
7	31	36	33	30	26	34	45	203	466	122	38	24
8	30	36	33	30	26	36	43	222	466	*116	36	25
9	28	36	32	29	26	40	44	227	462	110	36	24
10	28	35	32	29	26	41	46	220	*452	105	36	23
11	28	35	33	28	26	39	48	234	436	100	36	23
12	30	35	32	28	26	38	50	227	427	96	*35	23
13	33	36	*32	29	26	37	51	220	417	87	34	25
14	34	36	32	*28	26	36	58	230	383	86	34	22
15	36	36	32	28	*26	36	60	230	340	82	34	22
16	36	36	32	28	27	35	63	227	305	79	32	*20
17	36	36	32	28	28	36	64	225	274	77	32	22
18	36	35	32	28	28	36	64	232	254	74	30	22
19	36	35	32	27	29	36	61	279	249	71	29	22
20	36	34	32	27	30	37	58	296	264	*67	30	20
21	36	34	32	27	30	39	55	*279	*262	65	28	19
22	36	34	32	27	30	38	55	252	252	63	28	18
23	36	34	32	26	32	*37	74	234	a250	61	27	18
24	36	33	31	26	36	73	73	227	a250	53	26	18
25	36	33	31	26	40	36	67	237	a250	56	26	16
26	36	34	31	26	38	35	63	242	a250	58	26	18
27	34	34	31	26	38	35	59	268	a240	54	27	16
28	35	*34	30	26	36	35	58	287	a240	51	26	17
29	35	34	31	26	-	35	61	313	a230	49	27	16
30	*35	34	30	26	-----	36	70	*335	a210	48	26	16
31	34	-----	30	26	-----	37	-----	370	-----	46	25	-----
Total	1,026	1,050	995	865	811	1,129	1,626	7,061	10,179	2,629	1,018	637
Mean	33.1	35.0	32.1	27.9	29.0	36.4	54.2	228	339	91.3	32.8	21.2
Ac-ft	2,040	2,080	1,970	1,720	1,610	2,240	3,230	14,010	20,190	5,610	2,020	1,260
Calendar year 1956: Max 488 Min 20 Mean 77.0 Ac-ft 55,920												
Water year 1956-57: Max 466 Min 16 Mean 80.1 Ac-ft 57,990												

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Cub River near Preston.

Bear River near Preston, Idaho

Location.--Lat 42°10', long 111°51', in NW $\frac{1}{4}$ 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 5 $\frac{1}{2}$ miles upstream from Battle Creek.

Drainage area.--4,300 sq mi (revised), approximately.

Records available.--October 1889 to September 1917 (gage heights only, January to September 1917), January 1944 to September 1957. Prior to 1903, published as "at Battle-creek."

Gage.--Water-stage recorder. Altitude of gage is 4,540 ft (from topographic map). October 1889 to September 1917 staff or wire-weight gages at several sites within 5 miles downstream at different datums.

Average discharge.--13 years (1944-57), 885 cfs (640,700 acre-ft per year).

Extremes.--Maximum discharge during year, 3,450 cfs May 20 (gage height, 4.95 ft); minimum, 5.2 cfs July 7 (gage height, 0.34 ft); minimum daily, 9.5 cfs July 6.
1889-1917, 1944-57: 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 discharge, 0.6 cfs June 14, 1949; minimum daily, 14 cfs July 4, 1944, July 4, 1945, July 5, 1947, May 11, 1953.

Remarks.--Records good. Station is below all irrigation diversions from Bear River in Idaho except Cub River pumps in SE $\frac{1}{4}$ 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 1956 to September 1957

Dsy	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	315	121	244	392	191	952	682	816	1,620	676	913	820
2	412	67	325	656	140	711	816	950	1,250	554	872	727
3	328	65	477	506	148	237	1,160	986	1,360	282	901	658
4	434	54	619	476	607	660	1,020	1,090	1,410	121	1,060	782
5	350	139	771	291	700	*889	1,130	947	1,210	317	1,070	648
6	378	271	798	331	566	1,130	1,020	1,050	917	9.5	1,050	700
7	408	445	627	598	667	985	705	1,090	1,000	11	1,040	798
8	409	449	175	385	490	1,100	924	1,130	799	*512	1,070	552
9	190	583	213	703	170	1,020	896	1,100	512	726	1,170	714
10	190	334	592	623	251	611	1,060	1,470	1,080	704	1,130	749
11	145	472	641	427	748	804	1,160	1,340	553	928	1,140	610
12	196	428	517	297	537	819	1,080	1,320	521	899	1,280	620
13	474	487	762	361	538	779	1,110	1,220	547	938	1,120	697
14	360	428	925	419	142	758	863	1,800	621	819	1,030	724
15	374	485	779	489	359	487	740	*1,750	555	743	1,110	598
16	391	513	264	827	347	581	1,430	1,720	520	1,320	1,530	632
17	452	398	614	396	300	522	1,090	1,690	830	1,430	933	813
18	438	374	439	417	846	806	1,220	1,750	358	1,570	905	787
19	415	522	479	192	402	456	1,160	1,940	1,080	926	1,230	802
20	589	277	473	311	683	563	1,020	2,500	906	127	1,230	768
21	217	392	559	439	478	855	591	2,560	828	*70	1,270	838
22	495	426	612	689	484	790	925	2,150	422	1,460	1,090	566
23	367	403	378	678	661	*514	1,540	1,830	156	1,720	1,240	814
24	480	432	419	643	751	389	1,400	2,010	491	1,810	1,140	835
25	126	314	387	416	1,090	1,020	1,160	1,990	680	1,890	838	869
26	746	451	461	604	1,260	556	864	1,820	765	1,230	1,170	811
27	512	506	516	296	799	701	1,250	1,450	439	251	1,000	961
28	332	728	474	779	*1,150	493	900	1,480	644	459	1,160	938
29	623	349	431	443	-	875	681	1,720	802	1,400	734	845
30	*476	*554	446	517	-----	893	888	1,620	294	1,290	957	1,210
31	158	-----	367	334	-----	176	-----	1,640	-----	934	745	-----
Total	11,600	11,467	15,782	14,925	15,505	22,132	30,485	47,929	23,170	25,726.5	33,128	22,886
Mean	374	382	509	481	554	714	1,016	1,546	772	830	1,069	763
Ac-ft	23,010	22,740	31,300	29,600	30,750	43,900	60,470	95,070	45,960	51,030	65,710	45,390
Calendar year 1956: Max	1,720					Min	54	Mean	655	Ac-ft	482,700	
Water year 1956-57: Max	2,560					Min	9.5	Mean	753	Ac-ft	544,900	

* Discharge measurement made on this day.

Cub River near Preston, Idaho

Location.--Lat 42°08', long 111°41', in SW $\frac{1}{4}$ 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, October 1955 to September 1957.

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

Average discharge.--14 years, 87.8 cfs (63,560 acre-ft per year).

Extremes.--Maximum discharge during year, 715 cfs June 7 (gage height, 3.39 ft); minimum, 14 cfs Feb. 14.
1940-52, 1955-57: Maximum discharge, that of June 7, 1957; maximum gage height, 3.83 ft June 2, 1943; minimum discharge, 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 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	14	1.8	129
.9	23	2.3	266
1.1	38	2.8	466
1.4	67	3.3	700

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	25	22	19	18	31	34	82	480	*284	66	43
2	28	24	22	19	18	31	31	101	466	259	65	43
3	28	24	22	19	18	30	32	*127	539	239	64	42
4	28	25	22	19	18	27	30	135	571	219	63	42
5	28	24	23	18	17	27	32	165	*618	197	62	41
6	28	24	22	18	17	24	52	206	662	183	60	40
7	28	24	21	18	17	23	42	252	676	172	59	40
8	28	24	b21	19	17	26	38	284	658	*158	57	40
9	28	24	b21	18	17	33	40	298	614	147	57	40
10	28	24	b21	18	17	35	43	291	*566	141	55	40
11	28	24	b22	18	17	30	46	310	493	135	55	39
12	28	24	22	18	17	30	50	291	493	129	*53	38
13	28	24	*22	19	17	26	52	266	493	124	52	38
14	28	24	21	*19	17	25	56	270	475	118	52	37
15	27	24	21	19	*17	24	59	256	414	115	52	36
16	27	24	21	b18	17	24	60	249	372	109	51	*36
17	26	24	21	b18	18	25	60	239	332	106	50	36
18	27	24	20	b18	18	25	62	256	298	103	50	38
19	27	b23	20	b18	18	26	58	313	298	100	49	39
20	26	b23	20	18	19	30	53	336	340	*97	48	36
21	26	23	20	18	19	33	52	*298	*344	94	48	35
22	26	23	20	18	19	30	51	252	313	90	48	35
23	27	23	20	18	22	*27	72	222	310	88	47	35
24	26	22	20	18	31	26	70	210	313	84	46	35
25	26	22	20	18	43	25	62	219	321	83	46	34
26	28	22	20	18	35	23	57	239	325	80	45	34
27	28	22	19	18	39	23	53	295	313	79	45	33
28	26	*22	19	18	33	23	53	352	317	75	45	33
29	26	22	19	17	-	24	58	414	313	74	45	32
30	25	22	19	b17	-----	30	72	*444	302	71	44	32
31	*26	-----	19	b17	-----	34	-----	462	-----	70	43	-----
Total	840	703	642	563	590	850	1,530	8,134	13,009	4,023	1,622	1,122
Mean	27.1	23.4	20.7	18.2	21.1	27.4	51.0	262	434	130	52.3	37.4
Ac-ft	1,670	1,390	1,270	1,120	1,170	1,690	3,030	16,130	25,800	7,980	3,220	2,230
Calendar year 1956: Max	652			Min 19		Mean 88.4		Ac-ft 64,200				
Water year 1956-57: Max	676			Min 17		Mean 92.1		Ac-ft 66,700				

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Little Bear River near Paradise, Utah

Location.--Lat 41°35'25", long 111°51'10", SE $\frac{1}{4}$ 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 1957 in reports of Geological Survey. January 1937 to September 1938 (corrected), 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. 28, 1945, at site 150 ft upstream at different datum. Nov. 28, 1945, to May 19, 1952, at present site at datum 1.50 ft higher.

Average discharge.--19 years (1939-57), 87.9 cfs (63,640 acre-ft per year).

Extremes.--Maximum discharge during year, 864 cfs May 19 (gage height, 5.07 ft); minimum, 15 cfs Aug. 28.

1938-57: Maximum discharge, 1,830 cfs Dec. 23, 1955 (gage height, 6.03 ft); minimum, 4 cfs Aug. 14, 1940.

Remarks.--Records good except those for periods of ice effect, which are fair. Diversions above station for irrigation of about 400 acres above and 2,400 acres below station. No diversion between station and Hyrum Reservoir.

Rating tables, water year 1956-57, 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, Feb. 21-28, May 1-15, Sept. 3-29)

Oct. 1 to Feb. 23

Feb. 24 to Sept. 30

2.4	18	2.9	16	3.8	178
2.6	34	3.1	31	4.2	356
2.9	75	3.4	71	4.6	585
3.4	195				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	51	48	51	*52	113	*127	326	282	*35	23	21
2	18	46	48	51	52	108	168	415	278	33	23	21
3	18	46	49	49	51	113	105	*415	268	31	23	21
4	18	49	49	51	49	*101	101	367	242	27	22	21
5	18	51	55	b48	b48	113	103	367	233	27	20	21
6	19	52	53	b50	b49	91	331	382	212	27	18	21
7	19	56	48	b48	49	91	151	*398	193	27	19	21
8	21	58	b45	51	51	103	127	398	164	30	19	22
9	21	53	b45	49	49	124	135	341	147	29	18	21
10	22	55	56	b48	49	130	151	306	168	30	18	21
11	21	55	72	b48	49	113	168	311	175	29	18	22
12	34	55	81	51	51	108	178	287	141	29	19	22
13	38	53	81	52	51	89	186	287	135	29	20	22
14	41	55	77	72	59	87	201	292	115	28	20	22
15	40	49	64	*61	70	*87	212	282	110	26	20	20
16	42	*56	61	51	65	85	*205	*264	113	27	22	21
17	*39	56	*56	b48	61	83	212	255	103	28	21	21
18	24	56	53	b48	56	81	212	255	91	28	21	*20
19	26	46	53	b52	62	81	193	*570	87	*26	20	22
20	26	49	51	55	*113	89	171	*573	85	25	20	20
21	26	51	49	53	137	98	175	459	*83	23	17	22
22	26	52	51	b50	142	89	193	*377	*81	24	19	22
23	27	53	45	b51	180	83	*518	326	85	23	19	23
24	32	53	52	51	*220	79	*311	341	79	25	*19	25
25	36	53	51	b48	*356	81	238	311	75	25	19	27
26	37	53	48	49	161	81	216	292	51	25	20	25
27	37	53	b48	49	164	77	201	282	46	24	20	25
28	41	53	b48	b49	132	79	205	287	42	23	17	27
29	41	*51	b48	b48	-	81	225	*316	34	23	17	26
30	48	48	b50	b45	-----	103	*250	321	33	22	*19	*25
31	*53	-----	*51	b48	-----	110	-----	306	-----	*22	21	-----
Total	927	1,565	1,686	1,575	2,628	2,951	5,909	10,709	3,951	830	611	670
Mean	29.9	52.2	54.4	50.8	93.9	95.2	197	345	132	26.8	19.7	22.3
Ac-ft	1,840	3,100	3,340	3,120	5,210	5,850	11,720	21,240	7,840	1,650	1,210	1,330

Calendar year 1956: Max 456 Min 14 Mean 93.4 Ac-ft 67,760
Water year 1956-57: Max 573 Min 17 Mean 93.2 Ac-ft 67,450

Peak discharge (base, 400 cfs).--Feb. 25 (9:30 a.m.) 651 cfs (4.56 ft); Apr. 6 (6 a.m.) 645 cfs (4.65 ft); Apr. 23 (6 a.m.) 639 cfs (4.64 ft); May 2 (11:30 p.m.) 573 cfs (4.43 ft); May 19 (4:30 p.m.) 864 cfs (5.07 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

BEAR RIVER BASIN

Hyrum Reservoir near Hyrum, Utah

Location.--Lat 41°37'30", long 111°52'30", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 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 1957.

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

Extremes.--Maximum contents observed during year, 15,760 acre-ft May 20 (elevation, 4,673.0 ft); minimum observed, 3,610 acre-ft Oct. 10, Sept. 30 (elevation, 4,643.4 ft). 1938-57: Maximum contents observed, 16,100 acre-ft June 12, 13, 1953 (elevation, 4,673.7 ft); minimum observed since initial filling, 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 (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). Elevation of spillway crest, 4,660 ft. Water used for irrigation on Hyrum project. Figures given herein represent usable contents. Those published in annual reports prior to 1946 show total contents.

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

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

Capacity table, water year 1956-57 (elevation, in feet,
and usable contents, in acre-feet)

4,643	3,480	4,660	9,840
4,645	4,130	4,665	12,030
4,650	5,860	4,670	14,340
4,655	7,780	4,674	16,240

Usable contents, in acre-feet, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	-	12,030	15,280	-	14,760	9,620	5,470
2	-	-	-	-	-	-	-	-	15,470	14,720	9,416	5,360
3	-	-	7,700	-	-	-	-	-	15,470	14,430	9,290	5,320
4	-	-	-	-	-	-	-	-	15,470	14,250	9,180	5,290
5	-	-	-	-	-	-	-	-	15,520	14,010	9,000	5,220
6	-	-	-	-	-	-	-	-	15,470	13,870	8,830	5,110
7	-	-	-	-	-	-	-	-	15,470	13,640	8,750	5,010
8	-	-	-	-	-	-	-	-	15,520	13,450	8,540	4,940
9	-	-	-	-	-	-	-	-	15,570	13,270	8,340	4,870
10	3,610	5,080	8,340	10,440	10,440	10,870	13,170	15,660	15,570	13,080	8,220	4,800
11	-	-	-	-	-	-	-	-	15,620	12,850	8,060	4,730
12	-	-	-	-	-	-	-	-	15,570	12,620	7,860	4,660
13	-	-	-	-	-	-	-	-	15,520	12,530	7,740	4,600
14	-	-	-	-	-	-	-	-	15,520	12,390	7,580	4,560
15	-	-	-	-	-	-	-	-	15,470	12,210	7,420	4,490
16	-	-	-	-	-	-	-	-	15,470	12,030	7,260	4,390
17	-	-	-	-	-	-	-	-	15,470	11,940	7,110	4,290
18	-	-	-	-	-	-	-	-	15,470	11,760	6,950	4,290
19	-	-	-	-	-	-	-	-	15,470	11,490	6,800	4,290
20	4,030	5,860	9,670	-	10,440	11,310	15,420	15,760	15,420	11,400	6,680	4,290
21	-	-	-	10,440	-	-	-	-	15,380	11,140	6,490	4,260
22	-	-	-	-	-	-	-	-	15,380	10,920	6,380	4,230
23	-	-	-	-	-	-	-	-	15,380	10,790	6,230	4,190
24	-	-	-	-	-	-	-	-	15,380	10,610	6,080	4,130
25	-	-	-	-	-	-	-	-	15,380	10,480	6,080	4,100
26	-	-	-	-	-	-	-	-	15,280	10,310	5,970	4,030
27	-	-	-	-	-	-	-	-	15,280	10,180	5,860	3,930
28	-	-	-	-	11,360	-	-	-	15,280	10,050	5,850	3,800
29	-	-	-	-	-	-	-	-	15,280	9,960	5,790	3,740
30	-	8,7280	-	-	-	-	15,290	-	14,950	9,890	5,690	3,610
31	4,600	-	10,390	10,440	-	11,970	-	15,570	-	9,710	5,570	-
(+)	4,646.4	-	4,661.3	4,661.4	4,663.5	-	-	4,672.6	4,671.3	4,659.7	4,649.2	4,643.4
(*)	+930	+2,680	+3,110	+50	+920	+610	+3,320	+280	-620	-5,240	-4,140	-1,960

Calendar year 1956..... * -1,060

Water year 1956-57..... * -60

+ Elevation, in feet, at end of month.

* Change in contents, in acre-feet.

a No gage-height record; contents interpolated.

Little Bear River near Hyrum, Utah

Location.--Lat 41°38'00", long 111°53'00", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ (revised) sec. 6, T. 10 N., R. 1 E., on left bank 2,000 ft upstream from road bridge, 1 mile (revised) downstream from Hyrum Dam, and $\frac{1}{2}$ miles west of Hyrum.

Drainage area.--222 sq mi.

Records available.--October 1938 to September 1957.

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.--19 years, 64.1 cfs (46,410 acre-ft per year).

Extremes.--Maximum discharge during year, 559 cfs May 23 (gage height, 3.26 ft); minimum daily, 0.3 cfs Nov. 14-29, Dec. 3-7.

1938-57: Maximum discharge, 986 cfs Apr. 30, 1952 (gage height, 4.54 ft); minimum daily, 0.2 cfs Oct. 9-11, 28-30, 1955.

Remarks.--Records good. Diversions above station for irrigation of about 2,800 acres above and about 7,600 acres below station. Flow regulated by Hyrum Reservoir (see preceding page).

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

-0.1	0.2	0.3	8.1	1.3	105
0.0	.9	.4	12	1.8	199
.1	2.3	.6	24	2.4	335
.2	4.7	.9	50	3.1	514

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	*4.5	0.4	50	53	212	*91	224	294	3.0	0.9	2.3
2	1.0	5.0	.4	51	55	181	91	335	362	2.5	1.0	3.5
3	2.3	.8	.3	52	55	163	90	*357	364	2.8	1.0	4.7
4	5.7	.8	.3	53	54	146	85	371	214	2.0	.9	1.7
5	8.1	.8	.3	53	53	138	86	384	64	1.7	.8	1.5
6	7.8	.7	.3	53	53	127	96	396	100	1.6	.9	1.3
7	7.4	.6	.3	53	54	117	102	404	313	1.6	.9	1.3
8	7.1	.6	.4	55	54	112	37	406	124	1.5	1.0	1.3
9	7.1	.6	.8	55	54	117	4.7	394	108	1.5	1.0	1.3
10	6.7	.5	.8	53	54	133	13	376	105	1.5	1.0	1.3
11	6.7	.5	1.2	54	54	136	5.0	362	122	1.5	1.2	1.3
12	7.1	.4	1.2	55	54	133	4.5	355	110	1.5	1.2	1.2
13	7.4	.4	1.5	54	55	127	44	340	96	1.5	1.2	1.2
14	7.1	.3	1.5	58	57	117	65	338	86	1.5	1.2	1.5
15	6.7	.3	1.3	*59	61	110	66	335	70	1.5	1.2	4.2
16	6.7	.3	1.3	57	65	102	132	335	72	1.9	1.0	4.2
17	6.1	.3	1.5	55	65	98	191	276	73	2.2	1.2	1.6
18	6.1	.3	1.5	54	84	41	195	150	66	1.7	1.6	*1.5
19	5.4	.3	1.5	55	64	4.2	193	273	59	1.6	1.7	1.5
20	4.7	.3	1.5	57	*73	3.5	197	*505	*49	1.6	1.7	3.7
21	4.7	.3	1.6	60	120	3.3	195	483	43	1.6	1.3	9.4
22	4.5	.3	1.6	58	138	3.3	195	489	34	1.3	1.2	12
23	4.5	.3	1.9	57	179	3.0	266	*481	30	1.3	1.2	14
24	4.5	.3	9.4	58	257	3.0	340	443	23	1.2	1.0	15
25	4.2	.3	24	57	*266	3.0	335	424	16	1.2	1.0	19
26	4.2	.3	35	56	269	53	322	293	7.8	.9	1.2	27
27	4.5	.3	40	56	253	90	298	244	4.2	.9	1.2	35
28	4.5	.3	42	55	233	88	294	260	3.5	.9	1.2	43
29	4.5	*.3	46	54	-	86	292	*271	2.2	.9	1.2	51
30	4.2	.4	48	52	-----	88	176	273	2.8	.9	2.0	35
31	4.5	-----	*50	52	-----	90	-----	292	-----	*.9	3.5	-----
Total	167.0	19.4	317.8	1,700	2,866	2,828.3	4,508.2	10,867	2,835.5	48.2	38.6	302.5
Mean	5.39	0.65	10.3	54.8	102	91.2	150	351	94.5	1.55	1.24	10.1
Ac-ft	331	38	630	3,370	5,680	5,610	8,940	21,550	5,620	96	77	600
Calendar year 1956: Max 378 Min 0.3 Mean 67.5 Ac-ft 48,960												
Water year 1956-57: Max 503 Min 0.3 Mean 72.6 Ac-ft 52,540												

* Discharge measurement made on this day.

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

Location.--Lat 41°44'40", long 111°47'00", in NE $\frac{1}{4}$ sec. 36, T. 12 N., R. 1 E., on right bank 100 ft downstream from powerhouse of Utah Power & Light Co. and 2 $\frac{1}{2}$ miles east of Logan.

Records available.--May 1913 to September 1957.

Gage.--Water-stage recorder and timber control. Altitude of gage is 4,680 ft (from topographic map). Prior to Oct. 1, 1938, at datum 0.61 ft higher.

Average discharge.--44 years, 111 cfs (80,360 acre-ft per year).

Extremes.--1913-57: Maximum daily discharge, 206 cfs Apr. 24, 1956; no flow for periods during several years.

Remarks.--Records excellent. Flow regulated by powerplant above gage. Power canal diverts water from right bank of Logan River in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 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 1956-57 (gage height, in feet,
and discharge, in cubic feet per second)

0.75	0	1.6	60
.9	7.0	2.1	120
1.0	12	2.7	207
1.2	26		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	112	103	90	87	98	107	197	193	191	197	134
2	111	112	99	93	83	99	31	199	194	191	197	131
3	112	110	100	88	82	95	0	196	194	191	197	130
4	114	111	103	92	81	97	52	196	194	193	197	128
5	111	111	106	87	78	*95	106	199	193	193	196	128
6	111	111	104	89	84	94	111	196	194	193	194	128
7	111	111	89	96	83	87	111	*199	196	193	*191	127
8	111	111	86	93	87	95	111	201	194	194	185	127
9	110	111	83	92	86	104	110	199	193	191	178	127
10	110	111	97	83	84	108	110	199	193	191	173	126
11	108	111	106	89	83	107	110	199	194	191	175	126
12	108	111	*106	95	84	108	111	197	194	193	175	126
13	107	*111	107	93	84	106	111	196	193	193	169	124
14	111	111	106	99	87	99	111	196	175	193	165	116
15	110	107	100	92	87	100	161	197	193	*191	165	112
16	112	110	106	83	86	99	*188	199	191	194	161	114
17	112	111	99	75	84	98	190	199	191	194	*159	115
18	112	108	97	79	84	98	191	199	191	194	159	115
19	111	98	98	84	87	97	191	*201	193	*194	159	115
20	111	95	94	99	86	99	179	196	191	193	161	115
21	112	98	89	89	92	104	169	194	191	191	162	115
22	112	100	92	*79	92	103	172	194	191	191	162	114
23	108	104	89	87	93	95	194	194	191	191	155	*111
24	104	103	98	88	100	94	185	*196	*191	191	151	115
25	106	104	90	83	106	97	179	194	190	191	148	115
26	111	103	83	84	103	88	173	194	190	193	149	115
27	108	106	84	84	106	94	165	194	191	196	151	115
28	110	104	84	82	102	95	166	194	191	197	147	115
29	111	104	86	82	-	99	182	194	191	196	145	115
30	112	103	90	73	-----	106	197	194	191	196	149	115
31	*111	-----	90	88	-----	106	-----	194	-----	197	144	-----
Total	3,420	3,213	2,964	2,700	2,483	3,064	4,164	6,096	5,572	5,981	5,216	3,609
Mean	110	107	95.6	87.1	88.7	98.9	139	197	192	193	168	120
Ac-ft	8,780	6,370	5,890	5,360	4,920	8,080	8,260	12,090	11,410	11,860	10,350	7,160
Calendar year 1956: Max	206			Min 0		Mean 134		Ac-ft 96,990				
Water year 1956-57: Max	201			Min 0		Mean 133		Ac-ft 96,520				

* Discharge measurement made on this day.

Logan, Hyde Park & Smithfield Canal near Logan, Utah

Location.--Lat 41°44'45", long 111°47'05", in SE $\frac{1}{4}$ sec. 25, T. 12 N., R. 1 E., on right bank $1\frac{1}{4}$ miles downstream from head of canal and $2\frac{1}{2}$ miles east of Logan.

Records available.--June 1904 to December 1907, January 1909 to September 1957 (fragmentary prior to October 1923).

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

Average discharge.--34 years (1923-57), 28.6 cfs (20,710 acre-ft per year).

Extremes.--1906, 1924-57: Maximum daily discharge, 136 cfs May 30, 31, 1930; no flow at times in most years.

Remarks.--Records excellent above 10 cfs and good below. No diversion above station. Canal diverts from Logan River in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T. 12 N., R. 2 E., for irrigation and domestic supply north of Logan.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

-0.4	0	0.5	20
0.0	.2	.8	38
.1	2.0	1.2	61
.2	4.9	1.8	95
.3	9.0	2.4	131

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	5.7	5.3	4.6	5.7	4.9	0.2	11	27	126	47	36
2	19	6.1	5.3	4.6	5.7	4.9	0	a9.1	46	126	44	35
3	19	7.0	5.3	*4.6	5.3	4.6	0	a10	73	124	42	35
4	19	7.4	5.7	4.6	4.9	4.6	0	a10	90	124	40	34
5	19	7.4	6.1	4.6	4.9	4.9	.2	a10	108	127	40	34
6	19	7.0	6.1	4.6	4.9	4.3	.2	a10	118	124	37	34
7	20	7.4	5.3	4.6	4.6	3.7	.2	*28	122	119	37	33
8	20	7.0	5.3	4.9	4.6	1.8	.2	45	121	123	40	34
9	20	7.0	5.7	4.6	4.3	.4	.2	51	120	117	40	35
10	18	7.0	6.5	4.6	4.0	.4	.2	53	115	109	40	35
11	19	7.0	7.8	4.6	4.0	.4	.2	50	*108	112	39	35
12	18	6.5	8.2	4.6	4.0	.2	.2	49	105	112	37	34
13	18	6.5	7.4	5.3	3.7	.9	.2	47	73	113	37	34
14	10	6.1	6.5	5.3	3.7	4.3	.2	34	56	112	37	34
15	9.5	5.7	5.3	4.6	4.0	1.6	.4	22	40	108	36	34
16	9.5	*5.7	6.3	4.3	4.0	.2	.7	14	28	106	37	33
17	*8.7	5.7	4.9	4.3	3.7	.2	.9	3.7	28	105	37	30
18	8.6	5.7	4.9	4.6	4.0	.2	2.0	7.4	38	103	36	30
19	8.6	5.3	4.9	4.9	4.0	.2	1.3	10	56	*103	*34	31
20	8.2	5.7	4.9	6.1	4.0	.2	.9	9.5	57	100	34	30
21	7.8	7.0	4.6	6.1	4.0	.4	.9	8.6	57	94	34	25
22	7.8	7.4	4.6	5.3	4.0	.6	1.1	5.3	59	85	36	18
23	7.8	7.4	4.6	5.7	4.3	1.6	2.6	.1	64	84	37	18
24	8.2	6.5	4.6	5.3	4.3	2.0	1.3	0	*74	80	37	16
25	7.8	6.1	4.6	4.9	5.7	2.0	.9	0	83	75	37	17
26	6.5	5.7	4.6	4.9	5.3	1.1	.9	0	88	75	37	21
27	7.8	5.3	4.6	4.9	5.3	.2	.9	.1	100	69	37	24
28	8.2	5.3	4.6	4.9	5.3	.2	.9	3.2	121	64	39	21
29	7.8	5.3	4.6	4.9	-	.2	1.1	13	126	60	40	20
30	6.5	5.3	4.6	4.9	-----	.4	1.6	14	127	*57	39	*20
31	6.1	-----	4.6	5.3	-----	.2	-----	13	-----	51	37	-----
Total	394.4	190.2	167.3	152.0	126.2	51.8	20.6	541.0	2,428.0	3,087.0	1,181.0	870.0
Mean	12.7	6.34	5.40	4.90	4.51	1.67	0.69	17.5	80.9	99.6	38.1	29.0
Ac-ft	782	377	332	301	250	103	41	1,070	4,820	6,120	2,340	1,730
Calendar year 1956: Max	129				Min 0.1	Mean 28.9	Ac-ft 21,000					
Water year 1956-57: Max	127				Min 0	Mean 25.2	Ac-ft 18,270					

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Logan River above State dam and Utah Power & Light Co.'s tailrace near Logan.

Logan River above State dam, near Logan, Utah

Location.--Lat 41°44'40", long 111°47'00", in NE $\frac{1}{4}$ 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 2 $\frac{1}{2}$ miles east of Logan.

Drainage area.--218 sq mi.

Records available.--June 1896 to September 1957. 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.--44 years (1913-57), 107 cfs (77,460 acre-ft per year). Average combined discharge of Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal, 34 years (1923-57), 233 cfs (168,700 acre-ft per year).

Extremes.--Maximum discharge during year, 938 cfs June 6 (gage height, 3.41 ft); minimum daily, 12 cfs Nov. 14-16, 28, 29, Dec. 1, 2, 24, 25, Mar. 7.

Maximum combined discharge during year (Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal), 1,240 cfs June 6; minimum daily discharge, 92 cfs Jan. 30.

1913-57: 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.

1934-57: 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 good above 30 cfs and fair below. Water diverted from river and springs above station for power, irrigation, and municipal supply. Flow regulated by power-plants above station. For records of combined flow of Logan River, 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 siphons canyon 400 ft upstream from station.

Cooperation.--Records collected in collaboration with Utah Power & Light Co., in connection with a Federal Power Commission project.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

0.9	12	2.2	315
1.0	22	2.8	591
1.3	67	3.5	998
1.7	158		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	17	12	13	16	14	27	42	707	275	18	19
2	19	15	12	13	16	14	71	75	740	248	18	25
3	19	15	14	13	15	14	116	158	*762	236	17	23
4	17	18	14	14	16	14	73	161	791	211	16	26
5	17	20	18	13	16	*13	22	205	*826	180	16	26
6	18	20	17	13	15	13	79	268	868	161	16	23
7	18	19	14	13	15	12	48	*340	850	156	*16	22
8	18	16	14	14	15	16	40	409	802	136	16	20
9	18	16	17	14	14	19	42	396	768	128	17	19
10	18	16	18	13	14	22	60	356	734	128	17	20
11	18	15	21	14	14	19	65	356	*654	116	17	19
12	19	14	*22	14	14	21	75	296	622	98	16	17
13	22	14	19	14	14	18	81	252	685	85	17	17
14	25	12	17	16	14	13	94	268	638	77	17	22
15	25	12	14	14	14	15	67	245	576	*73	17	26
16	26	12	13	14	13	17	*35	242	522	57	17	26
17	22	13	13	15	13	18	41	268	474	53	17	28
18	21	13	14	14	13	18	36	327	409	48	17	28
19	22	15	14	14	13	17	27	*470	400	*40	*16	34
20	22	13	15	16	14	18	22	479	441	35	16	30
21	20	13	13	16	14	19	20	378	460	35	17	32
22	20	16	13	*16	13	17	20	308	409	36	17	38
23	26	17	13	14	13	19	41	293	378	31	17	*34
24	32	14	12	14	16	16	26	*289	*356	28	17	34
25	28	15	12	13	21	16	23	296	360	25	17	34
26	23	14	15	14	15	22	22	348	365	23	17	27
27	25	*14	15	13	15	18	21	451	336	20	17	25
28	22	12	14	15	15	18	20	527	315	19	16	26
29	20	12	14	14	-	18	20	601	311	19	18	25
30	19	13	14	14	-----	20	40	638	300	19	18	25
31	*21	-----	13	15	-----	23	-----	680	-----	18	17	-----
Total	659	447	460	436	410	531	1,374	10,402	16,859	2,814	522	770
Mean	21.3	14.9	14.8	14.1	14.6	17.1	45.8	336	562	90.8	16.8	25.7
Ac-ft	1,310	887	912	865	813	1,050	2,730	20,630	33,440	5,580	1,040	1,530

Calendar year 1956: Max 938 Min 12 Mean 114 Ac-ft 82,960
 Water year 1956-57: Max 868 Min 12 Mean 97.8 Ac-ft 70,790

* Discharge measurement made on this day.

Logan River above State dam, near Logan, Utah--Continued

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 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	152	135	120	108	109	117	134	250	927	592	262	189
2	149	133	116	111	105	118	102	283	980	565	259	191
3	150	132	119	106	102	114	116	344	1,030	551	256	188
4	150	136	123	111	102	116	125	367	1,080	528	253	188
5	147	138	130	105	99	113	128	414	1,150	500	252	188
6	148	138	127	107	104	111	190	474	1,180	478	247	185
7	149	137	108	104	103	103	159	567	1,170	468	244	182
8	149	134	105	112	107	113	151	655	1,120	453	241	181
9	148	134	106	111	104	123	152	646	1,080	436	235	181
10	146	134	122	101	102	130	170	608	1,040	428	230	181
11	145	133	135	108	101	126	175	605	956	419	231	180
12	145	132	136	114	102	129	186	542	921	405	228	177
13	147	132	133	112	102	125	192	495	951	391	223	175
14	146	129	130	120	105	116	205	498	869	382	219	172
15	144	125	119	111	105	117	218	464	809	372	218	172
16	148	128	124	101	103	116	224	455	741	357	215	173
17	142	130	117	94	101	116	232	471	693	352	213	173
18	142	129	116	98	101	116	229	533	638	345	212	173
19	142	118	117	103	104	114	219	681	649	337	209	180
20	141	114	114	121	106	117	202	684	689	328	211	175
21	140	118	107	111	110	123	190	581	708	320	213	172
22	140	123	110	100	109	121	193	507	659	312	215	170
23	142	128	107	107	110	116	238	487	633	306	209	163
24	144	124	115	107	120	112	212	485	621	299	205	165
25	142	125	107	101	133	115	203	490	633	291	202	166
26	140	123	103	103	123	111	196	542	643	291	203	163
27	141	125	104	102	126	112	187	645	627	285	205	164
28	140	121	103	102	122	113	187	724	627	280	202	162
29	139	121	105	101	-	117	203	808	628	275	203	160
30	138	121	109	92	-----	126	239	846	618	272	206	160
31	138	-----	108	108	-----	129	-----	887	-----	266	198	-----
Total	4,474	3,850	3,595	3,292	3,020	3,645	5,557	17,038	25,050	11,882	6,919	5,249
Mean	144	128	116	106	108	118	185	550	835	383	223	175
Ac-ft	8,870	7,640	7,130	6,530	5,990	7,230	11,020	33,790	49,690	23,570	13,720	10,410
Calendar year 1956: Max	1,220			Min 98			Mean 277		Ac-ft 201,000			
Water year 1956-57: Max	1,180			Min 92			Mean 256		Ac-ft 185,600			

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.--November 1913 to September 1957. Records for July 1900 to December 1902, at site 3½ miles downstream, not equivalent owing to spring flow.

Gage.--Water-stage recorder. Altitude of gage is 5,000 ft (from topographic map). Prior to Oct. 2, 1934, at site 1,000 ft upstream at different datum.

Average discharge.--43 years (1914-57), 126 cfs (91,220 acre-ft per year).

Extremes.--Maximum discharge during year, 466 cfs May 19 (gage height, 3.71 ft); minimum daily, 69 cfs Feb. 12.

1913-57: Maximum discharge, 1,620 cfs May 15, 1917 (gage height, 6.5 ft, from flood-marks, site and datum then in use), from rating curve extended above 800 cfs; minimum daily, 29 cfs Jan. 3, 1935.

Remarks.--Records good, except those for periods of ice effect, which are fair. A few small diversions for irrigation of about 200 acres above station. Low-water flow may be slightly regulated by powerplant above station.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1925, superseding those published in WSP 610, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1925		1925-Con.		1925-Con.		1925-Con.	
Jan. 1-29	a72	Feb. 6	91	Feb. 14	72	Feb. 22	68
30	74	7	87	15	72	23	67
31	74	8	87	16	71	24	62
Feb. 1	74	9	86	17	70	25	59
2	75	10	81	18	70	26	57
3	76	11	85	19	69	27	54
4	79	12	82	20	70	28	54
5	86	13	75	21	70	Mar. 1	54

Month	Maximum	Minimum	Mean	Runoff in acre-feet
January 1925.....	-	-	72.1	4,440
February.....	91	54	73.2	4,060
March.....	191	53	96.9	5,960
Water year 1924-25....	333	53	119	86,400
Calendar year 1925....	333	53	119	86,200

a Average for period indicated.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.1	61
2.5	145
3.0	271
3.6	432

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	102	*100	90	84	84	124	*120	276	307	157	134	120
2	100	98	90	84	82	120	109	334	300	155	131	120
3	100	96	90	84	80	115	109	*366	*297	155	129	118
4	100	92	90	84	76	107	118	350	289	155	131	118
5	98	102	94	82	74	113	109	369	281	157	131	115
6	98	100	94	82	76	107	208	385	284	157	131	115
7	100	98	88	82	76	104	152	404	276	157	131	115
8	100	98	b82	84	78	115	140	401	263	157	129	115
9	100	96	78	82	78	124	147	382	252	155	129	115
10	100	98	90	82	78	140	159	350	244	155	127	115
11	100	100	100	82	76	120	174	347	249	159	127	118
12	102	98	109	80	69	120	179	326	228	155	127	113
13	100	96	102	82	72	115	166	305	228	152	124	113
14	98	96	102	88	78	109	183	323	221	150	124	113
15	98	96	94	*84	80	104	200	305	210	150	127	113
16	100	*96	92	82	80	104	196	292	208	150	124	111
17	100	96	*92	76	78	104	203	287	200	150	124	111
18	100	96	90	74	78	104	200	289	193	150	124	107
19	100	94	90	82	86	96	188	388	191	145	124	122
20	98	90	86	86	*84	109	174	407	191	145	122	115
21	98	90	84	86	96	113	171	366	*188	145	122	113
22	98	90	84	82	100	104	191	326	181	143	129	111
23	100	90	84	82	118	98	255	*310	179	140	124	111
24	100	92	84	82	179	96	216	313	176	140	122	111
25	98	94	84	82	206	96	196	307	171	140	122	111
26	100	84	86	82	157	94	183	302	167	138	122	111
27	98	80	84	82	155	113	176	307	167	136	122	111
28	98	96	80	80	140	80	178	310	162	136	120	111
29	98	96	80	78	-	100	210	318	162	136	122	109
30	96	92	80	b75	-----	111	260	320	159	136	122	109
31	98	-----	80	84	-----	113	-----	313	-----	*134	120	-----
Total	3,076	2,850	2,753	2,541	2,714	3,372	5,268	10,378	6,624	4,590	3,897	3,410
Mean	99.2	95.0	88.8	82.0	120	109	176	335	221	148	126	114
Ac-ft	6,100	5,650	5,460	5,040	5,380	6,690	10,490	20,580	13,140	9,100	7,730	6,760

Calendar year 1956: Max 509 Min 78 Mean 151 Ac-ft 109,900

Water year 1956-57: Max 407 Min 69 Mean 141 Ac-ft 102,100

Peak discharge (base, 140 cfs).--Feb. 25 (9 p.m.) 255 cfs (2.93 ft); Mar. 10 (1 a.m.) 155 cfs (2.53 ft); Apr. 6 (8 a.m.) 261 cfs (3.03 ft); May 19 (4 p.m.) 466 cfs (3.71 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Hammond (East Side) Canal near Collinston, Utah

Location--Lat 41°50', long 112°03', in SE $\frac{1}{4}$ 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 1957.

Gage--Water-stage recorder.

Average discharge--40 years (1917-57), 52.0 cfs (37,650 acre-ft per year).

Extremes--1912-57: Maximum daily discharge, 182 cfs June 28, July 1, 1932, June 27, 28, 1933; no flow for periods during each year.

Remarks--Records good. Canal diverts from east side of Bear River in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 13 N., R. 2 W., at dam at which West Side Canal and intake of Cutler powerplant also divert. Water from this canal and West Side Canal used for irrigation of about 58,000 acres below stations in eastern Box Elder County.

Cooperation--Gage-height record and six discharge measurements furnished by Utah Power & Light Co.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90	12						0	43	162	143	150
2	86	12						0	67	*163	147	146
3	80	12						0	81	164	148	142
4	78	12						.8	*81	165	148	140
5	75	12						1.0	94	167	*153	140
6	74	12						*55	110	167	*156	140
7	75	12						68	118	167	157	140
8	70	12						66	127	166	158	140
9	68	12						*77	127	161	158	140
10	68	12						87	122	167	157	134
11	67	13						68	110	166	155	132
12	60	13						50	110	*166	155	130
13	58	12						33	105	166	156	129
14	58	8.9						4.5	94	166	157	127
15	59	7.1						*11	91	162	158	127
16	*52	7.3						22	86	156	161	127
17	45	7.3						27	82	159	160	127
18	46	7.1						27	94	160	161	122
19	42	6.8						17	130	157	160	99
20	43	7.1						10	144	158	161	95
21	42	4.4						10	137	158	162	95
22	40	0						10	143	157	162	94
23	22	0						9.8	152	157	160	*94
24	13	0						9.3	151	155	158	95
25	16	0						9.6	*152	152	158	95
26	14	0						9.6	158	149	158	93
27	14	0						10	158	150	155	89
28	14	0						10	158	149	153	89
29	*14	0						11	159	142	153	90
30	13	0						11	162	142	152	89
31	12	-----						18	-----	143	151	-----
Total	1,508	214.0	0	0	0	0	0	742.6	3,548	4,919	4,831	3,550
Mean	48.6	7.13	0	0	0	0	0	24.0	118	159	156	118
Ac-ft	2,990	424	0	0	0	0	0	1,470	7,040	9,760	9,580	7,040
Calendar year 1956: Max 172 Min 0 Mean 62.1 Ac-ft 45,060												
Water year 1956-57: Max 167 Min 0 Mean 52.9 Ac-ft 38,300												

* Discharge measurement made on this day.

West Side Canal near Collinston, Utah

Location.--Lat 41°50', long 112°04', in SW $\frac{1}{4}$ sec. 27, T. 13 N., R. 2 W., on left bank 4,300 ft downstream from Cutler Dam and 4 miles north of Collinston.

Records available.--June 1912 to September 1957.

Gage.--Water-stage recorder. Prior to May 22, 1914, inclined staff gage at same site and datum.

Average discharge.--45 years, 231 cfs (167,200 acre-ft per year).

Extremes.--1912-57: Maximum daily discharge, 748 cfs May 19, 20, 1954; no flow during periods in every year except 1914.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Canal diverts from west side of Bear River in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 26, T. 13 N., R. 2 W., at dam at which Hammond (East Side) Canal and intake of Cutler powerplant also divert. Water from this canal and Hammond (East Side) Canal used for irrigation of about 58,000 acres below stations in eastern Box Elder County.

Cooperation.--Gage-height record and nine discharge measurements furnished by Utah Power & Light Co.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 1-7, June 29 to Sept. 30)

0.6	2.1	1.5	20	4.0	249
.8	3.9	1.9	40	5.0	415
1.0	6.8	2.5	81	6.6	750
1.2	11	3.2	148		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	463	107			(*)			0	179	709	580	619
2	448	107						0	208	*699	800	800
3	413	106						0	246	704	808	800
4	395	107						0.5	*293	706	611	600
5	390	85						1.5	300	716	*608	602
6	*365	78			24	17		*2.4	364	734	*608	602
7	360	79						221	456	734	617	602
8	365	78						231	524	734	655	602
9	370	77						229	551	727	674	597
10	364	76						231	600	713	683	600
11	350	75						135	547	718	690	587
12	320	75				10		50	587	*718	690	578
13	295	73				0		45	580	718	690	570
14	295	66				0		32	562	706	702	557
15	295	62				0		*30	538	695	702	557
16	282	62				0		55	524	677	704	555
17	249	62				0		129	498	690	699	545
18	234	63				0		131	504	699	704	516
19	222	64				0		135	597	699	704	399
20	224	64				0		134	582	702	704	399
21	227	64				0		133	534	697	704	401
22	205	63				0		134	540	695	*699	401
23	164	62				0		135	624	686	695	*401
24	146	62				0		132	677	686	679	402
25	146	62				0		131	*695	652	681	404
26						0		132	729	617	681	404
27	133	62				0		132	738	595	688	404
28	123	*62				0		132	732	600	686	404
29	*123	62				0		131	722	593	663	406
30	114	62				0		131	716	576	663	402
31	106	62				0		131	580	580	646	402
Total	8,309	2,189				197	0	3,246.4	15,948	21,155	20,678	15,316
Mean	268	72.9				6.35	0	105	532	682	667	511
Ac-ft	16,480	4,340				391	0	6,440	31,630	41,960	41,010	30,380

Calendar year 1956: Max 732 Min 0 Mean 287 Ac-ft 208,300
Water year 1956-57: Max 738 Min 0 Mean 247 Ac-ft 179,000

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 12-15, Dec. 1 to May 5; discharge estimated on basis of 4 discharge measurements and notes of gate changes by employee of Utah Power & Light Co.

Bear River near Collinston, Utah

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

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

Records available.--July 1889 to September 1957.

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

Extremes.--Maximum discharge during year, 4,920 cfs May 23 (gage height, 5.50 ft); minimum daily, 21 cfs Sept. 8.

1889-1957: 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. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

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

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	272	1,070	841	869	710	2,890	1,540	2,180	3,980	534	820	788
2	199	1,000	882	1,200	942	2,350	1,430	2,300	3,880	36	636	886
3	458	317	913	961	672	1,860	1,870	2,280	3,880	34	238	252
4	617	499	1,040	996	1,080	*1,920	1,980	2,540	4,130	45	498	225
5	502	793	1,390	824	1,000	2,100	1,950	2,740	4,100	34	*196	408
6	592	626	1,100	1,060	1,140	1,700	1,710	2,820	3,880	34	*107	345
7	287	716	1,100	1,230	1,100	1,970	2,060	2,620	3,360	34	512	186
8	335	771	528	909	1,020	1,920	2,280	2,850	3,100	34	448	21
9	270	1,180	807	898	513	2,260	2,010	*3,040	2,980	36	548	316
10	596	1,050	*1,080	674	1,070	2,020	1,590	3,120	2,990	36	487	624
11	511	1,010	768	1,300	1,310	2,450	1,520	3,380	2,750	66	477	740
12	194	944	746	1,140	1,080	2,220	1,990	3,380	2,180	34	330	466
13	199	862	1,460	1,330	1,110	1,910	1,790	3,450	2,370	34	248	365
14	543	1,080	1,470	1,210	697	2,220	1,690	3,600	2,310	34	147	96
15	738	955	1,590	1,250	1,850	2,020	*2,300	*3,770	2,380	36	372	696
16	550	1,080	1,800	1,290	1,350	1,810	2,250	3,510	2,270	36	223	336
17	867	1,030	1,870	1,180	1,180	1,260	1,790	3,500	2,040	36	418	497
18	492	892	1,420	1,360	1,350	1,640	1,910	3,530	1,840	34	435	412
19	853	866	1,260	854	749	1,560	2,450	3,760	1,960	39	368	1,010
20	660	869	1,050	1,000	1,650	1,050	2,390	3,820	1,630	34	342	1,290
21	903	904	1,070	*1,000	2,010	1,400	1,940	3,820	1,990	36	222	1,120
22	639	662	1,240	1,210	2,850	1,370	2,230	3,840	1,240	33	651	1,030
23	867	1,050	610	954	2,400	1,160	2,320	4,120	740	138	713	*885
24	1,080	979	1,230	1,310	2,560	1,490	3,000	4,880	1,690	42	597	824
25	678	917	1,050	972	2,920	1,770	2,950	4,840	*1,020	34	661	913
26	1,550	955	1,240	1,440	3,300	1,230	3,240	4,520	90	67	900	915
27	732	1,060	849	792	*3,340	1,400	2,940	*4,350	58	852	580	1,030
28	244	*1,800	692	1,620	2,920	1,310	2,570	4,360	34	838	36	904
29	*1,600	679	918	976	-	1,500	2,430	4,360	34	64	561	685
30	986	515	941	952	-----	1,550	2,480	4,080	34	33	703	1,140
31	1,070	-----	1,080	696	-----	894	-----	4,150	-----	340	404	-----
Total	20,081	27,131	34,035	33,457	43,873	54,304	64,600	109,510	64,840	3,717	13,878	19,405
Mean	648	904	1,098	1,079	1,567	1,752	2,153	3,533	2,161	120	448	647
Ac-ft	39,830	53,810	67,510	66,360	87,020	107,700	128,100	217,200	128,600	7,370	27,530	39,490
Calendar year 1956: Max	3,500			Min 27		Mean 1,139		Ac-ft 826,800				
Water year 1956-57: Max	4,880			Min 21		Mean 1,339		Ac-ft 969,500				

* Discharge measurement made on this day.

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, 2¼ 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 1957.

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

Average discharge--18 years (1911-12, 1931-32, 1941-57), 17.5 cfs (12,670 acre-ft per year).

Extremes--Maximum discharge during year, 259 cfs Feb. 23 (gage height, 3.23 ft), from rating curve extended above 70 cfs on basis of computation of peak flow by weir formula; minimum, 11 cfs Dec. 7, 26, Jan. 16, 29, 30, Feb. 3, 4, 5, 6; minimum gage height, 0.43 ft Dec. 7, 26, Jan. 30, 1911-13, 1931-32, 1940-57; Maximum discharge, 351 cfs July 24, 1955 (gage height, 3.63 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 partly estimated gage-height record, which are fair. Diversions above station for irrigation of about 400 acres.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

0.4	9.8	1.2	50
.6	18	1.5	68
.8	28	2.0	104
1.0	38	2.5	145

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	14	14	14	f12	26	17	14	18	13	13	14
2	14	13	14	14	f12	24	16	14	18	14	13	14
3	13	14	14	14	f12	26	16	14	18	14	13	14
4	13	14	14	14	f11	19	16	15	17	14	13	14
5	*13	14	15	13	f11	19	17	15	17	14	13	14
6	13	14	14	f13	f12	17	22	*15	17	14	12	14
7	13	15	*13	f13	f12	17	18	15	17	14	13	14
8	13	15	14	f13	f13	20	17	15	17	14	13	14
9	13	14	14	f13	f17	26	17	16	17	13	13	14
10	14	14	14	f13	f17	23	16	17	17	13	13	14
11	14	14	15	f13	f35	18	16	16	17	13	13	14
12	14	*14	15	f13	f42	18	16	17	16	14	14	14
13	14	14	18	14	30	17	16	f20	16	14	14	14
14	14	14	16	15	34	16	16	21	16	13	14	13
15	14	13	15	*14	f76	16	16	20	16	13	14	13
16	14	14	15	f13	56	17	15	19	*16	13	14	13
17	14	14	14	f13	f51	17	15	18	16	13	14	13
18	14	14	14	f14	f43	17	16	18	16	13	14	13
19	14	12	15	f14	f51	16	16	f34	15	13	14	13
20	14	12	14	f14	36	17	16	29	15	13	14	13
21	14	13	15	13	31	17	17	*24	15	13	15	13
22	14	14	13	13	f54	16	16	22	15	13	17	13
23	14	14	14	f12	133	15	16	21	14	13	15	13
24	14	14	14	f12	*106	15	16	20	14	14	14	13
25	14	14	14	f12	110	16	15	20	14	14	14	13
26	15	14	14	f12	49	16	15	19	14	*14	14	13
27	15	14	14	f12	45	15	15	19	14	14	*14	13
28	15	14	14	f12	28	16	14	20	14	14	14	13
29	15	14	14	f12	-	16	14	19	14	14	14	13
30	14	14	14	f12	-----	18	14	19	14	14	14	13
31	15	-----	14	f12	-----	*18	-----	18	-----	14	14	-----
Total	432	415	445	405	1,139	564	482	583	474	420	427	403
Mean	13.9	13.8	14.4	13.1	40.7	18.2	16.1	18.8	15.8	13.5	13.8	13.4
Ac-ft	857	823	883	803	2,260	1,120	956	1,160	940	833	847	799
Calendar year 1956: Max 45 Min 12 Mean 15.0 Ac-ft 10,870												
Water year 1956-57: Max 133 Min 11 Mean 17.0 Ac-ft 12,280												

* 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,150 ft (by barometer). Prior to Dec. 16, 1943, staff gage, and Dec. 16, 1943, to Aug. 22, 1954, water-stage recorder at site 50 ft upstream at datum 1.84 ft higher.

Average discharge.--18 years (1939-57), 9.89 cfs (7,160 acre-ft per year).

Extremes.--Maximum discharge during year, 95 cfs May 19 (gage height, 2.79 ft), from rating curve extended above 30 cfs on basis of logarithmic plotting; minimum, 1.9 cfs Jan. 31; minimum daily discharge, 3.2 cfs Jan. 31.

1938-57: Maximum discharge observed, 160 cfs Apr. 2, 1943, from rating curve extended above 47 cfs on basis of logarithmic plotting; maximum gage height, 2.38 ft Apr. 19, 1952, site and datum then in use; minimum discharge recorded, 1.6 cfs Jan. 13, 1950 (gage height, 0.43 ft, site and datum then in use); minimum daily, 1.8 cfs Nov. 3-5, 1949.

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

Revisions (water years).--WSP 1344: 1943(M). Revised figures of discharge, in cubic feet per second, for high-water period in the water year 1942, superseding those published in WSP 960, are given herewith:

1942		1942-Con.	
Apr. 1	12	Apr. 7	51
2	14	8	47
3	21	9	42
4	35	10	35
5	45	11	33
6	51		

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
April 1942	676	51	12	22.5	1,340
Water year 1941-42	3,554.9	51	5.8	9.74	7,051
Calendar year 1942	3,531.5	51	-	9.68	7,004

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 19)

Oct. 1 to May 18

May 19 to Sept. 30

1.6	3.0	2.0	16	1.5	5.2	2.0	23
1.7	5.0	2.2	27	1.6	7.4	2.2	36
1.8	7.9			1.7	10	2.5	64
				1.8	14		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	5.2	5.5	5.8	4.1	7.9	6.3	8.3	15	8.2	6.5	6.3
2	5.0	5.2	5.5	5.8	4.8	7.9	5.8	9.0	15	8.0	6.3	6.1
3	5.0	5.2	5.5	5.8	4.5	7.6	5.8	9.3	14	8.0	6.3	6.1
4	5.0	5.2	5.5	5.8	4.3	6.6	5.8	9.0	14	8.0	6.3	5.9
5	*5.0	5.2	5.8	5.5	4.3	6.3	8.0	9.3	13	7.7	6.3	5.9
6	5.0	5.5	5.2	5.5	4.1	6.0	12	*9.7	13	7.7	6.5	5.9
7	5.0	5.5	*b5.5	5.8	4.1	6.3	7.6	10	13	7.7	6.5	5.9
8	5.2	5.2	b5.0	5.8	4.3	8.3	6.9	10	12	7.4	6.5	6.1
9	5.0	5.2	b5.0	5.2	4.3	8.3	6.6	10	12	7.4	6.3	5.9
10	5.2	5.2	4.5	5.5	4.3	7.2	6.6	11	12	7.2	6.3	6.1
11	5.0	5.2	5.2	6.0	4.5	6.3	6.6	11	12	7.2	6.1	6.1
12	5.0	*5.2	6.0	5.8	4.5	6.3	6.6	13	11	7.2	6.1	5.9
13	5.2	5.2	6.0	6.0	4.8	6.0	6.6	18	11	7.2	6.1	5.9
14	5.0	5.0	5.5	6.0	5.0	6.0	6.6	22	11	7.2	6.1	6.3
15	5.0	5.0	5.5	6.0	5.5	6.0	6.6	19	11	7.2	6.3	5.9
16	5.0	5.5	6.0	6.0	5.2	6.0	6.6	18	*11	6.7	6.1	5.9
17	5.0	5.5	6.0	b5.6	5.2	6.0	6.6	18	10	6.7	6.1	5.9
18	5.0	5.2	6.0	b5.4	5.0	6.0	6.9	18	9.9	6.7	6.3	6.1
19	5.0	4.8	5.8	b5.2	5.2	6.0	6.9	54	9.6	6.7	6.1	6.3
20	5.2	5.0	5.5	*b5.0	5.2	6.3	6.9	34	9.6	6.5	6.3	6.3
21	5.2	5.5	5.8	5.2	5.2	6.0	7.2	*28	9.6	6.5	6.1	6.1
22	5.2	5.5	5.5	b5.0	5.8	5.5	6.9	25	9.6	6.7	6.5	6.1
23	5.5	5.5	5.2	4.8	17	5.2	10	22	9.4	6.3	6.3	6.1
24	5.5	5.5	5.8	4.8	*19	5.2	8.3	22	9.1	6.7	6.3	5.9
25	5.5	5.5	5.5	4.8	21	5.5	7.9	21	9.1	6.5	6.3	5.9
26	6.0	5.8	5.5	4.5	11	5.5	7.9	19	8.8	*6.5	6.3	5.9
27	6.0	5.5	5.8	4.5	12	5.5	7.2	18	8.5	6.7	*6.3	5.9
28	5.8	5.5	5.8	b4.3	9.0	5.5	7.2	17	8.5	6.7	*6.3	5.9
29	5.8	5.5	5.8	b4.0	-	5.8	7.6	16	8.5	6.7	6.3	5.6
30	5.5	5.5	5.8	b3.5	-----	6.6	7.9	16	8.5	6.7	6.3	5.9
31	5.2	-----	5.8	3.2	-----	*6.6	-----	16	-----	6.5	6.3	-----
Total	161.8	159.5	172.8	162.1	193.2	196.2	216.4	540.6	328.7	219.1	194.7	180.1
Mean	5.22	5.32	5.57	5.23	6.90	6.33	7.21	17.4	11.0	7.07	6.28	6.00
Ac-ft	321	316	343	322	383	389	429	1,070	652	435	386	357

Calendar year 1956: Max 33 Min 3.6 Mean 6.52 Ac-ft 4,750
Water year 1956-57: Max 54 Min 3.2 Mean 7.47 Ac-ft 5,400

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

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 1957.

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, 206 cfs May 31 (gage height, 4.77 ft); minimum daily, 17 cfs July 8, 9, Aug. 27; minimum gage height observed, 1.87 ft Aug. 27. 1938-57: 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, that of Aug. 27, 1957.

Remarks.--Records fair. Flow regulated by several small reservoirs above station. Divisions above station for irrigation of 25,000 to 30,000 acres.

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

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

1.9	16	2.5	54	3.5	116
2.1	26	2.7	68	4.0	150
2.3	38	3.0	86	4.8	208

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	31	37	44	43	121	73	51	54	22	20	22
2	20	32	37	42	43	111	74	48	45	21	19	25
3	20	34	38	38	42	102	73	45	40	20	18	24
4	19	35	38	37	42	89	68	42	40	19	18	24
5	*20	37	42	37	41	106	65	40	40	19	18	24
6	20	38	43	36	41	105	72	*39	38	18	18	24
7	20	40	*36	37	39	108	85	39	35	18	18	23
8	24	38	33	37	42	108	82	39	33	17	18	22
9	24	37	30	38	45	107	80	39	31	17	18	22
10	20	37	45	37	47	108	78	40	30	18	18	22
11	20	37	61	37	45	107	73	42	28	19	18	22
12	20	*36	65	39	48	105	70	42	27	19	18	22
13	20	37	67	46	52	103	67	46	26	20	18	22
14	20	37	67	51	59	102	68	52	25	19	18	22
15	20	37	68	48	60	89	67	62	25	19	18	22
16	20	38	69	46	65	81	65	69	*24	19	18	22
17	20	37	81	42	91	82	62	74	24	19	18	22
18	20	37	60	39	92	82	67	85	24	19	18	22
19	20	37	59	46	93	71	59	120	23	20	18	22
20	20	40	57	*43	94	72	59	170	23	20	18	27
21	20	36	54	42	106	72	67	*205	23	20	18	24
22	20	36	54	42	106	71	66	205	23	20	19	23
23	22	34	45	41	130	70	65	201	23	19	18	22
24	22	34	45	41	*184	67	61	149	22	20	18	22
25	24	34	46	39	191	70	67	138	22	18	18	21
26	24	34	47	39	180	70	65	96	21	*18	18	19
27	27	37	43	41	140	65	65	86	20	18	*17	18
28	27	37	43	36	126	66	61	63	18	18	18	18
29	29	37	43	33	--	66	59	57	19	18	19	21
30	29	37	44	33	---	70	52	59	22	18	19	19
31	30	---	44	35	---	*73	---	57	---	19	19	---
Total	691	1,088	1,521	1,242	2,287	2,719	2,035	2,500	848	588	564	662
Mean	22.0	36.3	49.1	40.1	81.7	87.7	67.8	80.5	28.3	19.0	18.2	22.1
Ac-ft	1,350	2,160	3,020	2,460	4,540	5,330	4,040	4,960	1,680	1,170	1,120	1,310
Calendar year 1956: Max 185 Min 16 Mean 46.3 Ac-ft 33,580												
Water year 1956-57: Max 205 Min 17 Mean 45.8 Ac-ft 33,200												

* Discharge measurement made on this day.

Note.--Doubtful gage-height record Dec. 7-10, Jan. 28 to Feb. 3, Feb. 26, 27, May 1-5, 19, 20, June 2, 6-24, 26, 27, July 2-22, Sept. 30; discharge estimated on basis of 2 discharge measurements, weather records, and records for Portneuf River at Pocatello, Marsh Creek near McCammon, and Little Malad River above Elkhorn Reservoir near Malad.

Bear River near Corinne, Utah

Location.--Lat 41°34'35", long 112°06'00", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 10 N., R. 2 W., on right bank 1.2 miles downstream from Salt Creek, 2.0 miles northeast of Corinne, and 2.8 miles downstream from Malad River.

Drainage area.--6,800 sq mi, approximately.

Records available.--October 1949 to September 1957 (discontinued).

Gage.--Water-stage recorder. Datum of gage is 4,204.6 ft, unadjusted. Auxiliary staff gage 7,800 ft downstream July 27, 1950, to Nov. 21, 1955.

Average discharge.--8 years, 1,687 cfs (1,221,000 acre-ft per year).

Extremes.--Maximum discharge during year, 5,080 cfs May 26 (gage height, 12.23 ft); minimum, 131 cfs July 27; minimum daily, 137 cfs July 26, 27.
1949-57: Maximum discharge, 7,200 cfs May 3, 1952 (gage height, 14.69 ft); maximum gage height, 14.83 ft Feb. 11, 1951; minimum discharge, 86 cfs Aug. 18, 1953; minimum daily, 90 cfs Aug. 18, 1953.

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.

Revisions (water years).--WSP 1284: 1953.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	282	1,130	781	1,200	850	3,160	1,250	2,390	4,210	150	234	600
2	315	1,140	997	1,000	900	2,995	1,680	2,230	4,100	398	829	853
3	*336	1,120	1,140	1,300	1,000	2,550	*1,700	2,340	4,050	279	671	964
4	478	604	1,130	1,100	900	2,130	1,910	2,320	4,050	161	357	499
5	684	541	1,180	1,100	1,200	2,250	2,090	2,590	4,140	*148	520	327
6	583	848	1,540	1,100	1,100	2,213	1,990	*2,710	4,130	148	420	427
7	722	747	1,200	1,200	1,250	2,060	1,850	2,780	3,920	146	205	395
8	545	*832	1,200	1,300	1,200	*2,270	2,070	2,820	3,460	148	503	324
9	503	882	750	1,050	1,100	2,180	2,340	*3,010	3,240	146	470	220
10	474	1,270	900	1,000	800	2,430	2,180	3,100	3,230	146	545	*239
11	751	1,250	1,200	850	1,250	2,350	1,760	3,280	3,140	148	566	596
12	722	1,240	900	1,400	1,400	2,570	*1,700	3,460	2,680	*151	533	806
13	449	1,170	900	1,300	1,200	2,450	2,000	3,590	2,460	161	449	667
14	377	1,090	1,500	1,500	1,200	2,180	1,940	3,610	*2,480	172	348	467
15	655	1,220	1,600	1,500	1,000	*2,380	1,940	3,700	2,440	161	234	300
16	858	1,170	1,750	1,350	1,900	2,260	2,450	*3,680	2,510	152	318	579
17	*747	1,250	*1,950	1,400	1,500	1,960	2,190	3,660	2,320	152	282	508
18	978	1,170	2,050	1,300	1,350	1,610	1,940	3,610	2,230	156	395	587
19	764	1,100	1,800	1,500	1,500	1,790	2,190	3,810	2,050	155	474	571
20	901	1,000	1,500	1,000	1,000	1,660	2,560	3,980	2,080	148	474	978
21	844	1,000	1,200	1,100	1,800	*1,320	2,480	3,940	*1,880	151	416	1,330
22	1,040	1,000	1,250	1,100	2,200	1,580	2,220	*3,920	1,920	*154	273	1,250
23	824	850	1,350	1,300	3,000	1,570	2,440	*4,070	1,690	151	529	*1,190
24	1,010	1,220	900	1,100	2,600	1,420	2,670	4,500	940	152	*747	1,060
25	1,210	1,210	1,400	1,400	2,700	1,730	2,690	5,030	1,660	161	621	901
26	920	1,130	1,300	1,100	3,100	1,920	*3,110	5,030	1,220	137	688	992
27	1,520	1,110	1,400	1,500	*3,370	1,540	3,180	*4,730	357	137	638	1,020
28	954	1,310	1,050	1,000	3,430	1,600	2,940	4,520	188	785	701	1,080
29	478	*1,850	900	1,700	-	1,510	2,650	4,480	160	973	227	1,040
30	1,460	1,130	1,000	1,100	-----	1,670	2,490	4,400	150	312	456	815
31	1,220	-----	1,100	1,100	-----	1,680	-----	4,240	-----	149	810	-----
Total	23,604	32,644	38,818	37,750	45,800	62,980	66,800	111,590	73,085	6,688	14,933	21,585
Mean	761	1,088	1,252	1,218	1,636	2,032	2,227	3,600	2,436	216	482	720
Ac-ft	46,820	64,750	76,990	74,880	90,840	124,900	132,500	221,500	145,000	13,270	29,620	42,810
Calendar year 1956: Max	3,470				101	Mean	1,285	Ac-ft	932,800			
Water year 1956-57: Max	5,030				137	Mean	1,469	Ac-ft	1,064,000			

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 20-23, Dec. 7 to Feb. 26 (no gage-height record Jan. 9-12, 18, 19, 23-25, Jan. 27 to Feb. 2, Feb. 5-9, 12-21); discharge estimated on basis of 1 discharge measurement and records for station near Collinston.

Weber River near Oakley, Utah

Location.--Lat 40°44'10", long 111°14'45", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ 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 3 $\frac{1}{4}$ miles northeast of Oakley.

Drainage area.--163 sq mi.

Records available.--October 1904 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,600 ft (from topographic map). Prior to Oct. 25, 1933, staff gage at site a quarter of a mile downstream at different datum. Oct. 25, 1933, to Aug. 29, 1955, water-stage recorder at present site at datum 0.5 ft higher.

Average discharge.--51 years (1906-57), 226 cfs (163,600 acre-ft per year).

Extremes.--Maximum discharge during year, 2,560 cfs June 7 (gage height, 3.93 ft); minimum not determined, occurred during periods of ice effect or no gage-height record, 1904-57: Maximum discharge observed, 4,170 cfs June 13, 1921 (gage height, 9.0 ft, site and datum then in use), from rating curve extended above 2,000 cfs by logarithmic plotting; minimum recorded, 16 cfs Mar. 12, 1941.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Several small diversions for irrigation above station. 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).--WSP 790: 1934. WSP 1394: 1907-9, 1911-12, 1921-22.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 13, June 2-9)

Oct. 1 to June 11				June 12 to Sept. 30			
0.1	42	2.0	575	0.4	72	2.0	530
.5	85	3.0	1,270	.8	136	3.0	1,080
1.0	180	3.6	1,790	1.2	235	3.4	1,390
1.5	345	4.2	2,380	1.6	370		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*62	59			(*)	*48	*62	140	1,010	1,070	166	114
2	60					49	57	193	1,210	992	162	110
3	61					49	56	258	1,460	908	157	105
4	61					48	55	309	*1,700	810	153	102
5	60	b60		a40		50	55	368	*1,950	685	151	98
6	59					48	63	453	2,120	605	149	98
7	59	62			b48	50	58	525	*2,320	595	155	96
8	63	60				51	56	575	2,170	545	162	96
9	60	60				54	63	842	1,930	498	153	102
10	59	60	a40			55	66	648	1,720	477	149	100
11	58	59				52	71	642	*1,460	490	144	97
12	60	b61	a40		(*)	52	80	540	1,320	449	155	97
13	63	58				49	50	58	*502	*1,370	402	142
14	61	57		b40		49	b50	97	480	1,090	374	140
15	60	b57				46	b51	103	448	986	335	142
16	59	b58				48	51	110	408	866	300	144
17	59	58				49	52	115	394	*760	280	142
18	59	60	b40			49	52	117	412	735	284	134
19	59	b55				48	52	110	642	805	290	130
20	57					49	54	107	555	1,070	251	128
21	57					48	56	105	494	1,140	238	130
22	57	b50				49	54	110	453	938	235	140
23	62					51	58	115	458	914	215	126
24	70					52	57	108	435	*1,040	203	130
25	63					54	55	102	417	1,230	198	132
26	64			a45		50	52	98	426	1,250	196	128
27	68					50	52	98	480	1,270	188	126
28	68	b45	(*)			48	52	102	565	*1,330	185	123
29	*65					-	54	115	666	1,320	178	123
30	61	(*)				-	57	*125	708	1,190	175	*123
31	64					-	59		*820		168	114
Total	1,898	1,649	1,240	1,295	1,364	1,624	2,667	15,056	39,674	12,819	4,353	2,760
Mean	61.2	55.0	40.0	41.8	48.7	52.4	88.9	486	1,322	414	140	92.0
Ac-ft	3,760	3,270	2,460	2,570	2,710	3,220	5,290	29,860	78,690	25,430	8,630	5,470
Calendar year 1956:	Max	1,730			Min	-	Mean	229	Ac-ft	166,400		
Water year 1956-57:	Max	2,320			Min	-	Mean	237	Ac-ft	171,400		

Peak discharge (base, 1,200 cfs).--June 7 (12:30 a.m.) 2,560 cfs (3.93 ft); June 28 (1 a.m.) 1,600 cfs (3.63 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Weber-Provo Canal near Oakley.

b Stage-discharge relation affected by ice.

Weber-Provo diversion canal at Oakley, Utah

Location.--Lat 40°42'30", long 111°16'30", in NW¹ 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 1957 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.--1945-57: Maximum daily discharge, 913 cfs May 21, 1956; no water diverted from Weber River for several months each year.

Remarks.--Records good except those for periods of no gage-height record or once-daily gage-height readings, which are fair. Canal diverts water from Weber River in SW¹ 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. For records at outlet of canal see page 96.

Revisions (water years).--WSP 1284: 1949.

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

Nov. 16 to Mar. 13

Mar. 13 to July 31

2.1	12	0.0	0	0.7	46	3.0	459
2.3	19	.1	2.8	1.0	80	4.0	723
2.7	35	.2	7.0	1.5	149	5.0	953
3.0	49	.4	20	2.0	235		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	(*)	0	31	32	g36	0	0	115	556	*720		
2		0	31	g35	g35	0	0	170	825	628		
3		0	38	g34	g33	0	0	214	889	372		
4		0	37	g34	18	0	0	216	869	6.6		
5		0	35	g29	0	8.2	0	218	*355	42		
6		0	22	g29	0	20	0	222	453	62		
7		0	22	g27	0	23	0	224	514	62		
8		0	19	g32	0	23	21	224	514	59		
9		0	g25	g31	0	30	36	227	522	147		
10		0	g35	g17	0	35	39	229	567	198		
11		0	g40	g36	0	35	47	338	594	191		
12		0	g46	g37	0	35	52	410	594	160		
13		0	g47	g40	0	38	53	406	633	137		
14		0	g47	g35	0	35	53	398	718	124		
15		0	a42	g33	0	37	53	379	673	110		
16		18	a42	g30	0	18	53	363	620	90		
17		32	32	g12	0	0	53	331	559	67		
18		31	29	g12	0	0	53	329	536	62		
19		20	41	g26	0	0	72	413	567	62		
20		17	26	g26	0	0	95	408	666	61		
21		21	31	g28	0	0	94	391	728	60		
22		29	34	g29	0	0	97	363	696	53		
23		35	28	g32	0	0	90	361	678	43		
24		34	36	g32	0	0	81	356	716	29		
25		35	32	g31	0	0	91	329	750	25		
26		33	31	g33	0	0	86	320	756	22		
27		32	33	g34	0	0	86	359	760	16		
28		30	35	g35	0	0	89	406	773	8.7		
29	(*)	31	35	g32	-	0	98	418	763	8.2		
30		*29	36	g28	-----	0	*104	420	746	7.6		
31		-----	g36	g28	-----	0	-----	430	-----	5.7		
Total	0	427	1,054	929	122	337.2	1,596	9,987	19,590	3,638.8	0	0
Mean	0	14.2	34.0	30.0	4.36	10.9	53.2	322	653	117	0	0
Ac-ft	0	847	2,090	1,840	242	669	3,170	19,810	38,860	7,220	0	0

Calendar year 1956: Max 100 Min 0 Mean 92.2 Ac-ft 66,940
 Water year 1956-57: Max 889 Min 0 Mean 103 Ac-ft 74,750

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of engineer's notes and record for station near Woodland.

g Discharge computed from once-daily staff-gage readings.

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 an eighth of a mile downstream from Wanship Dam, 1.2 miles south of Wanship, and 1½ miles upstream from Silver Creek.

Drainage area.--320 sq mi, approximately.

Records available.--October 1950 to September 1955, April to September 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,900 ft (from topographic map). Nov. 17, 1950, to Sept. 30, 1955, water-stage recorder at site 200 ft upstream at different datum.

Extremes.--Maximum discharge during period April to September 1957, 578 cfs July 3 (gage height, 2.69 ft); minimum daily, 9.0 cfs Apr. 18-22 (gage height, 1.46 ft).

1950-55, 1957: Maximum discharge, 2,340 cfs May 30, 1951 (gage height, 4.73 ft, site and datum then in use); minimum daily, that of Apr. 18-22, 1957.

Remarks.--Records good. Many diversions above station for irrigation. Flow regulated by Rockport Reservoir, formed by Wanship Dam, completed in 1957 (usable capacity, 60,000 acre-ft). Records do not include water diverted from Weber River basin through Weber-Provo diversion canal (see p. 59).

Discharge, in cubic feet per second, 1957

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	a141	10	49	404	143	244	16	32	56	110	138	82	168
2	a159	10	49	521	133	238	17	22	*56	110	125	138	168
3	a168	10	49	578	125	244	18	9.0	56	110	121	173	163
4	d130	10	49	559	121	244	19	9.0	56	110	129	173	163
5	d88	10	50	550	102	238	20	9.0	50	110	143	178	163
6	d57	10	58	540	102	214	21	9.0	45	110	148	189	158
7	d58	10	102	540	94	189	22	*9.0	47	114	163	220	148
8	d57	31	114	540	82	189	23	9.7	47	114	195	258	148
9	d43	90	114	*450	79	189	24	10.	47	114	189	258	148
10	31	32	121	347	79	183	25	9.7	47	218	178	265	148
11	31	54	*117	308	79	183	26	9.7	47	395	178	272	143
12	31	54	114	294	79	178	27	9.7	47	289	158	272	158
13	31	54	110	294	79	168	28	9.7	47	*258	153	272	163
14	31	56	*114	285	79	168	29	*10	47	308	153	*258	163
15	31	56	110	168	82	168	30	10	49	308	*148	244	*163
							31		50		143	244	-
Total.....							1,284.5	1,311	4,098	8,820	4,934	5,402	
Mean.....							42.1	42.3	137	285	159	180	
Runoff in acre-feet.....							2,510	2,600	8,130	17,490	9,790	10,710	

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of record of release from Wanship Reservoir.
d Doubtful gage-height record; discharge estimated on basis of recorder graph and record of releases from Wanship Reservoir.

Weber River near Peoa, Utah

Location.--Lat 40°45'10", long 111°22'20", in SE¼NW¼ sec. 10, T. 1 S., R. 5 E., on left bank 60 ft downstream from bridge on U. S. Highway 189, 2.4 miles north of Peoa, and 3.2 miles upstream from Wanship Dam.

Records available.--May to September 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 6,050 ft (from Bureau of Reclamation Rockport Reservoir map).

Extremes.--Maximum discharge during period April to September 1957, 2,110 cfs June 7 (gage height, 3.37 ft); minimum daily, 99 cfs Apr. 29.

Remarks.--Records good. Many diversions above station for irrigation. No diversion between station and Rockport Reservoir. Records do not include water diverted from Weber River basin through Weber-Provo diversion canal (see p. 59). Flow slightly regulated by several small reservoirs above station.

Discharge, in cubic feet per second, 1957

Day	Apr.	May	June	July	Aug.	Sept.	Day	Apr.	May	June	July	Aug.	Sept.
1	-	119	440	419	119	140	16	-	187	535	211	123	112
2	-	132	421	356	116	128	17	-	*182	*340	205	126	109
3	-	128	657	419	112	123	18	-	192	277	211	126	112
4	-	253	*813	739	106	123	19	-	472	263	205	126	123
5	-	304	1,440	649	106	119	20	-	341	521	177	135	119
6	-	*341	1,340	554	106	119	21	-	260	661	158	140	119
7	-	394	*1,710	554	102	116	22	(*)	209	419	*182	148	119
8	-	412	1,500	521	102	116	23	-	222	340	148	140	119
9	-	504	1,400	*400	102	116	24	-	265	*410	148	135	118
10	-	493	*1,190	256	99	112	25	-	260	554	148	130	112
11	-	451	939	340	106	112	26	-	234	624	148	140	112
12	-	296	755	298	116	116	27	-	228	599	135	144	109
13	-	253	*955	242	116	119	28	-	260	*686	135	144	106
14	-	253	596	211	119	116	29	99	341	649	130	*148	
15	-	209	584	194	135	112	30	119	350	554	*123	144	*102
							31	-	*412	-	119	135	-
Total.....							-		8,958	22,172	8,715	3,846	3,476
Mean.....							-		289	739	281	124	116
Runoff in acre-feet.....							-		17,770	43,980	17,290	7,630	6,890

* Discharge measurement made on this day.

Weber River near Coalville, Utah

Location.--Lat 40°53'40", long 111°24'00", in SE 1/4 sec. 20, T. 2 N., R. 5 E., on left bank 1 1/2 miles upstream from high-water line of Echo Reservoir, 1 1/2 miles south of Coalville, and 6 miles downstream from Silver Creek.

Drainage area.--438 sq mi.

Records available.--April 1927 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,600 ft (from topographic map). Prior to Mar. 22, 1931, staff gage and Mar. 22, 1931, to Sept. 30, 1952, water-stage recorder, at same site at datum 1 ft higher.

Average discharge.--30 years, 204 cfs (147,700 acre-ft per year).

Extremes.--Maximum discharge during year, 960 cfs Oct. 20 (gage height, 3.38 ft); minimum, 8.8 cfs June 6 (gage height, 0.27 ft).
1927-57: Maximum discharge, 2,190 cfs May 6, 1952; maximum gage height, 5.08 ft (present datum) May 29, 1951; minimum discharge, 6 cfs Sept. 20, 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. No diversion between station and Echo Reservoir. Records do not include water diverted from Weber River basin through Weber-Provo diversion canal (see p. 59). Flow slightly regulated by several small reservoirs above station, and since Apr. 1, 1957, by Rockport Reservoir (usable capacity, 60,000 acre-ft).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.3	12	1.2	129
.4	17	1.6	233
.6	33	2.0	362
.9	72	3.0	772

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*57	95	b31		(*)	*315	204	28	50	380	123	257
2	56	143	b30			731	*157	33	48	*485	116	263
3	53	121	b25			698	201	57	37	520	110	263
4	52	127	b26			365	154	56	20	508	110	263
5	52	116	a26			431	116	54	15	500	93	263
6	52	134	b26			453	100	52	13	496	89	239
7	54	167	b26			414	89	50	30	492	80	182
8	56	157	b26			360	86	49	60	496	70	177
9	54	136	b26			428	79	98	68	454	66	182
10	58	131	b26			273	70	68	82	352	66	188
11	63	127	b30			254	77	69	98	328	70	185
12	64	121	b40		a24	279	75	64	97	298	75	177
13	74	118	49			196	74	64	104	298	69	167
14	70	114	49			150	72	74	*102	285	82	184
15	54	114	b40		a20	127	70	66	125	193	63	164
16	25	89	35			134	72	63	140	143	62	162
17	23	31	b33			170	70	64	125	118	80	162
18	21	32	b31			188	53	60	116	112	127	160
19	23	b29	b30			210	48	107	98	123	127	164
20	244	b25	b30			239	43	125	91	138	136	167
21	97	b22	b30			216	40	114	95	157	150	170
22	75	b28	b30			172	41	100	95	182	190	160
23	87	b28	b30			131	54	98	91	216	227	157
24	110	b30	b80		106	125	60	112	89	204	248	157
25	98	b30	344		412	106	47	104	171	185	273	147
26	106	b32	532		622	28	40	93	376	157	273	145
27	112	b32	167		655	61	37	87	305	138	273	154
28	95	b32	*b45		665	328	35	80	230	134	279	167
29	*91	b32	b35		230	35	35	70	298	138	*273	164
30	62	*b32	b25		199	199	*41	64	298	*134	250	162
31	63	-----	a20		196	196	-----	*53	-----	127	264	-----
Total	2,201	2,425	1,973	620	3,012	8,207	2,338	2,276	3,567	8,491	4,494	5,532
Mean	71.0	80.8	63.6	20.0	108	265	77.9	73.4	119	274	145	184
Ac-ft	4,370	4,810	3,910	1,230	5,970	16,280	4,640	4,510	7,080	16,840	8,910	10,970
Calendar year 1956: Max			1,070	Min	20	Mean	154	Ac-ft	112,000			
Water year 1956-57: Max			731	Min	13	Mean	124	Ac-ft	89,520			

* 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 near Oakley and Wanship.

b Stage-discharge relation affected by ice.

Chalk Creek at Coalville, Utah

Location.--Lat 40°55'10", long 111°24'00", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1957.

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.--30 years (1927-57), 60.6 cfs (43,870 acre-ft per year).

Extremes.--Maximum discharge during year, 822 cfs May 19 (gage height, 2.78 ft); minimum, 5.8 cfs Nov. 15 (gage height, 0.23 ft).
1927-57: Maximum discharge, 1,540 cfs Apr. 28, 1952 (gage height, 4.67 ft); minimum, less than 1 cfs for several days during June to November 1934.

Remarks.--Records good. Several diversions above station for irrigation, none below. Flow slightly affected by Chalk Creek Reservoir (capacity, 1,200 acre-ft).

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 6					May 7 to Sept. 30				
0.2	4.5	0.9	95		0.4	17	1.6	508	
.3	9.0	1.2	164		.6	41	2.0	469	
.4	17	1.5	245		.8	76	2.4	647	
.6	41				1.2	176			

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*11	21	17	16	19	*31	31	89	503	130	40	28
2	11	15	16	17	18	32	*29	117	521	*120	37	27
3	11	11	*18	17	17	32	32	159	556	117	36	28
4	9.0	16	19	17	17	27	29	164	*543	117	34	29
5	9.0	22	21	19	*16	28	31	190	530	110	36	29
6	9.8	24	15	17	15	24	41	*234	503	98	34	31
7	9.0	24	13	*19	15	28	37	316	503	96	32	31
8	8.6	22	15	18	16	31	34	338	444	100	31	29
9	8.6	21	16	17	16	34	37	382	390	94	31	3
10	8.6	21	18	15	16	40	37	358	*354	83	32	26
11	9.0	21	21	17	17	32	44	370	423	83	31	26
12	8.6	21	28	19	19	32	54	294	374	91	31	25
13	8.6	20	31	19	20	27	79	285	406	85	31	25
14	9.0	20	31	21	20	20	102	286	*374	80	31	24
15	9.0	12	27	21	26	21	104	294	358	66	29	21
16	9.0	20	26	16	24	26	*102	297	402	55	28	22
17	9.8	24	20	15	21	26	95	*276	346	55	28	21
18	9.8	20	17	16	24	25	87	319	342	57	25	24
19	9.8	11	21	17	25	25	75	610	323	63	25	28
20	9.8	12	17	18	47	26	68	606	301	66	22	28
21	11	15	18	17	52	27	62	415	304	63	25	29
22	9.8	17	17	17	44	22	64	323	272	63	37	31
23	11	20	17	18	62	17	89	316	241	57	36	27
24	15	20	18	17	70	18	77	378	228	52	31	28
25	15	18	17	16	66	21	83	342	219	47	29	26
26	16	17	17	18	49	25	73	335	209	49	31	22
27	16	17	16	17	57	19	68	358	197	47	33	20
28	15	17	18	17	38	22	70	411	176	44	32	19
29	*16	17	18	19	-	24	73	*448	165	40	*29	18
30	18	17	17	18	-----	26	81	427	148	*44	34	17
31	22	-----	18	19	-----	27	-----	473	-----	41	31	-----
Total	352.8	553	598	544	836	815	1,888	10,190	10,655	2,313	972	773
Mean	11.4	18.4	19.3	17.5	29.9	26.3	62.9	329	355	74.6	31.4	25.8
Ac-ft	700	1,100	1,190	1,080	1,660	1,620	3,740	20,210	21,130	4,590	1,930	1,530

Calendar year 1956: Max 426 Min 8.6 Mean 58.9 Ac-ft 42,620

Water year 1956-57: Max 610 Min 8.6 Mean 83.5 Ac-ft 60,480

Peak discharge (base, 400 cfs).--May 19 (8 p.m.) 822 cfs (2.78 ft); June 3 (4:30 a.m.) 633 cfs (2.34 ft).

* Discharge measurement made on this day.

Echo Reservoir at Echo, Utah

Location.--Lat 40°57'50", long 111°26'00", in NW 1/4 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 1957.

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 and staff gage.

Extremes.--Maximum contents during year, 73,800 acre-ft June 29 (elevation, 5,559.9 ft); minimum, 7,550 acre-ft Oct. 20 (elevation, 5,491.8 ft).
1930-57: Maximum contents, 74,540 acre-ft June 16-20, 1956 (elevation, 5,560.4 ft); no storage Sept. 12 to Dec. 3, 1931, Sept. 24 to Nov. 2, 1934, Oct. 12 to Nov. 21, 1944, Oct. 1 to Nov. 15, 1954.

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 (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.

Capacity table, water year 1956-57 (elevation, in feet, and usable contents, in acre-feet)

5,490	6,730	5,515	22,390	5,540	47,200
5,495	9,110	5,520	26,620	5,545	53,360
5,500	11,830	5,525	31,180	5,550	59,880
5,505	14,920	5,530	36,100	5,555	66,740
5,510	18,480	5,535	41,440	5,560	73,940

Usable contents, in acre-feet, at 6 a.m. during summer and 9 a.m. during winter, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8,460	8,560	10,150	16,440	19,390	25,920	36,720	44,040	67,300	73,210	55,020	29,310
2	8,360	8,600	10,210	16,510	19,470	26,970	37,030	44,380	67,730	73,060	54,000	28,950
3	8,310	8,700	10,320	16,580	19,550	28,400	37,340	44,610	68,230	73,060	53,110	28,490
4	8,210	8,650	10,430	16,720	19,700	29,310	37,550	45,080	68,860	73,210	52,100	28,040
5	8,160	8,600	10,540	16,800	19,700	30,050	37,760	45,540	69,440	73,210	51,100	27,590
6	8,120	8,600	10,590	16,870	19,700	30,610	37,760	46,130	70,010	73,210	50,110	27,330
7	8,020	8,600	10,700	16,940	19,620	31,560	37,970	46,840	70,300	73,060	49,130	26,880
8	8,020	8,700	10,810	17,010	19,550	31,940	38,080	47,560	71,020	73,060	47,920	26,180
9	7,920	8,760	10,920	17,160	19,390	32,520	38,180	48,400	72,040	72,920	46,960	25,580
10	7,920	8,760	10,980	17,160	19,320	33,200	38,290	49,250	72,620	72,470	46,010	25,060
11	7,920	8,760	11,090	17,300	19,240	33,590	38,400	50,110	73,360	71,890	45,080	24,630
12	7,880	8,760	11,260	17,380	19,160	34,480	38,610	51,100	73,500	71,460	44,040	24,210
13	7,920	8,700	11,430	17,450	19,090	35,080	38,820	51,720	73,500	70,880	43,120	23,960
14	7,970	8,700	11,770	17,740	18,940	35,390	39,140	52,480	73,500	70,440	42,000	23,630
15	7,970	8,650	11,940	17,890	18,940	35,490	39,790	53,110	73,650	69,870	41,110	23,290
16	7,920	8,560	12,120	17,960	18,790	35,490	40,120	53,870	73,650	69,010	40,010	23,050
17	7,830	8,700	12,240	18,040	18,790	35,490	40,440	54,510	73,650	68,010	38,820	22,720
18	7,740	8,860	12,350	18,110	18,640	35,590	40,780	55,670	73,500	67,020	38,080	22,390
19	7,640	8,960	12,530	18,190	18,480	35,700	41,110	56,190	73,360	66,040	37,240	22,230
20	7,550	9,010	12,650	18,340	18,480	35,900	41,350	57,890	73,060	65,200	36,200	22,230
21	8,020	9,110	12,710	18,340	18,640	36,100	41,550	59,340	72,920	64,370	35,490	22,230
22	8,070	9,210	12,770	18,480	18,940	36,310	41,770	60,420	72,920	63,540	34,580	22,310
23	8,070	9,310	12,890	18,560	19,160	36,310	42,000	61,220	72,920	62,720	33,790	22,310
24	8,260	9,420	13,080	18,640	19,470	36,310	42,330	62,440	72,920	62,040	33,200	22,310
25	8,410	9,570	13,890	18,790	20,010	36,310	42,670	63,400	73,060	61,220	32,710	22,310
26	8,510	9,680	15,060	18,860	21,430	36,200	43,010	64,370	73,210	60,420	32,230	22,230
27	8,600	9,730	15,880	18,940	23,050	36,100	43,240	65,340	73,650	59,610	31,750	22,230
28	8,750	9,840	16,090	19,090	24,380	36,000	43,460	65,900	73,650	58,550	31,180	22,230
29	8,700	9,940	16,160	19,090	-----	36,200	43,580	66,180	73,800	57,760	30,610	22,150
30	8,700	10,050	16,300	19,240	-----	36,410	43,690	66,500	73,500	56,840	30,240	22,070
31	8,600	-----	16,300	19,240	-----	36,520	-----	66,880	-----	55,920	29,770	-----

(+)	5,494.0	5,496.8	5,507.0	5,511.0	5,517.4	5,530.4	5,537.0	5,555.1	5,559.7	5,547.0	5,523.5	5,514.6
(*)	+90	+1,450	+6,250	+2,940	+5,140	+12,140	+7,170	+23,190	+6,620	-17,580	-26,150	-7,700

Calendar year 1956..... * -8,590

Water year 1956-57..... * +13,560

+ Elevation, in feet, at end of month.

* Change in contents, in acre-feet.

a No elevation; contents interpolated.

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 1957.

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.--30 years, 274 cfs (198,400 acre-ft per year).

Extremes --Maximum discharge during year, 695 cfs July 21 (gage height, 4.52 ft); minimum daily, 0.7 cfs Feb. 26, Apr. 19.
1927-57: Maximum discharge, 3,060 cfs May 13, 1952 (gage height, 7.34 ft); minimum daily, 0.3 cfs Nov. 18-29, 1954, Jan. 18-24, Nov. 4-6, 1955.

Remarks.--Records good. Many diversions above and below station for irrigation. Flow regulated by Echo Reservoir (see preceding page).

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Feb. 5,
Feb. 25 to Mar. 1, June 8-11)

Oct. 1 to June 8				June 9 to Sept. 30			
1.1	0.4	1.8	29	2.6	68		
1.2	1.4	2.1	66	3.0	139		
1.3	3.2	2.5	140	3.5	260		
1.4	5.8	3.0	261	4.0	455		
1.5	9.4	3.4	385	4.5	695		
1.6	14						

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*116	116	1.0	1.1	1.4	32	132	2.4	323	650	580	500
2	106	116	1.1	1.0	1.4	84	*92	2.6	281	*650	590	491
3	102	146	*1.3	1.1	1.5	83	126	2.8	281	635	600	491
4	102	164	1.4	1.1	1.4	*114	134	3.2	281	615	600	482
5	102	164	1.4	1.1	*42	136	147	3.4	283	625	580	473
6	102	164	1.4	1.1	86	136	109	3.6	328	645	575	464
7	95	164	1.4	*1.3	90	138	6.4	3.6	252	615	585	460
8	92	164	1.3	1.4	88	138	6.4	3.9	90	635	580	451
9	92	164	1.1	1.4	68	85	49	3.9	73	650	585	431
10	92	164	1.1	1.4	92	53	66	4.1	117	660	590	419
11	92	164	1.3	1.4	97	14	40	4.1	370	685	595	407
12	76	164	1.1	1.4	108	1.0	5.8	3.9	*512	670	595	383
13	76	164	1.3	1.4	118	68	3.0	4.1	*532	660	590	367
14	90	164	1.1	1.5	118	136	1.3	3.9	532	660	595	359
15	88	164	1.1	1.5	118	158	1.3	4.1	465	665	605	351
16	84	86	1.3	1.4	118	158	1.3	4.1	520	665	610	335
17	84	2.2	1.3	1.4	116	158	1.9	4.4	545	680	590	307
18	83	2.2	1.3	1.4	116	158	.8	4.7	522	675	580	281
19	79	2.2	1.3	1.4	116	158	.7	4.9	522	675	590	228
20	79	2.2	1.3	1.3	116	158	.8	4.4	*478	660	590	198
21	79	2.0	1.1	1.4	41	158	.9	4.4	451	650	580	187
22	78	2.0	1.1	1.4	27	158	1.0	4.7	407	675	575	184
23	78	1.1	1.1	1.4	34	158	1.0	5.2	351	670	565	184
24	78	.8	1.1	1.5	34	158	1.1	5.2	248	660	560	184
25	78	.8	1.1	1.5	13	171	1.3	5.2	303	655	555	184
26	78	.9	1.1	1.4	.7	183	1.3	5.5	399	655	560	180
27	78	.9	1.1	1.4	.9	183	1.5	81	419	655	565	194
28	121	.9	1.1	1.4	.8	183	1.7	295	451	635	*555	210
29	*149	.9	1.1	1.4	-	183	*1.8	*375	504	*625	536	225
30	141	.9	1.1	1.4	-----	183	2.2	371	610	600	522	218
31	116	-----	1.1	1.4	-----	183	-----	368	-----	590	504	-----
Total	2,906	2,454.0	37.0	41.7	1,784.1	4,067.0	938.5	1,596.3	11,450	20,155	17,882	9,828
Mean	93.7	81.8	1.19	1.35	63.7	131	31.3	51.5	382	650	577	328
Ac-ft	5,760	4,870	73	83	3,540	8,070	1,860	3,170	22,710	39,980	35,470	19,490
Calendar year 1956: Max				1,500	Min	0.6	Mean	239	Ac-ft	173,700		
Water year 1956-57: Max				685	Min	0.8	Mean	200	Ac-ft	145,100		

* Discharge measurement made on this day.

Lost Creek near Croydon, Utah

Location.--Lat 41°10'35", long 111°24'20", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 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 9 $\frac{1}{2}$ miles northeast of Croydon.

Drainage area.--133 sq mi.

Records available.--February 1921 to December 1923, April 1941 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,820 ft (by barometer). Prior to Aug. 26, 1954, at several sites within 40 ft of present site at various datums.

Average discharge.--18 years, 36.9 cfs (26,710 acre-ft per year).

Extremes.--Maximum discharge during year, 290 cfs May 19 (gage height, 5.63 ft); minimum recorded, 7.1 cfs Aug. 18, 19.

1921-23, 1941-57: 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, which are fair.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 19 to May 8)

Oct. 1 to May 3

May 4 to Sept. 30

2.9	5.7	3.6	42	2.7	4.8	4.0	107
3.0	8.3	4.0	71	2.9	13	5.0	217
3.2	16	5.0	153	3.2	32	5.3	250
				3.6	67		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.6	11				20	29	97	162	22	10	
2	*8.3	b10				20	25	126	144	*21	10	
3	8.3	b10				20	*25	150	*130	20	10	
4	8.0	b11				*18	25	160	117	19	10	
5	8.3	11	11		(*)	18	a28	172	102	18	10	
6	8.6	11				17	a40	191	93	18	9.5	
7	8.6	12			(*)	18	a35	*204	84	18	9.5	
8	9.0	12				22	31	196	76	17	9.0	
9	9.0	12				29	34	193	71	16	9.0	
10	9.0	12			a14	30	40	187	*71	16	8.6	
11	9.0	12	b14			23	46	178	72	18	9.0	
12	9.3	12	b17			22	50	164	59	18	9.5	
13	11	11	b20			20	55	152	*62	17	8.6	
14	10	11	b20			20	60	158	55	16	8.2	
15	9.7	b10	9.3		a14	19	62	150	54	14	8.2	
16	10	b10	9.0			18	*62	*150	50	15	8.2	
17	10	11	8.6			19	64	153	47	14	9.0	
18	10					18	66	159	43	14	8.2	
19	10				a15	18	61	248	40	13	8.2	
20	10				a17	20	56	237	*39	13	8.2	
21	10	b11			a20	22	53	210	39	13	8.6	
22	10		b12		a19	20	55	190	35	13	10	
23	11				a23	20	67	180	32	12	9.5	
24	12				a26	20	62	186	30	11	9.0	
25	11				a28	19	60	176	29	11	9.5	
26	11				25	18	59	176	27	11	9.0	
27	11				26	17	58	187	26	11	9.0	
28	11	b12			22	18	59	190	25	10	*10	
29	12		a13		-	20	67	*190	24	*11	a9.5	
30	*11				24	82	183	23	11	a9.5		
31	11				25		173		10	a9.5		
Total	305.7	337	388.9	434	473	632	1,516	5,466	1,861	461	284.0	285.0
Mean	9.86	11.2	12.5	14	16.9	20.4	50.5	176	62.0	14.9	9.16	9.5
Ac-ft	606	668	771	861	938	1,250	3,010	10,840	3,690	914	563	565

Calendar year 1956: Max 156

Min -

Mean

29.6

Ac-ft 21,490

Water year 1956-57: Max 248

Min -

Mean

34.1

Ac-ft 24,680

Peak discharge (base, 130 cfs).--May 7 (12:30 a.m.) 222 cfs (5.15 ft); May 19 (12:30 p.m.) 290 cfs (5.63 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 nearby stations.

b Stage-discharge relation affected by ice.

WEBER RIVER BASIN

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., on upstream face of concrete dam, 9 miles southeast of Morgan.

Drainage area.--144 sq mi.

Records available.--October 1937 to September 1957 in reports of Geological Survey. November 1931 to September 1957 in reports of Weber River water commissioner.

Gage.--Tape gage generally read weekly. Altitude of gage is 5,550 ft (from river-profile map). Prior to Oct. 1, 1953, staff gage at site 500 ft east of dam.

Extremes.--Maximum contents observed during year, 28,570 acre-ft June 30 (gage height, 140.5 ft); minimum observed, 8,870 acre-ft Oct. 7 (gage height, 84.3 ft).
1931-57: 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, Sept. 21 to Oct. 11, 1954.

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 (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.

Capacity table, water year 1956-57 (elevation, in feet,
and usable contents, in acre-feet)

84	8,800	110	15,880
87	9,500	120	19,120
90	10,250	130	23,300
100	13,000	141	28,820

Usable contents, in acre-feet, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	-	-	-	-	-	-	-	-	-	-	17,860
2	-	-	10,740	-	-	-	-	-	28,300	-	-	-
3	-	-	-	-	13,140	15,460	-	-	-	-	22,890	-
4	-	9,750	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	26,060	-	-	-	-
6	-	-	-	12,150	-	-	-	-	-	-	-	-
7	8,870	-	-	-	-	-	19,460	-	-	28,300	-	-
8	-	-	-	-	-	-	-	-	-	-	-	16,750
9	-	-	-	-	-	-	-	-	28,300	-	-	-
10	-	-	-	-	13,360	16,040	-	-	-	-	-	-
11	-	10,050	-	-	-	-	-	-	-	-	21,460	-
12	-	-	-	-	-	-	-	27,520	-	-	-	-
13	9,500	-	-	12,310	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	21,090	-	-	27,000	-	-
15	-	-	-	-	-	-	-	-	-	-	-	15,600
16	-	-	-	-	-	-	-	-	28,300	-	-	-
17	-	-	-	-	13,740	16,690	-	-	-	-	-	-
18	-	10,280	-	-	-	-	-	-	-	-	20,180	-
19	-	-	-	-	-	-	-	28,250	-	-	-	-
20	-	-	-	12,700	-	-	-	-	-	-	-	-
21	9,500	-	-	-	-	-	22,750	-	-	25,600	-	-
22	-	-	-	-	-	-	-	-	-	-	-	14,520
23	-	-	11,710	-	-	-	-	-	28,300	-	-	-
24	-	-	-	-	14,320	17,440	-	-	-	-	-	-
25	-	10,470	-	-	-	-	-	-	-	-	18,900	-
26	-	-	-	-	-	-	-	28,300	-	-	-	-
27	-	-	-	12,940	-	-	-	-	-	-	-	-
28	9,680	-	-	-	a14,970	-	24,310	-	-	24,310	-	-
29	-	-	-	-	-	-	-	-	-	-	-	14,240
30	-	a10,660	11,930	-	-	-	a24,810	-	28,570	-	-	a14,240
31	a9,710	-----	a11,960	a13,050	-----	18,250	-----	a28,300	-----	a23,700	a18,010	-----
(+)	-	-	-	-	-	117.3	-	-	140.5	-	-	-
(*)	-1,370	+950	+1,300	+1,090	+1,920	+3,280	+6,560	+3,490	+270	-4,870	-5,690	-3,770

Calendar year 1956..... * +4,370

Water year 1956-57..... * +3,160

+ Gage height, in feet, at end of month.

* Change in contents, in acre-feet.

a No gage-height record; contents interpolated.

East Canyon Creek near Morgan, Utah

Location.--40°55'20", long 111°36'20", in NW $\frac{1}{4}$ sec. 10, T. 2 N., R. 3 E., on right bank 2,500 ft downstream from East Canyon Dam, 2 $\frac{1}{2}$ miles upstream from Sheep Canyon, and 9 miles southeast of Morgan.

Drainage area.--145 sq mi.

Records available.--October 1937 to September 1957 in reports of Geological Survey. October 1931 to September 1957 in reports of Weber River water commissioner.

Gage.--Water-stage recorder and Lyman rectangular weir. Altitude of gage is 5,460 ft (from river-profile map).

Average discharge.--26 years (1931-57), 51.9 cfs (37,570 acre-ft per year).

Extremes.--Maximum discharge during year, 257 cfs May 22 (gage height, 1.67 ft); minimum daily, 1.8 cfs Nov. 5.

1931-57: Maximum discharge, 872 cfs May 4, 1952 (gage height, 3.49 ft); minimum daily, 1.4 cfs Dec. 18-20, 1954, Dec. 28, 1954, to Jan. 30, 1955.

Remarks.--Records good. No diversions between station and East Canyon Reservoir (see preceding page) which completely regulates flow.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

0.0	0	0.6	53
.1	3.6	1.0	117
.2	9.7	2.0	343
.3	18		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	136	13	3.6	3.6	4.2	4.2	8.4	9.7	158	58	108	112
2	*136	14	3.6	3.6	4.2	4.7	8.4	10	156	48	110	113
3	123	14	3.2	3.6	4.2	4.7	*8.4	11	152	*60	110	113
4	119	5.9	*3.2	3.6	4.2	*4.7	8.4	11	150	60	112	112
5	117	1.8	3.2	3.6	4.2	5.3	8.4	11	121	59	112	110
6	117	2.2	3.6	3.6	*4.2	5.3	9.0	12	115	59	110	110
7	85	2.2	3.6	3.6	4.2	5.9	9.7	53	123	98	110	108
8	43	2.2	3.6	3.6	4.2	5.9	9.7	85	140	119	108	110
9	34	2.2	3.6	*3.6	4.2	5.9	9.7	85	146	117	108	113
10	31	2.2	3.6	3.6	4.2	6.5	9.7	76	144	117	108	112
11	31	2.2	3.6	3.6	4.2	6.5	9.7	64	150	115	110	112
12	32	2.2	3.6	3.6	4.2	6.5	9.7	64	150	117	112	110
13	22	2.7	3.6	3.6	4.2	7.1	9.7	63	*148	117	113	108
14	14	2.7	3.6	4.2	4.2	7.1	10	63	146	115	112	106
15	14	2.7	3.6	4.2	4.2	7.1	10	66	142	115	112	110
16	14	2.7	3.6	4.2	4.2	7.1	10	98	148	115	112	110
17	14	2.7	3.6	4.2	4.2	7.1	11	128	142	113	110	108
18	14	2.7	3.6	4.2	4.2	7.1	11	128	132	115	115	108
19	13	2.7	3.6	4.2	4.2	7.8	a11	138	87	113	117	106
20	14	3.2	3.6	4.2	3.6	7.8	a11	198	53	113	117	104
21	14	3.2	3.6	4.2	3.6	7.8	a10	245	49	115	115	104
22	14	3.2	3.6	4.2	3.6	7.8	a10	248	49	115	113	89
23	14	3.2	3.6	4.2	3.6	7.8	a9.7	229	46	115	115	63
24	14	3.2	3.6	4.2	3.6	7.8	9.7	218	53	115	113	50
25	14	3.2	3.6	4.2	3.6	9.4	9.7	220	59	113	113	49
26	14	3.2	3.6	4.2	3.6	8.4	9.7	213	57	113	113	36
27	14	3.6	3.6	4.2	4.2	8.4	9.7	190	57	113	112	21
28	14	3.6	3.6	4.2	4.2	8.4	9.7	158	53	112	*112	21
29	14	3.6	3.6	4.2	-	8.4	9.7	*152	49	*110	112	19
30	*14	3.6	3.6	4.2	-----	7.8	9.7	158	44	110	112	18
31	13	-----	3.6	4.2	-----	8.4	-----	158	-----	110	110	-----
Total	1,276	119.8	110.4	122.4	113.4	213.7	290.5	3,562.7	3,219	3,164	3,466	2,665
Mean	41.2	3.99	3.56	3.95	4.05	6.89	9.68	115	107	102	112	88.8
Ac-ft	2,530	238	219	243	225	424	576	7,070	6,380	6,280	6,870	5,290

Calendar year 1956: Max 152 Min 1.8 Mean 34.9 Ac-ft 25,300
 Water year 1956-57: Max 248 Min 1.8 Mean 50.2 Ac-ft 36,340

* Discharge measurement made on this day.

a No gage-height record; discharge interpolated.

Hardscrabble Creek near Porterville, Utah

Location.--Lat 40°57'10", long 111°43'00", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T. 3 N., R. 2 E., on right bank two-thirds of a mile upstream from Tucker Hollow and 2 $\frac{1}{4}$ miles southwest of Porterville.

Drainage area.--24.9 sq mi.

Records available.--October 1941 to September 1957 in reports of Geological Survey. December 1937 to August 1940 (fragmentary) in files of State engineer's office.

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

Average discharge.--16 years (1941-57), 32.3 cfs (23,380 acre-ft per year).

Extremes.--Maximum discharge during year, 234 cfs June 5 (gage height, 2.85 ft); minimum not determined, occurred during periods of ice effect or no gage-height record.
1941-57: Maximum discharge 464 cfs Aug. 20, 1945 (gage height, 3.60 ft), minimum recorded, 3.0 cfs Feb. 11, 1944.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. A small transbasin canal diverts water from Arthurs Fork, a tributary of Hardscrabble Creek, to Farmington Creek for irrigation in vicinity of Farmington.

Revisions (water years).--WSP 1244: 1945(M).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	4.8	1.7	39
1.0	6.6	2.0	71
1.2	11	2.5	155
1.4	19	2.8	224

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.0	7.6		7.0		13	25	*82	210	43	13	8.7
2	*6.0	b6.0	b6.6	7.0		13	22	107	212	41	13	8.7
3	6.2	b6.0				12	*19	122	*214	*40	12	8.7
4	6.0	b6.0	6.8			*11	18	126	214	38	15	8.5
5	6.0	9.4	6.8		(*)	13	20	137	214	37	12	8.5
6	6.0	9.1				11	40	143	214	36	12	8.3
7	6.2	8.7				12	33	*162	200	a34	11	8.0
8	6.4	8.0		*6.2	a6.5	15	30	179	177	a32	11	8.0
9	6.4	7.8	b6.0	6.4		30	32	182	168	a29	10	8.0
10	6.6	7.8		b6.0		35	39	173	151	a27	10	8.3
11	6.2	7.8		b6.0		25	47	155	133	a28	11	8.3
12	7.6	7.6	b8.0	6.4		21	54	128	124	a25	10	8.3
13	7.6	7.6	12	8.0		18	60	131	*128	a24	10	8.3
14	6.8	7.6	12	8.7		15	64	141	126	a23	10	8.3
15	6.6	b6.0	8.7	7.0		14	60	126	114	a22	10	8.3
16	6.6	b8.0	8.0	b6.5	6.4	13	*62	*115	108	a21	9.9	8.0
17	6.8	8.3		b6.5	6.2	13	65	117	105	a20	9.6	8.0
18	6.8	7.6			6.2	13	66	124	91	19	9.4	8.7
19	7.0	b7.0			6.2	13	54	205	85	19	9.1	9.9
20	6.6	b7.0			8.0	15	45	186	85	18	9.4	8.7
21		b6.0			10	17	41	159	84	18	9.1	8.7
22		b7.0			9.6	14	48	141	78	17	11	8.5
23		8.7			15	13	62	145	74	16	9.4	8.3
24		7.6	b7.0	a6.5	16	12	59	157	70	15	9.1	8.3
25		7.2			a18	12	57	175	68	15	9.1	8.3
26	a6.8				18	12	56	184	64	15	9.0	8.3
27					18	11	51	188	60	14	9.0	8.0
28		b6.8			15	12	54	*198	57	14	*8.7	8.0
29					-	14	59	200	54	*14	10	8.0
30	*6.8				-----	18	66	207	43	14	10	8.0
31	6.8	-----	7.2		-----	22	-----	217	-----	14	9.0	-----
Total	205.2	223.4	223.1	205.2	250.1	482	1,408	4,812	3,731	740	318.8	250.9
Mean	6.62	7.45	7.20	6.62	8.93	15.5	46.9	155	124	23.9	10.3	8.36
Ac-ft	407	443	443	407	496	956	2,790	9,540	7,400	1,470	632	498

Calendar year 1956: Max 145 Min - Mean 25.6 Ac-ft 18,600

Water year 1956-57: Max 217 Min 6.0 Mean 35.2 Ac-ft 25,480

Peak discharge (base, 220 cfs).--May 19 (10 a.m.) 227 cfs (2.88 ft); June 5 (9:30 p.m.) 234 cfs (2.85 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Weber River at Gateway, Utah

Location.--Lat 41°08', long 111°50', in NW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 October 1901, April to July 1903 (gage heights only), June 1919 to September 1957. Published as "near Uinta" 1889-1903.

Gage.--Water-stage recorder. Altitude of gage is 4,790 ft (by barometer). Oct. 13, 1889, to July 11, 1903, staff gage at site 1 mile downstream at different datum. June 22, 1919, to Oct. 22, 1929, water-stage recorder at site 2,200 ft upstream at different datum. Oct. 22, 1929, to Oct. 30, 1947, water-stage recorder at site 50 ft downstream at present datum.

Average discharge.--37 years (1920-57), 586 cfs (424,200 acre-ft per year).

Extremes.--Maximum discharge during year, 2,370 cfs May 19 (gage height, 4.33 ft); minimum daily, 70 cfs Jan. 30, 31.
1889-1903, 1919-57: 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 affected by storage in Rockport, Echo, and East Canyon Reservoirs.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.0	71	2.0	750
.1	84	3.0	1,340
.4	138	4.0	2,110
1.0	304	5.0	2,930
1.5	505		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	308	223	94	84	b76	274	440	528	1,700	670	645	565
2	*297	*215	92	87	78	288	329	*585	1,450	675	655	570
3	288	209	94	86	78	328	313	866	1,400	*680	670	560
4	278	249	*94	87	76	294	322	922	1,230	650	685	560
5	274	252	97	84	76	436	*352	978	1,130	655	690	550
6	271	259	95	86	*85	*376	740	1,070	1,040	665	675	536
7	268	259	92	86	124	368	428	1,210	1,000	665	680	523
8	229	256	b80	*87	140	416	329	1,280	760	645	*675	505
9	215	249	b80	89	142	514	308	1,280	675	695	685	510
10	204	246	b95	b78	140	536	358	1,220	750	675	665	482
11	198	246	b150	b78	149	364	404	1,160	861	730	655	478
12	207	246	204	83	162	278	408	1,010	*996	750	670	478
13	204	246	*182	90	185	246	420	972	1,090	725	675	456
14	198	246	212	190	198	288	456	1,020	1,080	725	665	436
15	201	240	147	128	274	336	456	972	1,070	725	665	424
16	196	243	128	104	301	340	474	966	1,100	*695	680	428
17	193	151	116	b76	278	344	*492	996	1,130	685	675	428
18	188	109	107	b72	282	340	514	1,040	1,040	690	650	440
19	182	95	107	b74	256	340	500	1,880	1,000	690	650	424
20	182	87	100	b80	371	344	436	*2,160	944	680	650	368
21	182	94	98	b83	585	348	400	1,880	856	655	645	344
22	182	92	97	b80	388	336	400	1,650	790	665	650	329
23	182	90	92	*b76	585	318	625	1,500	700	645	645	315
24	198	90	92	b78	700	315	541	1,570	630	645	615	294
25	193	89	92	b76	705	318	478	1,600	514	645	605	*291
26	190	90	90	b74	536	340	440	1,620	590	650	595	278
27	190	92	86	b77	448	336	412	1,600	585	655	*610	259
28	190	92	86	b75	360	336	400	*1,730	590	670	625	271
29	234	92	84	b72	-	340	416	1,870	590	665	600	281
30	*240	92	84	b70	-----	376	456	1,830	600	675	600	288
31	232	-----	86	b70	-----	396	-----	1,770	-----	*645	580	-----
Total	6,794	5,239	3,351	2,660	7,758	10,807	13,062	40,835	27,931	20,985	20,110	12,671
Mean	219	175	108	85.8	277	349	435	1,317	931	677	649	422
Ac-ft	13,480	10,390	6,650	5,280	15,390	21,440	25,910	81,000	55,400	41,620	39,890	25,130
Calendar year 1956: Max		2,040		Min	80		Mean	476	Ac-ft	345,900		
Water year 1956-57: Max		2,160		Min	70		Mean	472	Ac-ft	341,600		

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

WEBER RIVER BASIN

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 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,270 ft (by barometer).

Average discharge.--6 years (1951-57), 330 cfs (238,900 acre-ft per year).

Extremes.--Maximum discharge during year, 2,360 cfs May 20 (gage height, 6.65 ft); minimum daily, 3.7 cfs Sept. 28.

1950-57: Maximum discharge, 7,070 cfs May 6, 1952 (gage height, 10.89 ft); minimum daily, 3.4 cfs May 27, 1955.

Remarks.--Records good. Many diversions above and below station for irrigation. Flow affected by storage in Rockport, Echo, and East Canyon Reservoirs.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	157	85	97	85	282	462	491	1,550	64	45	33
2	12	143	85	93	86	258	364	*651	1,280	70	42	29
3	*12	131	86	93	88	320	316	889	1,140	83	104	29
4	13	168	86	93	85	282	*334	944	*934	55	56	29
5	12	195	88	95	77	*379	334	969	799	42	61	30
6	11	210	*93	92	*83	391	761	990	646	43	49	36
7	9.2	232	88	93	111	338	486	1,060	560	48	44	29
8	7.8	229	72	*90	136	383	338	1,140	296	*43	43	16
9	7.4	226	78	90	143	449	299	1,090	162	71	43	20
10	4.8	223	90	77	131	623	338	995	261	57	36	31
11	4.4	220	124	73	149	398	383	969	441	80	35	39
12	15	229	226	83	174	292	394	809	*587	89	35	40
13	29	232	220	95	201	229	398	829	746	70	42	26
14	38	232	285	189	207	255	433	904	834	72	45	26
15	53	223	192	160	268	308	433	834	819	69	48	26
16	66	229	154	109	346	316	422	784	849	64	66	25
17	66	168	133	85	313	331	453	780	914	47	52	34
18	63	101	131	74	296	316	478	804	775	52	40	54
19	65	86	126	78	278	327	482	1,600	760	80	39	57
20	69	83	120	86	302	324	422	2,100	619	58	43	48
21	68	83	113	90	646	342	364	2,050	499	51	50	56
22	70	86	105	86	402	331	364	1,720	418	51	72	50
23	74	88	107	81	547	310	669	1,530	232	45	57	34
24	95	90	105	85	784	310	574	1,560	107	47	41	28
25	85	86	105	83	1,070	313	478	1,550	51	45	36	28
26	81	86	103	80	619	334	433	1,530	39	40	39	23
27	92	86	101	93	437	334	394	*1,500	47	45	*40	14
28	101	85	93	81	391	327	372	1,600	46	53	48	3.7
29	138	85	95	77	-	334	379	1,730	36	52	43	4.8
30	168	85	99	69	-----	375	422	1,680	36	60	54	11
31	*174	-----	97	70	-----	394	-----	1,610	-----	47	47	-----
Total	1,713.6	4,577	3,665	2,840	8,455	10,505	12,779	37,692	16,483	1,792	1,495	909.5
Mean	55.3	153	118	91.6	302	339	426	1,216	549	57.8	48.2	30.3
Ac-ft	3,400	9,080	7,270	5,630	16,770	20,840	25,350	74,760	32,690	3,550	2,970	1,800
Calendar year 1956: Max	1,400				Min 4.4		Mean 230	Ac-ft 166,800				
Water year 1956-57: Max	2,100				Min 3.7		Mean 282	Ac-ft 204,100				

* Discharge measurement made on this day.

South Fork Ogden River near Huntsville, Utah

Location.--Lat 41°16', long 111°40', in SE $\frac{1}{4}$ 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 5 $\frac{1}{2}$ miles east of Huntsville.

Drainage area.--148 sq mi.

Records available.--March 1921 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,190 ft (by barometer). Prior to Aug. 14, 1934, at site 300 ft upstream at different datum.

Average discharge.--36 years, 111 cfs (80,360 acre-ft per year).

Extremes.--Maximum discharge during year, 969 cfs May 19 (gage height, 4.28 ft); minimum, 30 cfs Jan. 16 (gage height, 0.81 ft).
1921-57: Maximum discharge, 1,890 cfs May 3, 1952 (gage height, 5.98 ft); minimum observed, 20 cfs Nov. 25, 1931, July 28, 1934.

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

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 6, 7)

Oct. 1 to May 7

May 8 to Sept. 30

1.8	30	2.0	210	1.0	40	3.0	455
1.0	45	3.0	502	1.5	100	4.1	883
1.2	65	3.8	800	2.0	190		
1.5	108						

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	*43	42	a40	a40	81	100	342	650	104	57	45
2	42	40	42	40	b40	89	94	499	823	100	57	43
3	*41	39	42	40	40	88	92	*589	600	98	55	42
4	42	42	*42	39	b40	79	*89	564	555	95	58	41
5	42	42	44	39	b42	*84	92	626	495	93	58	42
6	42	42	44	39	*b42	75	180	724	*458	90	54	42
7	42	43	b42	39	43	78	148	772	408	89	53	42
8	42	42	b42	39	43	95	133	*788	359	*87	52	40
9	42	41	b42	*39	43	120	133	734	318	86	51	41
10	42	41	a42	b38	43	140	148	697	302	83	50	42
11	41	41	a42	b38	43	113	176	677	*289	83	49	42
12	44	41	b45	38	43	106	198	581	256	85	49	43
13	44	41	48	39	43	97	212	545	256	82	49	42
14	43	41	48	43	44	88	229	555	235	79	48	42
15	43	39	44	40	45	82	236	520	229	77	48	41
16	43	43	43	38	46	81	236	516	215	73	48	41
17	43	42	42		47	79	*244	520	203	74	47	41
18	42	43	40		48	78	246	552	190	73	46	44
19	42	b42	40	b38	48	79	215	839	182	70	45	48
20	42	b42	40		50	82	185	883	176	68	45	45
21	42	b42	b40		63	88	172	771	172	68	48	45
22	42	43	b40		61	82	178	646	160	67	51	44
23	43	43	b40		81	77	224	592	151	67	49	43
24	43	42	b40		97	73	203	634	142	66	48	43
25	43	42	40		129	72	189	619	133	63	46	44
26	43	41	b40	a38	103	70	180	634	128	62	*45	43
27	43	41	b40		103	66	172	665	123	61	46	43
28	43	41			100	68	174	*689	119	62	46	43
29	43	42			-	72	205	734	114	61	47	44
30	42	43	a40		-----	81	259	697	110	60	47	43
31	44	-----			-----	86	-----	685	-----	*59	46	-----
Total	1,317	1,250	1,296	1,198	1,610	2,659	5,342	19,889	8,351	2,385	1,538	1,284
Mean	42.5	41.7	41.8	38.6	57.5	85.8	178	642	278	76.9	49.6	42.8
Ac-ft	2,610	2,480	2,570	2,380	3,190	5,270	10,600	39,450	16,560	4,730	3,050	2,550

Calendar year 1956: Max 637 Min 38 Mean 119 Ac-ft 86,650
Water year 1956-57: Max 883 Min - Mean 132 Ac-ft 95,440

Peak discharge (base, 400 cfs).--May 6 (10 p.m.) 872 cfs (4.08 ft); May 19 (12:30 p.m.) 969 cfs (4.28 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for Chalk Creek and Lost Creek.

b Stage-discharge relation affected by ice.

WEBER RIVER BASIN

Pine View Reservoir near Ogden, Utah

Location.--Lat 41°15'20", long 111°50'25", in NW¼ 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 1957.

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

Extremes.--Maximum contents during year, 57,600 acre-ft June 11 (elevation, 4,879.0 ft); minimum, 4 acre-ft Jan. 10 (elevation, 4,819.1 ft).

1936-57: Maximum contents, that of June 11, 1957; minimum, that of Jan. 10, 1957.

Remarks.--Reservoir is formed by earth-fill, rock-faced dam; storage began Nov. 16, 1936; capacity, 110,100 acre-ft at elevation 4,900 ft (maximum super storage) above mean sea level. During September 1939 sills of radial spillway gates were raised 1 ft, thus changing the top of spillway gates from elevation 4,871 to 4,872 ft. During 1957 the storage capacity was increased by raising the crest of the spillway to 4,878 ft and elevation of maximum super storage to 4,900 ft (additional capacity, 65,920 acre-ft). Dead storage negligible. Water is used for irrigation in Weber Basin and Ogden River projects.

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

Capacity table, water year 1956-57 (elevation, in feet, and usable contents, in acre-feet)

4,819.0	3	4,835.0	3,380	4,855.0	19,330
4,822.0	61	4,840.0	6,150	4,860.0	25,480
4,826.0	380	4,845.0	9,680	4,870.0	40,680
4,830.0	1,380	4,850.0	14,060	4,880.0	59,670

Usable contents, in acre-feet, at 8 a.m., water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,780	46	44	41	608	6,600	15,450	17,990	52,010	53,570	41,370	28,220
2	5,530	28	44	44	632	6,930	15,860	18,660	52,400	53,180	41,020	27,940
3	5,300	38	44	28	632	7,270	16,280	19,900	52,790	52,790	40,340	27,520
4	5,120	41	44	77	608	7,540	16,490	21,190	54,170	52,200	40,000	27,110
5	5,010	41	44	77	585	7,900	16,800	22,530	55,170	51,810	39,660	26,690
6	4,840	49	41	77	562	8,400	17,340	23,920	56,180	51,420	39,190	26,290
7	4,670	55	38	77	535	8,700	18,100	25,750	56,790	51,040	38,660	26,020
8	4,560	46	38	44	608	9,070	18,540	27,380	56,990	50,660	38,330	25,620
9	4,190	30	38	7	608	9,380	18,660	29,500	57,200	50,270	37,830	25,350
10	3,880	28	38	4	608	9,920	18,210	31,410	57,400	49,700	37,340	24,960
11	3,480	26	52	15	678	10,320	17,770	33,070	57,600	49,510	36,850	24,560
12	3,150	22	205	49	748	10,730	17,450	34,460	57,400	49,140	36,530	24,800
13	2,840	26	276	55	771	11,070	17,340	36,050	56,990	48,780	36,050	24,040
14	2,540	28	380	214	794	11,320	17,120	37,500	56,580	48,380	35,570	23,790
15	2,210	21	315	435	849	11,490	17,120	38,990	55,980	48,010	35,100	23,410
16	1,910	26	205	435	904	11,670	16,910	40,340	55,570	47,640	34,620	23,030
17	1,550	30	86	416	959	12,020	16,800	42,060	55,570	47,270	34,150	22,780
18	1,380	35	90	367	1,010	12,020	16,800	43,820	55,980	46,720	33,690	22,530
19	1,190	24	69	398	1,100	12,190	16,800	46,160	56,180	46,350	33,380	22,280
20	904	11	49	453	1,190	12,370	16,910	49,320	55,770	45,980	32,920	22,040
21	608	19	61	489	1,870	12,560	17,020	51,420	55,980	45,620	32,460	21,790
22	323	46	52	507	2,250	12,740	17,020	51,810	55,770	45,080	32,010	21,670
23	102	52	38	526	2,580	12,920	17,340	51,230	55,770	44,720	31,710	21,550
24	49	52	44	585	3,480	12,920	17,880	50,850	55,770	44,360	31,260	21,430
25	44	55	44	585	4,190	13,010	17,990	50,470	55,570	44,180	30,810	21,190
26	46	55	32	608	5,300	13,390	17,880	49,890	55,370	43,820	30,530	20,950
27	46	55	38	632	5,780	13,770	17,880	49,320	54,970	43,290	30,080	20,720
28	9	52	38	655	6,340	14,060	17,880	49,320	54,770	42,670	29,640	20,480
29	9	52	44	678	-	14,350	17,770	50,080	54,370	42,410	29,210	20,250
30	77	46	49	655	-	14,750	17,770	50,850	53,910	42,060	28,930	20,130
31	30	-	44	632	-	15,040	-	51,420	-	41,780	28,500	-
(†)	4,820.9	4,821.5	4,821.4	4,827.3	4,840.3	4,851.0	4,853.6	4,875.9	4,877.2	4,870.6	4,862.2	4,855.7
(*)	-5,990	+16	-2	+588	+5,710	+8,700	+2,730	+33,650	+2,490	-12,130	-13,280	-8,370

Calendar year 1956..... * -10,780

Water year 1956-57..... * +14,110

† Elevation, in feet, at end of month.

* Change in contents, in acre-feet.

Ogden River below Pine View Dam, near Ogden, Utah

Location.--Lat 41°15'15", long 111°50'40", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T. 6 N., R. 1 E., on left bank 500 ft downstream from Wheeler Creek, 1,000 ft downstream from Pine View Dam, and 6 $\frac{1}{2}$ miles northeast of Ogden.

Drainage area.--321 sq mi.

Records available.--October 1937 to September 1957, not including flow of Pine View pipeline. January 1904 to October 1912, October 1931 to September 1937, including flow of pipeline, published as Ogden River near Ogden; records not equivalent.

Gage.--Water-stage recorder. Datum of gage is 4,803.33 ft above mean sea level (levels by Bureau of Reclamation). Prior to Aug. 24, 1932, hook or chain gage, and Aug. 25, 1932, to Sept. 30, 1954, water-stage recorder, at site 1,000 ft downstream, at datum 5.03 ft lower.

Average discharge.--20 years (1937-57), 89.7 cfs (64,940 acre-ft per year).

Extremes.--Maximum discharge during year, 1,400 cfs May 23 (gage height, 5.90 ft); minimum not determined, occurred during period of no gage-height record.

1937-57: Maximum discharge, 3,190 cfs May 3, 1952 (gage height, 7.76 ft, site and datum then in use); minimum daily, 0.1 cfs Jan. 19-22, 1954, Oct. 6-9, 1955, Feb. 15, 1956, when reservoir gates were closed.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by Pine View Reservoir (see preceding page). Pine View pipeline diverts water above station for use in irrigation and power development. Diversions for irrigation and municipal supply above Pine View Reservoir.

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 9-19, 24-30, May 8-20)

Oct. 1 to May 20

May 21 to Sept. 30

1.7	0	2.1	8.8	2.8	80	1.7	6.7	3.0	173
1.8	.9	2.2	13	3.3	177	1.8	11	3.5	322
1.9	3.0	2.3	20	4.0	397	1.9	16	4.0	507
2.0	5.6	2.5	39	4.2	480	2.2	40	5.0	950
						2.6	90	5.9	1,400

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	*16	a0.3			5.0	8.4	296	722	55	41	25
2	12	12				5.3	5.6	274	686	*62	40	23
3	*12	8.8				4.5	4.8	270	360	62	40	26
4	12	8.8	*.3			3.2	*4.5	274	156	53	40	32
5	12	7.7	.3			*5.1	10	274	248	56	37	35
6	12	4.6	.4	(*)	(*)	3.7	41	280	248	56	36	16
7	12					4.5	13	283	224	47	40	15
8	9.9					6.8	121	*272	227	*44	44	8.3
9	7.7					13	378	192	224	52	44	13
10	17					14	463	194	297	53	43	19
11	12			a0.4		7.7	455	200	*495	41	43	24
12	11					6.2	442	197	507	44	42	24
13	9.5					4.8	442	202	527	44	41	24
14	8.1					3.5	438	210	563	42	40	25
15	8.1					3.7	422	*202	468	41	40	21
16	7.7			a0.3		3.5	418	158	231	44	41	15
17	7.4					3.7	*418	40	72	42	41	15
18	7.1					2.5	418	39	134	46	42	15
19	10	a.3	a.3			2.5	*326	92	194	42	38	a12
20	13					4.0	246	368	156	41	37	a10
21	11					4.0	244	1,020	86	37	39	7.1
22	8.9					2.8	244	1,320	39	41	39	7.1
23	11					1.1	258	1,350	30	46	34	7.8
24	13					3.7	318	1,360	27	45	29	12
25	12					14	1.5	385	1,330	26	37	a33 8.3
26	13				7.7	1.7	378	1,320	43	33	*36	7.8
27	13				6.2	1.5	378	1,150	62	43	36	8.3
28	13				4.5	1.7	378	*622	66	42	36	7.8
29	14				-	2.8	378	695	65	37	33	7.8
30	45				-----	5.3	351	713	66	34	25	7.8
31	42				-----	7.1	-----	735	-----	*38	26	-----
Total	408.4	65.1	9.4	9.3	46.0	139.8	8,386.3	16,132	7,229	1,400	1,176	479.1
Mean	13.2	2.17	0.30	0.3	1.64	4.48	280	520	241	45.2	37.9	16.0
Ac-ft	810	129	19	18	91	275	16,630	32,000	14,340	2,780	2,330	950

Calendar year 1956: Max 939 Min 0.1 Mean 86.8 Ac-ft 64,460
Water year 1956-57: Max 1,360 Min - Mean 97.2 Ac-ft 70,370

* 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 streams.

WEBER RIVER BASIN

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 6 miles upstream from mouth.

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

Records available.--May 1905 to September 1957 in reports of Geological Survey. January 1904 to May 1905 in reports of State engineer.

Gage.--Water-stage recorder. Altitude of gage is 4,210 ft (from topographic map). Prior to Nov. 12, 1914, staff gage and Nov. 12, 1914, to Aug. 29, 1949, chain gage, at same site and datum.

Extremes.--Maximum discharge during year, 3,390 cfs May 22 (gage height, 13.08 ft); minimum daily, 15 cfs Oct. 1.
1904-57: Maximum discharge, 10,100 cfs May 6, 1952 (gage height, 19.01 ft); practically no flow during latter part of several summers since 1915.

Remarks.--Records good except those for periods of no gage-height record, which are fair. During summer months practically entire flow is diverted above station for irrigation. Flow regulated by Rockport Reservoir beginning Apr. 1, 1957 (usable capacity, 60,000 acre-ft), and by Echo, East Canyon, and Pine View Reservoirs (see p. 63, 66, 72).

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 30 to Jan. 13, May 14-18, June 2-4, 9-17, June 29 to July 27)

Oct. 1 to Apr. 5

Apr. 6 to Sept. 30

0.8	11	3.0	216	1.1	25	4.0	383
1.0	20	4.0	410	1.5	49	6.0	854
1.5	49	6.0	973	2.0	88	10.0	2,120
2.0	88	8.0	1,590	2.5	143	13.0	3,310
2.5	143			3.0	215		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a15	286	164	184	191	493	530	370	2,440	56	*56	64
2	28	*275	163	188	186	446	458	1,040	2,210	63	73	50
3	*36	250	163	184	176	522	398	1,230	1,820	75	66	42
4	51	273	170	169	169	483	491	1,330	*1,210	79	61	34
5	56	322	170	179	164	*568	*491	1,310	1,090	67	67	48
6	48	334	*179	191	169	641	856	1,350	988	50	62	40
7	48	363	184	*196	*205	538	671	1,410	868	41	38	49
8	48	361	135	198	233	565	508	1,520	695	*49	35	47
9	105	348	120	*196	243	615	690	*1,370	549	109	39	36
10	139	324	138	159	236	844	821	1,260	656	61	39	31
11	144	320	214	156	247	630	a840	1,280	1,090	75	30	38
12	217	322	357	186	273	509	a860	1,150	*1,240	106	28	65
13	259	322	408	194	296	424	a870	1,190	1,340	93	26	55
14	268	324	509	309	309	422	a900	1,320	1,480	94	27	46
15	290	314	444	309	346	476	a920	*1,280	1,460	104	27	48
16	313	311	383	245	432	499	a960	1,190	1,290	80	39	58
17	294	282	303	205	408	499	1,030	998	1,100	55	49	55
18	288	185	268	169	389	493	1,050	970	964	59	42	89
19	284	166	264	164	378	506	*1,030	1,540	976	106	35	186
20	296	153	235	173	401	504	834	2,290	*810	71	32	174
21	294	140	214	180	774	525	804	2,930	690	62	33	156
22	272	139	213	157	593	527	778	3,270	627	58	53	133
23	182	151	196	172	678	496	1,180	3,110	442	55	72	133
24	216	166	202	179	988	486	1,160	3,160	306	58	53	100
25	186	166	197	159	1,210	456	1,110	3,180	148	48	45	96
26	170	169	192	155	1,010	403	1,030	3,150	68	38	43	87
27	169	172	188	156	682	394	992	*3,060	58	50	*33	80
28	192	166	185	167	632	383	946	2,740	44	52	52	65
29	164	164	190	159		390	934	2,620	47	57	64	58
30	233	169	184	155		424	961	2,590	54	64	65	53
31	288		186	167		458		2,550		61	80	
Total	5,647	7,437	7,086	5,760	12,018	15,609	25,103	58,358	26,758	2,096	1,464	2,216
Mean	182	248	229	186	429	504	837	1,883	892	67.6	47.2	73.9
Ac-ft	11,200	14,750	14,050	11,420	23,840	30,960	49,790	115,800	53,070	4,160	2,900	4,400
Calendar year 1956: Max 1,860 Min 13 Ac-ft 309,700												
Water year 1956-57: Max 3,270 Min 15 Mean 465 Ac-ft 336,300												

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of available trace and records for stations at Ogden and Ogden River below Pineview Dam, near Ogden.

Holmes Creek near Kaysville, Utah

Location.--Lat 41°03'18", long 111°53'40", in NE¹ sec. 25, T. 4 N., R. 1 W., on left bank 2 miles northeast of Kaysville.

Records available.--May 1950 to September 1957.

Gage.--Water-stage recorder and concrete control. Datum of gage is 5,095.1 ft above mean sea level, unadjusted.

Average discharge.--7 years, 3.81 cfs (2,760 acre-ft per year).

Extremes.--Maximum discharge during year, 28 cfs June 5 (gage height, 0.93 ft); minimum, 1.0 cfs Nov. 19 (gage height, 0.43 ft).

1950-57: Maximum discharge, 36 cfs May 3, 1952 (gage height, 1.13 ft); no flow for part of several days during 1951, 1955.

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

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.4	0.8	0.7	7.9
.5	2.0	.8	14
.6	4.3	1.0	29

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	1.8	1.7	1.7	1.7	2.4	*3.0	7.1	23	7.1	*4.0	2.8
2	*1.5	*1.8	1.8	1.7	1.5	2.4	3.0	*8.8	23	6.7	4.0	2.8
3	1.5	1.8	1.8	1.5	1.5	2.6	3.0	9.9	23	*6.7	4.0	2.4
4	1.5	2.0	1.8	*1.5	*1.5	2.4	3.0	8.8	*26	6.7	3.8	2.4
5	1.5	2.0	1.8	1.5	1.5	*2.6	3.0	8.8	24	6.7	3.8	2.4
6	1.4	2.2	1.8	1.5	1.5	2.4	3.2	*9.9	22	5.9	3.8	2.4
7	1.5	2.2	1.8	1.5	1.5	2.4	3.0	10	20	5.9	3.8	2.4
8	1.5	2.2	1.8	1.5	1.5	2.8	3.0	11	20	5.9	3.5	2.4
9	1.5	2.0	2.0	1.5	1.4	2.8	3.0	10	18	5.6	3.2	2.6
10	1.7	2.0	2.0	1.5	1.5	3.2	3.5	10	19	5.6	3.2	2.6
11	1.7	2.0	2.0	1.8	1.5	3.0	3.8	9.9	*17	5.9	3.2	2.6
12	2.0	2.0	1.8	1.8	1.7	2.8	4.3	9.9	16	5.6	3.0	2.8
13	2.0	2.0	2.0	2.0	1.7	2.6	4.6	12	15	5.2	3.0	2.6
14	1.8	1.8	2.0	2.0	1.7	*2.4	4.9	16	14	5.2	2.8	2.6
15	1.8	*b1.9	1.8	1.8	*1.7	2.4	4.3	17	13	4.9	*2.8	2.6
16	*1.7	b1.9	1.8	b1.6	1.8	2.4	*4.3	16	14	*4.9	2.6	2.4
17	1.7	1.8	2.0	*b1.7	1.8	2.4	4.3	*14	13	4.9	2.6	*2.4
18	1.8	1.7	*2.0	1.7	1.8	2.2	4.3	14	12	4.6	2.8	2.6
19	1.8	b1.4	1.8	1.8	1.8	2.0	4.0	19	12	4.6	2.8	2.8
20	1.8	b1.6	2.0	1.8	2.0	2.0	3.8	20	*12	4.6	2.8	2.4
21	1.8	b1.7	1.8	1.7	1.8	2.2	3.5	18	12	4.6	2.8	2.4
22	1.7	b1.8	b1.7	1.7	1.8	2.2	3.8	15	11	4.6	3.2	2.4
23	1.8	1.8	b1.6	1.7	2.2	2.2	5.9	14	10	4.6	2.8	2.2
24	2.0	1.8	b1.7	1.8	2.2	2.2	5.6	14	9.9	4.3	2.8	2.2
25	1.8	1.8	1.8	1.7	2.8	2.2	5.6	15	9.3	4.3	3.0	2.2
26	1.8	1.8	1.8	1.8	2.6	2.2	5.2	16	9.3	4.3	3.2	2.2
27	1.8	1.8	1.7	1.8	2.6	2.0	4.9	d21	8.4	4.3	3.2	2.2
28	1.8	1.8	1.8	1.7	2.6	1.8	4.9	d22	8.4	4.3	3.0	2.2
29	1.8	*1.7	1.8	1.5	-	2.0	5.6	d22	7.5	4.3	*3.0	2.4
30	1.7	1.7	1.7	1.5	-----	2.4	5.9	d22	7.5	4.0	2.8	2.4
31	1.8	-----	1.7	1.7	-----	2.6	-----	*22	-----	4.0	2.8	-----
Total	53.0	55.8	56.6	52.0	51.2	74.2	124.2	443.1	449.3	160.8	98.1	73.6
Mean	1.71	1.86	1.83	1.68	1.83	2.39	4.14	14.3	15.0	5.19	3.16	2.45
Ac-ft	105	111	112	103	102	147	246	879	891	319	195	146

Calendar year 1956: Max 10 Min 1.4 Mean 2.95 Ac-ft 2,140

Water year 1956-57: Max 26 Min 1.4 Mean 4.64 Ac-ft 3,360

Peak discharge (base, 10 cfs).--June 5 (4 p.m.) 28 cfs (0.93 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed from reconstructed gage-height graph based on recorder graph, and records for nearby streams.

TRIBUTARIES BETWEEN WEBER AND JORDAN RIVERS

Farmington Creek above diversions, near Farmington, Utah

Location.--Lat 41°00'05", long 111°52'25", in NE¹ 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 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,100 ft (from Forest Service topographic map). Prior to Oct. 1, 1951, at site 600 ft downstream at different datum.

Average discharge.--7 years, 13.0 cfs (9,410 acre-ft per year).

Extremes.--Maximum discharge during year, 169 cfs May 19 (gage height, 1.64 ft); minimum, 1.3 cfs Nov. 19.

1949-57: Maximum discharge, 254 cfs May 22, 1950 (gage height, 1.74 ft, site and datum then in use); minimum, 0.9 cfs Aug. 25, 30, 31, 1954.

Remarks.--Records good. Records include a small transmountain diversion from Hardscrabble Creek.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 25 to June 3, June 6-15)

0.6	1.3	0.9	8.4	1.2	32
.7	2.6	1.0	14	1.3	47
.8	4.8	1.1	21	1.5	106

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	2.6	2.3	2.3	2.4	4.5	6.4	28	99	26	6.8	3.8
2	*2.1	*2.4	2.1	2.3	2.4	4.5	*6.4	*39	96	26	6.4	3.6
3	2.0	2.3	2.3	2.4	2.4	4.5	6.0	45	86	25	5.7	3.4
4	2.1	2.4	2.6	*2.4	*2.4	4.3	6.0	47	*86	23	6.0	3.1
5	2.1	2.4	2.6	2.4	2.4	*4.3	5.7	57	86	*22	5.7	3.1
6	2.0	2.9	2.6	2.4	2.6	4.0	8.0	*60	80	21	5.4	3.1
7	2.0	2.8	2.4	2.4	2.8	4.3	7.5	76	70	20	5.1	3.1
8	2.0	2.8	2.3	2.4	2.8	5.4	6.8	55	57	18	4.5	3.4
9	2.0	2.9	2.8	2.4	2.9	6.8	7.1	47	58	18	4.5	3.4
10	2.0	2.9	2.8	2.4	2.8	6.8	8.0	57	70	18	4.3	3.4
11	1.9	2.8	4.3	2.4	2.9	6.0	11	55	*63	16	4.8	3.4
12	2.9	2.9	4.3	2.6	3.1	5.7	13	50	55	15	4.8	3.1
13	2.8	2.9	4.0	3.1	3.4	5.4	15	52	45	13	4.0	2.9
14	2.6	2.9	3.8	3.4	*3.6	*4.8	15	45	43	13	4.0	2.9
15	2.4	*2.4	3.1	2.8	3.6	4.5	14	52	45	12	*4.0	2.9
16	*2.4	2.9	3.1	2.3	3.6	4.3	*15	55	41	*11	4.0	2.8
17	2.4	2.8	3.1	*2.6	3.8	4.5	17	*60	43	11	3.6	*2.6
18	2.4	2.4	2.9	2.6	3.8	4.3	17	68	43	10	3.6	3.1
19	2.4	1.9	*2.6	2.8	3.8	4.3	13	93	39	10	3.4	4.5
20	2.4	2.0	2.6	2.6	4.0	4.5	10	65	*39	9.8	3.6	3.4
21	2.3	2.3	2.6	2.6	4.0	5.1	9.3	50	39	9.3	3.8	3.4
22	2.3	2.4	2.6	2.6	3.8	4.8	10	41	38	8.9	6.0	3.1
23	2.6	2.4	2.8	2.6	4.3	4.3	14	38	36	8.4	4.3	2.9
24	3.1	2.4	2.6	2.6	4.5	4.3	13	43	34	8.4	4.0	2.9
25	2.8	2.3	2.4	2.6	6.4	4.3	13	57	33	8.0	4.0	2.8
26	2.9	2.3	2.6	2.6	5.1	4.3	13	86	32	8.0	4.0	2.8
27	2.9	2.3	2.3	2.6	5.4	4.0	13	99	30	7.5	4.0	2.8
28	2.8	*2.3	2.3	2.6	4.8	4.3	14	103	30	7.5	3.8	2.8
29	2.6	2.3	2.4	2.4	-	4.5	18	86	28	8.0	*4.5	2.8
30	2.3	2.3	2.4	2.4	-	5.7	20	86	27	7.5	4.5	2.8
31	2.3	-	2.3	2.4	-	5.7	-	*100	-	7.5	3.8	-
Total	73.8	75.7	85.7	79.0	99.8	149.0	345.2	1,895	1,571	426.8	140.7	94.1
Mean	2.38	2.52	2.76	2.55	3.56	4.81	11.5	61.1	52.4	13.8	4.54	3.14
Ac-ft	146	150	170	157	198	296	685	3,760	3,120	847	279	187

Calendar year 1956: Max 63 Min 1.9 Mean 10.7 Ac-ft 7,770
water year 1956-57: Max 103 Min 1.9 Mean 13.8 Ac-ft 10,000

Peak discharge (base, 80 cfs).--May 7 (3:30 p.m.) 120 cfs (1.58 ft); May 19 (4 a.m.) 169 cfs (1.64 ft); May 28 (4 p.m.) 131 cfs (1.43 ft); June 9 (10 p.m.) 113 cfs (1.42 ft).

* Discharge measurement made on this day.

Ricks Creek above diversions, near Centerville, Utah

Location.--Lat 40°56'25", long 111°52'00", in NW $\frac{1}{4}$ 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.

Drainage area.--2.35 sq mi.

Records available.--April 1950 to September 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 4,840 ft (from topographic map).

Average discharge.--7 years, 2.40 cfs (1,740 acre-ft per year).

Extremes.--Maximum discharge during year, 26 cfs June 1 (gage height, 1.13 ft); minimum, 0.2 cfs Nov. 19.

1950-57: Maximum discharge, 31 cfs May 15, 1952; maximum gage height, 1.27 ft May 23, 1950; minimum discharge, 0.1 cfs Apr. 9, 1953, Feb. 3, 1955.

Remarks.--Records good.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 31, June 1)

0.5	0.4	0.9	8.2
.6	1.1	1.0	13
.7	2.5	1.2	24
.8	4.8		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	1.1	0.8	0.7	0.8	1.0	1.2	3.7	22	4.8	1.8	1.2
2	*.7	*.9	.8	.7	.7	1.0	*1.3	*4.2	22	5.1	1.7	1.1
3	.7	.8	.9	*.7	.8	1.1	1.3	4.2	18	*4.8	1.7	1.0
4	.8	.8	1.0	.7	*.8	*1.0	1.3	4.2	19	4.2	1.7	1.0
5	.8	.8	1.0	.6	.7	1.0	1.3	4.8	*19	4.0	1.5	1.0
6	.8	.9	1.0	.6	.7	.9	1.4	*5.1	18	4.0	1.5	.9
7	.8	1.0	.9	.6	.7	1.0	1.3	5.7	17	3.7	1.5	.9
8	.8	.9	1.0	.7	.8	1.1	1.3	6.0	16	3.5	1.4	.8
9	.8	.8	.9	.7	.7	1.3	1.5	7.1	16	3.2	1.2	.9
10	.8	.9	.9	.6	.7	1.3	1.7	8.2	14	3.7	1.2	.9
11	.7	.8	1.2	.6	.8	1.2	2.0	8.6	*12	3.5	1.3	.9
12	.9	.7	1.0	.6	.8	1.2	2.1	8.6	11	3.0	1.2	.9
13	.9	.7	1.1	.7	.7	1.2	2.5	8.6	11	2.8	1.2	.8
14	.8	.6	1.0	.7	*.7	*1.2	2.6	8.6	10	2.8	1.2	.9
15	.6	*.6	.9	.6	.7	1.2	2.6	9.1	9.5	2.6	*1.2	.8
16	*.6	.7	.9	.4	.7	1.2	*2.6	9.9	9.1	*2.3	1.1	.8
17	.7	.7	.9	*.4	.8	1.3	2.6	*11	8.2	2.3	1.1	*.8
18	.7	.7	*.8	.6	.8	1.2	2.6	11	7.4	2.5	1.1	1.0
19	.7	.4	.7	.6	.9	1.2	2.6	15	6.7	2.3	1.1	1.1
20	.8	.6	.7	.7	.9	1.2	2.3	16	*6.4	2.1	1.1	.9
21	.8	.7	.7	.7	.9	1.4	2.3	16	6.0	2.3	1.1	.9
22	.8	.7	.6	.7	.9	1.3	2.5	14	6.0	2.1	1.3	.9
23	1.0	.7	.8	.6	.9	1.2	3.0	12	6.0	2.0	1.2	.9
24	1.2	.6	.8	.7	.9	1.1	2.8	12	5.7	2.0	1.2	.8
25	1.0	.7	.7	.6	1.2	1.1	2.8	13	5.4	2.0	1.2	.8
26	1.0	.8	.6	.6	1.0	1.0	2.6	14	5.4	2.0	1.2	.8
27	.9	.8	.7	.7	1.1	1.0	2.6	14	5.7	2.0	1.2	.8
28	1.0	*.8	.7	.7	1.0	1.0	3.0	15	5.4	1.8	1.2	.8
29	1.0	.8	.7	.8	-	1.1	3.2	17	5.4	2.0	*1.3	.8
30	.9	.8	.7	.8	-----	1.3	3.2	18	5.1	2.0	1.2	.8
31	.9	-----	.6	.8	-----	1.3	-----	*20	-----	2.0	1.2	-----
Total	25.6	22.9	26.0	20.2	23.1	35.6	66.1	324.6	328.4	89.4	40.1	26.9
Mean	0.83	0.76	0.84	0.65	0.82	1.15	2.20	10.5	10.9	2.88	1.29	0.90
Ac-ft	51	45	52	40	46	71	131	644	651	177	80	53

Calendar year 1956: Max 9.5 Min 0.4 Mean 1.90 Ac-ft 1,380
Water year 1956-57: Max 22 Min 0.4 Mean 2.82 Ac-ft 2,040

Peak discharge (base, 10 cfs).--May 19 (8:30 a.m.) 19 cfs (1.10 ft); June 1 (4:30 p.m.) 26 cfs (1.13 ft).

* Discharge measurement made on this day.

Parrish Creek above diversions, near Centerville, Utah

Location.--Lat 40°55'25", long 111°51'50", in NW $\frac{1}{4}$ sec. 8, T. 2 N., R. 1 E., on left bank 1 mile northeast of Centerville.

Drainage area.--2.08 sq mi.

Records available.--November 1949 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,600 ft (from topographic map).

Average discharge.--7 years, 1.66 cfs (1,200 acre-ft per year).

Extremes.--Maximum discharge during year, 21 cfs June 2 (gage height, 2.05 ft); minimum daily, 0.3 cfs for several days during October and September.
1949-57: Maximum discharge, 30 cfs May 5, 1952; minimum, 0.2 cfs at times in 1954-56.

Remarks.--Records good. Records include flow through pipeline for Centerville city water supply.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	0.4	0.4	0.4	0.4	0.6	*1.0	3.1	18	2.5	0.8	0.5
2	.3	.4	.4	.4	.4	.6	1.0	*3.8	18	2.4	*.8	.4
3	.3	.4	.4	*.4	.4	.7	1.0	3.7	16	2.3	.7	.3
4	.3	.4	.4	.4	*.4	*.6	.8	3.7	17	2.2	.8	.3
5	.3	.4	.4	.4	.4	.7	.9	4.7	*16	*2.1	.8	.3
6	.3	.5	.4	.4	.4	.6	1.0	*5.3	16	2.0	.7	.3
7	.3	.5	.4	.4	.4	.7	.9	6.1	13	2.0	.7	.3
8	.4	.4	.4	.4	.4	.8	.9	6.3	12	1.8	.6	.3
9	.4	.4	.4	.4	.4	.9	1.0	5.8	10	1.6	.6	.3
10	.4	.4	.4	.4	.4	.8	1.1	6.1	9.8	1.7	.6	.4
11	.4	.4	.6	.4	.4	.7	1.3	5.1	*8.6	1.8	.7	.4
12	.6	.4	.6	.4	.5	.7	1.5	4.8	7.2	1.7	.6	.4
13	.5	.5	.6	.5	.4	.7	1.7	4.9	6.7	1.6	.6	.4
14	.5	.4	.6	.5	.4	*.7	1.8	5.2	5.9	1.5	.6	.4
15	.4	*.5	.4	.4	*.4	.7	1.8	4.9	5.3	1.5	*.6	.4
16	*.4	.5	.4	.4	.5	.7	1.7	5.5	5.1	*1.3	.5	.4
17	.4	.5	.4	*.4	.5	.7	*1.9	*6.8	4.7	1.3	.5	*.4
18	.4	.5	.4	.4	.5	.7	2.0	8.1	4.6	1.3	.4	.5
19	.4	.4	*.4	.4	.5	.7	1.9	11	4.0	1.5	.4	.4
20	.4	.4	.4	.4	.6	.7	1.6	11	*3.9	1.2	.5	.4
21	.4	.4	.4	.4	.7	.8	1.6	10	3.9	1.1	.6	.4
22	.4	.5	.4	.4	.6	.8	1.6	9.6	4.1	1.0	.8	.4
23	.4	.4	.4	.4	.6	.7	2.3	9.4	3.8	1.0	.5	.4
24	.4	.4	.4	.4	.7	.7	2.1	9.5	3.5	1.0	.5	.4
25	.4	.4	.4	.4	1.0	.7	2.0	10	3.1	1.0	.5	.4
26	.4	.4	.4	.4	.8	.7	1.9	12	3.2	1.0	.5	.4
27	.4	.4	.4	.4	.8	.6	1.9	13	3.2	1.0	.5	.4
28	.4	*.4	.4	.4	.6	.6	2.0	14	2.9	1.0	.5	.4
29	.4	.4	.4	.4	-	.7	2.4	*14	2.8	1.0	*.6	.4
30	.4	.4	.4	.4	-----	1.0	2.7	16	2.7	.9	.6	.4
31	.4	-----	.4	.4	-----	1.0	-----	19	-----	.8	.5	-----
Total	12.1	12.8	13.2	12.6	14.5	22.3	47.3	252.4	235.0	45.9	18.6	11.5
Mean	0.39	0.43	0.43	0.41	0.52	0.72	1.58	8.17	7.83	1.48	0.60	0.38
Ac-ft	24	25	26	25	29	44	94	501	466	91	37	23
Calendar year 1956: Max		6.6		Min	0.2	Mean	1.20	Ac-ft	868			
Water year 1956-57: Max	19			Min	0.3	Mean	1.91	Ac-ft	1,380			

Peak discharge (base, 10 cfs).--June 2 (2 p.m.) 21 cfs (2.05 ft).

* Discharge measurement made on this day.

Centerville Creek above diversions, near Centerville, Utah

Location.--Lat 40°55'00", long 111°51'45", in SE $\frac{1}{4}$ sec. 8, T. 2 N., R. 1 E., on right bank 1.2 miles east of Centerville.

Drainage area.--3.15 sq mi.

Records available.--November 1949 to September 1957.

Gage.--Water-stage recorder and concrete rating flume. Altitude of gage is 4,650 ft (from topographic map).

Average discharge.--7 years, 2.78 cfs (2,010 acre-ft per year).

Extremes.--Maximum daily discharge during year, 18 cfs May 28, 29, June 2, 3; minimum daily, 0.8 cfs for several days during October and January.
1949-57: Maximum daily discharge, 30 cfs May 6, 7, 1952; minimum daily, 0.5 cfs Mar. 16, 1955.

Remarks.--Records good. Discharge measurements generally made twice a month. Record includes flow of one ditch which diverts water about a quarter of a mile above station.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	1.1	0.9	0.8	1.1	1.4	2.0	4.7	16	3.9	1.6	1.5
2	.8	1.0	.9	.8	1.1	1.4	1.8	5.7	18	3.9	1.6	1.4
3	.8	1.0	1.0	.8	1.2	1.2	1.9	7.4	18	3.8	1.6	1.3
4	.8	1.0	1.0	.8	1.2	1.1	1.9	8.0	16	3.5	1.7	1.3
5	.9	1.1	1.0	.8	1.2	1.3	1.9	8.8	16	3.4	1.6	1.3
6	.9	1.1	1.0	.8	1.1	1.1	2.0	9.4	14	3.6	1.6	1.3
7	.9	1.1	1.0	.9	1.2	1.3	1.9	9.7	14	3.5	1.5	1.3
8	.9	1.1	1.0	.9	1.1	1.4	1.9	10	12	3.3	1.6	1.2
9	.9	1.1	1.0	.8	1.1	1.6	2.1	10	11	3.1	1.5	1.2
10	1.0	1.1	1.0	.9	1.1	1.8	2.4	10	11	3.2	1.4	1.4
11	.9	1.1	1.4	1.0	1.1	1.6	2.8	9.2	10	3.2	1.6	1.4
12	1.1	1.1	1.3	1.1	1.2	1.5	3.2	7.9	9.2	2.8	1.5	1.2
13	1.0	1.1	1.3	1.1	1.2	1.4	3.6	8.1	9.2	2.8	1.5	1.2
14	1.0	1.0	1.3	1.1	1.3	1.4	3.7	9.3	9.5	2.7	1.5	1.2
15	1.0	1.0	1.1	1.0	1.2	1.4	3.7	9.6	11	2.7	1.6	1.1
16	.9	1.0	1.2	1.0	1.2	1.4	3.9	9.9	11	2.5	1.4	1.1
17	.9	1.0	1.1	1.1	1.2	1.4	3.9	9.9	9.3	2.6	1.4	1.2
18	.9	1.0	1.1	1.3	1.2	1.4	3.9	9.8	7.8	2.6	1.4	1.4
19	.9	.9	1.1	1.1	1.2	1.5	3.7	14	7.4	2.5	1.4	1.6
20	1.0	1.0	1.1	1.0	1.4	1.6	3.0	14	7.2	2.4	1.4	1.5
21	.9	1.0	1.1	1.0	1.4	1.8	2.8	14	6.9	2.3	1.6	1.5
22	.9	1.0	1.0	1.0	1.4	1.5	3.3	13	6.6	2.2	1.7	1.5
23	1.0	1.0	1.1	1.0	1.4	1.5	4.0	14	6.4	2.1	1.5	1.5
24	1.1	1.0	.9	1.1	1.4	1.5	3.7	14	6.1	2.1	1.4	1.4
25	1.0	.9	.9	1.1	1.7	1.5	3.5	15	5.8	1.9	1.4	1.4
26	1.1	1.0	.9	1.0	1.5	1.4	3.4	16	5.4	1.9	1.5	1.5
27	1.1	.9	.9	1.0	1.6	1.4	3.4	17	5.2	1.9	1.4	1.4
28	1.1	.9	.9	1.0	1.5	1.4	3.5	18	4.9	1.7	1.4	1.4
29	1.0	.9	.9	1.0	-	1.6	4.0	18	4.5	1.8	1.7	1.4
30	1.0	.9	.9	1.0	-----	2.0	4.3	17	4.2	1.7	1.6	1.4
31	1.1	-----	.9	1.1	-----	2.0	-----	17	-----	1.6	1.5	-----
Total	29.7	30.4	32.2	30.3	35.5	45.8	91.1	358.4	293.6	83.4	47.1	40.6
Mean	0.96	1.01	1.04	0.98	1.27	1.48	3.04	11.6	9.79	2.69	1.52	1.35
Ac-ft	59	60	64	60	70	91	181	711	582	165	93	81

Calendar year 1956: Max 8.2 Min 0.7 Mean 2.04 Ac-ft 1,480
Water year 1956-57: Max 18 Min 0.8 Mean 3.06 Ac-ft 2,220

Stone Creek above diversions, near Bountiful, Utah

Location.--Lat 40°53'40", long 111°50'40", in NW¹ sec. 21, T. 2 N., R. 1 E., on right bank 2.2 miles east of Bountiful.

Drainage area.--4.48 sq mi.

Records available.--April 1950 to September 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,080 ft (from topographic map).

Average discharge.--7 years, 3.46 cfs (2,500 acre-ft per year).

Extremes.--Maximum discharge during year, 39 cfs May 19, 31; maximum gage height, 1.39 ft May 31; minimum discharge, about 0.4 cfs Oct. 1-18.

1950-57: Maximum discharge, 82 cfs May 5, 1952 (gage height, 2.79 ft); no flow Oct. 5, 1951.

Remarks.--Records good except those for periods when flow was diverted around station by a pipeline, which are fair. Records include flow in pipeline.

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 2				May 3 to Sept. 30			
0.65	0	1.0	4.9	0.7	0.5	1.1	12
.7	.1	1.1	9.3	.8	1.3	1.2	19
.8	.8	1.2	16	.9	3.6	1.3	33
.9	2.2			1.0	7.2	1.4	56

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		1.2	1.0	1.0	0.9	1.9	2.6	11	35	4.9	1.6	
2		*1.0	1.2	1.0	1.0	1.9	2.6	14	30	4.6	*1.3	
3	(*)	.9	1.2	*1.0	.9	1.9	2.6	16	26	*4.6	1.1	
4		.8	1.2	1.0	.9	*1.7	2.6	15	31	4.2	1.2	0.8
5		.9	1.2	.9	*.9	1.9	2.8	17	*28	4.2	1.1	
6	0.4	.9	1.2	.9	.9	1.7	2.8	*18	26	3.9	1.1	
7		1.2	1.2	.9	.9	1.9	2.6	19	24	4.2		
8		.9	1.2	.9	.9	2.0	2.6	19	20	3.9	1.0	
9		1.0	1.2	.9	1.0	2.6	2.8	19	19	3.6		
10		1.0	1.2	.8	1.2	2.4	3.6	19	17	3.9		.7
11	.4	1.2	1.4	.8	1.2	2.0	4.5	18	15	3.9	.9	
12	.4	.9	1.3	.8	1.3	1.9	5.2	17	*13	3.3		
13	.4	.9	1.2	.9	1.3	1.9	5.5	17	12	3.0		
14	.4	*.9	1.2	.9	1.2	1.7	5.2	17	11	3.0	(*)	
15	.4	1.0	1.2	.8	1.2	*1.7	5.2	17	11	3.0		
16	*.4	1.2	1.0	*.7	1.2	1.6	5.6	*17	11	2.8	.8	(*)
17	.4	1.2	1.0	.6	1.3	1.7	*6.0	18	11	*2.8		
18	.4	1.2	*.9	.7	1.4	1.7	6.0	18	11	2.5		.6
19	.5	1.0	.9	.8	1.4	1.7	5.2	26	9.6	2.5		
20	.5	.9	.9	.8	1.6	1.7	4.9	22	9.6	2.5		
21	.6	1.0	.9	.9	1.6	1.9	4.9	18	9.6	2.3		
22	.7	1.2	.8	.9	1.6	1.9	4.9	19	9.6	2.3		
23	1.0	1.2	.8	.9	1.7	1.7	6.0	19	9.2	2.0		
24	1.3	1.2	.8	.9	1.7	2.0	5.6	21	*8.3	2.0		
25	1.2	1.2	.8	.8	2.2	1.9	5.6	25	7.5	2.0		
26	1.4	1.2	.9	.9	1.9	1.9	5.6	30	7.2	2.0	.9	
27	1.6	1.2	1.0	.9	1.9	1.9	6.0	35	6.8	2.0		.7
28	1.6	*1.0	1.0	.9	1.7	1.9	6.4	26	6.4	1.8		
29	1.4	1.0	1.0	.8	-	2.0	8.2	*28	6.0	2.0	(*)	
30	1.3	1.0	1.0	.9	-----	2.2	9.3	31	5.2	1.8		
31	1.3	-----	1.0	1.0	-----	2.4	-----	37	-----	1.8		
Total	21.6	31.4	32.8	26.9	36.9	59.2	143.5	643	446.0	93.3	29.4	20.4
Mean	0.70	1.05	1.06	0.87	1.32	1.91	4.78	20.7	14.9	3.01	0.95	0.68
Ac-ft	43	62	65	53	73	117	285	1,280	885	185	58	40
Calendar year 1956:	Max 12			Min -		Mean 2.53		Ac-ft 1,840				
Water year 1956-57:	Max 37			Min -		Mean 4.34		Ac-ft 3,140				

Peak discharge (base, 15 cfs).--May 19 (1 p.m.) 39 cfs (1.37 ft); May 31 (5 a.m.) 39 cfs (1.39 ft).

* Discharge measurement made on this day.

Note.--Flow diverted around station by pipeline Oct. 1-12, Aug. 6 to Sept. 30; discharge estimated on basis of 5 discharge measurements, records at station, computations of flow in pipeline at outlet, and records for nearby streams.

Mill Creek at Mueller Park, near Bountiful, Utah

Location.--Lat 40°51'50", long 111°50'10", in SE¹ sec. 33, T. 2 N., R. 1 E., on right bank 2 miles southeast of Bountiful.

Drainage area.--8.79 sq mi.

Records available.--April 1950 to September 1957.

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

Average discharge.--7 years, 7.00 cfs (5,070 acre-ft per year).

Extremes.--Maximum daily discharge during year, 50 cfs May 9; minimum daily, 0.9 cfs for several days during October and November.

1950-57: Maximum daily discharge, 140 cfs Apr. 28, 1952; minimum daily, 0.5 cfs for several days in August and September 1954.

Remarks.--Records good. Discharge measurements generally made twice a month. Records include flow of pipeline which diverts about a quarter of a mile above station and is measured at division box by Cippoletti weirs.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	1.2	1.2	1.3	1.2	3.1	4.6	20	41	8.9	4.3	2.2
2	.9	1.1	1.2	1.3	1.2	3.2	4.6	25	44	8.3	4.2	2.2
3	.9	1.1	1.2	1.2	1.2	3.2	4.5	35	44	8.4	4.3	2.1
4	.9	1.1	1.2	1.0	1.2	2.7	4.4	33	48	5.7	4.5	2.1
5	.9	1.2	1.2	1.0	1.2	2.8	4.4	38	46	8.0	4.3	2.1
6	.9	1.3	1.2	1.2	1.1	2.5	4.5	38	44	4.9	4.3	2.1
7	.8	1.2	1.2	1.2	1.1	2.7	4.5	40	40	5.1	3.7	2.0
8	.9	1.2	1.2	1.2	1.1	3.0	4.4	46	35	8.0	3.4	2.0
9	.9	1.1	1.3	1.2	1.1	3.6	4.9	50	32	6.5	3.0	2.0
10	.9	1.3	1.2	1.2	1.2	3.9	4.5	38	31	6.0	2.9	1.8
11	.9	1.3	1.8	1.2	1.3	3.7	4.9	32	27	5.4	3.1	1.7
12	1.0	1.2	1.8	1.1	1.4	3.5	5.3	30	25	4.5	3.0	1.6
13	1.1	1.1	1.7	1.4	1.4	3.3	6.5	28	26	5.3	2.8	1.6
14	1.0	1.2	1.9	1.8	1.5	3.1	7.6	27	23	7.2	2.8	1.6
15	1.0	1.1	1.5	1.4	1.5	2.9	7.6	26	21	7.6	2.8	1.6
16	1.0	1.2	1.3	1.2	1.6	2.7	7.8	26	20	7.2	2.8	1.5
17	.9	1.3	1.3	1.3	1.7	2.9	8.7	26	20	7.2	2.7	1.5
18	.9	1.3	1.2	1.5	1.9	2.8	10	28	20	6.3	2.6	1.7
19	.9	1.0	1.2	1.2	1.9	2.8	11	44	21	6.2	2.5	1.8
20	.9	.9	1.2	1.2	2.1	3.1	9.7	42	20	5.9	2.5	1.7
21	.9	1.1	1.2	1.2	2.3	3.4	9.0	34	18	5.6	2.5	1.8
22	.9	1.1	1.2	1.2	2.3	3.4	9.7	29	17	5.6	2.8	1.7
23	.9	1.1	1.3	1.2	2.7	3.1	11	28	17	5.0	2.5	1.7
24	1.2	1.1	1.2	1.2	2.9	3.3	11	29	15	5.5	2.5	1.6
25	1.5	1.2	1.3	1.2	3.6	3.1	11	50	14	5.4	2.4	1.6
26	1.7	1.2	1.3	1.2	3.2	3.1	9.1	35	13	5.2	2.2	1.6
27	1.4	1.2	1.3	1.3	3.4	3.0	8.9	40	12	5.3	2.3	1.5
28	1.1	1.2	1.4	1.3	3.1	3.0	9.8	40	12	5.4	2.4	1.5
29	1.0	1.2	1.4	1.3	-	3.3	13	45	11	4.9	2.8	1.5
30	1.0	1.2	1.4	1.2	-----	4.2	17	44	9.6	4.7	2.6	1.5
31	1.0	-----	1.4	1.2	-----	4.6	-----	42	-----	4.5	2.4	-----
Total	31.1	35.0	41.4	38.6	51.4	99.0	233.5	1,069	766.6	189.7	93.9	52.9
Mean	1.00	1.17	1.34	1.25	1.64	3.19	7.78	34.5	25.6	6.12	3.03	1.76
Ac-ft.	82	69	82	77	102	196	463	2,120	1,520	376	186	105
Calendar year 1956: Max	23				Min 0.8	Mean 4.54		Ac-ft 3,300				
Water year 1956-57: Max	50				Min 0.9	Mean 7.40		Ac-ft 5,360				

Salt Creek at Nephi, Utah

Location.--Lat 39°42'45", long 111°48'25", in NE $\frac{1}{4}$ sec. 3, T. 13 S., R. 1 E., on right bank 1 mile east of Nephi.

Drainage area.--95.6 sq mi.

Records available.--December 1950 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,240 ft (by barometer). Prior to Nov. 6, 1952, at site 75 ft upstream at datum 1.43 ft higher.

Average discharge.--6 years (1951-57), 30.0 cfs (21,720 acre-ft per year).

Extremes.--Maximum discharge during year, 219 cfs June 5; minimum daily, 4.8 cfs Jan. 30. 1950-57: Maximum discharge, 724 cfs May 2, 1952; minimum, 1.1 cfs Dec. 13, 1951.

Remarks.--Records good except those for period of no gage-height record, which are fair. Records include discharge of Salt Creek diversion canal near Nephi.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.8	9.2	8.8	8.8	7.1	11	21	52	134	74	26	20
2	7.1	8.4	9.2	8.8	7.4	11	19	78	151	71	25	13
3	6.8	8.1	8.8	8.8	7.8	13	18	*126	156	67	24	19
4	6.4	9.2	8.8	8.8	6.1	11	18	128	168	60	24	19
5	6.8	9.2	8.8	8.8	6.8	13	18	152	*170	55	*25	18
6	6.8	8.8	8.8	8.8	7.1	11	23	*140	194	52	24	17
7	6.8	8.8	8.8	8.8	7.8	11	24	142	175	50	26	18
8	*7.1	8.8	7.4	8.8	8.4	12	22	134	145	46	27	18
9	7.1	8.8	7.4	8.4	13	13	23	123	124	*48	24	*18
10	7.1	8.8	8.8	6.1	9.2	13	27	128	106	50	23	19
11	6.8	9.2	10	8.4	9.5	12	31	118	86	47	22	18
12	7.1	*8.4	*9.5	8.4	9.5	12	35	94	83	46	23	18
13	7.4	8.8	9.2	11	8.8	12	40	92	101	44	22	17
14	7.8	8.8	8.8	15	8.8	10	59	*95	86	44	22	18
15	7.4	8.4	8.8	9.2	8.8	12	54	85	81	42	22	17
16	7.1	8.8	9.2	8.4	8.8	12	59	82	76	40	21	17
17	7.4	8.8	8.8	6.4	9.2	13	62	79	*69	41	21	17
18	7.1	9.5	8.4	6.8	9.2	13	*62	83	68	39	21	17
19	7.8	8.4	7.8	*7.8	9.2	13	56	89	89	39	22	17
20	8.8	7.4	8.1	8.4	9.5	13	49	a82	77	37	22	17
21	8.8	8.4	8.4	8.4	*12	15	44	a76	83	36	25	17
22	8.4	8.8	8.4	7.4	11	*13	42	a71	96	31	24	17
23	9.5	8.8	7.4	7.8	11	13	43	a71	101	31	24	16
24	11	8.4	9.2	8.1	11	13	45	a71	101	30	22	15
25	11	8.8	8.8	7.8	12	13	46	a81	107	30	22	18
26	11	8.4	8.8	8.1	11	13	43	a86	106	29	23	15
27	9.8	8.8	8.8	8.1	11	13	39	*101	98	28	23	15
28	9.8	8.8	8.8	7.4	11	13	38	125	*96	29	23	16
29	9.5	8.8	8.8	6.1	-	14	41	127	89	28	21	17
30	8.8	8.8	9.2	4.8	-----	17	44	105	83	27	21	16
31	8.8	-----	9.2	5.8	-----	18	-----	142	-----	27	22	-----
Total	250.9	261.4	270.0	254.5	262.0	396	1,145	3,158	3,279	1,318	716	517
Mean	8.09	8.71	8.71	8.21	9.35	12.8	38.2	102	109	42.5	23.1	17.2
Ac-ft	498	518	536	505	520	785	2,270	6,260	6,500	2,610	1,420	1,030
Calendar year 1956:	Max	77		Min	5.5	Mean	19.4	Ac-ft	14,040			
Water year 1956-57:	Max	194		Min	4.8	Mean	32.4	Ac-ft	23,450			

* Discharge measurement made on this day.

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

Currant Creek near Goshen, Utah

Location--Lat 39°53'05", long 111°53'05", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 1, T. 11 S., R. 1 W., on right bank 0.9 mile upstream from canal diversions and 5.4 miles south of Goshen.

Drainage area--303 sq mi.

Records available--August 1953 to October 1957.

Gage--Water-stage recorder. Altitude of gage is 4,850 ft (from topographic map).

Extremes--Maximum discharge during year, 77 cfs May 18-20 (gage height, 1.66 ft); minimum not determined, probably occurred during period of no gage-height record.
1953-57: Maximum discharge, 77 cfs Apr. 28, 1954, May 10-12, 1955, May 18-20, 1957; minimum daily, 0.4 cfs many days during February, March, April, 1955 and Mar. 29, 30, 1956.

Remarks--Records good except those for periods of ice effect or no gage-height record, which are fair. Irrigation diversions above station. Flow regulated by Mount Nebo Reservoir about 1 mile above station. Spring area about half a mile below station contributes water to Currant Creek at head of canyon; a discharge of 1.5 cfs was measured on Aug. 12, 1955, at point where spring flow enters creek.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.2	0.4	0.8	1.1
.3	1.0	1.0	20
.4	1.9	1.3	38
.5	3.3	1.7	77
.6	5.3		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27	19	1.1			0.6	1.2	33	15	63	24	29
2	27	24	1.1			.6	1.1	34	18	*66	24	30
3	27	24	1.1			.7	1.1	36	30	66	24	35
4	27	24	1.1			.6	1.0	43	28	65	23	35
5	27	24	1.1			.7	1.0	41	26	65	20	35
6		26	20	1.1	1.6	.6	1.1	34	25	65	22	35
7		26	17	1.5		.8	1.1	36	26	64	23	34
8		18	17	b1.9		.7	1.1	41	31	63	23	31
9		15	18	b1.9		.8	1.0	46	54	60	24	31
10		19	18	b1.9		.8	1.0	50	46	57	29	30
11	19	18	2.1			.8	1.0	61	*42	57	29	30
12	19	18	2.0			.8	1.0	61	43	54	29	30
13	19	18	1.8		.8	1.0	1.0	65	47	48	30	27
14	19	18	1.9			1.0	1.0	62	31	44	30	24
15	19	18	1.9			1.1	1.4	57	46	41	33	21
16	15	18	1.9			1.2	26	66	39	40	32	20
17	12	18	*2.0			1.2	26	73	39	44	32	20
18	12	18	2.1			1.1	26	74	37	44	32	18
19	12	b18	2.1		.6		26	77	36	44	*33	17
20	12	b18	2.1				23	74	36	43	25	17
21	12	18	2.1	1.4			25	63	42	42	21	17
22	12	18	2.0	(*)			27	63	45	*42	21	17
23	14	*18	2.0			1.2	30	62	46	41	21	17
24	*12	18	1.9				30	59	46	36	21	17
25	12	18	1.9		*.7		30	49	37	34	21	*16
26	11	18	1.9		.6		30	42	29	34	20	18
27	11	18	1.9		.6		30	39	61	40	21	19
28	11	18	2.0		.6	*1.2	30	*34	61	39	25	20
29	11	13	1.8			1.2	30	31	61	40	26	20
30	11	1.1	1.8			1.2	*30	22	61	32	29	20
31	11	1.1	1.8			1.1		10		24	29	
Total	525	543.1	54.8	45.4	21.9	30.7	447.7	1,538	1,184	1,497	796	730
Mean	16.9	18.1	1.77	1.46	0.78	0.99	14.9	49.6	39.5	48.3	25.7	24.3
Ac-ft	1,040	1,080	109	90	43	61	888	3,050	2,350	2,970	1,580	1,450

Calendar year 1956: Max 69 Min - Mean 21.8 Ac-ft 15,820
Water year 1956-57: Max 77 Min - Mean 20.3 Ac-ft 14,710

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Dec. 29 to Feb. 24, Mar. 19-27; discharge estimated on basis of 1 discharge measurement, weather records, and records for nearby streams.

Summit Creek near Santaquin, Utah

Location.--Lat 39°55'20", long 111°45'10", in NW¹NE¹ sec. 30, T. 10 S., R. 2 E., on right bank 3½ miles southeast of Santaquin.

Drainage area.--14.6 sq mi.

Records available.--March 1910 to September 1916, October 1954 to September 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,900 ft (from topographic map). March 1910 to September 1916 hook gage and sharp-crested weir in powerplant tailrace and staff gages and weir in main river channel at site 2½ miles downstream at different datum.

Average discharge.--9 years, 14.3 cfs (10,350 acre-ft per year).

Extremes.--Maximum discharge observed during year, 215 cfs June 3 (discharge measurement); maximum gage height, 1.92 ft June 5 (stage-discharge relation indefinite); minimum discharge, 1.4 cfs Jan. 9.
1910-16, 1954-57: Maximum discharge observed, that of June 3, 1957; minimum, 1.3 cfs Jan. 21, 1955.

Remarks.--Records good except those for periods of indefinite stage-discharge relation or no gage-height record, which are fair.

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 26-31, July 22-24; stage discharge relation indefinite June 1-7, 9, 10)

Oct. 1 to June 18, July 12 to Sept. 30				June 19 to July 11	
0.4	1.4	1.0	20	0.1	21
.5	2.4	1.2	33	.3	35
.6	4.4	1.5	80	.6	61
.7	6.8	1.8	92		
.8	10				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.0	5.5	4.6	4.6	4.4	5.3	6.3	20	e100	35	13	10
2	6.0	4.1	4.6	4.8	4.4	5.5	5.8	31	e120	*34	13	9.8
3	6.0	4.8	4.4	4.8	4.1	4.1	6.0	*37	*e140	33	13	9.4
4	6.0	5.8	4.6	5.1	4.1	5.1	6.5	43	e140	31	13	9.8
5	6.0	5.8	4.8	4.8	4.4	6.0	7.5	49	*e150	28	13	a10
6	6.0	5.3	4.6	4.8	4.4	5.5	8.8	58	e130	27	13	a10
7	6.0	5.1	4.4	4.8	4.1	5.5	7.5	*67	e115	26	12	a10
8	6.0	5.3	3.3	4.6	4.4	6.0	7.1	65	a100	a25	12	a10
9	6.0	5.3	2.6	1.9	4.6	6.5	7.1	68	e90	a25	12	a11
10	6.0	5.3	5.5	3.1	4.6	6.5	8.1	60	e80	a25	12	a11
11	5.8	4.8	5.8	5.1	4.6	6.3	9.1	49	*a76	a25	13	*11
12	6.3	4.8	5.1	4.8	4.6	6.3	11	40	*a76	*25	12	11
13	6.0	5.1	4.8	5.8	4.6	5.8	14	39	a86	24	12	11
14	5.8	3.3	4.8	4.8	4.8	5.5	16	41	a76	23	13	11
15	5.8	3.7	4.6	4.8	4.8	6.0	16	*43	a70	22	13	11
16	5.8	5.8	5.1	3.7	4.6	5.8	18	44	a64	20	12	11
17	5.8	4.8	*4.6	2.3	4.6	5.8	19	47	a58	20	12	11
18	5.8	4.6	4.1	3.1	4.6	5.8	20	50	a54	18	11	11
19	5.8	4.6	4.8	5.1	4.6	5.8	17	69	*53	17	*11	11
20	5.8	1.9	3.9	6.8	4.6	5.8	15	58	55	16	12	11
21	5.8	2.3	5.1	5.1	4.8	5.1	13	48	56	15	13	11
22	5.8	4.4	4.6	*4.6	4.6	5.7	13	45	51	*15	12	11
23	6.5	*5.1	4.4	4.6	4.8	5.5	13	45	48	14	11	10
24	*4.8	3.9	5.1	4.4	4.8	7.1	12	46	47	14	11	10
25	6.0	4.1	4.8	3.9	*5.5	6.0	11	49	49	14	12	*10
26	7.1	4.4	4.8	5.1	5.5	5.8	11	60	46	14	11	9.8
27	6.0	4.4	4.8	4.8	5.5	5.5	11	59	45	14	11	9.8
28	5.8	4.4	4.8	4.4	5.5	*6.0	11	*78	*43	13	11	9.8
29	5.8	4.4	4.8	4.1	-	6.0	13	84	41	13	11	9.8
30	5.5	4.6	4.8	4.4	-	7.1	*14	81	39	13	11	9.8
31	5.8	-----	4.8	4.6	-	7.5	-----	86	-----	13	11	-----
Total	183.6	137.7	143.8	139.6	130.9	180.2	347.8	1,669	2,298	851	372	312.0
Mean	5.92	4.59	4.64	4.50	4.68	5.81	11.6	53.8	76.6	21.0	12.0	10.4
Ac-ft	364	273	285	277	280	357	690	3,310	4,560	1,290	738	619
Calendar year 1956: Max	44				Min 1.9		Mean 9.31	Ac-ft 8,750				
Water year 1956-57: Max	150				Min 1.9		Mean 18.0	Ac-ft 13,020				

Peak discharge (base, 30 cfs).--May 9 (8:30 p.m.) 91 cfs (1.70 ft); May 19 (11 a.m.) 85 cfs (1.70 ft); June 3 (4:15 p.m.) 215 cfs (stage-discharge relation indefinite); June 5 (6 p.m.) discharge unknown (1.92 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of 2 discharge measurements and records for nearby stations.

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

Payson Creek above diversions, near Payson, Utah

Location--Lat 39°58'10", long 111°41'35", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1957.

Gage--Water-stage recorder. Altitude of gage is 5,670 ft (by barometer).

Average discharge--10 years, 13.8 cfs (9,990 acre-ft per year).

Extremes--Maximum discharge during year, 203 cfs May 19 (gage height, 2.76 ft); minimum, 1.5 cfs Jan. 8.

1947-57: Maximum discharge, 465 cfs May 4, 1952 (gage height, 2.99 ft), from rating curve extended above 150 cfs on basis of logarithmic plotting; minimum recorded, that of Jan. 8, 1957.

Remarks--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow affected by several small reservoirs.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 17, June 6-13, July 18-22)

0.7	3.3	1.4	34
.8	5.4	1.6	51
1.0	12	2.0	96
1.2	21	2.3	138

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.0	4.6	3.3	3.3	3.7	3.9	5.4	50	134	a22	12	10
2	4.8	b4.5	3.2	3.3	3.7	4.1	5.2	*74	128	*20	12	9.6
3	4.8	b4.3	3.2	3.3	3.5	4.4	5.2	83	*116	20	11	9.6
4	4.8	b4.5	3.3	3.3	b3.5	4.4	5.4	86	108	20	11	9.6
5	4.8	4.6	3.3	3.5	3.5	4.6	6.0	103	96	20	11	9.3
6	4.8	4.6	b3.2	3.5	3.5	4.4	7.6	122	78	19	12	8.9
7	5.0	4.4	b3.1	3.5	3.5	4.8	6.8	126	59	18	12	8.6
8	5.0	4.4	b3.1	3.3	3.7	5.4	6.2	*132	50	18	12	8.6
9	5.0	4.4	b3.5	b3.4	4.4	6.0	6.2	120	44	17	11	8.6
10	5.2	4.4	b4.0	b3.5	3.5	6.2	7.1	105	43	17	11	8.6
11	4.1	4.4	5.4	3.5	3.7	6.0	8.9	85	*40	17	12	8.6
12	5.0	4.1	5.2	3.7	3.7	5.7	11	72	37	17	11	8.6
13	4.8	4.1	4.6	3.9	3.5	4.6	15	76	40	16	11	8.2
14	3.9	3.0	4.6	3.9	3.7	b4.5	16	80	34	15	12	8.2
15	3.9	b3.8	3.9	3.7	3.5	4.4	19	63	39	15	11	8.2
16	3.9	3.9	3.9	b3.6	3.7	4.4	21	71	44	15	11	8.2
17	3.7	3.9	*3.7		3.5	4.4	24	*80	37	16	11	8.6
18	3.9	3.9	b3.7		3.5	4.6	*26	89	33	15	10	8.6
19	3.9	b3.8	b3.7		3.7	4.4	21	130	31	14	*10	8.9
20	3.9	b3.6	b3.7		3.7	4.4	18	89	*31	17	10	7.6
21	3.9	b3.4	3.7	a3.6	3.9	4.6	16	71	a29	17	11	7.4
22	3.7	3.3	b3.7	*3.7	4.1	4.1	17	65		*16	10	7.4
23	4.6	*3.5	b3.6	3.7	4.4	4.6	15	65		15	10	7.4
24	*4.8	3.7	b3.6	3.9	4.4	b4.3	14	71		15	10	7.1
25	5.0	3.5	3.5	3.9	*4.6	4.1	14	74		14	10	*7.0
26	5.2	3.5	b3.5	3.7	4.1	4.1	13	91	a24	14	10	7.1
27	5.0	3.5	3.5	3.7	4.4	*3.9	13	113		14	10	7.1
28	4.8	3.3	3.5	3.7	3.9	3.9	16	130		13	9.6	7.1
29	4.6	3.3	3.5	b3.7	-	4.1	23	122		13	10	7.1
30	4.4	3.3	3.3	b3.7	-----	5.2	30	*128		13	10	7.1
31	4.6	-----	3.3	b3.7	-----	5.4	-----	136	-----	13	10	-----
Total	140.8	117.5	114.3	111.6	106.5	143.9	412.0	2,902	1,485	505	334.6	246.9
Mean	4.54	3.92	3.69	3.60	3.80	4.64	13.7	93.6	49.5	16.3	10.8	8.23
Ac-ft	279	233	227	221	211	285	817	5,760	2,950	1,000	664	490

Calendar year 1956: Max 47 Min - Mean 9.02 Ac-ft 6,550
Water year 1956-57: Max 136 Min 3.0 Mean 18.1 Ac-ft 13,140

Peak discharge (base, 80 cfs)--May 8 (6 p.m.) 180 cfs (2.54 ft); May 19 (10:30 a.m.) 203 cfs (2.76 ft); May 28 (5 p.m.) 197 cfs (2.68 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Spanish Fork at Thistle, Utah

Location.--Lat 40°00', long 111°30', in SE $\frac{1}{4}$ 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 2 $\frac{1}{2}$ miles upstream from Diamond Fork.

Drainage area.--490 sq mi, approximately.

Records available.--January 1908 to September 1925 and October 1936 to September 1957 in reports of Geological Survey. January 1933 to September 1957 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 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.--41 years (1908-25, 1933-57), 93.3 cfs (67,550 acre-ft per year).

Extremes.--Maximum discharge during year, 565 cfs June 4 (gage height, 5.03 ft) minimum, 22 cfs Jan. 10.
1908-25, 1933-57: Maximum discharge, 1,800 cfs May 4, 1952 (gage height, 7.96 ft); 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 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 8 to June 3, June 8-13)

Oct. 1 to May 27

May 28 to Sept. 30

2.0	20	3.5	213	2.5	27	4.0	256
2.3	37	4.0	317	2.9	61	5.0	535
2.6	65	4.5	440	3.3	116		
3.0	122						

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	33	32	b34	b39	80	77	*137	454	126	55	51
2	25	27	b31	35	b35	72	73	134	484	118	52	49
3	26	27	32	36	b39	76	67	243	526	*116	52	50
4	26	28	*34	35	b34	65	63	278	532	116	50	49
5	26	34	37	37	b33	76	63	304	*314	111	72	49
6	26	35	38	37	b36	73	105	319	505	108	a52	49
7	27	35	b32	36	39	69	88	324	451	106	a52	50
8	27	34	b27	38	41	71	76	*330	378	100	a52	49
9	28	33	b30	b34	41	70	79	352	326	96	a51	48
10	29	34	b35	b24	41	71	87	337	313	94	a51	48
11	30	35	44	b31	41	a63	94	326	292	102	a51	46
12	30	*35	50	39	41	a61	108	293	*258	100	51	46
13	30	34	41	43	41	a60	122	284	256	93	49	46
14	30	33	44	44	41	a50	127	313	238	87	51	47
15	28	b25	36	40	43	a51	122	293	231	82	55	47
16	27	30	37	36	44	a52	132	284	249	80	57	46
17	27	34	36	b23	44	a52	*130	287	244	90	55	46
18	27	37	*31	b23	46	a53	137	308	218	77	55	48
19	26	29	32	b29	49	55	124	372	196	74	51	48
20	26	b26	30	b34	*55	57	116	372	186	74	*55	48
21	26	*b24	32	a36	91	*59	108	335	184	71	62	49
22	27	b27	34	a36	137	56	108	317	176	68	61	49
23	28	28	b27	*a38	173	50	117	*313	170	*67	54	50
24	35	31	b31	41	179	48	109	337	162	65	48	*52
25	*31	33	b33	40	188	51	103	346	159	63	67	*51
26	31	32	b32	38	*134	54	97	321	159	65	52	
27	32	32	b30	40	111	*50	91	337	157	66	47	
28	33	32	b30	b38	98	51	86	383	153	77	49	a49
29	33	31	b32	b33	-	54	108	409	142	61	50	
30	32	b31	b34	b28	-----	62	117	427	138	59	51	
31	33	-----	35	b33	-----	65	-----	448	-----	57	58	-----
Total	889	939	1,059	1,089	1,925	1,877	3,036	9,893	8,451	2,669	1,668	1,456
Mean	28.7	31.3	34.2	35.1	68.8	60.5	101	319	282	86.1	53.8	48.5
Ac-ft	1,760	1,860	2,100	2,160	3,820	3,720	6,020	19,620	16,760	5,290	3,310	2,890
Calendar year 1956: Max	231			Min	20		Mean	58.3	Ac-ft	42,340		
Water year 1956-57: Max	532			Min	23		Mean	95.8	Ac-ft	69,310		

Peak discharge (base, 330 cfs).--May 6 (11:30 p.m.) 376 cfs (4.17 ft); May 19 (4 p.m.) 423 cfs (4.28 ft); June 4 (12:30 a.m.) 565 cfs (5.03 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for station at Castilla and Diamond Fork near Thistle.

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 SW $\frac{1}{4}$ 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 1957 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 7,470 ft (by barometer).

Extremes.--1922-25, 1932-57: Maximum daily discharge, 595 cfs July 9, 1923; minimum daily observed, 4 cfs many times when no water was 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 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52									467	236	225
2	49									467	206	195
3	48									467	217	204
4	49									467	205	241
5	46									467	184	285
6	28									467	157	305
7	28									467	207	256
8	28						5			467	249	241
9	28									467	251	254
10	28									466	294	247
11									6	453	304	247
12										434	313	238
13										399	317	237
14										334	331	223
15										348	316	185
16		5	5	5	5		6			363	287	158
17										390	265	128
18										381	269	138
19										342	284	131
20										285	324	118
21	5									286	324	107
22									11	296	340	102
23									71	211	321	94
24							6			161	178	99
25										246	192	106
26										302	248	115
27										373	262	116
28										460	268	132
29										466	274	126
30										467	254	106
31											243	259
Total	489	150	155	155	140	171	180	186	2,683	11,110	8,442	5,359
Mean	15.8	5	5	5	5	5.5	6	6	89.4	358	272	179
Ac-ft	970	298	307	307	278	339	357	369	5,320	22,040	16,740	10,630
Calendar year 1956: Max	484											
Water year 1956-57: Max	467											
Calendar year 1956: Min	-											
Water year 1956-57: Min	-											
Calendar year 1956: Mean	101											
Water year 1956-57: Mean	80.1											
Calendar year 1956: Ac-ft	73,230											
Water year 1956-57: Ac-ft	57,960											

Note.--Discharge for period Oct. 11 to June 21 estimated on basis of observed tunnel seepage on Oct. 11 and May 22.

Diamond Fork below Red Hollow, near Thistle, Utah

Location.--Lat 40°04'40", long 111°24'00" in NW $\frac{1}{4}$ sec. 32, T. 8 S., R. 5 E., on right bank about 0.5 mile downstream from Red Hollow, 7.2 miles upstream from mouth, and 8 miles northeast of Thistle.

Drainage area.--110 sq mi, approximately.

Records available.--October 1953 to September 1957.

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

Extremes.--Maximum discharge during year, 539 cfs July 7 (gage height, 3.69 ft); minimum daily, 4.0 cfs Jan. 17, 18.

1953-57: Maximum discharge, 1,020 cfs July 13, 1954 (gage height, 4.71 ft); minimum daily, 2.0 cfs Feb. 1, 2, 1956.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow includes water diverted from Strawberry Reservoir (capacity, 270,000 acre-ft) in Colorado River basin via Strawberry tunnel (see preceding page) for irrigation in vicinity of Spanish Fork.

Rating table, water year 1956-57, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 29 to Sept. 3)

0.9	2.5	1.3	19	2.5	180
1.0	5.2	1.6	43	3.0	302
1.1	9.0	2.0	92	3.7	535

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	13	13	15	14	17	27	*69	166	496	254	242
2	54	11	12	16	12	18	23	92	170	500	242	218
3	54	11	14	17	14	18	21	113	170	*504	232	225
4	57	12	14	16	18	18	21	125	172	516	226	247
5	53	15	14	18	10	19	20	141	*172	519	223	272
6	41	14	13	18	12	18	34	152	164	516	195	291
7	38	13	13	18	14	19	25	158	149	523	230	254
8	38	13	b6.0	19	16	20	23	*164	137	519	265	244
9	35	13	b5.0	17	16	20	26	164	118	519	265	247
10	32	13	b10	6.0	16	21	30	160	121	523	297	242
11	20	13	b16	12	16	19	36	160	107	496	313	239
12	15	13	22	21	16	19	44	139	*96	434	319	235
13	15	13	16	22	16	19	53	134	96	368	319	232
14	15	13	18	23	16	17	53	139	88	336	333	223
15	14	8.9	14	21	16	16	53	128	86	339	319	193
16	14	13	15	18	18	18	56	128	85	345	283	170
17	14	14	14	4.0	18	19	56	130	85	379	272	147
18	14	15	*13	4.0	20	18	55	134	74	360	280	156
19	14	7.7	13	10	21	18	51	145	70	339	291	150
20	13	7.0	13	16	22	19	46	145	68	268	*327	139
21	13	*9.9	13	18	23	*21	43	136	70	278	327	127
22	13	13	14	18	25	19	44	132	64	291	336	121
23	15	14	8.5	*18	27	17	44	*128	104	*230	319	113
24	14	14	14	16	25	15	42	136	170	202	294	*118
25	*15	13	13	14	20	18	42	128	227	214	299	*121
26	15	14	12	15	*18	18	40	132	286	252	275	132
27	15	13	13	15	18	*17	41	141	354	265	272	134
28	15	13	12	15	18	16	44	150	459	272	280	147
29	15	13	13	13	-	19	53	162	489	278	283	141
30	14	13	15	10	-----	22	60	164	504	265	294	125
31	15	-----	16	10	-----	23	-----	164	-----	259	265	-----
Total	778	373.5	411.5	473.0	489	577	1,206	4,293	5,121	11,645	8,728	5,643
Mean	25.1	12.4	13.3	15.3	17.5	18.6	40.2	138	171	376	282	188
Ac-ft	1,540	741	816	936	970	1,140	2,390	8,520	10,160	23,100	17,310	11,190
Calendar year 1956: Max					Min 2.0	Mean 122		Ac-ft 88,750				
Water year 1956-57: Max			523		Min 4.0	Mean 109		Ac-ft 78,820				

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Dec. 29 to Jan. 23, Feb. 1-25; discharge estimated on basis of 1 discharge measurement, weather records, and records for Spanish Fork at Thistle and Castilla.

Spanish Fork at Castilla, Utah

Location.--Lat 40°03'00", long 111°32'50", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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, $1\frac{1}{4}$ 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 1957 in reports of Geological Survey. January 1933 to September 1957 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.--30 years (1919-25, 1933-57), 219 cfs (158,500 acre-ft per year).

Extremes.--Maximum discharge during year, 758 cfs June 4 (gage height, 6.16 ft); maximum gage height, 6.28 ft July 17; minimum discharge, 18 cfs Jan. 10 18.
1919-25, 1933-57: Maximum discharge, 3,610 cfs May 3, 1952 (gage height, 9.83 ft); minimum, 14 cfs 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 includes water diverted from Strawberry Reservoir (capacity, 270,000 acre-ft) in Colorado River basin via Strawberry tunnel (see p. 87) for irrigation in vicinity of Spanish Fork.

Rating table, water year 1956-57 (gage height, in feet,
and discharge, in cubic feet per second)
(Shifting-control method used July 10 to Sept. 30)

3.6	35	5.0	306
4.0	90	5.5	471
4.5	185	6.1	714

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	131	59	51	59	60	121	131	*230	671	625	329	290
2	102	51	50	60	56	120	114	312	697	617	306	264
3	97	50	51	60	60	127	107	392	714	*617	292	259
4	105	50	*55	61	52	111	104	424	714	621	290	284
5	100	63	59	60	50	127	102	460	*710	629	327	318
6	87	61	60	60	55	121	a170	494	688	625	266	344
7	82	59	55	57	61	114	146	513	604	629	287	309
8	85	57	42	63	66	120	123	*501	521	613	341	290
9	85	57	39	56	68	118	129	513	452	600	326	290
10	88	57	43	39	63	121	140	509	445	608	366	287
11	73	57	71	52	64	111	164	501	410	621	386	287
12	61	*57	100	63	66	111	185	438	366	580	a395	284
13	60	56	74	67	66	111	a205	430	*369	540	a400	279
14	57	59	79	70	67	95	a210	471	350	460	a410	272
15	56	42	64	64	68	98	a205	434	344	452	a400	247
16	55	50	68	60	70	100	a220	420	360	460	a350	228
17	55	56	66	56	70	104	a215	427	344	528	a340	205
18	54	63	*56	56	74	105	a230	464	318	517	a345	207
19	54	46	56	45	76	105	a205	556	295	479	a365	207
20	52	40	54	54	*84	107	a190	564	282	420	*413	196
21	52	*37	57	57	140	114	a180	509	282	410	427	187
22	52	43	59	57	170	104	a180	482	272	420	430	179
23	55	47	46	*57	223	92	196	*475	298	*341	399	172
24	68	50	54	63	230	93	172	528	373	298	360	*174
25	*60	51	57	57	252	98	166	532	458	298	406	*181
26	61	52	54	57	*179	97	156	509	479	341	335	194
27	60	51	52	60	166	*82	150	532	528	366	323	196
28	60	50	52	59	133	85	150	592	596	388	329	205
29	61	50	55	51	-	88	179	654	629	369	341	205
30	59	50	57	42	-----	107	203	671	637	350	354	189
31	64	-----	59	51	-----	112	-----	663	-----	338	329	-----
Total	2,191	1,571	1,795	1,733	2,779	3,319	5,027	15,200	14,186	15,160	10,967	7,229
Mean	70.7	52.4	57.9	55.9	99.2	107	168	490	473	489	354	241
Ac-ft	4,350	3,120	3,560	3,440	5,510	6,580	9,970	30,150	28,140	30,070	21,750	14,340
Calendar year 1956: Max	544				Min 37		Mean 187		Ac-ft 135,800			
Water year 1956-57: Max	714				Min 36		Mean 222		Ac-ft 161,000			

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for station at Thistle and Diamond Fork near Thistle.

Spanish Fork near Lake Shore, Utah

Location--Lat 40°09'30", long 111°43'50", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T. 7 S., R. 2 E., on left bank 1 mile upstream from mouth and 2 $\frac{1}{2}$ 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 1957.

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. Jan. 23, 1938, to Mar. 23, 1953, water-stage recorder at present site at different datum. Mar. 24, 1953, to Sept. 15, 1957, water-stage recorder at present site at datum 4.0 ft higher.

Average discharge--36 years (1904-6, 1909-19, 1920-25, 1938-57), 89.4 cfs (64,720 acre-ft per year).

Extremes--Maximum discharge during year, 512 cfs May 30 (gage height, 4.68 ft); practically no flow at times during summer months.

1903-7, 1909-25, 1938-57: maximum discharge observed, 3,020 cfs Apr. 28, 1952; practically no flow at times during irrigation season of most years.

Remarks--Records good except those for periods of no gage-height record, which are poor. Flow regulated by many diversions for irrigation and hydroelectric powerplant. During latter part of irrigation season, only wasted and return waters pass gage. Station is 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 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		62	61	53	151	127	178	118	485	5.0		
2		48	59	67	80	114	147	161	487	*1.0		
3		39	64	66	74	128	135	222	434			
4		45	*66	67	75	108	123	225	*364			
5		55	71	67	71	120	120	221	309			
6		59	80	67	75	127	188	232	246			
7		55	71	69	85	111	183	245	116			
8		54	67	72	88	122	145	182	50			
9		53	60	69	103	123	142	174	30	1.0		0.5
10		50	110	48	89	121	157	159	10			
11		50	115	64	91	111	171	144	3.0			
12	0.5	53	153	70	84	104	199	135	*3.0			
13		56	105	89	88	65	218	126	*52			
14		64	115	111	87	88	240	199	40			
15		49	90	92	91	88	218	205	100			
16		48	82	78	88	98	241	*201	196			*.8
17		56	*83	60	84	100	205	218	183			.8
18		70	65	56	94	96	*200	226	140			.7
19		57	59	62	96	96	180	321	126	.5	(*)	.6
20		47	56	66	*104	102	154	416	100			.7
21		42	59	76	166	116	152	423	*92			.9
22		47	64	*72	202	106	152	398		*.4		.9
23		*50	46	76	247	93	182	378				1.1
24	*54	54	61	83	250	96	118	410	50			1.1
25	48	55	56	81	257	*96	104	431				3.8
26	49	59	63	78	216	107	106	404				1.9
27	48	55	62	77	*178	*94	98	427		.4		1.7
28	47	59	64	76	140	99	91	447	10			1.4
29	54	58	63	68	-	103	99	484				1.4
30	57	61	64	108	-----	124	101	489				1.2
31	54	-----	67	185	-----	134	-----	484				-----
Total	422.5	1,610	2,299	2,373	3,454	3,317	4,747	8,903	3,816.0	26.0	9.3	26.5
Mean	13.6	53.7	74.2	76.5	123	107	158	287	127	0.84	0.3	0.88
Ac-ft	838	3,190	4,560	4,710	6,850	6,580	9,420	17,660	7,570	72	18	53

Calendar year 1956: Max 195 Min - Mean 46.1 Ac-ft 33,500
 Water year 1956-57: Max 489 Min - Mean 84.9 Ac-ft 61,500

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 1-24, June 8-15, June 20 to Sept. 15; discharge estimated on basis of 7 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 NE $\frac{1}{4}$ sec. 6, T. 8 S., R. 4 E., on right bank 1,000 ft downstream from Springville hydroelectric plant, 1 $\frac{1}{4}$ 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 1957.

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.--22 years (1904-5, 1907-16, 1945-57), 52.4 cfs (37,940 acre-ft per year).

Extremes.--Maximum discharge during year, 289 cfs May 6 (gage height, 4.02 ft); minimum, 7.8 cfs Dec. 27.

1904-16, 1945-57: Maximum discharge, 1,250 cfs May 4, 1952 (gage height, 7.83 ft present datum); minimum, 1.4 cfs Feb. 12, 1946.

Remarks.--Records good. Several diversions above station for irrigation. Flow regulated by hydroelectric plants at time during low stages. Springville city pipeline (capacity, approximately 5 cfs) diverts water from tributary spring above station (diversion began August 1951).

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 15-25, May 1)

Oct. 1 to May 1

May 2 to Sept. 30

1.7	9.2	2.5	68	2.0	12	3.2	135
1.8	15	3.0	128	2.3	30	3.8	244
2.1	31			2.7	70		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.6	13	14	15	15	19	34	108	164	53	20	20
2	11	12	13	16	15	19	31	*147	189	50	18	20
3	10	12	14	15	15	20	29	196	208	49	15	19
4	11	12	15	15	14	20	27	208	218	48	16	18
5	11	12	14	16	13	23	27	222	*224	45	20	17
6												
7	10	12	14	15	15	21	41	*232	230	42	22	18
8	10	13	15	16	15	20	37	236	210	38	21	16
9	11	13	12	15	15	20	34	214	174	38	20	15
9	12	12	10	15	16	21	37	210	150	38	19	16
10	13	12	12	12	16	22	46	206	146	35	20	16
11	12	12	17	14	16	21	57	198	129	37	20	15
12	12	13	20	15	17	21	77	158	109	38	22	15
13	12	13	16	15	17	21	96	160	*107	38	20	14
14	12	13	18	17	16	20	107	157	98	37	22	14
15	12	12	17	17	17	20	101	147	95	33	25	15
16	13	12	16	16	17	20	119	135	91	32	20	15
17	13	12	16	12	17	20	*115	131	79	32	20	16
18	13	12	*16	13	17	20	122	131	71	32	18	16
19	12	12	15	14	17	19	102	165	68	28	16	17
20	13	11	15	15	17	19	85	176	61	27	*19	18
21	13	*11	15	15	20	21	74	158	57	28	28	18
22	13	12	15	15	20	20	74	155	54	29	29	15
23	12	13	12	*16	20	20	74	147	60	25	25	15
24	11	13	13	16	19	20	65	157	63	*21	22	14
25	*11	13	14	15	22	20	61	155	64	19	23	15
26	12	13	13	16	22	*20	60	155	64	21	24	*17
27	12	14	15	16	*21	19	58	162	62	21	22	16
28	12	14	14	16	20	19	64	171	59	19	21	15
29	13	14	15	15	-	20	80	176	56	19	21	15
30	13	14	15	12	-----	23	95	*178	54	19	21	15
31	13	-----	16	15	-----	25	-----	169	-----	18	21	-----
Total	367.6	376	456	465	481	633	2,029	5,320	3,414	1,009	650	485
Mean	11.9	12.5	14.7	15.0	17.2	20.4	67.6	172	114	32.5	21.0	16.2
Ac-ft	729	746	904	922	954	1,260	4,020	10,550	6,770	2,000	1,290	962

Calendar year 1956: Max 193 Min 8.8 Mean 30.4 Ac-ft 22,070
Water year 1956-57: Max 236 Min 9.6 Mean 43.0 Ac-ft 31,110

Peak discharge (base, 120 cfs).--Apr. 18 (2 a.m.) 132 cfs (3.07 ft); May 6 (9 p.m.) 289 cfs (4.02 ft); June 6 (6 a.m.) 248 cfs (3.82 ft).

* Discharge measurement made on this day.

Provo River near Kamas, Utah

Location.--Lat 40°35'00", long 111°00'30", in NE $\frac{1}{4}$ sec. 2, T. 3 S., R. 8 E., on right bank 3 miles upstream from Soapstone Creek and 14 miles east of Kamas.

Drainage area.--29.6 sq mi.

Records available.--August 1949 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 8,110 ft (by barometer).

Average discharge.--8 years, 52.9 cfs (38,300 acre-ft per year).

Extremes.--Maximum discharge during year, 825 cfs June 6 (gage height, 3.66 ft); minimum, 1.7 cfs Oct. 30.

1949-57: Maximum discharge, that of June 6, 1957; minimum, that of Oct. 30, 1956.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. 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 tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to June 21						June 22 to Sept. 30			
0.6	2.6	1.2	20	2.6	297	1.1	9.6	1.7	55
.7	3.9	1.5	43	3.0	464	1.2	14	2.3	163
.8	5.8	1.8	85	3.3	617	1.4	26	2.8	330
.9	8.3	2.2	173						

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.			
1	4.5	b3.5	3.4	b3.5	4	4	5.0	16	294	*221	96	67			
2	3.6	b3.5	3.6					28	388	135	97	67			
3	3.5	b3.5	3.6					45	474	140	99	67			
4	3.4	3.4	3.9					60	559	103	99	67			
5	3.2	3.6	3.2					73	*538	86	101	67			
6	3.1	4.1	3.4	b3.5	4	4	5.0	94	*601	88	99	67			
7	3.2	4.1	4.5					108	580	83	99	65			
8	3.8	3.9	4.7					141	580	78	99	65			
9	3.4	3.9	4.3					155	528	75	99	67			
10	3.4	3.9	3.9					148	*450	72	103	65			
11	3.2	3.9	b3.9	3.5	4	4	6.0	127	432	72	113	67			
12	3.4	3.8	b3.9				7.0	94	409	68	110	63			
13	4.3	3.8	b3.9				8.0	*78	409	*61	104	63			
14	3.9	b3.2	3.9				11	72	297	63	96	50			
15	4.1		3.9				*b14	64	262	58	84	32			
16	3.9	b3.2	3.9	3.5	4	4	b14	63	227	58	83	30			
17	3.5		3.8				b14	72	*215	88	81	28			
18	3.4		3.8				b13	87	227	104	80	23			
19	3.2		3.6				b12	119	276	94	70	20			
20	3.1		3.8				b11	91	316	91	46	17			
21	3.1	3.2	3.9	3.5	4	4	b10	72	301	96	47	16			
22	*3.1		b3.6				9.9	66	241	*108	*47	15			
23	3.9						9.3	61	218	103	45	*15			
24	4.7						9.9	57	238	99	43	14			
25	3.9						9.2	61	286	97	45	13			
26	3.9	3.1	b3.6	3.5	4	4	8.5	87	290	101	41	13			
27	3.9	3.0					8.7	134	300	101	41	12			
28	3.8	2.9					10	206	330	99	40	11			
29	3.4	3.0					13	*212	308	99	42	10			
30	3.3	3.2					15	221	268	96	54	10			
31	3.6	-----					252	-----	-----	94	68	-----			
Total	111.7	102.5	116.8	108.5	112	124	263.5	3,162	10,842	2,991	2,371	1,190			
Mean	3.60	3.42	3.77	3.5	4	4	8.78	102	361	96.5	76.5	39.7			
Ac-ft	222	203	232	215	222	246	523	6,270	21,500	5,930	4,700	2,360			

Calendar year 1956: Max 428 Min 2.9 Mean 51.6 Ac-ft 37,460

Water year 1956-57: Max 601 Min 2.9 Mean 58.9 Ac-ft 42,620

Peak discharge (base, 400 cfs).--June 6 (6:30 p.m.) 825 cfs (3.66 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Jan. 17 to Apr. 14, Sept. 24-30; discharge estimated on basis of weather records and records for station near Hailstone.

Duchesne tunnel near Kamas, Utah

Location.--Lat 40°36', long 111°00', in NE $\frac{1}{4}$ sec. 2, T. 3 S., R. 8 E., on left bank 600 ft downstream from tunnel outlet, 3 miles upstream from Soapstone Creek and 14 miles east of Kamas.

Drainage area.--40 sq mi, approximately.

Records available.--October 1953 to September 1957.

Gage.--Water-stage recorder with Parshall flume, and Sparling water meter for low flow. Datum of gage is 8,098.5 ft (Bureau of Reclamation design plan).

Extremes.--1953-54: Maximum discharge during water year, 571 cfs May 21 (gage height, 4.15 ft); minimum not determined.

1954-55: Maximum discharge during water year, 676 cfs June 9 (gage height, 4.65 ft); minimum not determined, occurred during period when Sparling meter was in operation.

1955-56: Maximum discharge during water year, 549 cfs May 22 (gage height, 4.07 ft); minimum not determined, occurred during period when Sparling meter was in operation.

1956-57: Maximum discharge during water year, 677 cfs June 29 (gage height, 4.58 ft); minimum daily, 1.5 cfs Sept. 9-11 when flow was cut off at head end of tunnel.

Remarks.--Records good when all flow is through Parshall flume and fair for remainder of period. Flow is diversion from Duchesne River to Jordan River basin and includes about 1.5 cfs tunnel seepage.

Rating table for Parshall flume, Oct. 20, 1953, to Sept. 30, 1957 (gage height, in feet, and discharge, in cubic feet per second)

0.2	4.5	2.0	175
.4	13	3.0	335
.8	40	4.0	531
1.4	99	4.2	575

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								60	127	43	13	
2		(*)						54	115	40	13	
3								55	118	37	12	
4			(*)	(*)				73	133	35	15	
5		7.9						105	130	39	*25	
6							10	139	112	35	16	
7								*179	98	32	10	10
8			*8					221	89	31	10	11
9								252	85	32	10	10
10								283	77	27		11
11	al.5							288	74	26	8.8	11
12		8.8						321	75	*26		12
13							15	374	80	33	16	*11
14								400	*90	32	16	10
15								374	82	28	12	9
16					7	7	7	364	88	25	11	9
17								420	82	24	11	8
18								449	77	26	11	7
19		3.0						463	78	28	10	7
20								459	75	24	10	7
21								467	70	23	10	6
22								449	65	20	10	8
23		8.3		7				310	62	19	10	10
24								65	281	58	17	9
25								77	275	56	18	10
26		7.4						79	237	58	20	11
27								86	194	80	29	10
28								91	168	64	19	8
29								75	156	52	16	8
30								*69	149	46	15	8
31									129	15	8	
Total	112.9	248.4	232	217	196	217	922	8,158	2,497	834	343.4	280
Mean	3.64	8.28	7.48	7	7	7	30.7	26.3	83.2	26.9	11.1	9.33
Ac-ft	224	493	460	430	389	430	1,830	16,180	4,950	1,650	681	555

Calendar year 1953: Max - Min - Mean - Ac-ft -
 Water year 1953-54: Max 467 Min - Mean 39.1 Ac-ft 28,270

* Discharge measurement made on this day.

a Estimated seepage.

Note.--Water diverted through tunnel beginning Oct. 20. Records obtained by Sparling meter readings Oct. 20 to Apr. 23, Aug. 4 to Sept. 30; flow through Parshall flume Apr. 24 to Aug. 3.

JORDAN RIVER BASIN

Duchesne Tunnel near Kamas, Utah--Continued

Discharge, in cubic feet per second, water year October 1954 to September 1955

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		7.4						30	246	58	21	23
2		7.0						30	192	52	21	18
3	6.4		6.6					27	164	52	20	9.0
4								27	148	51	20	9.0
5								51	144	*44	24	12
6		6.6						88	213	43	26	13
7								113	*393	42	28	13
8								130	514	37	24	12
9	6.1	(*)	7.0					140	531	33	*21	12
10								*161	493	31	22	12
11	(*)							192	443	31	19	12
12		7.6					6.5	222	408	31	17	*11
13								254	357	28	18	11
14				6.5	6.5	6.5		286	362	26	18	11
15								246	300	25	19	10
16	7.3							198	270	25	20	10
17								161	222	24	20	11
18								152	196	24	19	12
19		9.6						200	181	24	18	15
20			5.8					275	165	23	16	18
21								280	149	25	15	14
22	7.1							246	142	25	14	12
23								232	133	26	14	19
24							9.3	230	121	30	16	17
25								227	109	60	30	12
26		7.1						222	96	46	33	12
27							15	219	87	32	22	15
28	7.4							182	77	28	19	17
29							(*)	208	72	25	17	15
30		6.7	6.1				20	283	64	23	16	14
31			6.5					321		22	15	
Total	212.6	229.8	193.2	201.5	182.0	201.5	253.8	5,633	6,994	1,046	622	401.0
Mean	6.86	7.66	6.23	6.5	6.5	6.5	8.46	182	231	33.7	20.1	13.4
Ac-ft	422	456	383	400	361	400	503	11,170	13,870	2,070	1,230	795
Calendar year 1954: Max			467	Min	-	Mean	39.2	Ac-ft	28,360			
Water year 1954-55: Max			531	Min	-	Mean	44.3	Ac-ft	32,060			

* Discharge measurement made on this day.

Note.--Discharge Oct. 1 to Apr. 29, Sept. 1-30 computed by converting Sparling meter readings in acre-feet to cubic feet per second. Discharge Apr. 30 to May 5 is combined flow through Sparling meter and Parshall flume. Flow through Parshall flume May 6 to Sept. 1.

Discharge, in cubic feet per second, water year October 1955 to September 1956

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							11	50	133	87	24	9.0
2								59	125	83	22	8.5
3		8.1						78	99	73	22	8.5
4	12							109	85	66	19	8.1
5								135	77	59	17	8.1
6								153	70	54	16	8.1
7		11		12	12			178	64	51	15	8.1
8								200	71	48	15	8.5
9								206	68	45	14	10
10								194	64	42	13	9.4
11			11					158	60	*42	13	8.7
12	10							133	47	41	16	8.7
13								113	*36	39	14	8.5
14		12						103	163	36	14	7.4
15								106	315	33	*15	7.1
16							9.0	145	245	32	15	7.0
17	(*)							219	201	30	15	6.9
18	9.5							307	183	29	13	6.9
19							*e32	414	186	27	15	6.9
20					11		e42	491	181	26	15	*6.9
21								e56	453	156	25	13
22								e68	487	147	25	12
23								e69	520	140	25	12
24								e69	506	131	24	11
25								e68	497	124	24	11
26			12									
27							(*)	e65	495	111	23	10
28								74	487	105	22	10
29	8.0	*11			9.0			63	306	98	22	10
30								54	52	90	25	10
31								69	87	24	9.5	7.5
								112		24	9.5	
Total	313.0	315.4	353	353	325	279	1,089	7,515	3,662	1,206	440.0	229.9
Mean	10.1	10.5	11.4	11.4	11.2	9.0	36.3	242	122	38.9	14.2	7.66
Ac-ft	621	626	700	700	645	553	2,160	14,910	7,260	2,390	873	456
Calendar year 1955: Max			531	Min	-	Mean	45.2	Ac-ft	32,750			
Water year 1955-56: Max			520	Min	-	Mean	43.9	Ac-ft	31,890			

* Discharge measurement made on this day.

e Discharge determined by combining flow through Parshall flume and Sparling meter.

Note.--No gage-height record Oct. 1 to Apr. 18, Sept. 11-30; discharge computed by converting Sparling meter readings in acre-feet to cubic feet per second. Flow through Parshall flume Apr. 27 to Sept. 10.

Duchesne Tunnel near Kamas, Utah--Continued

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.3	7.2						e26	262	165	38	21
2	7.4	7.2						e43	357	372	36	19
3	7.4	7.4						e57	487	324	34	19
4	7.1							e73	571	272	33	17
5				6.9				e88	318	229	37	16
6	6.9	7.7						e111	133	207	39	16
7			6.9				7.4	e124	109	194	34	16
8								e137	63	172	40	9.4
9	7.0							e145	45	153	33	1.5
10	7.0	7.4						e140	40	139	31	1.5
11	7.3							e129	33	148	33	1.5
12					6.5			e103	33	135	40	5.2
13	7.5	7.2						*e85	33	122	31	10
14								83	22	109	28	13
15	7.3						*10	75	17	99	28	12
16	7.1	6.9						69	13	90	26	11
17	7.1	6.7						72	10	96	25	11
18	6.8	6.7						82	10	100	24	11
19		*6.5						106	93	95	22	11
20	6.6			7.0				91	196	82	24	11
21		6.3	7.0					76	192	72	28	11
22	*7.4					7.5	12	66	183	*70	*31	11
23		6.1						61	183	65	26	*11
24	8.1				6.4			57	192	59	24	11
25		5.9						60	198	53	24	10
26	7.9				6.9			77	196	51	22	10
27					7.4			104	198	50	22	10
28	7.7	*7.4			7.4	8.5		143	325	46	21	10
29		8.5			-		15	169	491	45	22	10
30	7.5	7.6	6.9		-----	9.2	18	181	217	42	27	10
31	7.2	-----		6.8	-----		-----	213	-----	39	22	-----
Total	226.1	210.3	214.2	216.0	183.9	237.1	327.8	3,046	5,220	3,895	905	337.1
Mean	7.29	7.01	6.94	6.97	6.57	7.65	10.9	98.3	174	126	29.2	11.2
Ac-ft	448	417	427	428	365	470	650	6,040	10,350	7,730	1,800	669
Calendar year 1956: Max 520 Min - Mean 43.0 Ac-ft 31,240												
Water year 1956-57: Max 571 Min 1.5 Mean 41.1 Ac-ft 29,790												

* Discharge measurement made on this day.

e Discharge determined by combining flow through Parshall flume and Sparling meter.

Note.--No gage-height record Oct. 1 to Apr. 30, Sept. 9-30; discharge computed by converting Sparling meter readings in acre-feet to cubic feet per second. Sparling meter inoperative Apr. 15-30; discharge estimated on basis of records for Provo River near Kamas. Flow through Parshall flume May 14 to Sept. 8.

Weber-Provo diversion canal near Woodland, Utah

Location.--Lat 40°36'40", long 111°18'15", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 2 S., R. 6 E., on right bank 100 ft upstream from outlet to Provo River and $4\frac{1}{2}$ miles northwest of Woodland.

Records available.--October 1931 to August 1957 (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.--1931-57: Maximum daily discharge, 870 cfs June 4, 1957; 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 SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 21, T. 1 S., R. 6 E., and from Beaver Creek in NE $\frac{1}{4}$ SE $\frac{1}{4}$ 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. For records at head of canal see page 59.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

Nov. 17 to Mar. 13			Mar. 13 to Aug. 1		
2.2	14		0.1	2.5	1.5 146
2.6	29		.2	6.1	2.0 231
3.0	48		.3	11	3.0 442
			.5	25	4.0 701
			.8	54	4.6 876
			1.0	76	

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	29	32	29	0	0	105	528	879	8.7	
2		-	29	31	29	-	-	154	741	*624		
3		-	33	32	28	-	-	206	822	455		
4		-	36	32	25	-	-	217	870	36		
5		-	36	30	5.1	-	-	217	*485	-		
6		-	20	31	-	8.4	-	222	473	17		
7		-	19	29	-	23	-	227	561	17		
8		-	20	32	-	22	13	229	553	12		
9		-	20	30	-	26	29	231	561	87		
10		-	29	19	-	39	37	227	566	211		
11		-	42	29	-	37	43	319	595	195		
12		-	46	33	-	37	51	410	589	175		
13		-	45	34	-	36	52	403	619	143		
14		-	44	34	-	41	52	*401	707	124		
15		-	40	34	-	42	52	589	681	110		
16		-	40	30	-	33	53	370	624	95		
17		29	36	18	-	7.5	53	343	574	79		
18		29	27	20	-	-	54	330	550	59		
19		18	40	30	-	-	*60	401	558	86		
20		17	30	34	-	-	89	401	619	71		
21		20	27	33	-	-	89	403	687	61		
22		25	35	30	-	-	91	583	873	80		
23		33	30	29	-	-	98	374	876	52		
24		33	34	32	-	-	76	374	681	43		
25		33	32	29	-	-	91	359	701	36		
26		32	30	28	-	-	84	339	707	27		
27		31	31	29	-	-	81	374	709	23		
28		29	32	29	-	-	85	421	723	17		
29		28	34	28	-	-	91	440	718	16		
30		28	34	25	-	-	101	458	698	15		
31		-----	34	28	-----	-----	-----	468	-----	10	-----	-----
Total	-	385	1,014	914	116.1	351.9	1,525	10,193	19,229	3,635	8.7	-
Mean	-	-	32.7	29.5	-	-	329	641	117	-	-	-
Ac-ft	-	764	2,010	1,810	230	698	3,020	20,220	38,140	7,210	17	-
Calendar year 1956: Max - Min - Mean - Ac-ft -												
Water year 1956-57: Max 870 Min - Mean - Ac-ft 74,120												

* Discharge measurement made on this day.

Provo River near Hailstone, Utah

Location.--Lat 40°36', long 111°22', in SE $\frac{1}{4}$ sec. 34, T. 2 S., R. 5 E., on right bank 3 miles upstream from Ross Creek and Hailstone.

Drainage area.--233 sq mi.

Records available.--October 1949 to September 1957.

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

Extremes.--Maximum discharge during year, 3,880 cfs June 4 (gage height, 7.28 ft); minimum, 20 cfs Oct. 5.

1949-57: Maximum discharge, that of June 4, 1957; minimum, 17 cfs Aug. 31, 1954.

Remarks.--Records good except those for periods of ice effect or fragmentary or no gage-height record, which are fair. Records include flow of Weber-Provo diversion canal and Duchesne tunnel. Flow affected by irrigation diversions above and storage in several small reservoirs at headwaters.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 18-20, May 1-30, Aug. 15-29)

Oct. 1 to Apr. 30

May 1 to Sept. 30

1.0	17	0.9	55	4.0	1,040
1.3	52	1.3	119	5.0	1,600
1.7	120	2.0	292	6.0	2,410
2.1	210	3.0	620	7.0	3,520
2.4	288				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	48	62				84	122	f376	1,900	1,310	208	125
2	46	b85				89	98	f488	2,550	*1,500	204	111
3	33	b70			b70	93	93	f595	3,100	1,250	224	104
4	25	b75				*79	87	745	5,420	842	229	104
5	21	77				77	87	824	*2,990	659	234	92
6	24	86				82	120	919	*2,430	583	245	76
7	25	96				108	100	990	*2,780	558	221	76
8	28	91				118	102	1,040	2,520	522	227	67
9	40	87				139	130	*1,120	2,280	505	214	60
10	42	86			b60	154	152	1,100	*2,080	609	206	63
11	44	86				141	174	1,190	2,000	620	211	60
12	45	82			(*)	139	198	1,100	1,930	572	250	74
13	60	80				130	a220	1,010	2,040	495	224	90
14	63	72				63	108	a245	*972	1,800	462	211
15	66	b80				63	112	a250	906	1,690	429	206
16	66	b85				60	124	*253	850	1,480	398	184
17	62	b90				63	91	248	846	1,540	382	169
18	53	b90				60	84	243	884	*1,310	407	164
19	56	*b90				62	87	*232	1,180	1,400	448	151
20	56		(*)			69	93	251	1,090	1,820	419	136
21	59					74	98	248	1,000	1,930	373	138
22	*52					79	79	258	919	1,700	*348	*151
23	65					100	71	277	880	1,600	*327	132
24	87					108	65	f243	884	1,670	309	108
25	66	b80				124	*71	f261	846	1,810	289	106
26	80					100	76	245	876	*1,830	272	102
27	79					102	62	a255	1,010	1,770	261	90
28	74					93	77	a270	1,260	1,860	250	86
29	77					-	91	a300	*1,480	1,940	248	93
30	68					-----	100	a320	1,500	1,820	234	110
31	82	-----				-----	106	-----	1,670	-----	219	119
Total	1,692	2,430	2,325	2,170	2,050	3,026	6,082	30,550	60,790	16,080	5,555	2,329
Mean	54.6	81.0	75	70	73.2	97.6	203	985	2,026	519	173	77.6
Ac-ft	3,360	4,920	4,610	4,300	4,070	6,000	12,080	60,600	120,600	31,890	10,620	4,620
Calendar year 1956: Max		2,680				Mean	324		Ac-ft	235,000		
Water year 1956-57: Max		3,420			Min	21	Mean	370		Ac-ft	267,600	

Peak discharge (base, 1,200 cfs).--May 11 (4 p.m.) 1,300 cfs (4.68 ft); May 19 (2:30 p.m.) 1,300 cfs (4.72 ft); June 4 (5 a.m.) 3,880 cfs (7.28 ft); June 30 (4 a.m.) 2,170 cfs (5.76 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, Duchesne tunnel, and Weber-Provo canal.

b Stage-discharge relation affected by ice.

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

Deer Creek Reservoir near Charleston, Utah

Location.--Lat 40°24', long 111°32', in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T. 5 S., R. 4 E., at dam on Provo River, a quarter of a mile upstream from Deer Creek and 4 $\frac{1}{2}$ miles southwest of Charleston.

Drainage area.--560 sq mi.

Records available.--December 1940 to September 1957.

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, 155,900 acre-ft June 24, 25 (elevation, 5,418.22 ft); minimum, 76,760 acre-ft Jan. 3, 4 (elevation, 5,381.35 ft).
1940-57: Maximum contents, that of June 24, 25, 1957; minimum, 1,200 acre-ft Dec. 16, 1940 (elevation, 5,296.8 ft).

Remarks.--Reservoir is formed by earth-fill dam with concrete cutoff wall. Storage began in October 1940. Capacity, 152,560 acre-ft between elevations 5,280 (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 trashrack 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.

Capacity table, water year 1956-57 (elevation, in feet, and total contents, in acre-feet)

5,381	76,180	5,391	94,020	5,400	112,000	5,412	139,600
5,382	77,860	5,394	99,800	5,403	118,500	5,415	147,300
5,385	83,040	5,397	105,800	5,406	125,200	5,418	155,300
5,388	88,440			5,409	132,200	5,419	158,000

Total contents, in acre-feet, at 12 p.m., water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84,110	80,770	77,810	76,970	81,690	87,200	85,940	88,710	117,400	153,400	135,800	116,400
2	83,630	80,560	77,720	76,820	82,120	87,110	86,050	89,060	120,200	153,200	134,900	115,900
3	83,260	80,510	77,670	76,760	82,610	87,020	86,040	89,730	123,800	152,800	134,100	115,400
4	82,840	80,560	77,670	76,760	82,730	86,930	85,990	90,560	127,900	152,300	133,400	115,000
5	82,400	80,480	77,690	76,820	82,920	86,840	85,990	91,260	131,300	151,500	132,600	114,400
6	82,130	80,380	77,690	76,970	83,040	86,750	85,990	91,990	134,000	150,700	131,800	113,800
7	81,960	80,290	77,640	77,070	83,040	86,680	85,990	92,740	136,000	149,900	131,000	113,300
8	81,780	80,200	77,490	77,150	83,100	86,380	85,990	93,610	137,300	149,400	130,300	112,800
9	81,610	80,120	77,320	77,240	83,130	86,350	85,940	94,630	138,000	148,800	129,400	112,400
10	81,550	80,030	77,470	77,320	83,190	86,480	85,900	95,700	138,700	148,700	128,700	111,800
11	81,550	79,870	77,770	77,400	83,280	86,440	85,900	96,980	139,400	148,400	127,800	111,200
12	81,550	79,700	78,120	77,650	83,310	86,380	86,080	98,050	140,100	148,300	127,200	110,600
13	81,550	79,530	78,490	78,250	83,310	86,170	86,350	99,000	141,300	148,000	126,700	110,000
14	81,550	79,360	78,790	78,740	83,360	86,020	86,620	99,700	142,400	147,500	126,100	109,400
15	81,500	79,250	79,120	79,050	83,400	85,840	86,750	100,300	143,500	147,000	125,500	108,900
16	81,410	79,100	79,340	79,190	83,450	85,760	86,910	100,800	144,500	146,300	125,000	107,900
17	81,270	79,000	79,340	79,270	83,520	85,660	87,160	101,100	145,300	145,600	124,300	107,300
18	81,030	78,960	79,190	79,360	83,630	85,510	87,310	101,700	146,400	144,900	123,700	106,700
19	80,890	78,840	79,080	79,510	83,720	85,450	87,400	103,000	147,500	144,300	123,100	106,100
20	80,860	78,680	78,930	79,730	84,110	85,500	87,490	104,100	149,200	143,700	122,500	105,500
21	80,860	78,500	78,760	79,870	84,700	85,660	87,580	105,000	151,500	143,200	122,100	105,100
22	80,860	78,400	78,590	79,910	85,320	85,720	87,670	105,500	153,500	142,600	121,600	104,600
23	80,860	78,370	78,420	80,200	86,030	85,720	87,840	105,900	155,100	141,900	121,100	104,100
24	80,860	78,320	78,250	80,460	86,850	85,720	88,020	106,600	155,900	141,300	120,400	103,700
25	80,810	78,280	78,080	80,630	87,350	85,660	88,130	107,200	155,300	140,800	119,900	103,300
26	80,770	78,230	77,910	80,810	87,440	85,620	88,160	107,700	155,300	140,300	119,200	102,900
27	80,820	78,150	77,690	80,910	87,380	85,580	88,160	108,600	154,500	139,600	118,500	102,600
28	80,810	78,060	77,490	81,070	87,290	85,540	88,160	109,800	154,000	138,900	118,000	102,200
29	80,770	77,980	77,320	81,170	-	85,540	88,220	111,400	153,900	138,200	117,500	101,800
30	80,770	77,890	77,150	81,260	-	85,540	88,440	113,100	153,800	137,500	116,900	101,300
31	80,890	-----	76,980	81,410	-----	85,720	-----	115,100	-----	136,600	116,500	-----
(+)	5,383.77	5,382.02	5,381.48	5,384.07	5,387.37	5,386.50	5,388.00	5,401.45	5,417.47	5,410.82	5,402.07	5,394.78
(*)	-3,750	-3,000	-910	+4,430	+5,880	-1,570	+2,720	+26,660	+58,700	-17,200	-20,100	-15,200

Calendar year 1956.....\$ -10,280

Water year 1956-57.....\$ +16,660

† Elevation, in feet at end of month.

* Change in contents, in acre-feet.

Provo River below Deer Creek Dam, Utah

Location.--Lat 40°24'10", long 111°31'45", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 7, T. 5 S., R. 4 E., 200 ft upstream from Deer Creek, 1,000 ft downstream from Deer Creek Dam, and 4 miles north-east of Vivian Park.

Drainage area.--560 sq mi.

Records available.--May 1953 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,270 ft (from topographic map).

Extremes.--Maximum discharge during year, 2,190 cfs June 26 (gage height, 6.74 ft); no flow Nov. 4, Feb. 1-4, when reservoir gates were closed.
1953-57: Maximum discharge, that of June 26, 1957; no flow Nov. 4, 1956, Feb. 1-4, 1957.

Remarks.--Records good. Flow regulated by Deer Creek Reservoir (see preceding page), and small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River drainage into Daniels Creek. Flow also affected by irrigation diversions above and water diverted to Provo River by Weber-Provo diversion canal (see p. 96) and Duchesne tunnel (see p. 104).

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

1.9	79	5.0	1,080
2.4	174	6.0	1,660
3.0	329	6.8	2,180
4.0	645		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	307	223	265	288	135	*349	210	218	656	*1,710	527	420
2	302	272	265	288	0	349	210	223	701	1,590	527	408
3	299	272	254	288	0	349	241	246	886	1,470	524	402
4	299	80	246	226	143	349	267	299	*951	1,090	524	408
5	299	256	246	181	172	351	267	357	1,150	824	524	420
6	184	288	244	169	172	351	267	429	1,240	824	520	417
7	158	291	246	167	172	349	267	497	1,830	779	517	397
8	158	291	249	169	174	349	267	533	1,980	641	520	391
9	156	291	246	169	174	349	267	537	1,990	557	524	391
10	158	291	200	169	172	349	267	554	1,960	527	527	397
11	156	288	162	167	176	349	246	557	1,910	514	510	414
12	151	286	162	167	184	346	206	557	1,760	520	466	423
13	149	286	162	169	184	346	191	560	1,520	540	463	429
14	149	285	160	169	184	346	193	581	1,410	540	463	420
15	149	280	160	169	184	346	228	602	1,310	557	447	420
16	149	283	160	169	184	329	249	602	1,220	557	444	405
17	149	283	231	169	184	313	249	606	1,010	560	447	405
18	145	183	288	165	184	299	249	606	837	557	456	414
19	138	286	*288	165	184	239	249	613	775	547	469	411
20	130	*275	288	165	184	213	270	660	720	543	481	414
21	130	267	288	165	184	213	267	*747	667	540	*475	408
22	130	267	288	165	186	213	267	747	671	533	475	405
23	*132	265	288	167	186	216	275	747	705	517	472	397
24	138	265	288	*165	184	220	278	686	1,250	517	472	*379
25	149	265	291	165	292	*220	278	660	1,900	*468	475	340
26	151	265	291	162	349	213	278	656	2,080	403	466	340
27	151	265	291	165	349	210	278	656	2,130	520	463	335
28	151	265	288	165	349	216	275	656	2,100	524	450	335
29	156	265	288	165	-	216	*236	652	2,040	527	435	337
30	172	265	291	162	-----	210	216	652	1,820	533	429	337
31	181	-----	291	162	-----	210	-----	652	-----	530	426	-----
Total	5,426	7,972	7,705	5,596	5,225	8,977	7,508	17,348	40,979	21,059	14,918	11,819
Mean	175	266	249	181	187	290	250	560	1,366	679	481	394
Ac-ft	10,760	15,810	15,280	11,100	10,360	17,810	14,890	34,410	81,280	41,770	29,590	23,440
Calendar year 1956: Max			1,580			Mean	401	Ac-ft	201,400			
Water year 1956-57: Max			2,130		Min	80	Mean	423	Ac-ft	366,500		

* Discharge measurement made on this day.

Provo River at Vivian Park, Utah

Location.--Lat 40°21'40", long 111°33'45", in NW1/4 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 1957.

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.

Extremes.--Maximum discharge during year, 2,180 cfs June 26 (gage height, 6.25 ft); minimum daily, 41 cfs Feb. 3.

1911-57: Maximum discharge observed, 3,180 cfs June 11, 1921; minimum daily, 29 cfs Mar. 11, 13, 15-17, 20-22, 1948

Remarks.--Records good. Flow regulated by Deer Creek Reservoir (see p. 98), and small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River drainage into Daniels Creek. Flow also affected by irrigation diversions above and water diverted to Provo River by Weber-Provo diversion canal (see p. 96) and Duchesne tunnel (see p. 104).

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 26, 27)

1.0	34	4.0	857
1.5	99	5.0	1,400
2.0	191	6.0	1,980
3.0	474	6.3	2,180

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	308	241	269	308	166	400	228	267	705	1,760	554	431
2	302	294	269	308	43	400	228	275	732	1,646	554	419
3	299	294	259	308	41	397	251	299	925	1,540	550	415
4	299	123	254	241	148	397	280	348	*1,010	1,200	547	419
5	299	313	254	196	189	403	283	415	1,220	*915	547	431
6	189	316	256	185	189	397	288	501	1,330	905	540	438
7	170	316	256	185	189	390	286	579	1,670	848	540	406
8	172	316	256	185	191	394	283	611	2,030	705	536	406
9	172	313	254	185	191	390	283	619	2,010	626	536	406
10	172	313	212	185	189	390	286	634	2,000	601	536	412
11	174	313	185	185	196	387	272	637	1,940	583	526	431
12	172	311	183	185	202	384	238	634	1,800	586	474	438
13	170	311	180	196	202	381	219	637	1,550	604	471	441
14	172	305	178	193	202	378	224	652	1,440	604	474	435
15	172	305	178	185	202	375	256	670	1,360	622	454	435
16	174	305	178	185	202	360	286	670	1,270	622	444	422
17	174	302	250	185	202	339	286	670	1,060	615	448	422
18	172	207	308	180	202	322	286	682	876	611	458	431
19	166	302	*308	178	202	259	291	705	812	604	477	428
20	160	*291	308	180	212	236	311	740	773	597	491	431
21	162	278	308	180	226	233	308	826	724	593	*488	428
22	162	275	308	180	221	233	308	821	729	596	488	422
23	*166	275	305	180	219	233	316	816	765	565	484	415
24	172	272	305	*180	221	233	325	765	1,220	557	484	*390
25	178	272	305	180	326	231	325	716	1,920	*508	464	348
26	172	272	305	178	415	*224	325	712	2,020	430	474	348
27	178	272	305	180	415	219	319	*712	2,140	557	474	342
28	176	272	305	180	*406	224	322	712	2,100	557	461	339
29	178	269	305	178	-	224	*291	712	2,060	561	444	342
30	193	269	308	178	-	224	267	712	1,880	565	441	345
31	205	-	308	180	-	224	-	708	-	561	435	-
Total	6,030	8,517	8,162	6,112	6,009	9,878	8,471	19,457	42,070	22,828	15,317	12,216
Mean	195	284	263	197	215	319	282	628	1,402	736	494	407
Ac-ft	11,960	16,890	16,190	12,120	11,920	19,590	16,800	38,590	85,440	45,280	30,380	24,230
Calendar year 1956: Max	1,620			Min	123		Mean	427	Ac-ft	310,200		
Water year 1956-57: Max	2,140			Min	41		Mean	452	Ac-ft	327,400		

* Discharge measurement made on this day.

South Fork Provo River at Vivian Park, Utah

Location.--Lat 40°21'10", long 111°34'10", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1957.

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.

Extremes.--Maximum discharge during year, 49 cfs June 7 (gage height, 1.25 ft); minimum, 7.1 cfs Aug. 1.

1911-57: Maximum discharge observed, 123 cfs May 27, 1922; minimum, 5.4 cfs May 28, 29, 1954, Sept. 11, 1955, July 28, 1956.

Remarks.--Records good. Flow affected by irrigation diversions above, and diversion for city of Provo municipal supply which bypasses gaging station.

Rating table, water year 1956-57 (gage height, in feet,
and discharge, in cubic feet per second)

0.4	7.4
.8	23
1.3	52

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	16	16	15	16	16	14	13	23	16	8.1	19
2	13	16	16	15	16	16	14	14	25	16	8.1	19
3	10	16	16	15	16	16	13	15	32	18	9.7	19
4	12	16	16	15	16	16	13	15	*37	18	12	18
5	12	16	16	15	16	16	13	15	42	*16	15	18
6	13	16	16	15	16	16	14	16	47	16	18	18
7	13	16	16	15	16	16	14	17	47	16	18	17
8	13	16	15	15	16	15	14	17	43	16	16	17
9	13	16	15	15	16	15	13	19	38	15	15	16
10	14	16	16	15	16	15	13	19	33	14	15	11
11	15	16	18	15	16	14	13	20	32	13	14	9.0
12	16	16	17	15	16	14	13	19	28	13	13	10
13	16	16	16	16	16	15	13	19	30	14	13	11
14	16	16	17	18	16	15	13	20	28	13	14	13
15	16	16	16	16	16	15	13	19	26	13	16	16
16	16	16	16	16	16	15	13	18	25	13	15	16
17	16	16	16	15	15	15	13	19	23	13	14	13
18	15	16	15	15	15	14	13	19	21	11	14	13
19	15	16	*15	15	15	14	14	23	18	8.4	14	14
20	14	*16	15	15	16	14	13	23	15	9.0	15	15
21	14	16	15	15	17	14	13	22	17	9.7	*14	16
22	14	17	15	15	17	14	14	21	18	11	15	16
23	*15	16	15	15	17	14	14	21	17	11	16	17
24	15	16	15	*15	17	14	14	21	16	10	16	*17
25	16	16	15	15	18	14	13	20	17	*12	18	20
26	16	16	15	15	16	*14	13	20	19	12	17	20
27	16	16	15	15	16	14	13	*20	18	15	18	20
28	16	16	15	15	*16	14	13	20	19	14	19	18
29	16	16	15	15	-	13	*13	22	20	13	19	17
30	16	16	15	16	-	14	13	22	21	11	19	18
31	16	---	15	16	---	14	---	22	---	9.1	19	---
Total	452	481	484	473	451	454	399	590	795	408.2	464.9	481.0
Mean	14.6	16.0	15.6	15.3	16.1	14.6	13.3	19.0	26.5	13.2	15.0	16.0
Ac-ft	897	954	960	938	895	900	791	1,170	1,580	810	922	954

Calendar year 1956: Max 20 Min 6.2 Mean 13.6 Ac-ft 9,860
Water year 1956-57: Max 47 Min 8.1 Mean 16.3 Ac-ft 11,770

* Discharge measurement made on this day.

Provo River at Provo, Utah

Location.--Lat 40°14'15", long 111°41'55", in NW¼ 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 1957. Published as Provo River at San Pedro, Los Angeles and Salt Lake Railroad bridge near Provo 1903-4 and as Provo River at Rio Grande Western Railroad bridge near Provo 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 1,000 ft upstream at different datum. November 1938 to Aug. 23, 1957, water-stage recorder at present site at datum 2.00 ft higher.

Average discharge.--21 years (1933-34, 1937-57), 178 cfs (128,900 acre-ft per year).

Extremes.--Maximum discharge during year, 1,330 cfs June 27 (gage height, 3.31 ft); minimum not determined, occurred during period of no gage-height record.
1903-5, 1933-34, 1937-57: Maximum discharge, 2,520 cfs May 6, 1952 (gage height, 6.37 ft); practically no flow during several periods.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Station is below all diversions. At times entire flow is diverted above station for irrigation. Flow regulated by Deer Creek Reservoir (see p. 98) and small lakes at headwaters that serve as reservoirs. Small transmountain diversions from Strawberry River basin into Daniels Creek. Flow affected by Weber-Provo diversion canal (see p. 96) and Duchesne tunnel (see p. 104). Certain diversions for industrial use which reach Provo Bay, an arm of Utah Lake, are made above station; however, part of this flow is used for irrigation.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 20-31, June 20 to July 8, Aug. 23 to Sept. 30)

0.2	5.0	1.2	126	2.5	615
.3	11	1.6	228	3.0	865
.5	27	2.0	378	3.9	1,340
.8	61				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	184	275	309	170	365	238	198	279	955		14
2	14	238	279	313	90	361	251	174	254	*845		14
3	14	244	275	320	90	361	241	156	365	785		15
4	13	144	265	283	160	357	283	128	450	506		15
5	11	239	265	216		365	286	152	545	207		14
6	13	283	268	198		361	293	157	*645	174		14
7	14	286	265	195	190	357	293	166	765	143		15
8	16	283	268	198		353	290	169	1,030	81		14
9	16	290	265	195		353	290	159	1,000	*35		15
10	16	286	241	184		353	290	161	995			13
11	15	283	193	184		349	279	219	935		6.0	14
12	24	275	193	184		349	284	248	870			17
13	49	283	187	204		340	228	272	660			17
14	55	286	190	213		336	231	301	590			16
15	59	290	176	193	200	336	248	301	540	11		16
16	56	286	176	190		332	290	283	459			20
17	55	283	222	187		309	297	279	320			19
18	65	198	*309	184		293	290	258	193			20
19	72	290	313	182		261	290	345	109			26
20	82	*283	313	182		228	279	550	94		(*)	29
21	82	268	309	*184	220	228	286	640	92			33
22	76	268	309	182		238	290	655	95		8.0	39
23	*69	268	309	184		238	305	635	102		*8.6	39
24	92	272	309	187		235	301	600	351		7.9	*35
25	118	272	313		350	241	301	540	1,080		12	33
26	128	275	309		360	*228	297	526	1,250	7.0	16	33
27	130	279	309		360	222	290	502	1,300		16	39
28	141	279	309	180	*374	219	290	482	1,250		19	46
29	141	275	309			219	261	400	1,240		16	41
30	149	275	309			219	*216	*357	1,090		13	45
31	157		305			222		320			12	
Total	1,952	7,965	6,337	6,311	5,994	9,228	6,252	10,313	18,948	3,929	258.5	720
Mean	63.0	266	269	204	214	298	275	333	632	127	8.54	24.0
Ac-ft	3,870	15,800	16,540	12,520	11,690	18,300	16,370	20,460	37,580	7,790	513	1,430
Calendar year 1956: Max			855	Min	-	Mean	182	Ac-ft	131,900			
Water year 1956-57: Max			1,300	Min	-	Mean	225	Ac-ft	163,100			

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 25 to Feb. 27, July 9 to Aug. 22; discharge estimated on basis of 3 discharge measurements, available trace, and records for station at Vivian Park.

American Fork above upper powerplant, near American Fork, Utah

Location.--Lat 40°26'50", long 111°40'55", 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 power plant 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 1957 in reports of Geological Survey. January 1927 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, 53.0 cfs (38,370 acre-ft per year).

Extremes.--Maximum discharge during year, 509 cfs June 6 (gage height, 6.49 ft); minimum, 8.4 cfs, Jan. 17.
1927-57: Maximum discharge not determined, occurred July 30, 1953 (gage height, 9.2 ft, from floodmark); minimum, 4 cfs Jan. 25, 1952.

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

Cooperation.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	*16	14	12	12	13	18	27	241	179	55	32
2	19	a16	14	12	12	13	17	40	257	174	52	31
3	19	a16	14	12	12	14	17	64	318	167	50	30
4	19	a16	14	12	b12	13	16	77	309	158	50	29
5	19	a16	14	12	b12	14	15	*95	*357	143	48	28
6	19	a16	14	12	12	13	18	111	400	137	47	28
7	19	a16	14	12	11	*13	16	114	425	133	46	26
8	19	a16	b14	12	12	14	15	113	400	125	43	26
9	18	a16	b14	12	12	15	16	107	345	127	*42	26
10	18	16	14	b12	11	15	18	114	297	125	40	26
11	18	16	15	12	12	14	20	104	252	123	41	26
12	19	15	14	12	12	15	24	96	*238	*114	40	25
13	19	15	14	14	12	14	29	93	222	107	39	24
14	19	14	*14	12	12	12	31	92	209	103	39	24
15	18	13	13	12	12	14	29	82	196	99	39	24
16	18	14	14	10	12	14	32	*81	171	96	38	24
17	18	16	13	b10	12	14	*32	92	143	93	37	22
18	18	15	*13	b11	13	14	*39	107	137	90	37	23
19	18	b14	13	11	13	14	36	176	149	87	37	25
20	18	b13	13	12	14	15	30	141	179	84	39	23
21	18	*12	13	*12	14	15	27	129	188	81	*40	23
22	18	14	13	b12	14	15	26	*120	179	81	40	22
23	19	15	b13	12	15	14	26	118	176	77	37	21
24	19	16	13	*12	14	13	24	116	186	*74	36	*20
25	18	15	13	12	15	15	22	111	201	72	37	20
26	*19	15	13	12	14	15	21	116	*203	68	36	*20
27	19	14	13	12	*14	14	20	131	206	67	35	20
28	18	14	13	12	13	*15	21	160	211	65	35	20
29	18	14	13	b12	-	16	23	176	214	64	37	20
30	18	14	13	b12	-----	18	25	*198	193	60	35	20
31	19	-----	13	b12	-----	18	-----	227	-----	58	33	-----
Total	574	448	419	368	355	445	703	3,528	7,202	3,231	1,260	728
Mean	18.5	14.9	31.5	11.9	12.7	14.4	23.4	114	240	104	40.6	24.3
Ac-ft	1,140	889	831	730	704	883	1,390	7,000	14,280	6,410	2,500	1,440
Calendar year 1956: Max	314			Min 12			Mean 52.0	Ac-ft 37,740				
Water year 1956-57: Max	425			Min 10			Mean 52.8	Ac-ft 38,200				

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records, trend of flow, power plant records, and records for nearby stations.

b Stage-discharge relation affected by ice.

Transmountain diversions from Colorado River basin to Jordan River basin

The following ditches and tunnels in Utah, each equipped with a water-stage recorder, divert water from the Colorado River basin to the Jordan River basin. Records of daily flow are available in Salt Lake City district office of the Geological Survey.

Duchesne tunnel diverts water from the Duchesne River to the Provo River. Gage is located in NE $\frac{1}{4}$ sec. 2, T. 3 S., R. 8 E. (see p. 97) for complete record of daily discharge).

Strawberry tunnel whose west portal is in SW $\frac{1}{4}$ 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 (see p. 87 for complete record of daily discharge).

Hobble Creek ditch diverts water from tributary of Strawberry River to Daniels Creek (a tributary of Provo River). Gage is located in NW $\frac{1}{4}$ sec. 15, T. 6 S., R. 6 E.

Strawberry River and Willow Creek ditches divert water from the Strawberry River basin to Daniels Creek. The combined flow is gaged in sec. 4, T. 2 S., R. 12 W., Uinta Special Meridian.

Transmountain diversions, in acre-feet, water year October 1956 to September 1957

Name	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water year
Duchesne tunnel...	448	417	427	428	365	470	650	6,040	10,350	7,730	1,800	669	29,790
Strawberry tunnel...	970	298	307	307	278	339	357	369	5,320	22,040	16,740	10,630	57,960
Hobble Creek ditch.	0	0	0	0	0	0	0	19	650	47	1	0	717
Strawberry River and Willow Creek ditches.	84	0	0	0	0	0	0	0	1,030	753	344	173	2,380
Total in Utah....	1,500	715	734	735	643	809	1,010	6,430	17,350	30,570	18,880	11,470	90,850

Jordan River at narrows, near Lehi, Utah

Location.--Lat 40°26'40", long 111°55'15", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T. 4 S., R. 1 W., at narrows, $\frac{5}{8}$ miles northwest of Lehi and $7\frac{1}{2}$ 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,470 ft (by barometer). Prior to May 16, 1920, staff gage and May 16, 1920, to Sept. 30, 1934, water-stage recorder, at outlet of Utah Lake, $7\frac{1}{2}$ miles upstream at different datum.

Average discharge.--44 years (1913-57), 369 cfs (267,100 acre-ft per year).

Extremes.--1904, 1913-57: Maximum daily discharge, 1,410 cfs June 10, 1952; no flow at times when gates were closed.

Remarks.--Records good above 30 cfs and fair below. They represent combined flow of Jordan River, Utah and 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 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	492	19	17	17	2.8	2.8	3.1	21	376	670	697	614
2	493	19	17	17	2.8	2.8	2.8	21	452	591	689	627
3	494	19	17	17	2.8	2.8	3.1	20	494	682	695	657
4	486	19	17	17	2.8	2.8	3.1	20	553	704	716	664
5	443	19	17	17	2.8	3.1	3.1	20	630	719	734	564
6	431	20	20	12	2.8	3.1	3.1	127	647	714	703	658
7	416	20	23	4.9	2.8	3.1	3.1	277	644	710	725	657
8	415	20	23	4.9	2.8	3.1	2.8	335	639	733	737	659
9	390	20	24	4.6	2.5	3.1	2.8	395	658	732	734	707
10	368	19	24	3.9	2.8	3.1	2.8	471	573	750	754	687
11	371	19	24	3.6	3.1	3.1	2.8	543	444	777	769	703
12	242	19	20	3.6	3.1	3.1	2.8	562	463	778	769	670
13	311	19	17	3.6	3.4	3.1	2.8	506	509	775	765	649
14	321	19	17	3.4	3.1	3.1	3.1	409	508	774	761	617
15	107	19	17	3.4	3.6	3.1	3.1	398	455	770	760	583
16	18	20	17	3.4	3.6	3.1	3.1	392	366	769	753	580
17	18	19	17	3.4	3.6	3.1	3.1	388	296	762	748	580
18	18	19	17	2.8	3.6	3.1	3.4	434	292	790	749	574
19	16	19	17	2.8	3.6	3.1	3.4	296	322	765	747	562
20	16	20	17	2.5	3.6	3.1	3.1	166	370	760	749	562
21	14	20	17	2.5	3.6	3.1	2.5	125	366	757	775	542
22	20	20	17	2.8	3.6	3.1	2.5	90	360	740	780	542
23	26	21	17	2.5	3.4	3.1	2.8	128	458	707	780	527
24	24	21	17	2.5	3.4	3.1	2.8	147	512	723	779	484
25	26	21	17	2.5	3.4	3.4	2.5	120	554	755	746	476
26	26	20	17	2.5	3.4	3.4	4.8	120	609	765	723	456
27	22	18	17	2.5	3.1	3.4	3.4	188	638	735	689	487
28	18	18	17	2.5	3.1	3.4	3.4	254	640	743	616	525
29	20	17	17	2.8	-	3.4	25	297	646	732	582	519
30	20	17	17	2.8	-	3.4	22	334	653	701	522	501
31	18	-	17	2.8	-	3.4	-	356	-	700	552	-
Total	6,120	579	566	176.2	89.0	97.0	132.2	7,960	15,107	22,914	22,298	17,733
Mean	197	19.3	18.3	5.68	3.18	3.13	4.41	257	504	733	719	591
Ac-ft	12,140	1,150	1,120	349	177	192	262	15,790	29,960	45,450	44,230	35,170
Calendar year 1956: Max	817			Min	-	Mean	308	Ac-ft	223,400			
Water year 1956-57: Max	790			Min	2.5	Mean	257	Ac-ft	186,000			

Surplus Canal at Salt Lake City, Utah

Location.--Lat 40°43'40", long 111°55'35", in SW¹/₄SW¹/₄ sec. 14, T. 1 S., R. 1 W., on right bank 350 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 1957.

Gage.--Water-stage recorder. Datum of gage is 4,219.02 ft above mean sea level, datum of 1929. Prior to Oct. 22, 1952, at site 50 ft upstream at present datum. Since Dec. 31, 1946, auxiliary water-stage recorder about 1 mile downstream.

Average discharge.--14 years (1943-57), 196 cfs (141,900 acre-ft per year).

Extremes.--Maximum discharge during year, 872 cfs June 7 (gage height, 6.88 ft); minimum daily, 26 cfs Apr. 5.

1942-57: Maximum discharge, 1,700 cfs June 7, 1952; maximum gage height, 8.84 ft May 7, 1952; minimum daily discharge, 9.6 cfs Jan. 13, Feb. 20, June 26, 1956.

Remarks.--Records good. Flow regulated by headgates at diversion dam 350 ft above station. Canal was built to bypass flood water of Jordan River around Salt Lake City residential and industrial area (see p. 107) 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 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		*176	149	82	81	*77	68	*75	*138	434	*206	133
2		184	142	82	*60	74	68	56	124	488	192	114
3		174	136	82	78	75	82	28	176	*549	174	96
4		176	134	78	80	73	*82	31	147	596	178	70
5		187	130	70	77	70	101	26	144	658	200	101
6		192	141	94	77	71	106	47	152	728	182	107
7		182	142	90	73	68	87	49	155	816	184	117
8		182	139	77	67	74	81	47	179	719	190	133
9		182	141	74	66	75	75	40	166	644	152	122
10		197	134	77	60	71	94	46	154	*693	141	125
11		232	128	98	60	70	87	50	184	704	174	127
12		200	120	154	64	70	70	54	210	604	182	112
13		197	114	155	84	68	73	66	230	602	160	98
14		222	*118	179	126	70	80	74	253	574	133	*114
15		*213	106	136	94	*70	*80	*87	*250	553	*131	152
16		141	94	120	*81	67	70	81	232	598	115	142
17		106	91	*114	68	67	70	91	227	542	138	125
18		102	110	99	66	67	66	99	229	*477	150	119
19		123	94	99	63	66	73	114	420	425	161	123
20		133	90	93	59	61	66	110	556	405	146	114
21		144	123	93	67	66	70	107	398	452	141	126
22		146	125	90	64	64	81	105	320	450	121	160
23		142	126	87	67	68	71	290	285	389	104	168
24		134	125	84	70	71	61	211	315	347	102	150
25		154	128	82	74	80	60	154	376	338	104	147
26		147	130	77	84	77	70	139	363	333	93	155
27		150	131	74	85	78	60	157	371	306	112	160
28		149	120	75	87	74	59	152	381	275	123	*174
29		152	*88	77	84	-	54	144	397	218	133	177
30		128	84	77	84	-----	68	146	410	226	131	197
31		*141	-----	80	81	-----	78	-----	425	-----	*136	195
Total	5,148	3,633	2,949	2,351	1,982	2,309	2,876	8,377	15,143	4,589	4,146	5,140
Mean	166	121	95.1	75.8	70.8	74.5	95.9	270	505	148	134	171
Ac-ft	10,210	7,210	5,850	4,660	3,930	4,580	5,700	16,620	30,040	9,100	8,220	10,200
Calendar year 1956: Max 559 Min 9.6 Mean 121 Ac-ft 87,470												
Water year 1956-57: Max 816 Min 26 Mean 161 Ac-ft 116,300												

* Discharge measurement made on this day.

Jordan River at Salt Lake City, Utah

Location.--Lat 40°43'40", long 111°55'25", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 1957.

Gage.--Water-stage recorder. Datum of gage is 4,220.73 ft above mean sea level, datum of 1929.

Average discharge.--14 years (1943-57), 150 cfs (108,600 acre-ft per year).

Extremes.--Maximum discharge during year, 223 cfs May 19 (gage height, 4.00 ft); minimum, 23 cfs May 21.

Maximum combined discharge during year (Jordan River and Surplus Canal), 935 cfs June 7; minimum daily, 167 cfs Apr. 5.

1942-57: Maximum discharge, 384 cfs June 3, 1944; maximum gage height, 5.75 ft June 26, 1952; no flow May 10, 24, 1952 (entire flow diverted to Surplus Canal).

Maximum combined discharge (Jordan River and Surplus Canal), 1,820 cfs June 7, 1952; minimum daily, 141 cfs July 13, 1955.

Remarks.--Records good. Flow completely regulated since reconstruction, in May 1952, of Surplus Canal diversion dam 1,000 ft upstream. Flow affected by gates and pumps at outlet of Utah Lake. Many diversions above station for irrigation and industrial and municipal water supplies. See preceding page for records of Surplus Canal. For records of combined flow see following page.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*186	184	153	133	*126	141	*151	*147	56	*180	170	174
2	186	186	150	*132	130	141	152	149	63	164	159	174
3	181	183	149	134	133	150	153	166	*58	151	155	169
4	179	182	149	137	134	*152	148	159	70	147	154	163
5	179	182	151	137	134	156	141	156	67	148	164	162
6	180	185	152	138	137	158	153	164	60	139	156	154
7	176	186	154	139	138	148	158	168	60	141	151	154
8	184	187	155	139	143	144	151	178	84	145	149	150
9	186	182	154	141	146	141	142	170	136	132	143	153
10	194	172	155	141	145	147	141	163	*140	134	141	166
11	190	165	156	143	145	144	146	174	135	158	141	163
12	191	163	172	146	146	140	150	181	120	161	144	165
13	195	158	175	156	146	145	153	193	123	146	134	166
14	209	*164	183	170	146	148	157	175	119	137	*143	163
15	*207	164	168	166	*147	*147	*158	*151	105	*131	158	168
16	180	162	160	*162	145	144	155	*154	131	124	151	*171
17	164	162	*159	155	144	143	127	151	115	128	144	166
18	156	166	155	152	144	142	107	140	*90	132	158	161
19	157	163	153	151	143	143	112	118	103	136	141	173
20	162	160	150	149	141	139	112	33	128	119	137	184
21	159	170	149	150	141	139	108	31	143	130	148	190
22	159	169	149	147	141	144	110	37	137	155	166	194
23	154	170	146	147	145	144	170	37	119	171	167	189
24	172	169	144	146	147	142	189	40	114	176	158	179
25	176	169	142	138	148	141	157	40	120	177	161	175
26	185	170	140	131	144	141	151	43	155	170	160	171
27	182	168	137	131	146	137	156	48	168	175	168	178
28	178	166	137	130	144	135	148	49	183	174	*172	181
29	182	*153	136	129	-	134	144	50	197	178	174	186
30	178	153	134	127	-----	140	152	49	197	174	178	184
31	*174	-----	135	124	-----	143	-----	53	-----	*171	177	-----
Total	5,541	5,113	4,702	4,421	3,969	4,453	4,332	3,587	3,496	4,704	4,802	5,124
Mean	179	170	152	143	142	144	144	115	117	152	155	171
Ac-ft	10,990	10,140	9,330	8,770	7,870	8,830	8,590	7,080	6,930	9,330	9,520	10,160
Calendar year 1956: Max		251			Min 70		Mean 166		Ac-ft 120,300			
Water year 1956-57: Max		209			Min 31		Mean 149		Ac-ft 107,500			

* Discharge measurement made on this day.

Jordan River at Salt Lake City, Utah--Continued

Combined discharge, in cubic feet per second, of Jordan River and Surplus Canal at
Salt Lake City, Utah, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	362	333	235	214	203	209	226	285	490	386	303	361
2	370	328	232	212	204	209	208	283	551	356	273	358
3	355	319	231	212	208	232	181	342	607	325	251	342
4	355	316	227	217	207	234	179	306	666	325	224	309
5	366	312	221	214	204	257	167	300	725	349	265	293
6	372	326	246	215	208	264	200	316	788	321	263	282
7	358	328	244	212	206	235	207	323	876	325	268	295
8	366	326	232	206	217	225	198	357	803	335	282	288
9	369	323	228	207	221	216	182	336	780	284	265	297
10	391	306	232	201	216	241	187	317	853	275	266	328
11	422	293	254	203	215	231	196	358	839	332	261	331
12	391	283	326	210	216	210	204	391	724	343	256	349
13	392	272	330	240	214	218	219	423	725	306	232	352
14	431	282	362	296	216	228	231	428	693	270	257	339
15	420	270	304	260	217	227	245	401	658	262	310	346
16	321	256	280	243	212	214	236	386	729	239	293	344
17	270	253	273	223	211	213	218	378	657	266	269	337
18	258	276	254	218	211	208	206	369	567	282	257	327
19	280	257	252	214	209	216	228	538	528	297	264	360
20	295	250	243	208	202	205	222	589	533	285	251	387
21	303	293	242	217	207	209	215	429	595	271	274	404
22	305	294	239	211	205	225	215	357	587	276	326	391
23	296	296	233	214	213	215	460	322	508	275	335	383
24	366	294	228	216	218	203	380	355	461	278	308	366
25	330	297	224	212	228	201	311	416	458	281	308	338
26	332	300	217	215	221	211	290	406	488	263	315	331
27	332	299	211	216	224	197	313	419	474	287	328	349
28	327	286	212	217	218	194	300	430	458	297	346	355
29	334	241	213	213	-	188	288	447	415	311	351	364
30	306	237	211	211	-----	206	298	459	423	305	375	358
31	315	-----	215	205	-----	221	-----	478	-----	307	372	-----
Total	10,689	8,746	7,651	6,772	5,951	6,762	7,208	11,944	18,639	9,293	8,948	10,264
Mean	345	292	247	218	213	218	240	385	621	300	289	342
Ac-ft	21,200	17,350	15,180	13,430	11,800	13,410	14,300	23,690	36,970	18,430	17,750	20,360
Calendar year 1956: Max			805		Min 153		Mean 286		Ac-ft 207,800			
Water year 1956-57: Max			876		Min 167		Mean 309		Ac-ft 223,900			

Duck Creek near Hatch, Utah

Location.--Lat 37°31', long 112°42', in SW $\frac{1}{4}$ sec. 12, T. 38 S., R. 8 W., Salt Lake Base and meridian, on State Highway 14, 3 miles east of Navajo Lake, 400 ft downstream from Duck Creek Spring, 200 ft east of Duck Lake Dam, and 18 miles southwest of Hatch.

Records available.--October 1953 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 8,530 ft (by barometer).

Extremes.--Maximum and minimum discharges for the water years 1954-57 are contained in the following table:

Water year	Maximum			Minimum	
	Date	Discharge (cfs)	Gage height (feet)	Date	Discharge (cfs)
1954	May 20, 1954	140	3.04	(+)	-
1955	May 14, 1955	43	2.22	(+)	-
1956	May 24, 1956	65	2.41	(+)	-
1957	June 6, 1957	156	3.30	-	††0.5

† Not determined; occurred during period of ice effect.

‡ Not determined; occurred during period of no gage-height record.

†† Minimum daily, 0.5 cfs for many days during period January to April.

1953-57: Maximum discharge, 156 cfs June 6, 1957 (gage height, 3.30 ft); minimum not determined; less than 0.4 cfs during period 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. Station is above all diversions.

Rating table, water years 1954-57, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 2 to Feb. 19, June 4-10, 1957)

1.0	0.4	1.3	3.2	2.1	38
1.1	.9	1.5	8.0	2.5	72
1.2	1.8	1.7	15	3.1	144

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

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1			1.9	1.0	0.6	0.7	0.8	23	24	19	9.9	6.4
2			1.9	1.0	.6	.7	.8	20	24	*18	*9.9	6.2
3			1.9	1.0	.6	.7	.9	18	23	18	11	6.2
4			2.2	1.0	.5	.6	1.0	19	*22	19	12	6.2
5			1.9	1.0	.6	.5	1.5	22	22	18	13	6.4
6		1.9	1.7	1.0	.6	.5	2.7	24	22	18	*13	6.2
7			1.8	1.0	.6	.5	4.9	28	22	17	13	6.4
8			1.7	*1.0	.6	.4	5.1	33	22	17	13	6.2
9			1.6	1.0	.6		7.7	36	22	17	12	5.9
10			1.6	1.0	.6		9.6	*39	22	17	11	6.2
11			1.5	1.0	.5		8.4	68	21	16	9.9	6.9
12		*1.9	1.3	1.0	.6		2.0	*95	21	16	9.3	8.3
13		1.9	1.3	1.0	.7		2.4	95	22	16	9.3	8.3
14		1.9	1.3	1.0	.9		3.8	91	21	16	9.3	7.7
15		2.0	*1.2	1.0	.8		4.9	88	21	16	8.6	7.7
16		2.0	1.2	.9	.6		5.4	88	21	*16	9.0	7.5
17		1.8	1.2	.9	.6		7.2	78	*21	18	9.0	7.5
18		1.8	1.2	*.9	.8		9.6	80	21	16	6.2	7.2
19		1.8	1.2	1.2	.7	b.4	*12	92	20	16	6.9	7.2
20		1.8	1.2	1.0	.6		13	*91	20	15	*8.3	6.9
21		1.8	*1.1	.8	.6		14	80	20	15	9.3	6.9
22		*1.7	1.1	.8	.6	(*)	16	75	20	15	9.6	6.7
23		1.7	1.0	.8	*.6		17	51	20	15	9.3	6.7
24		1.7	1.0	1.0	.6		19	48	20	14	12	6.7
25		1.8	1.0	1.4	.6		19	42	20	13	9.9	6.7
26		1.8	1.0	.9	.6		20	39	20	13	9.9	6.2
27		1.8	1.0	.8	.6		21	*32	20	12	9.3	6.2
28		1.8	1.0	.7	.7		22	29	20	11	7.7	6.2
29		1.7	1.0	.8	-	.5	24	28	19	11	7.2	5.9
30		1.7	1.0	.7	-----	.6	25	27	19	10	6.7	5.6
31		-----	1.0	.6	-----	.7	-----	26	-----	9.9	6.7	-----
Total	62.0	55.3	42.0	29.2	17.6	14.4	300.7	1,605	632	475.9	301.2	201.3
Mean	2.0	1.84	1.35	0.94	0.63	0.46	10.0	51.8	21.1	15.4	9.72	6.71
Ac-ft	123	110	83	58	35	29	596	3,180	1,250	944	597	399

Calendar year 1953: Max - Min - Mean - Ac-ft -
Water year 1953-54: Max 95 Min - Mean 10.2 Ac-ft 7,400

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Oct. 1 to Nov. 11; discharge estimated on basis of weather records and records for nearby streams.

Duck Creek near Hatch, Utah--Continued

Discharge, in cubic feet per second, water year October 1954 to September 1955

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.1	3.4	2.4	1.0				4.2	9.9	*8.0	3.8	2.9
2	4.9	3.4	2.4	1.1				4.0	9.3	7.7	3.8	2.7
3	4.6	*3.4	2.6	1.0				3.6	9.0	7.5	3.8	2.7
4	4.6	3.4	2.9	.9				3.6	8.6	6.9	3.8	2.7
5	*4.4	3.4	2.4	.9				5.1	8.3	6.7	3.8	2.6
6	4.4	3.2	2.3	1.0				6.9	*8.0	6.4	3.6	2.7
7	4.4	3.2	2.3	1.0			0.7	9.0	7.7	5.9	3.4	2.7
8	4.2	3.2	2.3	.9				10	7.7	5.6	3.4	2.6
9	4.0	3.0	2.2	.9				9.9	7.5	5.4	3.4	3.0
10	4.0	3.0	2.3	.9				9.6	7.7	5.1	3.4	3.0
11	4.0	3.0	2.3	.9				9.9	7.7	4.6	3.4	2.7
12	4.0	3.2	2.0	.8				11	7.5	4.6	4.0	2.7
13	4.0	3.0	1.9	.8				16	7.5	4.6	4.4	2.6
14	4.0	2.9	*1.9	.8			*1.5	31	7.2	4.6	4.2	2.6
15	3.8	2.9	1.9	.8	0.6	0.5	3.7	24	6.9	4.6	3.8	*2.6
16	3.8	3.0	1.8	.9			7.2	15	6.7	4.6	3.6	2.6
17	3.8	2.9	1.8	.8			5.6	13	6.4	4.6	3.6	2.6
18	3.8	2.9	1.7	.8			3.8	12	6.4	4.4	3.6	2.7
19	3.6	2.9	1.6	.8			3.0	12	7.5	4.4	*3.4	2.6
20	3.6	2.7	1.6	.8			3.6	22	8.6	4.4	3.2	2.6
21	3.6	2.7	1.5	.8			7.2	20	9.0	4.2	3.2	2.6
22	3.4	*2.7	1.6	.8			2.4	27	9.3	4.2	3.2	2.4
23	3.4	2.6	1.5	.8			1.1	25	9.3	4.2	3.2	2.4
24	3.6	2.6	1.5	.8			1.4	21	9.3	4.2	3.6	2.4
25	3.6	2.4	1.4	.8			1.8	16	9.3	4.2	6.6	2.4
26	3.4	2.6	1.4	.8			2.3	12	9.0	4.0	8.1	2.4
27	3.4	2.6	1.4	.8			2.2	11	9.0	*3.8	4.4	2.3
28	3.4	2.6	1.2	.7			2.4	11	9.0	3.8	3.6	2.3
29	3.4	2.7	1.2	.6			3.0	9.9	8.3	4.0	3.4	2.3
30	3.4	2.7	1.1	.6			3.6	9.9	8.0	4.0	3.2	2.3
31	3.4	-----	1.0	.6			-----	9.6	-----	3.8	3.0	-----
Total	121.0	88.2	57.4	25.9	16.8	15.5	64.9	404.2	245.6	155.0	118.9	77.7
Mean	3.90	2.94	1.85	0.84	0.6	0.5	2.16	13.0	8.19	5.00	3.84	2.59
Ac-ft	240	175	114	51	33	31	129	802	487	307	236	154

Calendar year 1954: Max 95

Min -

Mean 10.5

Ac-ft 7,620

Water year 1954-55: Max 31

Min -

Mean 3.81

Ac-ft 2,760

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 29 to Apr. 13; discharge estimated on basis of weather records and records for nearby streams.

Discharge, in cubic feet per second, water year October 1955 to September 1956

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.3	1.6	1.7				0.5	11	12	10	4.6	2.9
2	2.2	1.6	1.5				.8	12	12	9.9	*4.8	2.9
3	2.2	1.6	1.3				.7	14	11	9.6	4.4	2.9
4	2.3	1.5	1.1				.8	15	11	9.6	4.4	2.9
5	2.3	1.6	1.1				1.0	16	11	8.6	4.4	2.9
6	2.2	1.6	1.0				1.2	18	11	8.0	4.2	2.9
7	1.9	1.6	.9				1.5	18	10	7.7	4.0	2.9
8	1.9	1.6	.9				2.0	29	9.9	7.2	4.0	2.9
9	1.9	*1.6	.8				2.5	34	9.6	7.2	4.2	3.0
10	*1.9	1.6	.7				*3.0	28	9.3	6.9	4.0	3.0
11	1.8	1.6	.6				3.6	23	9.3	6.9	4.2	2.9
12	1.8	1.6	.6				3.2	23	9.0	6.4	4.0	2.9
13	1.7	1.8	.6				3.4	17	8.6	6.2	3.8	2.9
14	1.6	3.5	.6				3.0	16	8.3	5.9	3.8	2.9
15	1.6	1.6	.6				2.7	14	8.3	5.6	3.6	*2.9
16	1.6	1.4	.6	0.5	0.5	0.5	2.6	13	8.3	5.4	3.6	2.7
17	1.6	1.5	.5				3.0	17	8.3	5.4	3.4	2.6
18	1.7	1.4	.5				3.0	30	9.6	5.1	3.2	2.6
19	1.7	1.4	.4				2.9	41	11	5.1	3.2	2.6
20	1.7	1.5	.4				2.6	44	11	5.1	3.0	2.6
21	1.7	1.8	.5				3.2	36	11	5.1	2.9	2.7
22	1.6	1.8	.7				4.6	37	11	4.9	2.9	2.6
23	1.6	1.6	.6				6.4	45	11	4.9	2.9	2.6
24	1.5	1.6	.5				7.5	47	11	4.6	2.9	2.4
25	1.5	1.6	.5				8.6	38	11	4.6	3.2	2.4
26	1.6	1.5	.5				9.9	*28	11	4.9	3.2	2.4
27	1.7	1.5	.5				*12	21	11	5.4	3.2	2.4
28	1.6	1.5	.5				10	21	11	5.4	3.2	2.4
29	1.6	1.5	.4				9.6	19	11	5.1	3.2	2.4
30	1.6	1.7	.4				9.6	15	*11	4.9	3.2	2.4
31	1.6	-----	.4				-----	13	-----	4.9	3.0	-----
Total	55.5	49.3	21.9	15.5	14.0	15.5	125.2	753	308.5	196.5	112.4	81.5
Mean	1.79	1.64	0.71	0.5	0.5	0.5	4.17	24.3	10.3	6.34	3.63	2.72
Ac-ft	110	98	43	31	28	31	248	1,490	612	390	223	162

Calendar year 1955: Max 31

Min -

Mean 3.43

Ac-ft 2,480

Water year 1955-56: Max 47

Min -

Mean 4.78

Ac-ft 3,470

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 31 to Apr. 9; discharge estimated on basis of weather records and records for nearby streams.

SEVIER LAKE BASIN

Duck Creek near Hatch, Utah--Continued

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	2.0	1.6	0.6	0.6	0.6	0.5	2.3	37	29	22	17
2	2.4	1.9	1.6	.7	.5	.5	.5	4.4	39	28	21	17
3	2.6	1.8	1.6	.7	.5	.5	.5	7.2	40	27	21	17
4	2.3	1.7	1.7	.7	.6	.5	.5	11	52	27	21	17
5	2.2	1.7	1.8	.7	.6	.5	.6	14	80	27	21	17
6	2.2	1.7	1.9	.7	.6	.5	.6	16	92	27	21	17
7	2.3	1.7	2.2	.8	.6	.5	.7	18	119	26	20	16
8	2.2	1.9	1.7	.8	.6	.5	.8	19	*116	26	20	16
9	2.2	1.9	1.6	.8	.6	.6	.8	20	110	27	20	16
10	2.2	1.9	1.6	.7	.6	.6	.7	*23	129	27	20	16
11	2.2	1.9	1.5	.7	.6	.5	.8	23	*89	28	20	*16
12	2.2	1.9	1.5	.8	.6	.5	.9	21	90	27	20	16
13	2.2	1.9	1.4	.8	.5	.5	3.0	19	117	26	*20	16
14	2.2	1.9	1.5	.9	.5	.5	4.0	17	112	26	20	16
15	2.2	1.9	1.4	.7	.5	.5	4.4	16	112	26	20	16
16	2.2	1.8	1.3	.6	.5	.5	5.4	15	83	26	20	16
17	2.2	1.8	1.2	.6	.5	.5	5.6	16	80	25	19	16
18	2.2	1.8	1.2	*.6	.5	.6	6.9	17	94	*25	19	16
19	*2.0	1.8	1.2	.5	.6	.6	4.6	22	92	26	19	16
20	1.9	1.7	1.1	.5	.5	.6	4.5	25	82	25	19	16
21	1.9	1.6	1.1	.5	.6	.5	4.0	25	68	25	19	15
22	1.9	1.6	1.1	.5	.6	.5	3.5	24	53	24	19	15
23	2.0	1.6	1.0	.5	.6	.5	*3.2	24	45	24	19	16
24	2.2	1.6	1.0	.5	.5	.5	2.9	22	40	24	18	16
25	2.0	1.5	.9	.5	.5	.5	2.4	20	*36	24	18	15
26	2.0	1.5	.8	.5	.5	.5	2.2	20	34	24	18	15
27	2.0	*1.5	.8	.5	.5	.6	2.2	21	33	23	18	15
28	2.2	1.5	.8	.5	.6	.6	2.0	*25	32	23	17	15
29	2.2	1.6	.7	.5	-	.6	2.0	31	31	22	17	15
30	2.0	1.7	.7	.6	-----	.6	2.0	34	30	22	17	15
31	1.9	-----	.7	.6	-----	.5	-----	36	-----	22	17	-----
Total	66.8	52.3	40.2	19.6	15.6	16.5	72.7	607.9	2,167	788	600	478
Mean	2.15	1.74	1.30	0.63	0.56	0.53	2.42	19.6	72.2	25.4	19.4	15.9
Ac-ft	132	104	80	39	31	33	144	1,210	4,300	1,560	1,190	948
Calendar year 1956: Max 47 Min - Mean 4.87 Ac-ft 3,530												
Water year 1956-57: Max 129 Min 0.5 Mean 13.5 Ac-ft 9,770												

* Discharge measurement made on this day.

Asay Creek above West Fork, near Hatch, Utah

Location.--Lat 37°33', long 112°31', in sec. 33, T. 37 S., R. 6 W., Salt Lake meridian, half a mile below Asay Creek spring, 2 miles upstream from West Fork Asay Creek, and 8 miles southwest of Hatch.

Records available.--July 1954 to September 1957.

Gage.--Water-stage recorder.

Extremes.--Maximum and minimum discharges for the water years 1954-57 are contained in the following table:

Water year	Maximum			Minimum	
	Date	Discharge (cfs)	Gage height (feet)	Date	Discharge (cfs)
1954†	July 25, 1954	59	1.89	Sept. 6, 1954	22
1955	May 15, 23, 1955	36	±1.64	(††)	-
1956	May 25, 1956	48	1.74	-	±13
1957	June 10, 1957	110	2.39	(††)	-

† Period July to September.

‡ May 23, 1955.

†† Not determined; probably occurred during period of no gage-height record.

±± From recorded range in stage, during period Jan. 22 to Mar. 30, 1956.

1954-57: Maximum discharge, 110 cfs June 10, 1957; minimum recorded, 13 cfs sometime during period Jan. 22 to Mar. 30, 1956 (from recorded range in stage).

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

Discharge, in cubic feet per second, 1954

Day	Discharge	Day	Discharge	Day	Discharge	Day	Discharge	Day	Discharge
July 1-12	a36	July 28	32	Aug. 13	27	Aug. 29	25	Sept. 14	25
13	*35	29	31	14	27	30	25	15	25
14	35	30	30	15	27	31	25	16	25
15	35	31	30	16	27	Sept. 1	24	17	25
16	34	Aug. 1	29	17	27	2	24	18	25
17	34	2	29	18	27	3	24	19	25
18	35	3	*28	19	*25	4	24	20	25
19	34	4	28	20	25	5	24	21	24
20	33	5	28	21	25	6	24	22	24
21	34	6	28	22	25	7	*24	23	24
22	35	7	29	23	*26	8	24	24	24
23	35	8	29	24	26	9	24	25	24
24	35	9	29	25	28	10	24	26	24
25	37	10	29	26	*28	11	24	27	24
26	35	11	*28	27	27	12	26	28	24
27	34	12	28	28	26	13	26	29	23
								30	23

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
July 1954.....	1,075	-	30	34.7	2,130
August.....	840	29	25	27.1	1,670
September.....	729	26	23	24.3	1,450

* Discharge measurement made on this day.

a Average for period indicated.

Note.--No gage-height record July 1-12; discharge estimated on basis of weather records and trend of flow.

Asay Creek above West Fork, near Hatch, Utah--Continued

Discharge, in cubic feet per second, water year October 1954 to September 1955

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	22	22	17	16	16	17	22	25	22	18	18
2	23	22	22	17				24	25	22	18	18
3	23	*22	22	17				24	24	22	19	18
4	*23	22	22	17				23	24	22	19	18
5	23	22	22	17				22	24	22	19	18
6	22	22	22	17	16	15	18	23	*24	21	*19	18
7	22	22	22	17				25	23	20	19	18
8	22	22	21	17				27	23	20	18	18
9	22	22	21	17				28	23	20	18	18
10	22	22	22	17				27	23	*20	18	18
11	22	22	22	16	16	15	18	26	22	20	18	18
12	22	22	21	16				25	22	20	18	18
13	22	22	20	16				*18	22	20	19	18
14	22	22	20	16				19	23	20	19	18
15	22	22	20	16				19	22	20	19	18
16	22	22	20	16	16	15	18	19	34	22	20	18
17	22	22	20	15				19	31	22	20	18
18	22	22	20	15				18	29	22	20	18
19	22	22	20	15				18	28	22	20	18
20	22	21	*20	15				18	28	23	19	17
21	22	21	20	15	15	16	25	30	22	19	18	18
22	22	*21	20					32	23	19	18	17
23	22	21	19					20	35	24	19	18
24	22	21	19					35	24	19	18	17
25	22	21	19					31	24	19	18	17
26	22	21	19	16	16	16	25	29	24	19	*18	17
27	22	21	18					24	27	23	19	17
28	22	21	18					23	27	23	19	17
29	22	21	18					22	26	23	19	17
30	22	21	17					23	25	22	19	17
31	22	17	17					25	25	18	18	17
Total	687	649	625	497	440	486	583	857	692	618	566	529
Mean	22.2	21.6	20.2	16.0	15.7	15.7	19.4	27.6	23.1	19.9	18.3	17.6
Ac-ft	1,360	1,290	1,240	986	873	964	1,160	1,700	1,370	1,230	1,120	1,050

Calendar year 1954: Max - Min - Mean - Ac-ft -
 Water year 1954-55: Max 35 Min - Mean 19.8 Ac-ft 14,340

* Discharge measurement made on this day. Note.--No gage-height record Jan. 21 to Apr. 12; discharge estimated on basis of records for nearby streams.

Discharge, in cubic feet per second, water year October 1955 to September 1956

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	18	18	17	17	17	18	25	30	23	20	18
2	17	18	18	17			17	25	28	22	20	18
3	17	18	18	17			17	25	28	22	*20	18
4	18	18	18	17			17	27	28	24	20	18
5	18	18	18	17			16	28	27	27	20	18
6	18	18	18	17	17	17	17	28	*27	26	19	17
7	18	18	18	17			18	28	26	25	19	18
8	18	18	17	17			19	30	25	24	19	18
9	18	*18	17	17			19	35	24	24	19	18
10	*18	18	17	17			20	40	24	24	19	18
11	18	18	17	17	17	17	20	38	24	24	19	18
12	18	18	17	17			19	35	23	24	19	18
13	18	18	17	17			19	35	22	22	19	18
14	18	18	17	17			19	34	22	23	19	18
15	18	18	17	17			19	30	22	22	19	*17
16	18	19	17	17	17	17	19	29	22	22	19	17
17	18	18	17	17			19	28	22	22	19	17
18	18	18	17	17			19	30	22	22	19	17
19	18	18	17	17			19	36	22	22	19	18
20	18	17	17	17			19	42	23	22	18	18
21	18	17	17	17	17	17	19	43	23	21	18	18
22	18	17	17	17			21	43	23	21	18	18
23	18	17	18	18			22	44	23	21	18	18
24	18	18	18	18			22	44	24	20	18	18
25	18	18	18	18			23	47	24	21	18	18
26	18	18	18	17	17	17	24	46	23	21	18	18
27	18	18	18				25	44	22	20	18	18
28	18	18	18				25	38	20	20	18	18
29	18	18	18				25	*35	22	20	18	18
30	19	18	17				25	35	*23	20	18	18
31	18	17	17				*17	31	23	20	18	18
Total	555	536	541	527	493	527	600	1,078	718	691	582	535
Mean	17.9	17.9	17.5	17.0	17.0	17.0	20.0	34.8	23.9	22.3	18.8	17.8
Ac-ft	1,100	1,060	1,070	1,050	978	1,050	1,190	2,140	1,420	1,370	1,150	1,060
Calendar year 1955: Max	35	35	35	35	35	35	35	35	35	35	35	35
Water year 1955-56: Max	47	47	47	47	47	47	47	47	47	47	47	47
Mean	18.9	18.9	18.9	18.9	18.9	18.9	20.2	34.8	23.9	22.3	18.8	17.8
Ac-ft	13,680	13,680	13,680	13,680	13,680	13,680	14,540	21,400	14,200	13,700	11,500	10,600

* Discharge measurement made on this day.
 Note.--No gage-height record Jan. 22 to Mar. 30; discharge estimated on basis of records for nearby streams.

Asay Creek above West Fork, near Hatch, Utah--Continued

Rating table, water year 1956-57 (gage height, in feet, and
discharge, in cubic feet per second)
(Shifting-control method used Sept. 26-30)

1.3	12	1.6	29	2.0	69
1.4	17	1.7	37	2.2	95
1.5	22	1.8	46	2.4	122

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	16	15				15	24	62	53	39	35
2	18	16	15				15	26	67	52	39	35
3	17	15	15				15	29	69	52	38	34
4	17	15	15				14	33	71	50	38	34
5	17	15	15				15	39	71	46	39	34
6	17	15	15				15	45	75	45	39	33
7	18	15	15			14	16	46	78	45	38	34
8	18	15	15				16	46	82	46	39	33
9	17	15	15				16	49	86	45	37	33
10	18	15	15				17	49	92	46	37	33
11	18	15	15				19	51	98	48	37	33
12	18	16	16				21	51	91	50	37	33
13	18	16	16			*15	22	49	*89	46	36	33
14	18	16	16			15	23	46	88	44	36	33
15	19	16	16			14	25	46	88	44	36	33
16	19	16	16	15	15	14	27	*46	88	44	35	33
17	19	16	16			14	28	44	88	44	35	32
18	19	16	16			14	28	44	88	*44	35	32
19	19	16	16			14	27	46	87	44	35	32
20	18	15	15			14	24	51	87	43	36	32
21	17	15	15			14	23	52	87	42	36	32
22	17	15	15			14	22	53	88	40	36	32
23	17	15	15			14	22	55	88	41	36	32
24	17	15	15			14	22	54	88	41	*36	32
25	17	15	15			14	23	54	*86	41	36	32
26	*17	15	15			14	22	52	84	41	36	30
27	17	15	15			14	22	51	83	40	36	30
28	17	*15	15			14	22	51	79	40	36	30
29	17	15	15			14	22	52	70	40	36	30
30	16	15	15			14	22	56	58	40	36	30
31	16	15	15			14	22	58	58	40	36	30
Total	546	460	465	465	420	436	620	1,445	2,456	1,377	1,136	974
Mean	17.6	15.3	15.0	15.0	15.0	14.1	20.7	46.6	81.9	44.4	36.6	32.5
Ac-ft	1,080	912	922	922	833	865	1,230	2,870	4,870	2,730	2,250	1,930

Calendar year 1956: Max 47 Min - Mean 19.7 Ac-ft 14,320
 Water year 1956-57: Max 98 Min - Mean 29.6 Ac-ft 21,420

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 9 to Mar. 12; discharge estimated on basis of records for nearby streams.

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 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,870 ft (from river-profile map). Prior to May 7, 1914, and Aug. 22, 1914, to Mar. 15, 1915, staff gages, and May 7-25, 1914, Mar. 16, 1915, to Sept. 30, 1928, and June 20, 1939, to Oct. 3, 1949, water-stage recorder, at several sites within 2 miles of present site at various datums.

Average discharge.--26 years (1912-13, 1914-16, 1917-18, 1922-23, 1924-27, 1939-57), 121 cfs (87,600 acre-ft per year).

Extremes.--Maximum discharge during year, 626 cfs June 11 (gage height, 3.34 ft); minimum recorded, 33 cfs Dec. 16 (gage height, 1.15 ft).

1911-28, 1939-57: 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 Dec. 16, 1956.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Small diversions above station for irrigation. No regulation since Hatchtown Dam failed in 1914.

Revisions (water years).--WSP 960: 1939-40. WSP 1284: 1916.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 15, 16)

1.2	33	2.5	330
1.5	72	3.0	491
2.0	185	3.2	560

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	37	*b40			44	38	46	340	182	79	64
2	38		b40			44	38	46	384	175	79	63
3	38		b40			44	38	49	429	167	79	63
4	37		39		b42	42	38	58	445	156	81	63
5	37	b38	40	a38		42	37	67	474	146	81	61
6	36		41			41	37	79	468	144	79	61
7	36		42			41	38	88	515	139	76	61
8	35	38			42	40	38	96	532	136	76	60
9	35	38		b39	44	38	38	105	532	129	74	60
10	35	38	b35	b39	44	39	39	122	546	142	72	60
11	35	38		41	*46	37	40	127	536	*170	74	60
12	35	38		44	47	37	41	125	488	149	77	58
13	35	38	34	47	50	*37	42	118	536	136	77	56
14	36	38	35	49	55	37	45	111	528	122	74	56
15	36		b35	47	53	37	47	96	505	118	74	56
16	36		34	45	49	37	49	88	461	111	70	56
17	36				49	37	51	85	420	109	69	56
18	36			(*)	49	38	53	88	404	109	69	56
19	36				46	38	55	107	372	105	67	56
20	37				46	37	51	120	343	100	69	56
21	38				46	37	49	125	327	98	87	56
22	38	b38			46	b37	49	127	308	96	76	56
23	39				49	b37	*47	*127	284	94	*70	55
24	41		b35	b45	47	b37	46	120	266	94	70	55
25	40				46	38	47	109	*252	92	67	55
26	*41				45	38	46	103	240	94	66	55
27	41				45	37	45	105	226	90	65	55
28	40				44	36	45	116	215	88	66	55
29	41				36	46	46	149	207	88	69	55
30	40				36	46	46	220	190	86	67	55
31	38	-----	a36	-----	36	-----	296	-----	83	66	-----	55
Total	1,159	1,139	1,121	1,330	1,282	1,192	1,319	3,418	11,773	3,748	2,266	1,734
Mean	37.4	38.0	36.2	42.9	45.8	38.5	44.0	110	392	121	73.1	57.8
Ac-ft	2,300	2,260	2,220	2,640	2,540	2,360	2,620	6,780	23,350	7,430	4,490	3,440
Calendar year 1956: Max	229			Min	-	Mean	55.8	Ac-ft	40,510			
Water year 1956-57: Max	546			Min	-	Mean	68.2	Ac-ft	62,430			

Peak discharge (base, 500 cfs).--June 11 (12:30 a.m.) 626 cfs (3.34 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and records for stations near Circleville and Kington.

b Stage-discharge relation affected by ice.

Sevier River near Circleville, Utah

Location.--Lat 38°06', long 112°19', in SW¹ 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,240 ft (from river-profile map). May 10 to Sept. 19, 1912, staff gage at site 300 ft upstream at different datum. Apr. 23, 1914, to Sept. 30, 1927, Nov. 21, 1949, to Aug. 6, 1954, water-stage recorder at site 300 ft upstream at datum 1.23 ft higher.

Average discharge.--16 years (1914-22, 1923-24, 1950-57), 171 cfs (123,800 acre-ft per year).

Extremes.--Maximum discharge during year, 426 cfs June 11 (gage height, 3.19 ft); minimum daily, 25 cfs Aug. 10.

1912, 1914-27, 1949-57: Maximum discharge, 1,960 cfs about May 21, 1922 (gage height, 9.8 ft, from high-water mark, present datum), from rating curve extended above 1,000 cfs by logarithmic plotting; minimum daily, 19 cfs July 12, 1955.

Remarks.--Records good except those for periods of ice effect or doubtful gage-height record, which are fair. Many diversions above and below station.

Revisions (water years).--WSP 1180: 1922(M).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.9	19	2.0	154
1.2	42	3.0	368
1.6	88	3.2	416

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	49	89	88	83	92	49	42	213	116	32	63
2	33	49	89	88	b90	101	53	48	238	110	32	63
3	36	54	91	91	b90	92	59	50	275	101	33	61
4	37	67	91	91	b87	85	59	52	308	92	32	61
5	40	71	98	92	80	89	52	51	315	88	33	53
6	37	76	98	92	82	89	60	48	331	84	33	54
7	34	74	95	91	95	84	60	51	324	82	31	52
8	34	60	78	88	92	79	63	59	345	74	28	51
9	35	52	67	92	105	76	63	58	359	73	26	49
10	38	47	b76	83	118	75	60	61	387	80	25	48
11	37	47	b90	85	*112	73	61	84	409	*104	26	46
12	35	48	b102	96	120	71	58	87	370	125	26	47
13	37	45	b100	101	120	*69	50	79	343	118	34	49
14	36	b44	99	110	123	68	52	80	352	101	45	49
15	38	b45	94	104	125	67	52	75	347	84	32	50
16	37	b50	94	b93	110	68	52	75	327	74	38	52
17	37	b65	92	b84	107	68	47	69	301	102	41	48
18	35	b80	89	*b82	108	69	42	65	279	82	39	d47
19	34	b80	88	b83	104	64	40	61	251	80	41	d47
20	35	b60	85	b86	104	59	39	69	215	70	43	d48
21	36	b65	87	b84	104	50	38	79	d209	67	*71	d49
22	37	b90	76	83	110	47	43	84	d201	64	84	51
23	38	b100	82	91	107	49	54	*91	d193	58	54	51
24	38	b88	83	88	108	51	*55	105	d191	58	64	52
25	*38	89	b83	89	102	63	60	120	d183	56	68	50
26	43	91	b92	88	96	76	50	110	*177	56	64	55
27	45	91	b90	85	96	60	44	99	167	75	62	54
28	47	89	b92	78	95	51	42	94	150	45	60	*54
29	49	92	b90	76	-	48	41	79	139	50	70	55
30	48	*94	89	83	-----	49	44	99	121	54	65	51
31	51	-----	88	83	-----	49	-----	158	-----	50	67	-----
Total	1,188	2,050	2,757	2,748	2,873	2,131	1,542	2,382	8,020	2,473	1,399	1,560
Mean	38.3	68.3	88.9	88.6	103	68.7	51.4	76.8	267	79.8	45.1	52.0
Ac-ft	2,360	4,070	5,470	5,450	5,700	4,230	3,060	4,720	15,910	4,910	2,770	3,050
Calendar year 1956: Max	156			Min	24	Mean	61.7	Ac-ft	44,810			
Water year 1956-57: Max	409			Min	25	Mean	85.3	Ac-ft	61,740			

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed from reconstructed graph based on recorded graph and records for nearby streams.

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 1957.

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 1 mile downstream at different datum.

Average discharge.--43 years, 135 cfs (97,740 acre-ft per year).

Extremes.--Maximum discharge during year, 453 cfs June 12 (gage height, 2.14 ft); minimum daily, 6.2 cfs May 13, 14.

1914-57: 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 800 cfs; minimum daily, 4.2 cfs June 29, 30, 1953.

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

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

0.5	3	1.0	55
.6	7	1.3	129
.7	14	1.7	270
.8	24	2.1	453

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.1	15	101	101	b100	101	25	12	132	16	10	13
2	8.4	16	107	107	b108	98	32	12	167	18	10	13
3	8.4	16	101	104	b105	104	31	11	216	18	10	13
4	8.4	18	104	107	b102	112	31	11	220	14	10	14
5	9.1	32	109	107	b95	104	27	10	231	14	10	17
6	8.4	35	112	107	94	101	21	10	243	15	9.8	17
7	8.4	41	118	104	101	96	21	7.0	239	13	9.1	15
8	8.4	35	101	104	104	91	19	7.0	262	12	9.8	15
9	8.4	37	b75	109	126	88	20	7.7	285	10	9.8	13
10	8.4	35	b84	104	144	86	20	7.7	340	11	9.1	14
11	7.7	35	101	104	129	74	21	6.6	419	19	9.1	13
12	8.4	25	123	115	*144	74	22	6.6	404	*24	9.1	13
13	8.4	27	121	121	141	74	22	6.2	330	31	9.1	15
14	9.1	23	126	126	144	*72	21	6.2	339	21	9.8	13
15	9.1	22	121	123	148	57	20	7.0	352	14	10	13
16	10	34	115	121	132	55	20	12	330	13	*10	15
17	10	66	107	*109	126	55	20	14	304	16	10	14
18	10	91	104	118	129	55	19	15	262	24	10	13
19	10	b91	b104	115	126	52	20	16	235	16	10	14
20	10	b66	b104	107	126	48	20	16	201	13	11	15
21	10	70	109	107	126	45	20	16	194	12	11	15
22	11	98	96	96	126	43	17	19	184	11	14	14
23	11	115	96	104	123	41	16	*22	174	11	12	13
24	11	107	99	104	123	41	*15	40	154	11	12	13
25	*11	101	98	107	121	46	15	52	115	11	13	13
26	11	104	112	104	104	63	15	45	*101	12	13	14
27	11	101	b108	96	109	41	14	40	104	14	13	14
28	12	101	112	94	109	32	13	35	72	17	13	*14
29	12	104	107	94	-	32	13	27	46	15	14	14
30	13	*107	b106	101	-----	27	12	27	20	14	16	13
31	16	-----	104	94	-----	24	-----	69	-----	13	15	-----
Total	307.1	1,766	3,288	3,314	3,365	2,032	602	593	6,673	473	341.7	419
Mean	9.91	58.9	106	107	120	65.5	20.1	19.1	222	15.3	11.0	14.0
Ac-ft	609	3,510	6,520	6,570	6,670	4,030	1,190	1,180	13,240	938	678	831
Calendar year 1956: Max	148			Min 6.2		Mean 48.8		Ac-ft 35,400				
Water year 1956-57: Max	419			Min 6.2		Mean 63.5		Ac-ft 45,970				

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Otter Creek Reservoir near Antimony, Utah

Location.--Lat 38°10'15", long 112°00'00", in NW $\frac{1}{4}$ 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 1957 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 6,350 ft (by barometer).

Extremes.--Maximum contents observed during year, 28,020 acre-ft June 20 (gage height, 24.9 ft); minimum observed, 800 acre-ft Oct. 10 (gage height, 2.5 ft). 1914-15, 1934-57: 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 observed, 200 acre-ft Sept. 10, 1956 (gage height, 1.0 ft).

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. 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.

Capacity table, water-year 1956-57 (gage height, in feet, and usable contents in acre-feet)

2.0	600	10.0	6,500	18.0	16,000
3.0	1,000	12.0	8,500	20.0	19,200
4.0	1,600	14.0	10,700	22.0	22,800
6.0	2,900	16.0	13,300	25.0	28,200
8.0	4,500				

Usable contents, in acre-feet, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	-	1,960	3,700	6,500	9,300	13,690	16,600	18,010	24,240	27,300	22,620	13,040
2	-	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-	-
10	800	2,200	4,340	7,400	10,460	14,600	17,200	19,200	26,940	26,400	19,200	10,100
11	-	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-	-
20	1,420	2,830	5,500	8,300	12,390	15,300	17,350	20,820	28,020	25,860	-	8,000
21	-	-	-	-	-	-	-	-	-	-	16,300	-
22	-	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	a13,550	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	-	-	-	-	-	-	-	-	-
31	a1,920	a3,620	6,400	a9,220	-----	16,450	a17,950	-----	a27,370	a22,890	a13,340	7,300
(†)	-	-	9.9	-	-	18.3	-	-	-	-	-	10.8
(*)	+1,560	+1,700	+2,780	+2,820	+4,330	+2,900	+1,500	+6,010	+3,410	-4,480	-9,550	-6,040

Calendar year 1956..... * -2,000

Water year 1956-57..... * +6,940

† Gage height, in feet, at end of month.

* Change in contents, in acre-feet.

a No gage-height record; contents interpolated.

East Fork Sevier River near Kingston, Utah

Location.--Lat 38°12', long 112°09', in SW¼ 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 1957.

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.--44 years, 84.1 cfs (60,890 acre-ft per year).

Extremes.--Maximum discharge during year, 854 cfs Aug. 11 (gage height, 3.39 ft); minimum observed, 2.7 cfs (discharge measurement) Jan. 18. 1913-57: Maximum discharge, 2,030 cfs May 12, 1941 (gage height, 5.05 ft); minimum daily recorded, 7 cfs Oct. 29, 30, 1930.

Remarks.--Records good except those for periods of ice effect, which are fair. Diversions above and below station for irrigation. Flow regulated by Otter Creek Reservoir (see preceding page).

Revisions (water years).--WSP 750: 1931-32.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 24 to Aug. 26)

0.1	6.1	1.4	107
.4	13	1.8	178
.7	26	2.1	247
1.0	50		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	29				12	26	27	31	27	161	188
2	25	28				12	28	27	28	27	159	186
3	18	28				13	24	26	31	24	161	184
4	18	28				12	23	28	34	24	163	182
5	17	28	11			13	23	28	35	27	168	180
6	15	28			10	13	23	27	32	28	170	180
7	15	28				12	24	26	25	39	168	178
8	16	26				12	24	28	24	41	167	174
9	16	26				12	23	30	24	40	167	172
10	15	27				12	23	38	28	41	167	170
11	12	27	10			12	24	38	35	41	180	163
12	12	27			*12	11	24	39	28	*44	152	157
13	13	22			13	12	24	36	24	39	155	157
14	13	9.8			13	*12	24	35	22	37	155	154
15	13			8	12	12	24	38	23	37	157	154
16	12				12	12	25	42	19	40	*155	154
17	12	10		(*)	12	13	25	38	20	41	155	150
18	12			(*)	13	13	24	35	30	45	155	148
19	12				13	12	24	36	32	79	155	150
20	12				12	12	24	35	32	94	155	148
21	13				13	13	25	32	32	92	184	148
22	13				13	13	23	32	32	92	195	146
23	13				13	14	23	*35	30	91	195	143
24	14		9		13	14	*23	36	27	104	191	128
25	*13				13	14	25	36	27	161	191	77
26	13	11			12	14	28	36	*28	165	188	76
27	15				12	14	27	37	29	163	186	68
28	16				12	14	22	34	28	161	186	*50
29	32				-	13	24	32	27	161	188	50
30	31	(*)			-----	13	28	53	24	159	188	50
31	29				-----	13	-----	48	-----	161	188	-----
Total	504	531.8	302	248	323	393	731	1,066	839	2,325	5,305	4,265
Mean	16.3	17.7	9.7	8	11.5	12.7	24.4	34.4	28.0	75.0	171	142
Ac-ft	1,000	1,050	599	492	641	780	1,450	2,110	1,660	4,610	10,520	8,460
Calendar year 1956: Max	234			Min	-	Mean	43.4	Ac-ft	31,430			
Water year 1956-57: Max	195			Min	-	Mean	46.1	Ac-ft	33,370			

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 4, Nov. 15 to Feb. 12 (no gage-height record Dec. 9-30, Jan. 6, 7, 9-12, 14-19, 22, Jan. 24 to Feb. 11; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby streams).

Piute Reservoir near Marysville, Utah

Location.--Lat 38°20', long 112°12', in NW $\frac{1}{4}$ sec. 3, T. 29 S., R. 3 W., at Piute Dam, 9 miles south of Marysville.

Drainage area.--2,400 sq mi, approximately.

Records available.--March 1914 to September 1957.

Gage.--Staff gage generally read once daily. Datum of gage is 5,900.8 ft above mean sea level (levels by Office of State Engineer).

Extremes.--Maximum contents observed during year, 28,320 acre-ft June 27-29 (gage height, 52.4 ft); minimum, 196 acre-ft Oct. 31 (estimated on basis of inflow-outflow computations).

1914-57: 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 (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.

Capacity table, water year 1956-57 (gage height, in feet, and usable contents, in acre-feet)

22.8	828	33.0	6,220	45.0	18,160
23.0	880	35.0	7,790	47.0	20,710
25.0	1,560	37.0	9,520	49.0	23,440
27.0	2,420	39.0	11,470	51.0	26,280
29.0	3,480	41.0	13,580	53.0	29,200
31.0	4,770	43.0	15,790		

Usable contents, in acre-feet, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	3,370	10,970	17,070	19,930	16,020	16,720	17,070	27,730	12,090	-
2		-	3,600	11,270	17,150	19,670	15,790	16,830	-	27,150	11,780	3,540
3		-	3,790	11,470	17,310	19,670	15,680	16,950	17,560	26,570	11,570	3,420
4		-	4,100	11,780	-	19,670	15,450	16,950	17,800	25,850	-	3,310
5		-	-	11,990	-	-	15,230	-	18,160	24,990	11,070	3,260
6		-	4,640	12,200	17,560	19,410	14,890	16,950	18,780	24,000	11,070	3,140
7		-	5,200	12,410	17,680	19,410	15,230	16,950	19,280	-	11,270	3,030
8		-	5,850	12,720	17,680	19,280	15,230	16,830	19,670	22,470	11,470	-
9		880	5,920	12,940	17,800	19,280	15,230	16,720	-	21,560	11,680	2,820
10		976	6,000	13,260	18,160	19,160	15,340	16,720	20,580	20,710	11,680	2,720
11		1,070	6,000	13,470	18,410	19,160	15,450	16,720	21,380	20,190	-	2,380
12		1,140	6,150	13,690	18,540	19,160	15,450	16,830	22,200	19,670	11,070	2,240
13		1,200	6,150	14,020	18,780	19,160	15,570	16,830	23,030	18,910	10,570	2,020
14		1,240	6,450	14,340	18,910	19,160	15,570	16,490	23,440	-	10,090	1,890
15		1,240	6,910	14,560	19,160	19,040	15,680	16,250	24,140	18,040	9,340	-
16		-	7,310	14,780	19,410	19,040	15,680	16,140	-	17,560	8,460	1,640
17		-	7,550	15,010	19,540	18,910	15,790	15,790	25,140	16,950	6,990	1,560
18		-	7,790	15,120	19,800	18,780	15,790	15,680	25,710	16,490	-	1,520
19		-	8,040	15,230	20,060	18,660	15,790	-	25,990	15,790	6,300	1,420
20		-	8,210	15,450	20,190	18,540	15,910	15,450	26,570	15,230	5,780	1,600
21		-	8,460	15,570	20,450	18,280	15,910	15,450	27,150	-	5,340	1,810
22		-	8,630	15,680	20,580	18,040	16,020	15,680	27,440	14,120	4,980	-
23		-	8,900	15,790	20,580	-	16,020	15,790	-	13,690	4,770	2,150
24		1,760	9,080	16,020	20,450	17,560	16,020	16,020	27,730	13,470	4,640	2,330
25		2,020	-	16,250	20,450	17,430	16,140	16,140	28,020	13,150	-	2,470
26		2,240	-	16,370	20,320	17,190	16,250	-	28,170	12,940	4,100	2,380
27		2,470	9,710	16,490	20,190	16,950	16,370	16,490	28,320	12,830	3,910	2,280
28		2,720	10,000	16,600	20,060	16,830	-	16,600	28,320	-	4,040	2,200
29		2,920	10,180	16,720	-	16,720	16,490	16,720	28,320	12,510	3,980	-
30		3,140	10,470	16,830	-	16,490	16,600	16,830	28,020	12,310	3,850	1,680
31	e196	-	10,670	16,950	-	16,250	-	16,950	-	12,300	3,790	-
(†)	21.3	28.4	38.2	44.0	46.5	43.4	43.7	44.0	-	39.8	29.5	25.3
(*)	-88	+2,940	+7,530	+6,280	+5,110	-3,810	+350	+350	+11,070	-15,720	-8,510	-2,110

Calendar year 1956..... * -3,450

Water year 1956-57..... * +1,400

+ Gage height, in feet, at end of month.

* Change in contents, in acre-feet.

a No gage-height record; contents interpolated.

e Capacity table in error; contents estimated on basis of inflow-outflow computations.

Sevier River below Piute Dam, near Marysville, Utah

Location.--Lat 38°19'55", long 112°11'15", in NW¼SE¼ 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 Marysville.

Drainage area.--2,440 sq mi, approximately.

Records available.--May 1911 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,870 ft (by barometer). Prior to May 4, 1912, staff gage at site half a mile upstream at different datum. May 4, 1912, to Mar. 31, 1935, water-stage recorder at site a quarter of a mile upstream at different datum. Apr. 1, 1935, to Apr. 7, 1936, at datum 0.2 ft higher.

Average discharge.--45 years (1912-57), 231 cfs (167,200 acre-ft per year).

Extremes.--Maximum discharge during year, 482 cfs Aug. 18 (gage height, 1.96 ft); minimum not determined, probably occurred during period of ice effect.
1911-57: Maximum discharge, 2,600 cfs May 23, 24, 1922; 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. One small diversion between gage and Piute Reservoir. Flow regulated by Piute Reservoir (see preceding page).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

-0.4	0.3	0.1	12	0.8	132
-0.3	1.7	.2	18	1.0	178
-0.2	3.2	.4	35	1.5	295
-0.1	4.8	.6	60	2.0	478
0	7.5	.7	101		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	35	60	a28	4.2	52	141	164	5.2	4.5	175	315	272
2	45	62	a28	4.2	52	141	166	5.0	4.3	318	301	254
3	46	56	a24	4.2	52	141	166	4.8	4.5	355	298	242
4	46	50	22	4.2	53	141	164	4.8	4.5	406	268	238
5	46	50	20	4.2	53	141	166	4.6	4.5	434	199	240
6	47	52	17	4.2	53	141	64	4.6	4.6	454	101	247
7	46	52	13	4.2	53	141	7.5	37	4.6	454	101	254
8	46	52	b12	4.2	56	118	7.1	101	4.6	454	101	261
9	42	50	a11	4.2	64	112	7.1	54	4.6	450	134	263
10	39	52	a10	4.2	57	115	7.1	5.9	4.8	430	263	282
11	54	54	a9.0	4.2	54	79	7.1	5.4	5.0	334	355	282
12	57	50	8.3	4.2	*53	64	7.1	22	5.0	*348	378	270
13	57	50	6.8	4.8	52	89	6.2	96	5.0	331	410	252
14	52	54	5.9	4.2	52	*101	6.2	190	5.0	290	446	231
15	44	69	5.4	4.0	52	*92	5.9	180	4.8	301	*442	219
16	43	69	5.0	4.0	52	73	5.9	171	4.8	256	*446	219
17	37	86	4.6	(*)	52	127	5.6	134	4.8	374	446	210
18	27	79	4.3	52	169	5.4	112	4.8	390	462	185	
19	25	66	4.3	52	166	5.4	66	4.8	390	466	157	
20	27	4.3	4.3	50	166	5.4	44	4.8	390	434	130	
21	30	a50	4.2	49	164	5.4	4.2	4.6	358	*418	121	
22	30	b4.0	4.2	124	166	5.6	4.0	4.6	327	414	105	
23	36	52	b4.0	137	164	5.6	*4.0	4.8	290	406	92	
24	*38	42	4.2	4.2	141	166	*5.4	6.2	4.8	275	327	79
25	38	30	4.2	4.2	141	166	5.4	4.5	4.6	252	278	79
26	43	4.2	13	141	166	5.4	4.5	*4.6	226	278	127	
27	49	4.2	44	141	169	5.4	4.6	9.4	226	247	153	
28	56	4.2	52	141	169	5.4	4.6	57	224	217	*171	
29	53	4.2	52	169	5.6	4.5	118	226	206	208		
30	47	*30	4.2	52	169	5.2	4.5	132	219	231	208	
31	52	4.2	52	166	5.2	4.5	4.5	278	268	268	268	
Total	1,333	1,537	286.7	368.8	2,081	4,272	1,033.4	1,297.4	438.7	10,233	9,656	6,051
Mean	43.0	51.2	9.25	11.9	74.3	138	34.4	41.9	14.6	330	311	202
Ac-ft	2,640	3,050	569	732	4,130	8,470	2,050	2,570	870	20,300	19,150	12,000
Calendar year 1956: Max	462			Min	1.4	Mean	100	Ac-ft	72,670			
Water year 1956-57: Max	466			Min	4.0	Mean	106	Ac-ft	76,530			

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and water commissioner's notes.

b Stage-discharge relation affected by ice.

Clear Creek at Sevier, Utah

Location.--Lat 38°34'55", long 112°15'30", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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 1957 in reports of Geological Survey. April 1934 to September 1957 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. 24, 1946, at site 400 ft downstream at different datum.

Average discharge.--22 years (1912-17, 1940-57), 30.8 cfs (22,300 acre-ft per year).

Extremes.--Maximum discharge during year, 484 cfs June 5 (gage height, 5.30 ft); minimum, 1.5 cfs Oct. 12.
1912-19, 1940-57: Maximum discharge, 611 cfs Aug. 17, 1955 (gage height, 5.97 ft), from rating curve extended above 290 cfs by logarithmic plotting; no flow Aug. 26, 1913.

Remarks.--Records good. Practically entire flow is diverted above station each year during latter part of irrigation season.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 19 to June 6, July 10 to Sept. 30)

1.1	1.2	1.9	34
1.2	2.9	2.4	78
1.3	5.3	3.0	145
1.4	8.4	4.0	279
1.6	17	5.0	449

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	2.5	9.5	11	11	14	22	58	260	121	15	7.7
2	1.8	2.1	9.9	12	12	14	14	61	257	114	12	7.4
3	1.8	2.0	9.9	11	12	14	22	78	334	110	10	6.8
4	1.7	2.1	11	12	9.5	13	22	81	404	109	9.2	6.5
5	1.7	2.1	12	12	9.9	14	22	116	440	101	8.8	5.9
6	1.8	2.3	12	12	11	14	40	135	427	99	8.1	5.9
7	1.7	4.5	11	11	14	14	40	147	418	96	6.8	5.9
8	1.7	3.8	8.1	12	14	15	30	158	400	90	6.8	5.6
9	1.7	2.1	6.2	9.9	50	16	36	182	329	*80	7.7	5.6
10	1.7	2.0	8.4	10	24	16	62	182	278	84	7.7	5.9
11	1.7	1.8	12	11	30	14	87	158	256	72	9.9	5.3
12	1.7	2.0	14	13	*24	14	99	125	228	65	11	5.0
13	1.7	2.0	13	15	19	14	117	109	207	60	9.9	3.3
14	1.8	2.0	13	15	20	*12	99	101	215	54	7.4	2.9
15	1.8	1.8	9.5	13	20	14	90	93	226	47	*7.7	2.9
16	1.8	1.8	13	12	17	15	80	108	218	41	7.1	2.9
17	1.8	1.8	12	*6.2	17	14	68	94	194	43	5.6	2.9
18	1.8	2.5	8.4	8.8	17	14	64	109	172	43	5.3	2.9
19	1.8	1.8	10	8.8	16	13	51	190	162	38	5.0	2.9
20	1.7	2.7	9.2	11	15	13	40	161	157	30	7.3	3.8
21	1.7	6.8	9.9	13	15	14	34	125	163	29	17	4.8
22	1.7	8.1	11	9.9	14	11	32	*112	156	28	15	4.8
23	1.7	9.2	7.1	13	15	13	45	115	145	25	14	3.8
24	*2.3	9.5	8.8	12	15	11	*52	120	138	22	12	3.3
25	2.1	9.2	9.2	12	15	14	*70	125	134	21	9.9	3.6
26	2.7	8.8	8.1	12	15	18	65	124	137	21	9.9	3.6
27	2.3	8.1	8.1	12	15	16	65	151	*128	21	9.5	3.6
28	2.3	9.2	8.1	10	14	18	58	177	120	21	8.4	*3.6
29	2.7	9.2	8.8	8.1	-	18	67	198	120	21	8.4	3.6
30	2.5	*8.8	9.2	9.2	-----	19	61	232	129	19	8.4	4.3
31	2.7	-----	11	9.9	-----	20	-----	236	-----	17	8.4	-----
Total	59.7	133.3	311.4	345.8	480.4	453	1,855	4,171	6,952	1,742	289.2	137.0
Mean	1.93	4.44	10.0	11.2	17.2	14.6	55.2	135	232	58.2	9.33	4.57
Ac-ft	118	264	618	686	953	899	3,280	8,270	13,790	3,460	574	272
Calendar year 1956: Max		81		Min 1.1		Mean 12.8		Ac-ft 9,260				
Water year 1956-57: Max		440		Min 1.7		Mean 45.8		Ac-ft 33,180				

* Discharge measurement made on this day.

Sevier River near Sigurd, Utah

Location.--Lat 38°52', long 111°57', in SW¹/₄ 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 1957. Prior to October 1938, published as "near Vermillion."

Gage.--Water-stage recorder. Altitude of gage is 5,180 ft (by barometer). 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 present site at datum 2.00 ft lower.

Average discharge.--43 years (1914-57), 102 cfs (73,840 acre-ft per year).

Extremes.--Maximum discharge during year, 289 cfs June 16 (gage height, 3.02 ft); minimum daily, 0.6 cfs Oct. 11.

1914-57: Maximum discharge, 2,400 cfs May 30, 1922 (gage height, 6.1 ft, present datum), 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.

Revisions (water years).--WSP 1394: 1927-28, 1947.

Rating table, water year 1956-57 (gage height, in feet,
and discharge, in cubic feet per second)
(Shifting-control method used Mar. 21 to Apr. 8)

0.5	0.5	0.9	7.0	1.8	68
.6	1.1	1.1	14	2.3	134
.7	2.4	1.4	32	3.0	286

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	39	29	39	57	141	132	4.7	7.3	5.5	*90	5.5
2	.9	39	30	41	76	141	142	2.8	7.3	5.2	72	.9
3	.9	39	30	42	90	146	172	3.2	9.7	5.0	28	1.0
4	1.0	41	30	44	89	148	194	2.2	11	5.0	20	1.0
5	.8	41	31	44	87	151	197	2.4	24	5.0	20	1.1
6	.7	41	31	45	85	153	192	3.8	86	4.5	21	1.1
7	.8	41	33	45	85	151	197	*4.0	*134	4.3	*39	1.1
8	.8	40	31	47	86	149	162	3.6	157	4.0	61	1.2
9	*.7	40	28	47	89	151	77	2.8	205	4.0	65	1.2
10	.7	40	31	45	99	148	29	2.2	210	3.8	42	1.3
11	.6	40	31	44	108	141	31	1.9	199	*3.6	37	*1.5
12	.7	40	34	44	115	139	42	1.8	208	3.6	31	1.5
13	.7	41	*36	47	117	131	60	1.8	210	3.4	64	1.5
14	18	*40	38	50	165	123	71	1.8	194	3.0	59	1.6
15	28	39	38	52	168	49	76	1.4	214	2.8	30	27
16	35	39	38	52	120	1.0	*56	1.3	278	2.6	3.4	54
17	34	40	37	*51	110	.8	47	1.3	283	1.9	1.0	*54
18	34	41	35	50	105	1.1	39	1.3	*270	1.3	.9	55
19	34	31	34	48	*100	7.3	34	1.4	199	1.3	2.4	56
20	34	24	34	46	99	*21	52	1.3	148	1.2	3.6	54
21	34	24	39	46	95	69	58	1.2	164	1.1	4.0	59
22	35	27	44	46	89	*105	59	1.8	201	1.2	5.0	61
23	36	26	43	46	86	120	50	5.5	197	1.2	3.8	60
24	35	26	41	48	103	134	44	15	164	36	2.2	58
25	35	26	38	51	132	155	51	17	126	71	1.9	54
26	36	26	38	53	141	160	59	12	80	94	3.6	31
27	36	26	38	54	144	155	67	7.3	44	30	13	.9
28	37	26	39	54	142	160	55	5.5	16	90	14	.9
29	38	28	39	54	-	164	6.0	4.5	7.9	86	21	.8
30	38	28	40	54	-----	149	4.0	5.5	6.0	85	18	.7
31	38	-----	39	54	-----	142	-----	7.0	-----	84	9.7	-----
Total	625.2	1,039	1,097	1,483	2,982	3,606.2	2,455.0	129.3	4,060.2	710.5	786.5	647.8
Mean	20.2	34.6	35.4	47.8	106	116	81.8	4.17	135	22.9	25.4	21.6
Ac-ft	1,240	2,060	2,190	2,940	5,910	7,150	4,870	256	8,050	1,410	1,560	1,280
Calendar year 1956: Max	263				Min 0.4		Mean 50.8		Ac-ft 36,910			
Water year 1956-57: Max	283				Min 0.6		Mean 53.8		Ac-ft 38,510			

* Discharge measurement made on this day.

Pleasant Creek near Mount Pleasant, Utah

Location.--Lat 39°32'30", long 111°23'30", in W $\frac{1}{2}$ sec. 5, T. 15 S., R. 5 E., on left bank a quarter of a mile downstream from South Fork and 3.9 miles east of Mount Pleasant.

Drainage area.--16 sq mi, approximately.

Records available.--October 1954 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,760 ft (from river-profile map).

Extremes.--Maximum discharge during year, 178 cfs June 4 (gage height, 9.53 ft), minimum, 4.3 cfs Mar. 3 (caused by temporary obstruction upstream).
1954-57: Maximum discharge not determined, occurred during mud-rock flow Aug. 16, 1955 (estimated flow, 750 cfs below debris basin located half a mile below gage); minimum, 3.0 cfs July 22, 1955, caused by temporary obstruction upstream.
Maximum discharge known, 2,060 cfs July 24, 1946, from critical-depth determination of peak flow over retention dam half a mile below gage.

Remarks.--Records fair except those for periods of doubtful or no gage-height record, which are poor. Records include flow of Candland ditch and Coal Fork ditch which are measured transmountain diversions from San Rafael River basin (see preceding page).

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 5-9, May 29 to June 3, June 16-29, July 1-7, 9-14, July 23 to Aug. 11, Aug. 28 to Sept. 13)

Oct. 1 to June 3, July 4 to Sept. 13				June 4 to July 3		Sept. 13-30	
7.9	4.7	9.0	62	8.0	99	6.7	8.5
8.1	12	9.8	120	9.0	148	6.8	13
8.5	32			9.4	170		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.9	6.6	6.6	6.9	6.9	7.2	9.3	14	82	*d128	17	11
2	6.9	6.2	6.2	6.9	6.8	7.2	8.9	17	81	d120	16	11
3	6.9	6.6	6.2	6.6	6.6	6.9	8.9	20	114	d110	16	11
4	6.9	6.6	6.6	6.9	6.6	7.2	8.9	22	166	d72	16	11
5	6.9	7.2	6.6	6.9	6.6	7.2	8.9	24	*153	d70	*17	11
6	6.6	7.5	6.9	7.5	6.2	6.9	9.7	*25	145	d70	17	10
7	6.6	7.5	6.6	7.2	6.2	7.2	8.9	25	130	b66	16	10
8	6.6	7.5	5.9	7.2	6.6	7.5	8.6	27	130	a60	16	10
9	6.6	7.5	5.9	6.9	6.6	7.5	9.3	28	116	*56	16	10
10	6.6	7.5	6.2	7.5	6.6	7.5	10	28	108	59	16	10
11	*6.6	7.5	*6.6	7.2	6.6	7.5	11	25	102	58	16	10
12	6.2	*7.5	6.9	7.2	6.6	7.5	12	22	*103	55	a15	*10
13	5.9	7.2	6.9	7.5	6.6	7.5	12	21	114	52	a14	*10
14	5.9	7.2	6.9	*7.5	6.6	6.9	12	21	112	50	a14	12
15	6.2	7.2	6.6	7.2	6.6	7.5	*12	19	107	a45	a13	12
16	6.2	7.5	6.6	7.2	6.6	7.5	13	19	104	a39	a13	11
17	6.2	7.2	6.6	6.9	6.6	7.5	13	20	103	a37	a12	11
18	6.2	7.2	6.6	7.2	*8.6	*7.5	12	20	*104	a35	a12	11
19	6.6	7.2	6.6	6.9	6.9	7.5	11	22	109	a30	a11	11
20	6.6	7.2	6.9	6.9	6.9	7.8	10	20	114	a28	a11	10
21	6.6	7.2	6.9	7.2	6.9	7.8	10	19	d114	a26	a11	10
22	6.6	7.2	6.9	6.9	6.9	7.8	10	18	d112	a24	a11	9.5
23	6.9	7.5	6.9	7.2	6.9	7.8	10	19	d117	*22	a11	9.0
24	6.9	7.5	6.9	7.2	6.9	7.8	10	21	d119	22	*a12	*9.0
25	6.9	6.9	6.9	7.2	7.2	7.8	10	21	d122	22	a28	9.0
26	7.2	6.6	6.9	7.2	6.9	8.2	10	26	d126	20	a13	9.5
27	6.9	6.6	6.9	7.2	7.2	7.8	10	*25	d126	19	a12	9.5
28	6.9	6.2	6.9	6.9	6.9	8.6	11	24	d124	19	11	10
29	6.9	6.2	6.9	6.9	-	8.6	12	32	d123	19	12	10
30	6.9	6.2	6.9	6.6	-----	8.9	12	64	d122	18	12	10
31	6.9	-----	6.9	6.9	-----	8.9	-----	72	-----	17	12	-----
Total	205.0	211.7	206.8	219.6	187.9	236.7	314.4	780	3,502	1,468	439	308.5
Mean	6.61	7.06	6.67	7.08	6.71	7.64	10.5	25.2	117	47.4	14.2	10.3
Ac-ft	407	420	410	436	373	469	624	1,550	6,950	2,910	871	612

Calendar year 1956: Max 92 Min 5.9 Mean 13.6 Ac-ft 9,850
Water year 1956-57: Max 166 Min 5.9 Mean 22.1 Ac-ft 16,030

Peak discharge (base, 50 cfs)--June 4 (5:30 p.m.) 178 cfs (9.53 ft); July 1 (8:30 p.m.) 136 cfs (8.93 ft).

* Discharge measurement made on this day.
a No gage-height record; discharge estimated on basis of 2 discharge measurements and records for nearby streams.
d Doubtful gage-height record; discharge computed from recorded gage-height graph and records for nearby streams.

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. Records of daily flow collected by Geological Survey available in Salt Lake City district office.

Fairview ditch diverts water from tributaries of San Rafael River and Price River to San Pitch River Basin. Gage is located in SE $\frac{1}{4}$ sec. 26, T. 13 S., R. 5 E.

Candland ditch diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in NW $\frac{1}{4}$ sec. 1, T. 15 S., R. 5 E.

Coal Fork ditch diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in SW $\frac{1}{4}$ sec. 24, T. 15 S., R. 5 E.

Twin Creek tunnel diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in SE $\frac{1}{4}$ sec. 35, T. 15 S., R. 5 E.

Spring City tunnel diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in SE $\frac{1}{4}$ sec. 16, T. 16 S., R. 5 E.

Black Canyon ditch diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in SE $\frac{1}{4}$ sec. 10, T. 16 S., R. 5 E.

Cedar Creek tunnel diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in SE $\frac{1}{4}$ sec. 10, T. 16 S., R. 5 E.

Reeder ditch diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in NW $\frac{1}{4}$ sec. 32, T. 16 S., R. 5 E.

John August ditch diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in NW $\frac{1}{4}$ sec. 35, T. 17 S., R. 4 E.

Madsen ditch diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in SW $\frac{1}{4}$ sec. 23, T. 17 S., R. 4 E.

Ephraim tunnel diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in NW $\frac{1}{4}$ sec. 24, T. 17 S., R. 4 E.

Larsen tunnel diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in SE $\frac{1}{4}$ sec. 10, T. 17 S., R. 4 E.

Horseshoe tunnel diverts water from tributary of San Rafael River to San Pitch River basin. Gage is located in SW $\frac{1}{4}$ sec. 2, T. 17 S., R. 4 E.

Transmountain diversions, in acre-feet, from Colorado River basin to Sevier Lake basin,
water year October 1956 to September 1957

Name	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Water year
Fairview ditch....	0	0	0	0	0	0	0	0	480	853	766	311	2,410
Candland ditch....	0	0	0	0	0	0	0	0	54	73	22	2	151
Coal Fork ditch....	0	0	0	0	0	0	0	0	240	160	24	2	426
Twin Creek tunnel..	0	0	0	0	0	0	0	0	161	211	5	0	377
Spring City tunnel	28	24	25	25	22	25	24	25	1,340	528	181	79	2,350
Black Canyon ditch	0	0	0	0	0	0	0	0	201	222	5	0	428
Cedar Creek tunnel	6	6	0	0	0	0	0	12	239	176	42	15	496
Reeder ditch.....	5	0	0	0	0	0	0	10	153	244	57	24	493
John August ditch..	0	0	0	0	0	0	0	0	53	155	70	1	279
Madsen ditch.....	0	0	0	0	0	0	0	0	16	4	0	0	20
Ephraim tunnel....	18	18	12	12	11	12	29	176	1,010	990	127	45	2,460
Larsen tunnel.....	0	0	0	0	0	0	0	0	436	534	23	0	993
Horseshoe tunnel..	0	0	0	0	0	0	0	0	429	266	4	0	699
Total in Utah....	57	48	37	37	33	37	53	223	4,810	4,420	1,330	479	11,560

Note.--There is one diversion from the Sevier Lake basin to the Colorado River basin. This diversion is Tropic and East Fork Canal which diverts water from East Fork Sevier River to tributary of Paria River. Gage is located in SW $\frac{1}{4}$ sec. 17, T. 36 S., R. 3 W. Figures of diversion, in acre-feet, for the 1957 water year are as follows: October, 0.6; May, 488; June, 737; July, 818; August, 395; September, 52; total for the water year, 2,490.

Twin Creek near Mount Pleasant, Utah

Location.--Lat 39°29'30", long 111°24'25", in NW¼ sec. 30, T. 15 S., R. 5 E., on right bank 3½ miles southeast of Mount Pleasant.

Drainage area.--12 sq mi, approximately.

Records available.--October 1954 to September 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 6,500 ft (from topographic map).

Extremes.--Maximum discharge during year, 117 cfs June 26, from rating curve extended above 70 cfs (gage height, 1.81 ft); minimum, 3.5 cfs Apr. 2.
1954-57: Maximum discharge, that of June 26, 1957; minimum, 1.8 cfs Mar. 18, 1955.

Remarks.--Records good except those for periods of ice effect or doubtful or no gage-height record, which are fair. Records include flow of Twin Creek tunnel, a measured trans-mountain diversion from San Rafael River basin (see p. 124).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 8-18, June 23 to Aug. 5, Aug. 25 to Sept. 12)

0.6	3.2	1.0	20
.7	4.5	1.1	34
.8	6.9	1.2	52
.9	11	1.5	106

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.5	4.2	4.0	3.9	3.9	3.9	4.0	6.0	20	*61	12	8.8
2	4.5	b4.2	4.0	3.9	4.0	3.9	3.8	7.6	27	68	11	8.8
3	4.5	b4.2	4.0	3.9	4.0	4.0	3.9	8.4	36	57	11	8.8
4	4.3	b4.2	3.9	4.0	4.0	4.0	3.9	9.2	33	54	11	8.0
5	4.3	b4.2	3.9	4.0	4.0	4.3	3.9	11	*47	50	*10	7.6
6	4.3	4.2	b3.9	4.0	4.0	4.2	4.0	*14	52	50	a9.6	7.6
7	4.2	4.2	b3.9	4.2	4.0	4.3	3.9	13	57	47	a9.4	d7.2
8	4.3	4.2	b3.9	4.2	4.0	4.5	3.9	13	50	41	a9.2	a7.2
9	4.2	4.2	b3.7	4.0	4.0	4.5	4.0	13	75	*38	a9.0	b6.9
10	4.2	4.2	b3.7	b4.0	4.0	4.5	4.2	13	72	38	a9.0	d6.9
11	*4.3	4.2	*4.0	b4.0	3.9	4.5	4.3	11	54	34	} a8.8	*d6.6
12	4.7	*4.2	3.8	4.2	3.9	4.5	4.3	9.7	*48	31		6.7
13	4.7	4.0	3.8	4.2	3.9	b4.2	4.7	9.2	77	31		*7.2
14	4.8	3.9	3.8	4.2	3.9	b4.0	4.8	9.2	59	30		7.2
15	4.8	b4.0	3.8	*b4.0	3.9	b4.2	*4.8	8.4	59	27		7.2
16	4.8	b4.0	3.9	4.0	3.9	4.2	5.0	8.0	43	28	} a8.8	6.9
17	4.7	4.2	3.8		3.9	4.2	5.0	7.6	40	30		6.9
18	4.2	4.2			*4.0	*4.0	5.0	8.0	*44	25		6.9
19	4.3	b4.0		b4.0	4.0	4.0	4.8	a9.0	52	24		6.9
20	4.2	b4.0			4.0	4.0	4.5	a8.0	68	23		6.9
21	4.2	b4.0	} b5.9		3.9	4.2	4.5	a8.0	65	21		6.9
22	4.2	4.0		4.2	3.9	3.9	4.7	a8.0	66	20		6.9
23	4.3	4.0		4.2	3.9	4.0	4.7	a9.0	45	*18	*8.8	6.9
24	4.3	4.0		4.0	3.9	4.2	4.7	a10	56	16	9.2	6.6
25	4.5	4.0		4.2	3.9	4.0	4.5	a11	95	16	22	*6.9
26	4.5	4.0	4.0	4.2	3.9	4.0	4.7	a14	106	15	d9.7	6.6
27	4.5	4.2	4.0	4.0	3.9	3.9	4.7	*15	66	13	d9.7	6.2
28	4.3	4.2	4.0	4.0	3.9	4.0	4.8	14	*70	13	d9.2	6.2
29	4.3	4.2	3.9	3.9	-	4.2	5.2	18	72	13	d9.2	6.6
30	b4.3	4.0	3.9	3.9	-	4.3	5.2	19	74	13	*d9.7	6.6
31	4.2	-	3.9	4.2	-	4.3	-	17	-	12	9.7	-
Total	136.4	123.3	120.8	125.5	110.4	128.9	154.4	339.3	1,728	957	304.0	213.6
Mean	4.40	4.11	3.90	4.05	3.94	4.16	4.48	10.9	57.6	30.9	9.81	7.12
Ac-ft	271	245	240	249	219	256	267	673	3,430	1,900	603	424

Calendar year 1956: Max 34 Min - Mean 6.95 Ac-ft 5,050
Water year 1956-57: Max 106 Min 3.7 Mean 12.1 Ac-ft 8,780

Peak discharge (base, 30 cfs).--June 9 (3:30 p.m.) 90 cfs (1.55 ft); June 22 (6 p.m.) 92 cfs (1.50 ft); June 26 (6 a.m.) 117 cfs (1.81 ft); Aug. 25 (2 p.m.) 113 cfs (1.54 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge computed from reconstructed gage-height graph based on recorded graph and records for nearby streams.

Sevier River below San Pitch River, near Gunnison, Utah

Location.--Lat 39°09'00", long 111°52'30", in NE $\frac{1}{4}$ 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,900 ft (from topographic map).

Average discharge.--40 years, 219 cfs (158,500 acre-ft per year).

Extremes.--Maximum discharge during year, 964 cfs June 11 (gage height, 4.70 ft); minimum, 24 cfs July 3 (gage height, 0.89 ft).

1917-57: 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 fragmentary 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 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	26	3.0	408
1.3	53	4.0	700
1.6	95	4.7	955
2.0	189		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	33	112	116	b140	221	187	87	378	*123	112	86
2	43	34	112	117	b180	214	193	84	f498	71	110	77
3	45	35	107	116	a200	225	208	112	567	47	100	74
4	52	37	112	117	a195	225	221	156	591	39	70	70
5	58	44	116	121	a190	223	230	118	f725	41	52	67
6	57	48	116	119	a185	228	234	140	f700	40	87	63
7	58	48	116	116	a185	223	232	*157	f776	34	89	59
8	59	50	b105	121	a180	217	239	208	*f828	34	*102	58
9	59	47	b98	123	177	208	214	181	f803	36	116	*59
10	*61	44	b105	116	208	208	116	219	f796	*35	112	59
11	62	42	b110	107	214	204	103	171	f937	*36	98	58
12	59	43	117	109	241	193	72	112	f839	36	75	58
13	63	44	126	121	250	193	92	81	873	39	79	59
14	63	44	*130	128	262	193	105	87	839	42	92	61
15	63	*48	125	*125	291	185	119	107	728	63	77	64
16	a59	75	125	121	286	145	*198	143	766	47	65	67
17	a50	90	123	117	246	78	136	169	f783	41	45	87
18	a42	93	121	b114	*225	38	117	157	*744	44	38	103
19	a38	95	119	b114	214	58	110	189	722	42	36	112
20	a37	95	117	116	202	*57	105	239	675	42	35	126
21	a37	87	117	117	191	70	121	193	648	43	48	128
22	38	114	b117	119	161	107	132	165	f612	43	62	128
23	39	93	b117	119	171	145	161	157	f669	41	64	130
24	40	93	b117	121	163	141	140	202	f719	41	62	132
25	40	82	b117	125	189	183	126	234	716	35	61	114
26	37	82	b112	128	214	187	134	241	594	61	67	112
27	37	100	b112	128	223	193	140	298	564	89	81	107
28	37	107	b112	130	228	204	141	344	475	98	74	77
29	38	109	b112	128	-	206	130	357	400	109	74	70
30	37	112	b116	125	-----	204	95	*405	293	112	92	68
31	33	-----	116	b130	-----	191	-----	359	-----	117	95	-----
Total	1,492	2,068	3,575	3,722	5,811	5,367	4,551	5,852	20,258	1,721	2,370	2,533
Mean	48.1	68.9	115	120	208	173	152	189	675	55.5	76.5	84.4
Ac-ft	2,960	4,100	7,090	7,380	11,530	10,650	9,030	11,610	40,180	3,410	4,700	5,020

Calendar year 1956: Max 358 Min 20
Water year 1956-57: Max 937 Min 33

Mean 103 Mean 163
Ac-ft 74,840 Ac-ft 117,700

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for station at Sigurd and water commissioner's notes.

b Stage-discharge relation affected by ice.

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

Sevier Bridge Reservoir near Juab, Utah

Location.--Lat 39°22', long 112°02', in NW $\frac{1}{4}$ 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 1957.

Gage.--Staff gage below gage height 60 ft and wire-weight gage above, read once daily.

Extremes.--Maximum contents observed during year, 70,850 acre-ft, June 28, 29 (gage height, 52.2 ft); minimum observed, 3,540 acre-ft Oct. 1 (gage height, 15.9 ft).
1914-57: 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 (approximate bottom of outlet tunnel) and 80.0 ft (top of flashboard on spillway). No dead storage. Water is used for irrigation.

Revisions (water years).--WSP 960: 1941.

Capacity table, water year 1956-57 (gage height, in feet, and usable contents, in acre-feet)

15	2,840	25	12,830	35	29,150	45	51,390
17	4,440	27	15,550	37	33,120	47	56,500
19	6,230	29	18,580	39	37,340	49	61,840
21	8,220	31	21,890	41	41,800	51	67,390
23	10,400	33	25,420	43	46,490	53	73,200

Usable contents, in acre-feet, at 8 a.m., water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,540	-	12,340	20,040	28,020	41,350	52,910	62,380	51,390	69,120	48,430	37,120
2	3,810	-	12,890	20,370	28,580	41,800	53,920	62,380	51,140	67,970	47,940	37,340
3	3,700	-	12,830	20,540	28,960	42,260	54,430	62,660	50,890	67,110	47,460	37,340
4	3,860	-	13,100	20,880	29,150	42,960	54,950	62,380	50,400	65,430	-	37,340
5	4,030	-	13,490	21,220	29,540	43,650	55,210	62,380	50,150	63,760	46,980	37,560
6	4,190	7,810	13,750	21,560	29,930	44,120	55,730	62,110	49,900	62,380	46,490	37,560
7	4,360	7,910	13,890	21,890	30,130	44,590	56,240	61,840	49,410	61,300	-	37,780
8	4,440	8,110	14,150	22,240	30,520	45,070	56,760	61,030	49,410	60,220	45,540	37,780
9	4,550	8,220	14,430	22,420	31,100	45,540	57,290	59,950	-	59,140	45,070	38,000
10	4,620	8,320	14,570	22,590	31,710	46,020	57,560	58,610	50,650	57,620	44,830	38,000
11	4,700	8,430	14,850	22,760	32,110	46,490	57,820	56,780	51,890	57,030	-	38,000
12	4,880	8,640	15,130	22,940	32,710	46,980	58,080	55,730	53,160	56,500	44,380	38,220
13	5,050	8,750	15,410	23,290	33,330	47,220	58,350	54,430	54,690	55,980	44,120	38,220
14	-	8,850	15,550	23,810	33,950	47,700	58,350	53,160	56,500	55,470	44,120	38,440
15	-	8,960	15,840	24,170	34,780	48,190	58,610	52,150	-	54,950	43,890	38,440
16	-	9,070	16,290	24,530	35,410	48,430	58,870	51,640	59,680	54,950	43,650	38,660
17	-	9,170	16,580	24,530	36,050	48,670	-	51,140	61,300	54,430	43,190	38,660
18	-	9,390	16,880	24,710	36,700	48,670	-	50,400	62,660	54,180	42,730	38,880
19	-	9,620	17,180	24,890	37,340	48,910	59,410	-	64,430	-	42,030	38,880
20	-	9,840	17,490	25,070	37,780	49,160	59,680	48,910	-	53,670	41,350	39,100
21	-	10,070	17,800	25,420	38,220	49,410	59,680	49,180	65,710	53,410	40,890	39,320
22	-	10,180	17,960	25,790	38,660	49,410	60,220	49,410	66,550	53,160	40,440	39,540
23	-	10,400	18,110	26,160	38,880	49,660	60,480	49,160	67,390	52,910	39,990	39,760
24	-	10,520	18,110	26,340	39,100	49,900	60,780	48,910	67,970	52,650	39,540	39,980
25	-	10,760	18,270	26,710	39,540	50,150	61,300	49,160	68,540	52,150	-	40,220
26	-	11,120	18,580	26,890	39,990	50,400	61,300	49,660	69,690	51,640	39,100	40,440
27	-	11,350	18,740	27,260	40,440	50,890	61,570	50,150	70,560	50,890	38,220	40,670
28	-	11,580	18,900	27,640	40,890	51,390	61,840	50,650	70,850	50,150	37,560	40,890
29	-	11,840	19,230	27,640	-	51,890	61,840	-	70,850	49,410	37,120	41,120
30	-	12,090	19,550	27,830	-	52,400	62,110	51,140	70,560	48,910	36,910	41,120
31	47,120	-	19,860	28,020	-	52,650	-	51,140	-	48,670	37,120	-
(†)	-	24.4	29.8	34.4	40.6	45.5	49.1	44.9	52.1	43.9	38.9	40.7
(‡)	+3,740	+4,970	+7,790	+8,140	+12,870	+11,760	+9,460	-10,970	+19,420	-21,890	-11,550	+4,000

Calendar year 1956..... * -9,860

Water year 1956-57..... * +37,740

† Gage height, in feet, at end of month.

* Change in contents, in acre-feet.

‡ No gage-height record; contents interpolated.

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 1957.

Gage.--Water-stage recorder and rubble masonry control since Apr. 16, 1914. Altitude of gage is 4,940 ft (by barometer). Prior to Apr. 16, 1914, staff gage 500 ft upstream at different datum. Apr. 17, 1914, to Apr. 7, 1938, water-stage recorder at present site and datum. Apr. 8, 1938, to Mar. 31, 1942, water-stage recorder at site 1,300 ft upstream at different datum.

Average discharge.--46 years, 240 cfs (173,800 acre-ft per year).

Extremes.--Maximum discharge during year, 911 cfs May 10 (gage height, 3.95 ft); minimum observed, 1.4 cfs (discharge measurement) Dec. 12.
1911-57: 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 no gage-height record, which are fair. No diversion between station near Gunnison and this station. Flow regulated by Sevier Bridge Reservoir (see preceding page).

Rating table, water year 1956-57 (gage height, in feet,
and discharge, in cubic feet per second)
(Shifting-control method used July 10, 11)

1.0	9.9	2.0	260
1.2	45	3.0	579
1.5	116	4.0	914

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								2.5	433	693	303	20
2								2.5	516	792	260	20
3								57	852	798	242	10
4								116	798	798	242	
5								116	836	728	245	
6								290	832	612	*248	
7								536	*771	612	338	
8	(*)							*689	602	612	391	
9								836	520	586	268	
10								907	388	*481	200	
11								870	218	334	200	
12			(*)					812	111	272	200	(*)
13		(*)						809	74	279	200	
14								665	76	204	197	
15								507	67	177	197	
16	2.1	2.0	1.5	2.2	2.7	3.1	2.5	449	62	197	236	3.5
17				(*)			(*)	559	62	209	282	
18								638	*84	242	315	
19								500	126	218	328	
20					(*)	(*)		242	264	203	328	
21								103	316	183	328	
22								271	297	191	325	
23								420	297	149	322	
24								205	233	294	319	
25								36	140	372	319	
26								19	113	369	316	
27								19	275	423	316	
28								*149	417	459	316	
29					-			236	542	388	189	
30					-			319	605	338	64	
31					-			366	-	319	20	-
Total	65.1	60.0	46.5	68.2	75.6	96.1	75.0	11,746	10,697	12,532	8,067	144.5
Mean	2.10	2.00	1.50	2.20	2.70	3.10	2.50	379	357	404	280	4.82
Ac-ft	129	119	92	135	150	191	149	23,300	21,220	24,860	15,980	287
Calendar year 1956: Max	979				Min -	Mean 125		Ac-ft 90,550				
Water year 1956-57: Max	907				Min -	Mean 120		Ac-ft 86,610				

* Discharge measurement made on this day.

Note.--No gage-height record Oct. 1 to May 2, Aug. 31 to Sept. 30; discharge estimated on basis of 8 discharge measurements, weather records, and water commissioner's notes.

Sevier River near Lynndyl, Utah

Location.--Lat 39°29', long 112°24', in SE $\frac{1}{4}$ sec. 27, T. 15 S., R. 5 W., on right bank $\frac{1}{2}$ miles downstream from highway bridge and $3\frac{1}{2}$ miles southwest of Lynndyl.

Drainage area.--6,270 sq mi, approximately.

Records available.--April 1914 to October 1919, November 1942 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,660 ft (by barometer).

Average discharge.--19 years (1914-19, 1943-57), 207 cfs (149,900 acre-ft per year).

Extremes.--Maximum discharge during year, 707 cfs May 12; maximum gage height, 5.88 ft July 5, 6; minimum discharge, 14 cfs Jan. 23, result of freezeup.

1914-19, 1942-57: Maximum daily discharge, 1,880 cfs June 9, 1914, based on records at Leamington; minimum observed, 6.1 cfs Nov. 15, 1955 (discharge measurement), result of freezeup.

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. 127). Several diversions for irrigation between reservoir and station. Records of chemical analyses and water temperatures for the water year 1957 are given in WSP 1523.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 4-10, May 25 to Aug. 2, Aug. 7 to Sept. 30)

1.9	16	3.5	170
2.2	30	4.0	265
2.5	50	5.0	504
3.0	100	6.0	766

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	39		b29		41	20	46	326	504	303	88
2	34	34		b24		42	19	46	350	529	289	70
3	33	a34	b42	b24		45	20	45	419	636	269	65
4	34	a35		b22	b17	45	21	44	452	680	250	54
5	31	a36	55	b22		46	22	75	597	690	250	48
6	31	a37	48			46	22	129	662	690	*246	34
7	31	36	37			42	18	159	*664	575	222	29
8	*31	39	b37		b20	37	17	*272	683	534	240	26
9	34	41	b37		b22	47	16	439	552	537	319	24
10	37	42	b37	b18	26	37	23	576	436	*526	308	23
11	36	42	b40		59	37	22	682	347	464	182	*22
12	36	42	*b47		39	37	23	698	216	374	184	28
13	39	*42	b47		36	37	22	633	150	276	173	22
14	40	40	b46		37	37	22	623	88	269	172	21
15	39	b36			35	34	23	565	68	232	175	21
16	39	b38			32	32	23	395	67	104	173	20
17	39	37			29	31	*26	333	*59	84	167	21
18	41	42		(*)	26	31	31	347	52	90	209	22
19	32	39			23	29	31	462	50	66	209	28
20	27				*36	28	33	469	47	84	189	30
21	28				48	*28	37	282	105	85	209	32
22	35	b41	b44	b17	40	26	46	136	263	77	230	35
23	41				39	24	56	87	263	87	230	34
24	43				42	22	58	301	261	90	228	33
25	49				42	20	53	281	238	121	234	34
26	44				44	19	49	139	173	283	246	35
27	44				43	20	47	88	126	296	248	36
28	43	b42			42	20	46	*60	148	322	254	35
29	43				17	45	51	315	393	259	35	35
30	42		b40		18	46	182	405	361	361	234	36
31	42	-----	b34		18	-----	-----	242	-----	315	140	-----
Total	1,154	1,191	1,335	572	881	993	937	8,687	8,568	10,392	7,041	1,039
Mean	37.2	39.7	43.0	18.5	31.5	32.0	31.2	287	286	335	227	34.6
Ac-ft	2,290	2,360	2,640	1,130	1,750	1,970	1,860	17,630	17,000	20,610	13,970	2,060
Calendar year 1956: Max	736				Min 13		Mean 124		Ac-ft 89,790			
Water year 1956-57: Max	698				Min -		Mean 118		Ac-ft 85,270			

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Chalk Creek near Fillmore, Utah

Location.--Lat 38°58', long 112°18', in NE $\frac{1}{4}$ sec. 28, T. 21 S., R. 4 W., on left bank 1 mile east of Fillmore and 2 $\frac{1}{2}$ miles downstream from South Fork.

Drainage area.--60 sq mi, approximately.

Records available.--May to July 1914, March 1944 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,180 ft (by barometer). May to July 1914, staff gage at site 1 $\frac{1}{2}$ miles upstream at different datum.

Average discharge.--13 years (1944-57), 33.1 cfs (23,960 acre-ft per year).

Extremes.--Maximum discharge during year, 359 cfs June 3; minimum daily, 4.4 cfs Nov. 21. 1914, 1944-57: Maximum discharge, 509 cfs May 4, 1952; minimum daily, that of Nov. 21, 1956.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Records include flow of Fillmore Canal which diverts on left bank at flood control dam 400 ft upstream. During low-water periods flow is diverted 2 miles upstream and carried in a lined ditch to the head of the Fillmore Canal. One small irrigation diversion above gage.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.6	8.0	8.0	7.6	a9.0		24	102	294	a58	22	a15
2	6.8	7.2	6.0	7.6	a9.2		27	124	321	a56	21	a15
3	6.8	7.0	6.0	7.8	a9.2		28	145	341	a54	21	a15
4	7.0	7.6	6.0	7.8	a9.2		29	163	*333	a50	21	a15
5	6.8	7.6	6.2	8.0	9.4		33	184	315	a48	21	a15
6	6.8	7.6	7.0	8.0	9.4	a11	47	201	296	a46	*20	a14
7	6.8	7.8	7.4	8.2	9.4		51	210	275	a44	20	a14
8	*6.8	7.8	6.6	8.2	9.0		47	*228	248	a42	20	a14
9	7.0	7.8	a7.0	6.8	9.9		46	236	239	a40	19	a14
10	7.2	7.8	a8.0	7.2	9.2		58	243	222	*39	19	a14
11	7.0	7.8	8.4	8.8	9.4		73	221	184	38	20	*14
12	7.6	7.8	*8.0	8.6	9.9		88	189	159	37	22	13
13	7.4	*8.0	7.8	9.9	9.9		97	165	155	35	19	13
14	7.4	7.6	7.8	9.7	10	a12	101	159	145	34	21	13
15	7.4	6.8	7.4	8.8	10		94	154	135	32	22	13
16	7.2	8.0	7.8	8.6	9.9		97	148	124	30	19	13
17	7.2	8.2	7.6	6.0	10		*92	148	106	31	18	13
18	7.2	8.0	7.0	*6.0	10	13	89	164	*100	35	17	13
19	7.2	7.2	7.2	7.4	10	13	80	205	96	34	17	13
20	7.4	5.1	7.2	8.6	*9.7	13	70	204	97	29	25	14
21	7.4	4.4	7.8	8.6	9.7	*14	64	185	95	29	a24	13
22	7.2	5.0	7.2	7.8	9.7	13	66	170	a89	27	a20	13
23	7.6	4.8	8.4	7.8	9.7	14	66	165	a84	26	a16	13
24	8.0	4.8	8.2	8.2	9.7	13	66	164	a80	26	a16	13
25	8.8	5.1	7.8	8.4	10	14	71	172	a78	32	a16	12
26	9.4	5.3	7.6	8.6		15	71	187	a72	26	a15	12
27	9.2	5.5	7.8	8.6	a10	15	75	*214	a70	25	a15	12
28	9.0	5.5	7.8	8.4		16	82	250	a67	24	a15	12
29	9.2	5.7	7.8	6.4		16	94	272	a65	24	a15	12
30	8.2	5.9	7.8	6.4		19	98	271	a60	23	a15	12
31	8.6	-----	7.8	a8.8	-----	20	-----	265	-----	22	a15	-----
Total	234.0	202.7	226.4	247.6	270.5	403	2,024	5,908	4,945	1,096	566	401
Mean	7.54	6.76	7.30	7.99	9.66	13.0	67.5	191	165	35.4	18.9	13.4
Ac-ft	464	402	449	491	537	799	4,010	11,720	9,810	2,170	1,160	795
Calendar year 1956: Max	86				Min 4.4	Mean 18.1	Ac-ft 13,160					
Water year 1956-57: Max	341				Min 4.4	Mean 45.3	Ac-ft 32,810					

* Discharge measurement made on this day.

a No gage-height record; 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 NW¼ 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 1957.

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.--10 years, 10.4 cfs (7,530 acre-ft per year).

Extremes.--Maximum discharge during year, 147 cfs June 10 (gage height, 3.40 ft); minimum daily, 0.9 cfs May 12.

1947-57: Maximum discharge, 290 cfs Aug. 9, 1947 (gage height, 4.35 ft, site and datum then in use), from rating curve extended above 160 cfs on basis of slope-area determination of peak flow; minimum daily, 0.1 cfs May 6, 9, 10, 1955, when gates of Three Creeks Dam were closed.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow affected by storage in Puffer Lake and in Three Creeks Reservoir (capacity, 2,020 acre-ft) completed in 1950.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	0.5	1.5	6.7	2.5	58
1.1	1.0	1.8	16	3.0	104
1.2	1.8	2.1	31	3.4	147
1.3	3.0				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.1							7.7	28	55	59	11
2	4.1							11	24	53	60	11
3	4.2	b3.6	b3.5				4.0	14	21	50	59	11
4	4.2							7.1	22	46	57	11
5	4.1							1.1	52	43	56	10
6	4.1	3.8						1.0	100	42	56	10
7	4.1	3.6						1.0	*126	34	58	9.9
8	4.1	3.4					5.0	1.0	143	23	62	9.9
9	4.1	3.6						1.1	144	31	62	9.6
10	4.1	3.6						1.1	145	*33	58	9.6
11	4.1	3.6						1.0	144	33	54	9.3
12	4.1	3.6					7.0	9	103	33	48	8.8
13	4.1	3.8						7.2	88	31	43	9.0
14	4.1	3.4						16	100	39	*38	9.0
15	4.1	b3.4		3.0	3.5	3.5		24	102	41	28	9.0
16	4.1	b3.4					10	32	102	50	16	9.0
17	4.1	b3.4	3.5				*12	32	89	*50	14	8.8
18	*3.9	3.4					12	31	61	55	14	8.5
19	3.8	b3.5					11	31	62	54	14	8.5
20	3.6	b3.5					9.9	31	62	54	14	8.8
21	3.6	b3.5					8.8	27	62	58	16	8.5
22	3.6	3.4					7.5	*11	62	60	14	8.5
23	3.8	3.6					6.7	11	50	59	13	8.3
24	b3.8						6.7	11	40	58	12	8.0
25	b3.8						6.5	12	21	59	12	8.0
26	b3.8							5.6	9.1	3.9	66	12
27	3.8	b3.5						5.8	7.4	*4.1	66	*7.7
28	3.8							6.0	22	36	12	7.7
29	3.6	(*)						6.7	23	36	63	13
30	b3.6							6.7	24	57	62	12
31	3.6							27		62	12	
Total	122.0	106.0	108.5	93.0	98.0	108.5	201.7	436.7	2,058.1	1,533	1,010	271.5
Mean	3.94	3.53	3.5	3.0	3.5	3.5	6.72	14.1	88.6	49.5	32.6	9.05
Ac-ft	242	210	215	184	194	215	400	866	4,080	3,040	2,000	539
Calendar year 1956: Max	55						Mean 8.14	Ac-ft 5,910				
Water year 1956-57: Max	145					Min 0.9	Mean 16.8	Ac-ft 12,180				

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Dec. 4 to Apr. 16; discharge estimated on basis of weather records and records for stations on Beaver River.

Beaver River near Beaver, Utah

Location.--Lat 38°17', long 112°34', in SW $\frac{1}{4}$ SW $\frac{1}{4}$ 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 4 $\frac{1}{2}$ miles east of Beaver.

Drainage area.--82 sq mi, approximately.

Records available.--June to September 1906, March 1914 to September 1957.

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.--43 years (1914-57), 54.5 cfs (39,460 acre-ft per year).

Extremes.--Maximum discharge during year, 732 cfs June 6 (gage height, 4.71 ft); minimum daily, 14 cfs several days during October to January.

1914-57: 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 daily recorded, 10 cfs for several days in 1915, 1931, 1934.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. No diversions above station for irrigation. Water diverted for hydroelectric power, but returned to stream above station. Some regulation by power-plants and several small reservoirs.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 3-7)

Oct. 1 to June 27

June 28 to Sept. 30

2.0	13	3.0	163	2.2	18	3.0	147
2.2	27	3.5	313	2.4	36	3.3	228
2.5	63	4.0	507	2.7	82		
2.8	117	4.4	682				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	15	b16	14	b15	17	22	49	253	208	79	30
2	18	b14	b16	14	b15	17	20	69	324	194	77	29
3	18	b14	b16	14	15	17	20	92	383	183	79	30
4	18	b14	15	14	b15	17	20	105	459	175	79	28
5	16	17	15	14	b15	18	21	111	471	154	77	28
6	15	17	16	14	b15	18	21	121	535	147	75	28
7	15	17	16	16	15	18	22	117	*658	131	79	28
8	15	17	b16	17	15	17	21	124	*642	102	79	24
9	18	17	b16	16	17	18	21	132	601	102	80	26
10	15	17	b16	b15	15	17	25	132	588	*109	79	24
11	16	16	16	15	15	18	34	115	527	109	79	24
12	17	17	16	15	15	18	41	93	491	100	73	24
13	16	17	15	17	*18	18	44	86	503	100	68	24
14	16	16	15	17	17	18	49	90	487	111	*63	24
15	17	b15	b15	*15	18	17	50	90	435	113	60	24
16	16	b15	14	15	17	*18	62	103	376	113	40	32
17	16	15		b15	18	18	*65	111	342	124	31	30
18	*16	17		b15	17	18	66	126	320	*117	32	29
19	16			b15	17	18	53	149	331	115	32	28
20	17			b15	17	17	47	139	327	111	*35	30
21	15			15	17	18	44	124	313	111	*42	30
22	15	b16		b15	16	18	38	*99	296	109	44	31
23	15			15	16	17	31	93	286	106	35	30
24	16		b15	15	16	20	39	88	266	104	35	30
25	14			15	17	16	41	88	253	104	34	30
26	19			15	16	18	35	97	235	109	33	30
27	17	a16		16	16	17	35	103	*211	109	30	*27
28	18			b15	16	17	39	146	*202	100	29	28
29	17	*b16		b15	-	17	42	181	211	90	36	26
30	15	b16		b15	-----	18	41	197	219	82	35	26
31	17	-----	14	b15	-----	18	-----	200	-----	82	33	-----
Total	507	479	473	468	449	546	1,109	3,569	11,543	3,722	1,682	832
Mean	16.4	16.0	15.3	15.1	16.0	17.6	37.0	115	385	120	54.3	27.7
Ac-ft	1,010	950	938	928	891	1,080	2,200	7,080	22,900	7,380	3,340	1,650
Calendar year 1956: Max		158		Min	14		Mean	36.5	Ac-ft	26,530		
Water year 1956-57: Max		656		Min	14		Mean	69.5	Ac-ft	50,350		

* 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 Beaver River near Adamsville.

b Stage-discharge relation affected by ice.

Beaver River at Adamsville, Utah

Location.--Lat 38°16', long 112°48', in S $\frac{1}{2}$ 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,000 ft (from topographic map). Prior to Oct. 16, 1937, at site 225 ft upstream at different datum and Oct. 16, 1937, to May 28, 1946, at site 75 ft downstream at datum 0.50 ft higher.

Average discharge.--42 years (1914-36, 1937-57), 37.0 cfs (26,790 acre-ft per year).

Extremes.--Maximum discharge during year, 689 cfs June 8 (gage height, 4.65 ft); no flow Oct. 1-31.

1913-36, 1937-57: Maximum discharge, 1,090 cfs July 23, 1941 (gage height, 4.68 ft, site and datum then in use), from rating curve extended above 500 cfs; no flow during summer periods of many years.

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 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

0.55	0	1.4	27
.6	.1	1.8	68
.7	.5	2.2	124
.8	1.4	2.6	190
.9	3.2	3.0	270
1.0	6.0	4.0	509
1.2	14	4.6	675

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		6.8	b32	b31		33	31	5.4	84	81	20	20
2		28	b32	30		32	34	4.8	274	85	18	21
3		b32	b32	32		42	44	5.4	362	56	16	20
4		b32	b28	30	b34	35	29	4.8	434	48	16	19
5		b32	28	30		35	24	2.2	506	39	16	18
6		38	32	30		35	15	1.4	591	29	15	18
7		37	32	30		33	8.6	4.0	*627	22	14	16
8		37		35	35	33	8.2	14	636	17	11	14
9		36		32	44	30	7.1	14	641	13	8.2	15
10		37		31	47	30	6.0	20	655	*12	7.5	14
11		37	b32	34	60	30	5.1	22	599	15	9.7	14
12		36		33	74	29	4.0	17	486	28	11	14
13		36		52	*64	29	3.0	17	432	30	10	14
14		36	34	43	59	30	2.5	14	462	27	*9.7	14
15		b33	b32	36	50	27	2.5	17	410	19	11	14
16		b33	32	*33	46	*28	2.5	27	351	17	13	14
17		b33	27	32	48	29	*2.2	19	272	26	11	14
18		53	31	34	44	28	3.7	14	211	36	9.7	14
19			33	34	44	29	1.2	16	183	24	12	14
20			32		56	28	.9	39	192	24	14	15
21			34		46	30	1.0	30	179	23	27	15
22					46	32	2.0	*24	169	22	34	16
23					44	33	31	40	158	19	25	14
24					42	34	28	54	150	18	17	14
25				b32	38	34	20	54	145	22	18	14
26					37	42	14	34	130	26	20	12
27					34	35	9.3	37	*118	27	18	*11
28					33	34	7.5	41	102	25	18	12
29					--	34	8.6	52	89	26	24	11
30					34	34	7.8	53	92	24	21	11
31					33	33	--	59	--	22	22	--
Total	0	986.8	963	1,026	1,229	1,000	363.7	756.0	9,740	883	494.8	446
Mean	0	32.9	31.7	33.1	43.9	32.3	12.1	24.4	325	28.5	16.0	14.9
Ac-ft	0	1,960	1,950	2,040	2,440	1,980	721	1,540	19,320	1,750	981	885
Calendar year 1956: Max	50											
Water year 1956-57: Max	655											
Min	0											
Mean	14.0											
Ac-ft	49.1											

* Discharge measurement or observation of no flow 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.

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 1957.

Gage.--Staff gage.

Extremes.--Maximum contents observed during year, 19,180 acre-ft June 24 (gage height, 47.0 ft); no contents during October and part of November 1956.
1937-57: Maximum contents observed, 23,810 acre-ft Apr. 22, 25, 28, 30, May 1, 1945; no contents Oct. 16, 31, 1939, and part of August to November 1956.

Remarks.--Reservoir is formed by earth-fill dam completed in 1914. Capacity, 23,260 acre-ft between gage height 0.0 (bottom of outlet tunnel) and 51.0 ft (spillway crest). Prior to fall of 1937 the spillway crest was at elevation 52.5 ft; capacity, 24,910 acre-ft. Dead storage negligible. Water is used for irrigation in vicinity of Minersville and Milford.

Capacity table, water year 1956-57 (gage height, in feet, and contents, in acre-feet)

16	1,760	28	5,750	40	13,110
18	2,250	30	6,720	42	14,720
20	2,810	32	7,820	44	16,340
22	3,440	34	8,910	46	18,230
24	4,080	36	10,270	48	20,120
26	4,920	38	11,620		

Usable contents, in acre-feet, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		-	-	-		7,380	-	-	-	-	-	-
2		-	-	-	5,670	-	-	-	-	-	-	-
3		-	-	-	-	-	-	-	-	-	14,320	-
4		-	-	-	-	-	-	7,980	-	-	-	-
5		-	-	4,290	-	-	-	-	-	-	-	-
6		-	-	-	-	-	-	-	-	18,230	-	-
7		-	-	-	-	-	-	-	-	-	-	-
8		-	3,440	-	-	-	-	-	11,420	-	-	-
9		-	-	-	5,960	-	-	-	-	-	-	-
10		-	-	-	-	-	-	-	-	16,910	-	-
11		-	-	-	-	7,700	-	7,760	14,560	-	-	-
12		-	-	4,290	-	-	-	-	-	-	-	-
13		-	-	-	6,440	-	-	-	-	-	-	-
14		-	-	-	-	-	-	-	-	-	12,460	-
15		-	3,700	-	-	-	8,470	-	16,340	-	-	-
16		-	-	-	-	-	-	-	-	-	-	-
17		-	-	4,920	-	7,870	-	-	-	-	-	-
18		-	-	-	-	-	-	-	-	-	-	-
19		-	-	-	-	-	-	7,700	18,140	-	-	-
20		-	-	5,040	-	-	8,360	-	-	15,530	-	-
21		-	-	-	-	-	-	-	-	-	-	-
22		-	-	-	-	-	-	7,700	-	-	-	-
23		-	3,760	-	7,050	-	-	-	-	-	-	-
24		-	-	-	-	-	-	-	19,180	-	-	-
25		-	-	-	-	-	-	7,320	-	-	-	-
26		-	-	-	-	-	-	-	-	-	-	-
27		-	-	-	-	-	-	-	-	-	-	8,140
28		-	-	-	-	-	-	-	-	-	-	7,980
29		-	-	-	-	-	-	7,700	18,140	-	-	-
30		-	-	-	-	-	-	-	-	-	-	-
31		-	-	-	-	-	-	-	-	-	-	-
	ao		3,920	a5,620		8,360		a9,080	a18,960	a14,580	a10,790	
(†)	-		23.5		31.2	33.0						32.3
(‡)	0	+2,620	+1,300	+1,700	+1,760	+980	-60	+780	+9,880	-4,380	-3,790	-2,810

Calendar year 1956..... # -1,620

Water year 1956-57..... # +7,890

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

a No gage-height record; contents interpolated.

Beaver River at Rockyford Dam, near Minersville, Utah

Location.--Lat 38°14', long 112°50', in NW $\frac{1}{4}$ sec. 11, T. 30 S., R. 9 W., on right bank half a mile downstream from Rockyford Dam and $4\frac{1}{4}$ miles east of Minersville.

Drainage area.--512 sq mi.

Records available.--December 1913 to September 1957.

Gage.--Water-stage recorder. Concrete control since Nov. 12, 1916. Altitude of gage is 5,400 ft (by barometer). Prior to June 1, 1916, at site 1,500 ft upstream at different datum.

Average discharge.--42 years (1914-36, 1937-57), 38.7 cfs (28,020 acre-ft per year).

Extremes.--Maximum daily discharge during year, 124 cfs July 17, 18; minimum daily, 3.3 cfs Nov. 30 to Dec. 29, Jan. 2-7.

1913-57: Maximum discharge, 727 cfs June 10, 1921 (gage height, 3.53 ft); minimum daily, 0.4 cfs Mar. 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.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.8	4.0	3.3	3.6	4.8	6.3	5.9	25	95	111	68	100
2	5.2	4.0	3.3	3.3	4.8	6.9	5.5	25	96	114	68	100
3	5.5	4.0	3.3	3.3	4.8	6.9	5.9	25	98	111	68	100
4	5.5	3.6	3.3	3.3	4.8	6.9	5.5	23	102	102	75	95
5	5.5	4.0	3.3	3.3	4.8	6.9	5.9	23	105	91	75	91
6	5.2	4.0	3.3	3.3	4.8	6.9	5.9	20	113	93	77	86
7	5.5	4.0	3.3	3.3	4.4	5.9	5.9	21	118	85	78	82
8	6.3	4.0	3.3	3.6	4.8	5.5	5.5	22	*118	78	86	74
9	6.3	4.4	3.3	3.6	4.8	5.5	5.9	22	120	88	90	62
10	5.9	4.0	3.3	3.6	4.8	5.9	5.5	22	114	*91	90	63
11	6.3	4.0	3.3	3.6	4.8	5.9	5.5	23	95	96	95	60
12	6.3	4.0	3.3	4.0	5.5	5.9	5.9	23	85	98	100	60
13	5.5	4.0	3.3	4.0	*5.5	5.9	5.9	24	83	96	38	60
14	7.5	4.0	3.3	4.4	5.5	5.9	6.3	27	78	96	*98	60
15	6.9	4.0	3.3	4.4	5.5	5.9	6.3	28	75	109	102	60
16	7.5	4.0	3.3	*4.4	5.9	*6.1	6.9	28	64	118	102	58
17	6.3	4.0	3.3	4.4	5.9	6.3	*7.5	28	57	124	103	58
18	4.8	4.0	3.3	4.4	5.9	6.3	6.9	28	56	124	107	58
19	4.4	4.0	3.3	4.4	5.9	6.3	6.9	29	53	122	107	58
20	4.4	4.0	3.3	4.4	5.9	6.3	6.9	29	54	122	107	58
21	4.4	4.0	3.3	4.4	5.9	5.9	6.3	*28	53	113	109	57
22	4.4	3.6	3.3	4.8	6.3	5.9	18	27	54	93	105	50
23	4.0	3.6	3.3	4.8	6.3	5.5	29	57	57	114	98	41
24	*4.0	3.6	3.3	4.8	6.3	5.2	27	69	63	100	96	36
25	4.0	3.6	3.3	4.8	6.3	5.5	26	75	69	78	96	33
26	4.0	3.6	3.3	4.8	6.3	5.5	26	74	82	91	107	32
27	4.0	3.6	3.3	4.8	6.3	5.5	25	64	95	107	83	*32
28	4.0	3.6	3.3	4.8	6.3	5.5	26	70	*105	100	86	32
29	4.0	*3.5	3.3	4.8	-	5.5	27	85	107	85	96	32
30	4.0	3.3	3.6	4.8	-----	5.5	26	90	109	70	100	32
31	4.0	-----	3.6	4.8	-----	5.5	-----	90	-----	68	100	-----
Total	160.4	116.0	102.9	129.0	153.9	185.4	358.7	1,224	2,573	3,088	2,870	1,820
Mean	5.17	3.87	3.32	4.16	5.50	5.98	12.0	39.5	85.8	99.6	92.6	60.7
Ac-ft	318	230	204	256	305	368	711	2,430	5,100	6,120	5,690	3,610
Calendar year 1956: Max 176 Min 3.3 Mean 22.0 Ac-ft 15,990												
Water year 1956-57: Max 124 Min 3.3 Mean 35.0 Ac-ft 25,340												

* Discharge measurement made on this day.

Coal Creek near Cedar City, Utah

Location.--Lat 37°40'20", long 113°02'05", in NE¹ sec. 13, T. 36 S., R. 11 W., on right bank 300 ft downstream from powerplant, 4 miles downstream from South Creek, and 1.3 miles east of Cedar City.

Records available.--May 1915 to November 1919, May 1935 to September 1957. 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 and concrete control. 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, May 4 to July 2, 1952, water-stage recorder at site 2 miles upstream at different datum.

Average discharge.--21 years (1935-37, 1938-57), 31.3 cfs (22,660 acre-ft per year).

Extremes.--Maximum discharge during year, 651 cfs May 28 (gage height, 2.55 ft); minimum, 0.5 cfs Feb. 5.

1935-57: 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, 0.4 cfs Dec. 17, 1954, result of freezeup.

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

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.3	6.2	5.8	6.5	6.9	9.7	20	46	226	43	15	12
2	7.8	5.4	5.8	6.9	7.3	9.7	14	50	254	40	14	11
3	8.7	4.5	6.2	6.9	6.9	9.2	19	a60	213	37	14	11
4	7.8	5.0	6.5	6.9	7.0	8.2	16	a80	213	34	14	11
5	7.3	7.7	6.5	6.9	6.9	8.2	18	a110	206	33	15	11
6	7.8	7.8	6.5	6.5	7.3	8.7	28	a150	206	31	*15	11
7	7.3	6.9	6.2	6.2	7.3	10	27	a170	180	30	13	11
8	7.3	6.9	4.2	6.5	7.8	16	21	a180	*145	28	13	10
9	7.3	6.9	4.0	5.8	8.2	16	24	*a170	145	34	13	10
10	6.9	6.5	*6.5	6.8	7.8	13	39	*140	254	41	12	10
11	6.9	6.5	8.7	6.5	8.7	13	52	94	220	37	13	*10
12	6.5	6.5	7.3	6.5	9.7	13	*52	68	186	36	13	10
13	6.9	6.5	6.9	10	*12	10	56	*71	186	27	13	9.7
14	6.9	5.1	6.5	*8.7	17	8.2	a60	52	186	24	18	9.7
15	6.9	3.4	5.6	6.9	16	9.2	a61	50	174	23	16	9.7
16	*6.9	5.0	6.5	6.2	14	*9.7	*63	48	114	23	13	9.7
17	6.9	6.9	6.2	3.6	14	9.2	52	58	110	28	12	9.7
18	6.5	7.8	5.4	5.0	12	9.2	*42	63	114	23	15	9.7
19	6.9	4.8	5.3	5.8	10	9.2	30	117	110	22	14	10
20	6.5	3.0	5.0	6.9	9.7	10	28	*105	105	20	15	10
21	6.5	4.2	6.4	7.3	9.7	13	22	84	*92	20	18	9.7
22	7.8	5.8	4.5	6.2	9.2	8.7	20	77	88	19	18	9.7
23	9.2	7.3	4.2	7.8	11	10	18	88	80	18	19	9.0
24	10	6.9	5.4	7.3	9.7	11	22	66	71	18	16	9.0
25	8.7	6.5	5.8	7.3	10	12	*22	84	66	18	16	9.0
26	*9.7	6.2	5.4	7.3	11	14	21	126	60	18	14	8.4
27	8.7	6.2	5.4	7.3	13	14	26	192	57	16	13	8.4
28	8.2	5.8	5.8	6.9	13	18	32	210	*55	16	14	8.4
29	8.2	6.2	6.2	4.8	-	16	32	186	51	16	18	8.4
30	7.2	5.8	6.2	7.8	-----	17	34	*244	46	16	15	8.4
31	7.8	-----	6.5	6.5	-----	17	-----	247	-----	15	13	-----
Total	235.3	180.2	183.4	208.5	283.1	360.1	971	3,486	4,213	804	454	294.6
Mean	7.59	6.01	5.92	6.73	10.1	11.6	32.4	112	140	25.9	14.6	9.82
Ac-ft	467	357	364	414	562	714	1,930	6,910	8,360	1,590	900	584
Calendar year 1956: Max		142		Min 3.0		Mean 19.2		Ac-ft 13,920				
Water year 1956-57: Max		254		Min 3.0		Mean 32.0		Ac-ft 23,150				

Peak discharge (base, 350 cfs).--May 28 (8 p.m.) 651 cfs (2.55 ft); June 10 (9 a.m.) 507 cfs (2.18 ft). Discharge measurement used on this day. No gage-height record; discharge estimated on basis of 1 discharge measurement, weather records, engineer's notes, and records for North Fork Virgin River near Springdale.

ESCALANTE VALLEY

Santa Clara-Pinto diversion near Pinto, Utah

Location.--Lat 37°28'00", long 113°28'30", in SW¹ sec. 19, T. 38 S., R. 14 W., on left bank 400 ft downstream from diversion tunnel outlet and 6 miles southeast of Pinto.

Records available.--October 1953 to September 1957 (records of monthly diversion only).

Gage.--Water-stage recorder and artificial rock masonry control. Altitude of gage is 6,860 ft (by barometer).

Extremes.--Maximum discharge during year, 42 cfs June 10 (gage height, 1.62 ft); no flow most of year.

1953-57: Maximum discharge, that of June 10, 1957; no flow most of each year.

Remarks.--Records good. This is a transmountain diversion from a tributary of Santa Clara River to Pinto Creek in Escalante Valley in The Great Basin.

Monthly diversion, in acre-feet, water year October 1956 to September 1957

Month	Diversion	Month	Diversion
October.....	0	May.....	873
November.....	0	June.....	902
December.....	0	July.....	0
January.....	0	August.....	0
February.....	0	September.....	0
March.....	0	Water year.....	1,890
April.....	111		

Whitewater River at Whitewater, Calif.

Location.--Lat 33°56'48", long 116°38'24", in NW 1/4 sec. 2, T. 3 S., R. 3 E., on right bank 1.5 miles north of Whitewater and 3 1/2 miles upstream from San Geronio River.

Drainage area.--57.4 sq mi.

Records available.--October 1948 to September 1957.

Gage.--Water-stage recorder. Datum of gage is 1,610.98 ft above mean sea level, adjustment of 1934. Supplementary water-stage recorder and sharp-crested weir on diversion channel 400 ft west and 500 ft downstream from base gage. From Feb. 24, 1950, to Sept. 30, 1952, supplementary gage used as base gage.

Average discharge.--9 years, 8.90 cfs (6,440 acre-ft per year); average combined discharge of river and infiltration line, 8 years (1949-57), 10.4 cfs (7,530 acre-ft per year).

Extremes.--Maximum discharge during year, about 750 cfs Jan. 13 (gage height, 8.68 ft, from floodmarks), estimated on basis of field survey; no flow Jan. 9, 11.

1948-57: Maximum discharge, that of Jan. 13, 1957; no flow Jan. 9, 11, 1957.

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 good except those for periods of no gage-height record, indefinite stage-discharge relation, and those above 10 cfs, which are poor. Discharge measurements generally made twice 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 station. Water is diverted out of basin about 15 miles upstream to powerplants in San Geronio 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.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.8	6.3	5.1	2.1	e10	2.9	4.3	a6	5.1	6.1	6.6	4.8
2	6.1	7.0	6.1	5.8	e10	.2	7.5	a6	3.0	6.6	6.6	7.5
3	6.8	5.6	6.1	6.1	e10	.1	7.0	a6	5.8	6.8	6.1	7.6
4	6.3	4.4	6.1	6.3	e7	6.5	6.8	a6	5.8	6.3	3.4	7.5
5	6.3	5.8	6.3	5.3	e7	6.7	8.0	a6	5.8	7.3	6.6	7.0
6	6.3	6.6	5.3	3.4	7.4	5.6	8.0	6.1	5.8	6.1	6.8	7.1
7	4.4	6.6	6.1	6.4	7.9	4.9	5.6	6.3	6.1	4.8	6.6	5.3
8	6.8	6.1	4.6	a15	5.1	6.6	7.5	6.8	5.1	6.3	6.6	3.4
9	6.8	6.6	3.6	a0	3.2	4.4	7.5	6.3	3.0	7.1	6.8	6.8
10	7.3	5.6	5.1	4.4	3.0	.1	8.0	6.1	6.1	6.3	5.8	7.3
11	6.8	4.0	6.3	a0	4.9	4.5	8.0	4.2	6.1	6.6	3.4	7.1
12	6.8	5.8	6.3	a5	5.1	5.3	9.5	2.2	5.6	6.3	6.6	6.6
13	5.6	6.1	4.9	a250	5.1	5.3	7.5	6.1	5.6	5.6	7.1	7.1
14	4.0	6.3	5.6	a10	5.1	4.9	6.1	6.3	6.3	3.4	7.1	6.6
15	7.1	6.1	5.3	a.3	5.1	6.6	7.0	5.3	4.8	6.3	6.3	3.8
16	6.6	6.3	3.4	a.3	4.9	2.9	7.0	5.6	3.0	6.8	7.3	6.1
17	6.3	5.6	5.3	2.8	3.8	.1	5.6	6.3	5.6	6.3	6.1	7.5
18	6.3	3.6	5.3	4.4	5.1	4.4	5.6	5.8	5.8	6.8	3.0	7.3
19	6.6	5.3	5.6	.9	5.1	5.3	6.1	3.4	5.8	6.8	7.3	6.8
20	6.3	4.9	5.3	.1	5.1	5.1	3.6	6.3	5.8	6.3	7.3	6.8
21	4.0	6.1	6.1	5.7	4.9	4.6	2.7	5.6	5.8	3.4	7.6	6.3
22	6.8	3.4	5.6	4.4	6.3	7.5	4.9	5.6	5.1	6.8	6.3	3.2
23	6.6	6.3	3.4	4.6	29	4.4	6.1	5.6	4.0	7.1	7.6	6.8
24	6.3	5.1	6.1	4.6	a10	3.4	6.1	5.8	6.1	7.1	5.8	7.1
25	6.3	3.4	4.0	4.6	3.4	4.6	5.6	5.3	6.1	6.8	4.2	7.1
26	5.8	5.6	6.1	4.0	4.9	5.1	a6	3.0	6.3	6.8	7.6	6.6
27	5.6	6.3	5.8	e4	5.3	4.9	a6	5.8	6.1	6.3	7.3	6.6
28	4.0	5.8	6.1	e5	5.1	6.1	a6	5.8	5.8	3.4	7.3	6.3
29	6.6	5.8	5.3	e14	-	5.6	a6	5.8	4.9	6.8	7.5	3.6
30	6.3	5.6	3.4	e10	-----	5.3	a6	5.3	3.0	6.8	7.5	7.9
31	6.3	-----	5.6	e10	-----	3.0	-----	5.6	-----	6.8	6.3	-----
Total	190.9	168.0	165.7	457.1	188.8	136.9	191.4	172.1	159.2	193.0	198.4	191.5
Mean	6.16	5.60	5.35	14.7	6.74	4.42	6.38	5.55	5.31	6.23	6.40	6.38
Ac-ft	379	333	329	907	374	272	380	341	316	383	394	380
(†)	16	15	16	48	30	56	20	9	7	7	7	8
(*)	51	60	55	79	101	106	119	115	89	63	56	58

Adjusted for infiltration only

Mean Cfsm In. Ac-ft												
	395	348	345	955	404	328	400	350	323	390	401	388

Observed

Calendar year 1956: Max	126	Min	1.0	Mean	5.93	Ac-ft	4,310
Water year 1956-57: Max	250	Min	0	Mean	6.61	Ac-ft	4,790

Adjusted

Calendar year 1956: Mean	Cfsm	In.	Ac-ft	4,650
Water year 1956-57: Mean	Cfsm	In.	Ac-ft	5,030

Peak discharge (base, 100 cfs).--Jan. 7 (5:30 p.m.) 397 cfs (7.10 ft); Jan. 13 (about 6 a.m.) about 750 cfs (8.68 ft); Feb. 23 (12 m.) 134 cfs (7.20 ft). † Runoff, in acre-feet, from infiltration line bypassing station, furnished by Whitewater Mutual Water Co. * Runoff, in acre-feet, diverted from basin 15 miles upstream, furnished by California Electric Power Co. a No gage-height record; discharge estimated on basis of floodmarks, probable recession curves, and records for nearby streams. e Stage-discharge relation indefinite; discharge estimated on basis of recorded gage heights and records for nearby streams.

Tahquitz Creek near Palm Springs, Calif.

Location.--Lat 33°48'15", long 116°33'40", in SW¼ sec. 22, T. 4 S., R. 4 E., on left bank 1.5 miles southwest of Palm Springs and 7 miles upstream from mouth.

Records available.--October 1947 to September 1957.

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.--10 years, 2.36 cfs (1,710 acre-ft per year); median of yearly mean discharges, 1.6 cfs (1,160 acre-ft per year).

Extremes.--Maximum discharge during year, 138 cfs Jan. 13 (gage height, 3.73 ft); no flow Oct. 1 to Jan. 6, July 30 to Sept. 30.

1947-57: Maximum discharge, 1,570 cfs Aug. 31, 1954 (gage height, 8.45 ft in gage well, 10.0 ft outside, from floodmarks), from rating curve extended above 60 cfs on basis of slope-area determination of peak flow; no flow during parts of each year.

Remarks.--Records good. Discharge measurements generally made twice a month.

Revisions (water years).--WSP 1244: 1948, 1951.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

0.5	0	1.2	4.5	2.1	23
.6	.2	1.5	8.9	2.3	30
.7	.5	1.7	13	2.5	40
.8	1.0	1.9	17	3.0	76
1.0	2.4				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	1.3	6.0	2.7	1.9	3.2	0.4		
2				0	1.3	4.8	2.7	1.8	3.0	.4		
3				0	1.2	4.5	2.4	1.8	2.8	.3		
4				0	1.2	4.1	2.4	1.7	2.7	.3		
5				0	1.2	4.0	2.4	1.6	2.5	.3		
6				0	1.2	4.1	2.5	1.6	2.4	.2		
7				4.0	1.2	4.1	2.6	1.6	2.3	.2		
8				5.9	1.5	4.2	2.4	1.7	2.3	.2		
9				4.1	7.4	4.2	2.2	1.7	2.4	.2		
10				2.7	6.8	4.4	2.2	1.8	3.0	.1		
11				2.0	6.2	4.0	2.2	2.2	2.9	.1		
12				1.6	5.5	3.9	2.2	2.4	2.3	.1		
13				43	4.6	3.7	2.2	2.5	2.2	.1		
14				10	4.2	3.5	2.1	2.7	2.0	.1		
15				5.6	4.0	3.5	2.2	2.7	1.9	.1		
16				3.5	4.0	3.5	2.1	2.7	1.8	.1		
17				2.5	3.9	3.5	2.0	2.7	1.6	.1		
18				2.1	3.6	3.5	2.5	3.1	1.4	.1		
19				1.8	3.5	3.4	2.2	7.5	1.3	.1		
20				1.7	3.3	3.3	2.6	8.4	1.2	.1		
21				1.6	3.2	3.3	2.7	7.2	1.2	.1		
22				1.4	3.1	3.1	2.6	6.4	1.1	.1		
23				1.4	9.4	3.0	2.5	5.8	1.1	.1		
24				1.2	7.7	3.0	2.5	5.4	.9	.1		
25				1.2	5.4	2.9	2.4	4.8	.8	.1		
26				1.2	4.7	2.8	2.3	4.4	.7	.1		
27				1.2	4.5	2.7	2.2	4.0	.6	.1		
28				1.2	4.6	2.7	2.2	3.9	.6	.1		
29				2.0	-	2.7	2.1	3.8	.6	.1		
30				1.6	-----	2.7	2.0	3.7	.5	0		
31				1.3	-----	2.7	-----	3.4	-----	0		
Total	0	0	0	105.8	109.7	111.8	70.3	106.9	53.3	4.5	0	0
Mean	0	0	0	3.41	3.92	3.61	2.34	3.45	1.78	0.15	0	0
Ac-ft	0	0	0	210	218	222	139	212	106	8.9	0	0

Calendar year 1956: Max 23

Min 0

Mean 0.70

Ac-ft 506

Water year 1956-57: Max 43

Min 0

Mean 1.54

Ac-ft 1,120

Peak discharge (base, 20 cfs).--Jan. 13 (6:30 a.m.) 138 cfs (3.73 ft).

Palm Canyon Creek near Palm Springs, Calif.

Location.--Lat 33°44'55", long 116°32'15", in S $\frac{1}{2}$ 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 700 ft (from topographic map). Prior to Jan. 14, 1942, at datum 0.2 ft higher.

Average discharge.--21 years (1930-41, 1947-57), 4.69 cfs (3,400 acre-ft per year); median of yearly mean discharges, 1.1 cfs (800 acre-ft per year).

Extremes.--Maximum discharge during year, 4.2 cfs Jan. 13 (gage height, 1.92 ft); no flow during most of year.

1930-42, 1947-57: 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. Discharge measurements or observation of no flow generally made twice a month.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	0	0.2						
2				0	0	.2						
3				0	0	.2						
4				0	0	.1						
5				0	0	.1						
6				0	0	.1						
7				0	0	0						
8				0	0	0						
9				0	.2	0						
10				0	.2	0						
11				0	.2	0						
12				0	.2	0						
13				0.9	.2	0						
14				0	.1	0						
15				0	.1	0						
16				0	.1	0						
17				0	.1	0						
18				0	.1	0						
19				0	.1	0						
20				0	.1	0						
21				0	.1	0						
22				0	.1	0						
23				0	.3	0						
24				0	.2	0						
25				0	.1	0						
26				0	.1	0						
27				0	.1	0						
28				0	.1	0						
29				0	-	0						
30				0	-	0						
31				0	-	0						
Total	0	0	0	0.9	2.8	0.9	0	0	0	0	0	0
Mean	0	0	0	0.03	0.10	0.03	0	0	0	0	0	0
Ac-ft	0	0	0	1.8	5.6	1.8	0	0	0	0	0	0

Calendar year 1956: Max 0.1 Min 0 Mean 0.0003 Ac-ft 0.2

Water year 1956-57: Max 0.9 Min 0 Mean 0.01 Ac-ft 9.2

Peak discharge (base, 100 cfs).--No peak above base.

Andreas Creek near Palm Springs, Calif.

Location.--Lat 33°45'35", long 116°32'55", in SE $\frac{1}{4}$ sec. 3, T. 5 S., R. 4 E., on left bank at Bureau of Indian Affairs diversion dam, 0.9 mile above mouth and 5.4 miles south of Palm Springs.

Drainage area.--8.78 sq mi.

Records available.--October 1948 to September 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 800 ft (from topographic map). Prior to Mar. 25, 1949, reference point at same site at different datum.

Average discharge.--9 years, 1.93 cfs (1,400 acre-ft per year).

Extremes.--Maximum discharge during year, 64 cfs Jan. 13 (gage height, 2.55 ft); minimum daily, 0.4 cfs Sept. 9.

1948-57: Maximum discharge, 1,960 cfs Aug. 31, 1954 (gage height, 7.11 ft), from rating curve extended above 80 cfs on basis of slope-area determination of peak flow; minimum daily, 0.3 cfs for many days during 1950-51.

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 1956-57 (gage height, in feet,
and discharge, in cubic feet per second)

1.3	0.4	1.8	12
1.4	1.4	2.0	20
1.5	2.9	2.5	58
1.6	5.0		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.9	1.0	1.0	2.7	3.5	1.4	0.9	1.0	0.7	0.6	0.6
2	.5	.9	1.0	1.0	2.5	2.7	1.4	.9	.9	.7	.8	.6
3	.6	.9	1.0	1.0	2.0	2.7	1.4	.9	.9	.7	.6	.5
4	.6	.9	1.1	1.1	1.9	2.7	1.2	.9	.8	.7	.6	.5
5	.6	1.0	1.2	1.2	1.9	2.5	1.2	.9	.8	.7	.6	.5
6	.6	1.0	1.2	1.4	1.9	2.4	1.2	.9	.9	.7	.6	1.5
7	.6	.9	1.2	1.6	1.9	2.4	1.2	1.0	.9	.7	.6	.5
8	.6	1.0	1.2	9.3	2.2	2.4	1.2	1.0	1.0	.7	.6	.5
9	.6	1.0	1.4	4.3	3.9	2.4	1.1	1.1	1.0	.7	.6	.4
10	.6	.9	1.2	5.0	2.4	2.4	1.1	1.4	1.1	.8	.6	.5
11	.6	1.0	1.4	2.7	2.2	2.4	1.1	1.5	1.0	.8	.8	.6
12	.6	1.0	1.4	2.5	2.0	2.4	1.1	1.4	.9	.8	.8	.6
13	.7	1.1	1.4	2.6	2.0	2.0	1.1	1.5	.9	.7	.7	.6
14	.7	1.1	1.4	6.1	2.0	2.0	1.2	1.6	.9	.6	.6	.6
15	.7	1.1	1.2	3.7	2.0	2.0	1.2	1.5	1.0	.6	.6	.6
16	.7	1.1	1.2	2.2	2.2	2.0	1.2	1.2	.9	.8	.6	.6
17	.7	1.1	1.1	1.8	2.2	1.9	1.2	1.4	.9	.8	.6	.7
18	.8	1.1	1.1	1.9	2.0	1.9	1.5	1.4	.9	.8	.6	.6
19	.8	1.1	1.1	1.8	2.0	2.0	1.4	1.9	.9	.7	.9	.6
20	.8	1.1	1.0	1.9	2.0	2.0	1.5	1.9	.9	.7	1.0	.6
21	.8	1.1	1.0	2.0	2.0	2.0	1.5	1.6	.9	.6	1.0	.6
22	.8	1.1	1.0	2.0	2.0	1.8	1.4	1.4	.8	.6	.8	.5
23	.9	1.1	1.0	2.0	9.2	1.8	1.4	1.4	.8	.6	.7	.6
24	.9	1.1	1.0	2.0	4.7	1.8	1.4	1.4	.8	.6	.6	.6
25	.9	1.1	1.0	2.0	3.1	1.8	1.2	1.2	.7	.6	.6	.6
26	.9	1.1	.9	2.0	2.7	1.8	1.2	1.2	.6	.7	.6	.6
27	.8	1.1	.9	2.0	2.5	1.6	1.1	1.1	.6	.7	.6	.6
28	.9	1.1	1.0	2.2	2.7	1.6	1.0	1.1	.7	.7	.6	.6
29	1.0	1.0	1.0	3.1	-	1.6	1.0	1.1	.8	.7	.6	.7
30	1.0	1.0	1.0	2.9	-----	1.4	.9	1.1	.7	.6	.6	.7
31	1.0	-----	1.0	2.7	-----	1.4	-----	1.1	-----	.6	.6	-----
Total	22.8	31.0	34.6	116.8	71.8	65.3	37.0	38.9	25.9	21.4	20.5	17.3
Mean	0.74	1.03	1.12	3.77	2.56	2.11	1.23	1.25	0.86	0.69	0.66	0.58
Ac-ft	45	61	69	232	142	130	73	77	51	42	41	34

Calendar year 1956: Max 29 Min 0.4 Mean 1.21 Ac-ft 878
Water year 1956-57: Max 26 Min 0.4 Mean 1.38 Ac-ft 997

Peak discharge (base, 30 cfs).--Jan. 7 (6 p.m.) 43 cfs (2.33 ft); Jan. 13 (8 a.m.) 64 cfs (2.55 ft).

Coyote Creek near Borrego Springs, Calif.

Location.--Lat 33°22'30", long 116°25'25", in SE $\frac{1}{4}$ sec. 23, T. 9 S., R. 5 E., on right bank 500 ft upstream from Box Canyon and 9 miles northwest of Borrego Springs.

Records available.--November 1950 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 1,250 ft (from topographic map).

Average discharge.--7 years, 2.57 cfs (1,860 acre-ft per year).

Extremes.--Maximum discharge during year, 44 cfs Aug. 17 (gage height, 6.94 ft), from rating curve extended above 3 cfs on basis of slope-area determination of 577 cfs; minimum daily, 1.3 cfs June 22-27, July 5.

1950-57: 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, 1.2 cfs July 14-16, 19-24, 1956.

Remarks.--Records good below 3 cfs and poor above. Discharge measurements generally made twice a month.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.7	2.0	2.0	2.2	3.4	2.3	2.1	1.8	1.6	1.4	1.6	1.8
2	1.7	2.0	2.0	2.2	3.3	2.2	2.0	1.7	1.6	1.4	1.6	1.8
3	1.8	2.0	2.1	2.3	2.8	2.2	2.0	1.7	1.6	1.4	1.6	1.8
4	1.7	2.1	2.1	2.2	2.5	2.2	2.0	1.7	1.6	1.4	1.6	1.9
5	1.7	2.0	2.2	2.2	2.4	2.2	1.9	1.7	1.5	1.3	1.6	1.9
6	1.7	2.0	2.2	2.3	2.4	2.3	1.9	1.7	1.5	1.4	1.6	1.9
7	1.7	2.0	2.2	2.7	2.4	2.2	2.0	1.7	1.6	1.4	1.6	1.9
8	1.7	2.0	2.3	2.1	2.4	2.2	1.9	1.7	1.6	1.4	1.6	1.9
9	1.7	1.9	2.3	2.2	2.4	2.3	2.0	1.8	1.6	1.4	1.6	1.9
10	1.7	1.9	2.3	2.3	2.4	2.3	2.0	1.9	1.6	1.5	1.6	1.8
11	1.7	1.9	2.4	2.1	2.4	2.3	2.0	1.9	1.6	1.6	1.6	1.8
12	1.7	1.9	2.4	2.0	2.4	2.3	1.9	1.9	1.6	1.6	1.6	1.8
13	1.7	2.0	2.4	2.1	2.3	2.3	1.9	1.9	1.6	1.6	1.6	1.8
14	1.7	2.0	2.3	2.0	2.3	2.3	1.9	1.9	1.6	1.6	1.5	1.8
15	1.6	2.1	2.3	2.1	2.3	2.3	1.8	1.9	1.5	1.6	1.5	1.8
16	1.6	2.1	2.3	2.1	2.3	2.3	1.8	1.9	1.5	1.6	1.6	1.8
17	1.7	2.2	2.3	2.0	2.3	2.3	1.8	1.9	1.5	1.7	3.4	1.8
18	1.7	2.2	2.3	2.0	2.4	2.2	1.8	1.9	1.5	1.6	1.8	1.7
19	1.7	2.2	2.3	3.2	2.4	2.2	1.9	1.9	1.4	1.6	1.7	1.7
20	1.7	2.2	2.3	4.4	2.4	2.1	1.9	1.9	1.4	1.6	1.7	1.7
21	1.8	2.2	2.3	3.6	2.4	2.1	1.9	1.9	1.4	1.6	1.7	1.6
22	1.8	2.1	2.3	3.3	2.3	2.0	2.0	1.9	1.3	1.6	2.9	1.8
23	1.8	2.1	2.3	3.2	2.3	2.0	2.0	1.8	1.3	1.6	3.8	1.6
24	1.9	2.2	2.3	3.0	2.3	1.9	2.0	1.8	1.3	1.6	3.3	1.6
25	1.9	2.2	2.3	3.0	2.2	1.9	1.9	1.7	1.3	1.6	2.5	1.6
26	1.9	2.2	2.3	2.9	2.2	2.0	2.0	1.7	1.3	1.6	2.2	1.6
27	1.9	2.1	2.3	3.0	2.1	2.0	2.0	1.7	1.3	1.6	2.0	1.7
28	2.0	2.1	2.3	3.0	2.2	2.0	1.9	1.7	1.4	1.6	2.0	1.7
29	2.0	2.0	2.2	3.1	-	2.0	1.9	1.7	1.4	1.6	2.0	1.7
30	2.0	2.0	2.2	3.8	-	2.0	1.9	1.6	1.4	1.6	2.0	1.7
31	1.9	-----	2.2	4.0	-----	2.0	-----	1.6	-----	1.6	1.9	-----
Total	54.8	61.9	70.0	84.6	67.9	66.9	58.0	55.5	44.4	47.7	60.3	52.7
Mean	1.77	2.06	2.26	2.73	2.42	2.16	1.93	1.79	1.48	1.54	1.95	1.76
Ac-ft	109	123	139	168	135	133	115	110	88	95	120	105

Calendar year 1956: Max 13 Min - Mean 2.09 Ac-ft 1,520

Water year 1956-57: Max 5.1 Min 1.3 Mean 1.99 Ac-ft 1,440

Peak discharge (base, 50 cfs).--No peak above base.

Note.--No gage-height record July 27 to Aug. 6; discharge interpolated.

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 1957.

Gage.--Water-stage recorder. Altitude of gage is 1,200 ft (from topographic map).

Average discharge.--7 years, 0.50 cfs (362 acre-ft per year).

Extremes.--Maximum discharge during year, 3.4 cfs Jan. 7 (gage height, 1.85 ft); no flow for several months.
1950-57: Maximum gage height, 9.9 ft, from floodmarks, Aug. 23, 1955 (discharge not determined); no flow during several months each year.

Remarks.--Records good. Discharge measurements or observations of no flow generally made twice a month.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.1	0.3	1.1	0.9	0.4	0.1				
2		0	.1	.3	1.2	.7	.4	.1				
3		0	.1	.4	1.1	.7	.3	.1				
4		.1	.1	.3	.9	.7	.3	.1				
5		.1	.2	.3	.8	.6	.2	.1				
6		.1	.2	.4	.7	.6	.2	.1				
7		.1	.1	1.6	.7	.6	.2	.1				
8		0	.1	1.2	.8	.6	.2	.1				
9		0	.2	.8	1.2	.7	.2	.1				
10		.1	.2	.6	.9	.9	.1	.1				
11		.1	.2	.6	.7	.6	.1	.3				
12		.1	.2	.5	.6	.5	.1	.4				
13		.1	.2	.8	.6	.5	.1	.3				
14		.1	.2	.7	.5	.5	.2	.3				
15		.1	.2	.6	.5	.5	.2	.3				
16		.1	.2	.5	.5	.7	.3	.4				
17		.1	.2	.4	.5	.6	.3	.1				
18		.1	.2	.4	.5	.5	.3	.2				
19		.1	.2	.4	.5	.7	.3	.2				
20		.1	.2	.5	.5	.6	.3	.4				
21		.1	.2	.6	.5	.5	.4	.5				
22		.1	.3	.5	.5	.5	.3	.3				
23		.1	.3	.5	.8	.4	.2	.3				
24		.1	.3	.5	.5	.4	.2	.3				
25		.1	.3	.6	.5	.4	.2	.2				
26		.1	.3	1.0	.3	.3	.1	.1				
27		.1	.3	1.4	.3	.3	.1	.1				
28		.1	.3	1.0	.4	.3	.1	.1				
29		.1	.3	1.3	-	.3	.1	.1				
30		.1	.3	1.2	-	.3	.1	.1				
31		---	.3	1.1	---	.3	---	.1	---			---
Total	0	2.5	6.6	21.3	18.6	16.7	6.5	6.1	0	0	0	0
Mean	0	0.08	0.21	0.69	0.66	0.54	0.22	0.20	0	0	0	0
Ac-ft	0	5.0	13	42	37	33	13	12	0	0	0	0
Calendar year 1956: Max 6.4 Min 0 Mean 0.31 Ac-ft 225												
Water year 1956-57: Max 1.6 Min 0 Mean 0.21 Ac-ft 155												

Peak discharge (base, 15 cfs).--No peak above base.

Deep Creek near Hesperia, Calif.

Location.--Lat 34°20'30", long 117°13'40", in SE $\frac{1}{4}$ 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 1957. November 1904 to September 1922, published as "East Fork of Mojave" in reports of California Division of Water Resources. Combined creek and canal, October 1950 to September 1957.

Gage.--Water-stage recorder and broad-crested weir. Altitude of gage is 3,050 ft (from topographic map). Prior to Sept. 30, 1922, staff gage and water-stage recorder at same site at different datum. December 1929 to Apr. 20, 1938, at same site at different datum. Apr. 21 to Dec. 10, 1938, at site 0.25 mile (revised) downstream at different datum.

Average discharge.--27 years (1930-57), 52.8 cfs (38,230 acre-ft per year); median of yearly mean discharges, 32 cfs (23,170 acre-ft per year). Average combined discharge of creek and canal, 7 years (1950-57), 33.9 cfs (24,540 acre-ft per year).

Extremes.--Maximum discharge during year, 11,500 cfs Jan. 13 (gage height, 8.25 ft), from rating curve extended above 4,000 cfs on basis of slope-area determination of peak discharge; minimum daily, 0.2 cfs Sept. 10-16.
1929-57: 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 period of no gage-height record, 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 2 $\frac{1}{2}$ miles above station for irrigation of about 1,500 acres and domestic use below station. For records of combined discharge of Deep Creek and canal, see following page.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 22 to Sept. 30)

0.65	0.2	1.3	9.3	2.3	130
.7	.4	1.4	9.6	2.5	209
.8	1.0	1.5	11	2.9	443
.9	2.0	1.7	22	3.5	980
1.0	3.4	1.9	42	4.5	2,430
1.1	5.1	2.1	76	5.3	4,100

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	1.0	2.0	3.5	24	121	14	16	a9.5	1.4	0.4	0.4
2	.4	1.0	2.2	3.5	27	100	11	12	a9.5	1.1	.4	.4
3	.4	1.0	2.4	3.5	27	78	10	9.8	a9.5	1.3	.4	.4
4	.5	1.0	2.6	3.7	25	68	10	9.6	a8	1.1	.4	.4
5	.6	1.0	2.8	5.9	23	58	9.9	9.4	a7.5	1.4	.4	.4
6	.6	1.1	2.9	9.5	25	50	9.7	8.3	a7	1.5	.4	.4
7	.6	1.0	1.5	8.6	25	45	9.7	7.7	a7	1.4	.4	.4
8	.6	1.0	3.2	36	32	40	9.2	7.7	a6.5	1.5	.4	.3
9	.6	1.1	3.1	32	135	36	8.3	7.3	a6	1.6	.4	.3
10	.6	1.1	2.9	57	124	45	9.1	7.9	a5.5	1.9	.4	.2
11	.6	1.2	3.1	73	106	42	9.1	12	5.1	1.8	.4	.2
12	.6	1.2	3.2	35	88	34	9.4	21	3.7	1.8	.5	.2
13	.6	1.3	3.2	4.070	70	30	9.6	20	3.2	1.7	.5	.2
14	.6	1.4	3.4	239	59	27	8.2	20	2.8	1.5	.6	.2
15	.6	1.4	3.4	95	51	24	7.5	23	2.8	1.5	.6	.2
16	.6	1.4	3.4	57	45	24	7.7	24	2.6	1.5	.6	.2
17	.6	1.5	3.4	40	39	29	8.5	21	2.0	1.4	.6	.3
18	.6	1.5	3.4	30	33	27	22	17	1.9	1.0	.6	.3
19	.6	1.5	3.4	25	33	27	22	78	1.7	.9	.6	.4
20	.6	1.4	3.4	21	28	29	21	82	1.6	.8	.6	.4
21	.6	.9	3.5	20	25	25	30	57	1.6	.7	.6	.4
22	.6	.8	3.5	18	25	25	25	54	1.5	.7	.6	.5
23	.6	.8	3.5	16	156	23	20	42	1.5	.7	.6	.5
24	.6	.9	3.5	17	162	22	29	40	1.5	.6	.5	.7
25	.7	.9	3.7	17	88	21	36	33	1.6	.6	.3	.9
26	.6	.8	3.5	21	70	20	36	26	1.0	.6	.3	1.0
27	.7	.9	3.4	25	59	20	29	23	3.8	.6	.4	1.0
28	.7	1.0	3.2	18	58	20	24	19	7.5	.6	.4	1.0
29	.8	1.3	3.2	20	-	18	20	16	4.7	.5	.5	1.1
30	.9	1.8	3.4	21	-----	17	19	13	1.6	.4	.5	1.1
31	.9	-----	3.4	18	-----	16	-----	a10	-----	.4	.5	-----
Total	19.0	34.2	96.7	5,061.2	1,662	1,161	493.9	746.7	129.2	34.5	14.8	14.5
Mean	0.61	1.14	3.12	163	59.4	37.5	16.5	24.1	4.31	1.11	0.48	0.48
Ac-ft	38	68	192	10,040	3,300	2,300	980	1,480	256	68	29	29
Calendar year 1956:	Max	3,550	Min	0.2	Mean	19.3	Ac-ft	14,000				
Water year 1956-57:	Max	4,070	Min	0.2	Mean	25.9	Ac-ft	18,780				

Peak discharge (base, 400 cfs).--Jan. 13 (5:30 a.m.) 11,500 cfs (8.25 ft).
a No gage-height record; discharge estimated on basis of weather records and record for Hesperia Water Co.'s canal.

Deep Creek near Hesperia, Calif.--Continued

Combined discharge, in cubic feet per second, of Deep Creek and Hesperia Water Co.'s canal near Hesperia, Calif., water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	2.4	3.2	4.4	24	127	19	22	16	3.2	0.4	0.4
2	.4	2.4	3.3	4.4	27	106	16	18	15	2.5	.4	.4
3	.4	2.4	3.4	4.3	27	84	15	15	15	3.4	.4	.4
4	.5	2.4	3.4	4.5	25	74	15	15	14	2.9	.4	.4
5	.6	2.4	3.6	6.7	23	63	15	14	14	2.8	.4	.4
6	.6	2.7	4.7	10	25	55	14	14	13	2.9	.4	.4
7	.6	2.6	4.6	9.1	25	50	14	14	13	2.8	.4	.4
8	.9	2.6	4.4	36	32	45	14	13	12	3.1	.4	.3
9	1.1	2.5	4.2	33	135	41	14	13	12	3.1	.4	.3
10	1.1	2.6	4.0	58	124	49	14	13	11	3.2	.4	.2
11	1.1	2.6	4.1	74	106	44	14	17	11	2.8	.4	.2
12	1.1	2.6	4.2	36	88	38	14	26	9.8	2.5	.5	.2
13	1.1	2.7	4.2	4,070	71	35	13	26	9.1	2.7	.5	.2
14	1.1	2.8	4.3	240	61	32	13	26	8.5	2.5	.6	.2
15	1.1	2.9	4.3	96	53	29	13	30	8.5	2.2	.6	.2
16	1.2	3.0	4.3	58	47	29	12	30	7.9	2.2	.6	.2
17	1.2	3.1	4.2	41	41	34	13	27	7.0	1.6	.6	.3
18	1.2	3.2	4.2	31	37	32	26	23	6.5	1.2	.6	.3
19	1.2	3.2	4.2	26	39	32	26	84	6.0	1.0	.6	.4
20	1.2	3.4	4.2	22	34	34	24	88	5.2	.9	.6	.4
21	1.3	3.1	4.3	20	31	29	32	63	5.2	.7	.6	.4
22	1.3	3.0	4.3	18	29	29	29	60	4.7	.7	.6	.5
23	1.3	3.1	4.3	18	159	27	26	48	4.6	.7	.6	.6
24	1.3	3.2	4.4	17	168	26	35	46	4.5	.6	.5	.7
25	1.4	3.1	4.6	17	94	26	42	39	4.4	.6	.3	.9
26	1.4	2.9	4.4	21	76	25	43	33	3.5	.6	.3	1.0
27	1.7	3.0	4.3	25	65	25	36	29	9.2	.6	.4	1.0
28	1.8	3.1	4.1	18	64	25	30	25	14	.6	.4	1.0
29	2.0	2.9	4.1	20	-	23	26	22	9.7	.5	.5	1.1
30	2.3	3.2	4.3	21	-	22	25	19	4.1	.4	.5	1.1
31	2.3	-	4.3	18	-	20	-	16	-	.4	.5	-
Total	36.2	85.1	128.4	5,077.4	1,730	1,310	642	928	278.4	55.9	14.8	14.5
Mean	1.17	2.84	4.14	164	61.8	42.3	21.4	29.9	9.28	1.80	0.48	0.48
Ac-ft	72	169	255	10,070	3,430	2,600	1,270	1,840	552	111	29	29
Calendar year 1956: Max			3,550		Min 0.2	Mean 23.0		Ac-ft 16,690				
Water year 1956-57: Max			4,070		Min 0.2	Mean 28.2		Ac-ft 20,430				

West Fork Mojave River near Hesperia, Calif.

Location (revised).--Lat 34°20'27", long 117°14'24", in SW1/4 sec. 18, T. 3 N., R. 4 W., on left bank at highway bridge, 0.5 mile upstream from confluence with Deep Creek and 6.5 miles southeast of Hesperia.

Drainage area.--74.8 sq mi.

Records available.--January 1930 to September 1957. December 1904 to June 1922 in reports of California Department of Water Resources.

Gage.--Water-stage recorder. Altitude of gage is 3,050 ft (from topographic map). Prior to June 30, 1922, staff gage and water-stage recorder several hundred feet downstream at different datum.

Average discharge.--27 years, 27.3 cfs (19,760 acre-ft per year); median of yearly mean discharges, 11 cfs (7,960 acre-ft per year).

Extremes.--Maximum discharge during year, 562 cfs Jan. 13 (gage height, 3.65 ft); no flow during several months.

1930-57: 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. Discharge measurements or observation of no flow 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.

Rating table, water year 1956-57 (gage height, in feet, and
discharge, in cubic feet per second)
(Shifting-control method used Jan. 30 to Mar. 12)

1.02	0	1.4	5.4	2.3	96
1.1	.2	1.5	9.9	2.6	159
1.2	.8	1.7	22	3.0	274
1.3	2.5	2.0	51		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1				0	12	40	2.0	0.1	0.7			
2				0	11	41	1.4	0	.3			
3				0	11	30	1.1	0	.2			
4				0	11	23	1.1	0	.1			
5				0	9.4	20	1.1	0	.1			
6				0	4.4	18	1.4	0	.1			
7				0	3.5	15	1.2	0	0			
8				0	7.4	14	1.0	0	0			
9				0	28	14	.8	0	0			
10				0	25	21	.8	0	0			
11				0	24	15	.8	0	0			
12				.1	20	14	.4	2.1	0			
13				237	18	11	.2	4.8	0			
14				30	15	10	.1	5.0	0			
15				14	11	9.4	0	5.4	0			
16				10	9.4	11	0	1.9	0			
17				3.8	7.4	18	0	3.0	0			
18				2.0	5.4	15	4.6	4.1	0			
19				.2	3.8	12	4.0	116	0			
20				0	2.8	7.9	.8	50	0			
21				2.9	2.3	7.4	5.8	29	0			
22				.1	2.0	6.6	4.8	22	0			
23				0	83	5.8	1.1	18	0			
24				0	62	4.8	.7	17	0			
25				0	36	4.8	.5	15	0			
26				6.6	27	4.1	.4	12	0			
27				14	18	3.8	.3	12	0			
28				12	20	3.0	.1	10	0			
29				19	-	2.8	.1	8.9	0			
30				17	-----	2.5	.1	6.2	0			
31				15	-----	2.0	-----	2.5	-----			
Total	0	0	0	383.7	489.8	404.9	36.7	345.0	1.5	0	0	0
Mean	0	0	0	12.4	17.5	13.1	1.22	11.1	0.05	0	0	0
Ac-ft	0	0	0	761	972	803	73	684	3.0	0	0	0

Calendar year 1956: Max 506 Min 0 Mean 2.91 Ac-ft 2,120
Water year 1956-57: Max 237 Min 0 Mean 4.55 Ac-ft 3,300

Peak discharge (base, 500 cfs).--Jan. 13 (8 a.m.) 562 cfs (3.65 ft).

Mojave River at lower narrows, near Victorville, Calif.

Location--Lat 34°34'22", long 117°19'08", in SW¹/₄SW¹/₄SE¹/₄ sec. 29, T. 6 N., R. 4 W., on left bank 1,000 ft (revised) upstream from bridge on U. S. Highway 66, 2,500 ft downstream from The Atchison, Topeka and Santa Fe Railway Co. bridge, and 3 miles northwest of Victorville.

Drainage area--530 sq mi.

Records available--February 1899 to July 1906, November 1930 to September 1957. Prior to Oct. 1, 1936, published as "at Victorville."

Gage--Water-stage recorder. Altitude of gage is 2,650 ft (from topographic map). Prior to Aug. 1, 1906, staff gage, and Nov. 12, 1930, to Dec. 8, 1936, water-stage recorder, at site 3.8 miles (revised) upstream at different datum. Dec. 9, 1936, to Mar. 28, 1938, water-stage recorder at present site at datum 2.00 ft higher.

Average discharge--26 years (1931-57), 72.6 cfs (52,560 acre-ft per year); median of yearly mean discharges, 39 cfs (28,200 acre-ft per year).

Extremes--Maximum discharge during year, 1,300 cfs Jan. 13 (gage height, 4.08 ft); minimum daily, 12 cfs Aug. 4, 5, 15.
1930-57: 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. Discharge measurements generally made twice a month. Periodic regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping for irrigation of about 5,000 acres above station.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	26	34	38	40	41	32	23	20	18	13	16
2	18	26	34	38	40	57	33	22	20	17	13	16
3	19	29	35	38	40	45	32	24	20	18	13	16
4	20	29	35	36	33	44	32	21	18	19	12	16
5	21	32	40	36	35	42	26	22	19	18	12	16
6	21	40	44	35	35	41	26	21	18	18	13	16
7	22	39	40	34	35	42	29	22	17	19	13	17
8	23	35	39	35	36	42	27	24	18	18	14	17
9	23	34	36	34	39	46	26	24	19	18	14	17
10	21	30	34	38	40	45	27	23	20	18	14	18
11	22	30	35	35	40	45	27	26	18	19	13	18
12	22	30	38	36	39	45	27	25	19	18	13	19
13	23	30	38	282	38	46	27	26	19	19	13	20
14	22	29	36	107	41	44	29	27	19	18	13	20
15	23	29	35	51	42	42	27	26	20	17	12	20
16	26	33	35	44	42	45	26	26	19	17	13	20
17	23	35	34	42	42	41	27	27	20	16	13	20
18	22	36	34	40	42	41	26	26	19	16	13	22
19	23	35	34	38	38	41	27	26	19	16	13	20
20	23	34	33	41	36	41	29	28	20	16	13	19
21	22	34	33	42	38	40	29	27	21	16	13	17
22	22	34	34	42	36	39	30	28	20	16	13	17
23	22	33	35	42	38	40	28	26	23	16	13	17
24	22	34	35	42	39	44	29	26	20	16	14	17
25	25	32	36	41	40	40	26	25	21	16	13	17
26	27	36	35	40	40	40	26	22	19	14	14	16
27	30	36	35	40	42	40	25	22	19	14	14	17
28	32	36	36	39	41	40	25	20	19	13	14	17
29	32	35	34	42	-	38	25	22	18	13	14	18
30	32	34	36	42	-----	32	23	22	17	13	15	18
31	29	-----	39	41	-----	33	-----	22	-----	13	16	-----
Total	731	985	1,111	1,531	1,087	1,302	828	751	578	513	413	534
Mean	23.6	32.8	35.8	49.4	38.8	42.0	27.6	24.2	19.3	16.5	13.3	17.8
Ac-ft	1,450	1,950	2,200	3,040	2,180	2,580	1,640	1,490	1,150	1,020	819	1,060
Calendar year 1956: Max	340			Min 12		Mean 29.5		Ac-ft 21,420				
Water year 1956-57: Max	282			Min 12		Mean 28.4		Ac-ft 20,560				

Peak discharge (base, 200 cfs)--Jan. 13 (3:30 p.m.) 1,300 cfs (4.08 ft).

Mojave River at Barstow, Calif.

Location (revised).--Lat 34°54'20", long 117°01'20", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 2,090 ft (from topographic map).

Average discharge.--27 years, 28.5 cfs (20,630 acre-ft per year); median of yearly mean discharges, 0.1 cfs (72 acre-ft per year).

Extremes.--No flow during year.

1930-57: Maximum discharge, 64,300 cfs Mar. 3, 1938 (gage height, 8.60 ft), by slope-area determination of peak flow; no flow for several months each year.

Remarks.--No flow since May 11, 1952. Observations of no flow made monthly. Slight regulation by Lake Arrowhead (capacity, 48,000 acre-ft, used principally for recreation). Diversions and pumping of about 15,000 acres above station for irrigation.

Mojave River at Afton, Calif.

Location.--Lat 35°02'15", long 116°23'00", in SE $\frac{1}{4}$ sec. 18, T. 11 N., R. 6 E., on downstream end of right pier of Union Pacific Railroad bridge, 0.3 mile west of Afton.

Records available.--December 1929 to September 1932, October 1952 to September 1957.

Gage.--Water-stage recorder. Datum of gage is 1,400.15 ft above mean sea level, datum of 1929, supplementary adjustment of 1943. Dec. 21, 1929, to Sept. 30, 1932, water-stage recorder at site 1.7 miles (revised) downstream at different datum.

Average discharge.--7 years (1930-32, 1952-57), 2.65 cfs (1,920 acre-ft per year).

Extremes.--Maximum discharge during year, about 11 cfs Aug. 11 (gage height, 3.40 ft), from estimate of flow through culverts; minimum daily, 0.4 cfs June 20, 21, 25-28, July 3-7.

1929-32, 1952-57: Maximum discharge, 3,550 cfs Feb. 10, 1932 (gage height, 4.70 ft, site and datum then in use); minimum daily, 0.1 cfs July 23-26, 1932.

Remarks.--Records good except those for July 17, Aug. 11, 12, which are fair. Natural flow affected by ground-water withdrawals, diversions, municipal use, and storage in two small reservoirs.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	1.1	1.2	1.5	1.6	1.5	1.2	*1.0	0.6	0.5	0.7	0.6
2	.8	1.2	1.2	1.5	1.8	1.5	1.2	1.0	.6	.5	.7	.6
3	.9	1.2	1.2	*1.5	1.6	1.4	*1.1	1.0	.6	.4	.7	.6
4	.8	1.2	*1.2	1.5	1.5	1.4	1.0	1.0	.6	.4	.7	*.6
5	*.8	1.2	1.2	1.5	1.5	1.5	1.0	.9	.5	.4	.6	.6
6	.8	*1.2	1.2	1.5	1.5	1.4	.6	.9	.5	.4	.7	.6
7	.9	1.2	1.2	1.5	1.5	1.4	.9	1.0	.5	.4	.7	.7
8	.9	1.2	1.3	1.5	1.5	1.5	1.0	1.0	.5	.5	.7	.6
9	.9	1.2	1.4	1.4	1.5	1.5	1.0	1.0	.5	.5	.7	.6
10	.9	1.2	1.4	1.4	1.5	1.4	1.0	1.1	*.6	*.5	.7	.6
11	.9	1.2	1.4	1.5	1.5	1.4	1.0	1.1	.7	.5	1.9	.6
12	.9	1.2	1.4	1.5	1.5	1.4	1.0	1.1	.6	.6	.9	.6
13	1.0	1.2	1.4	1.5	*1.5	*1.4	1.0	*1.1	.6	.9	.7	.6
14	1.0	1.2	1.4	1.4	1.5	1.5	1.1	1.1	.6	.7	*.7	.6
15	1.0	1.2	1.4	1.4	1.5	1.6	1.1	1.1	.6	.6	.6	.6
16	1.0	1.3	1.4	1.4	1.6	1.5	*1.1	1.1	.6	.6	.6	.6
17	1.0	1.3	1.4	*1.4	1.6	1.3	1.2	1.0	.6	1.4	.6	.6
18	1.0	1.3	1.4	1.4	1.5	1.3	1.2	1.0	.5	1.0	.6	.6
19	1.0	1.3	1.4	1.4	1.5	1.3	1.2	1.0	.5	.6	.6	*.7
20	1.0	1.2	*1.4	1.4	1.6	1.3	1.2	1.0	.4	.6	.6	.7
21	1.0	*1.2	1.4	1.5	1.6	1.2	1.3	1.0	.4	.6	.6	.7
22	1.0	1.2	1.4	1.5	1.6	1.2	1.4	1.0	.5	.6	.6	.7
23	1.0	1.2	1.4	1.5	1.6	1.2	1.2	1.0	.5	.6	.6	.7
24	1.0	1.2	1.5	1.6	1.6	1.3	1.2	1.0	.5	.6	.6	.8
25	1.0	1.2	1.5	1.6	1.6	1.3	1.2	1.0	*.4	*.6	.5	.8
26	1.1	1.2	1.5	1.6	1.6	1.2	1.2	.9	.4	.6	.6	.8
27	1.1	1.2	1.5	1.6	1.6	1.2	1.2	.8	.4	.6	.6	.8
28	1.1	1.2	1.4	*1.6	*1.5	1.3	1.1	*.8	.4	.7	.6	.8
29	1.1	1.2	1.4	1.6	-	1.3	1.1	.8	.5	.7	.6	.7
30	1.1	1.2	1.4	1.6	-----	1.2	1.0	.7	.5	.7	.5	.7
31	1.1	-----	1.4	1.6	-----	1.2	-----	.7	-----	.7	.6	-----
Total	29.8	36.3	42.3	46.3	43.3	42.1	33.2	30.2	15.7	19.0	21.1	19.8
Mean	0.96	1.21	1.36	1.49	1.55	1.36	1.11	0.97	0.52	0.61	0.68	0.66
Ac-ft	59	72	84	92	86	84	66	60	31	38	42	39
Calendar year 1956: Max	11				Min 0.6	Mean 1.23	Ac-ft 890					
Water year 1956-57: Max	1.9				Min 0.4	Mean 1.04	Ac-ft 753					

Peak discharge (base, 100 cfs).--No peak above base.

* Discharge measurement made on this day.

Big Rock Creek near Valyermo, Calif.

Location.--Lat 34°25'17", long 117°50'19", in NE¼ sec. 20, T. 4 N., R. 9 W., on left bank 0.1 mile upstream from Punchbowl Canyon and 0.9 mile south of Valyermo.

Drainage area.--23.0 sq mi.

Records available.--January 1923 to September 1957. May 1938 to January 1939, at site 0.2 mile downstream, not equivalent owing to inflow from Punchbowl Canyon. Prior to October 1954, published as Rock Creek near Valyermo.

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 0.2 mile downstream (below Punchbowl Canyon) at different datum.

Average discharge.--33 years (1923-37, 1938-57), 14.4 cfs (10,430 acre-ft per year); median of yearly mean discharges, 8.6 cfs (6,230 acre-ft per year).

Extremes.--Maximum discharge during year, 362 cfs Jan. 13 (gage height, 3.87 ft); minimum daily, 2.3 cfs Oct. 23.

1923-57: Maximum discharge, 8,300 cfs Mar. 2, 1938, by slope-area determination of peak flow; minimum daily, 0.7 cfs Nov. 5, 1951.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Discharge measurements generally made three or more times a month. There is evidence of appreciable infiltration into the stream bed in the immediate vicinity of station.

Cooperation.--Thirty discharge measurements furnished by Los Angeles County Flood Control District.

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 12

Jan. 12 to Sept. 30

1.9	1.8	1.76	2.5	2.3	26
2.0	4.8	1.8	3.2	2.6	54
2.1	9.7	1.9	5.6	3.0	115
2.2	17	2.0	8.8	3.2	155
		2.1	13		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	2.8	3.4	3.4	5.9	21	8.4	7.1	7.1	5.1	3.2	3.6
2	2.8	2.8	3.1	3.4	5.9	19	8.4	7.1	7.1	5.1	3.2	3.6
3	2.8	2.8	3.1	3.4	5.9	17	8.0	7.1	6.8	4.8	3.0	3.4
4	2.8	3.1	3.7	4.0	5.9	15	8.0	7.1	6.8	4.6	3.0	3.4
5	2.8	3.1	3.1	4.0	5.9	14	8.0	7.4	6.8	4.6	3.0	3.4
6	2.8	3.1	3.1	3.7	5.9	13	8.0	7.4	6.8	4.6	3.2	3.4
7	2.8	3.1	3.1	3.7	6.2	12	8.4	7.4	6.5	4.6	3.2	3.4
8	2.8	3.1	3.1	3.1	7.4	12	8.4	7.4	6.2	4.6	3.2	3.2
9	2.8	3.1	2.8	3.1	14	12	8.4	7.4	5.9	4.6	3.0	3.2
10	2.8	3.1	2.8	3.4	12	12	8.4	7.4	6.2	4.6	3.0	3.0
11	2.8	3.1	2.8	3.1	12	12	8.0	7.4	5.9	4.6	3.2	2.8
12	2.8	3.1	2.8	15	11	12	8.0	7.4	5.9	4.6	3.2	3.0
13	2.8	3.1	2.8	149	10	12	8.4	7.4	5.9	4.6	3.2	3.0
14	2.8	3.1	2.8	24	9.1	12	8.4	7.4	5.9	4.6	3.2	2.8
15	2.8	3.1	2.6	a10	8.8	11	8.8	7.4	5.9	4.6	3.2	2.8
16	2.6	a3.1	2.6	a7	8.8	12	8.8	7.1	5.9	4.6	3.2	2.8
17	2.6	a3.1	2.6	5.6	9.1	11	9.1	7.1	5.6	4.3	3.4	3.0
18	2.6	a3.0	2.6	5.1	9.5	10	9.1	7.1	5.6	4.3	3.4	2.8
19	2.6	a3.0	2.6	5.1	9.5	10	8.8	7.1	5.4	4.3	3.4	2.8
20	2.6	a3.0	2.8	5.1	9.1	9.9	8.8	7.1	5.4	4.1	3.4	2.6
21	2.6	a3.0	2.8	5.1	9.1	9.9	8.4	7.7	5.4	4.1	3.4	2.6
22	2.6	a2.9	2.8	5.1	9.1	9.5	8.0	7.7	5.4	4.1	3.4	2.5
23	2.3	a2.9	2.8	5.1	23	9.5	8.0	8.0	5.1	4.1	3.4	2.5
24	2.6	a2.9	2.8	5.1	19	9.1	8.0	8.0	5.1	4.1	3.4	2.5
25	2.8	a2.8	2.8	5.4	17	9.1	8.0	8.4	5.1	4.1	3.4	2.5
26	3.1	a2.8	2.8	5.9	17	8.8	8.0	8.0	5.1	3.8	3.4	2.6
27	2.8	a2.8	2.8	6.2	16	8.4	7.7	8.0	5.1	3.8	3.4	2.6
28	3.1	2.8	3.1	6.3	16	8.4	7.7	8.0	5.1	3.8	3.4	2.6
29	3.1	3.1	3.1	6.2	-	8.4	7.1	8.0	5.1	3.6	3.6	2.8
30	3.1	3.4	3.1	5.9	-----	8.4	7.1	7.7	5.1	3.4	3.6	2.8
31	2.8	3.4	3.1	5.9	-----	8.4	-----	7.4	-----	3.4	3.6	-----
Total	85.9	90.2	90.3	326.4	298.1	356.8	246.6	232.2	175.2	134.1	101.8	88.0
Mean	2.77	3.01	2.91	10.5	10.6	11.5	8.22	7.49	5.84	4.53	3.28	2.93
Ac-ft	170	179	179	647	591	708	489	461	348	266	202	175
Calendar year 1956: Max	185				Min 2.3	Mean 6.23	Ac-ft 4,560					
Water year 1956-57: Max	149				Min 2.3	Mean 6.10	Ac-ft 4,420					

Peak discharge (base, 50 cfs)--Jan. 13 (3 a.m.) 362 cfs (3.87 ft).

No gage-height record; discharge interpolated or estimated on basis of weather records and normal recession.

Little Rock Creek near Little Rock, Calif.

Location.--Lat 34°27'50", long 118°01'05", in SW1/4NW1/4 sec. 3, T. 4 N., R. 11 W., on right bank 0.3 mile upstream from Santiago Creek, 1.65 miles 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 1957.

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.--25 years (1930-37, 1939-57), 17.1 cfs (12,380 acre-ft per year); median of yearly mean discharges, 9.1 cfs (6,590 acre-ft per year).

Extremes.--Maximum discharge during year, 1,040 cfs Jan. 13 (gage height, 7.15 ft); no flow Oct. 1 to Nov. 19, July 17 to Sept. 30.
1930-57: 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; records reviewed by Geological Survey.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	1.0	1.6	7.5	46	7.7	6.1	3.4	0.4		
2		0	1.1	1.7	8.4	39	7.7	5.8	3.0	.4		
3		0	1.2	1.7	8.6	34	7.5	5.6	2.6	.4		
4		0	1.2	1.7	8.6	29	7.2	5.4	2.3	.4		
5		0	1.2	2.2	8.6	26	7.0	4.7	2.2	.4		
6		0	1.4	2.6	8.6	25	6.8	4.5	2.2	.4		
7		0	1.7	2.5	8.8	23	6.3	4.3	2.2	.4		
8		0	1.7	3.2	10	20	6.1	4.1	2.2	.4		
9		0	1.7	3.4	38	20	6.1	4.1	2.3	.4		
10		0	1.7	3.8	42	19	5.8	4.1	2.8	.2		
11		0	1.7	5.8	42	18	5.8	5.2	2.8	.2		
12		0	1.7	9.1	38	16	5.6	5.6	2.2	.2		
13		0	1.7	399	31	15	5.6	5.2	2.0	.2		
14		0	1.7	58	26	14	5.8	5.4	2.0	.1		
15		0	1.4	28	23	13	5.8	5.4	2.0	.1		
16		0	1.4	20	19	14	5.8	5.2	1.9	.1		
17		0	1.4	14	17	14	6.3	4.5	1.7	0		
18		0	1.4	12	15	12	8.6	4.3	1.2	0		
19		0	1.4	11	14	12	7.7	7.6	1.0	0		
20		.6	1.4	10	13	11	7.7	9.8	.8	0		
21		.8	1.6	9.3	12	11	7.9	8.4	.8	0		
22		.9	1.6	8.6	11	11	7.7	7.8	.8	0		
23		1.0	1.6	7.9	47	10	7.7	7.5	.8	0		
24		1.0	1.6	7.7	41	9.8	8.4	6.8	.6	0		
25		1.0	1.6	7.5	31	9.3	8.4	6.1	.6	0		
26		1.0	1.6	7.5	30	9.1	8.1	5.4	.5	0		
27		1.0	1.6	7.2	26	8.8	7.7	4.7	.5	0		
28		1.0	1.6	7.0	29	8.6	7.7	4.5	.5	0		
29		1.0	1.6	7.0	-	8.4	7.0	4.1	.5	0		
30		1.0	1.6	7.0	-----	8.2	6.5	3.8	.5	0		
31		-----	1.6	7.0	-----	7.7	-----	3.8	-----	0		
Total	0	10.3	46.7	673.0	614.1	521.9	209.8	169.6	48.9	4.7	0	0
Mean	0	0.34	1.51	21.7	21.9	16.8	6.99	5.47	1.63	0.15	0	0
Ac-ft	0	20	93	1,330	1,220	1,040	416	336	97	9.3	0	0
Calendar year 1956: Max		424			Min 0		Mean 7.27		Ac-ft 5,270			
Water year 1956-57: Max		399			Min 0		Mean 6.30		Ac-ft 4,560			

MONO LAKE BASIN

Mono Lake near Mono Lake, Calif.

Location.--Lat 38°00', long 119°08', in NE $\frac{1}{4}$ sec. 31, T. 2 N., R. 26 E., on west bank, 1 mile south of town of Mono Lake.

Records available.--June 1912 to September 1957. Records prior to September 1934 are published in WSP 765.

Gage.--Staff gage or reference point. 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.--1912-57: Maximum elevation observed, 6,428.1 ft July 18, 1919; minimum observed, 6,401.20 ft Sept. 27, 1957.

Cooperation.--Records furnished by city of Los Angeles, Department of Water and Power.

Revisions (water years).--WSP 765: 1912-33. WSP 1284: 1952.

Elevation, in feet, October 1956 to September 1957							
Date	Elevation	Date	Elevation	Date	Elevation	Date	Elevation
Oct. 5	6,402.15	Jan. 11	6,402.05	Apr. 19	6,402.59	July 26	6,402.08
12	6,402.10	18	6,402.16	26	6,402.63	Aug. 2	6,401.98
25	6,402.01	25	6,402.28	May 3	6,402.60	9	6,401.83
Nov. 2	6,401.96	Feb. 8	6,402.29	10	6,402.60	16	6,401.74
9	6,401.93	15	6,402.35	17	6,402.57	23	6,401.68
16	6,401.95	21	6,402.39	24	6,402.57	30	6,401.52
22	6,401.95	Mar. 1	6,402.52	31	6,402.59	Sept. 6	6,401.44
30	6,401.99	8	6,402.56	June 7	6,402.56	13	6,401.38
Dec. 7	6,401.95	15	6,402.60	14	6,402.48	18	6,401.32
14	6,401.99	22	6,402.60	21	6,402.43	20	6,401.29
21	6,402.00	29	6,402.61	28	6,402.42	27	6,401.20
28	6,402.01	Apr. 8	6,402.60	July 10	6,402.32		
Jan. 4	6,402.05	12	6,402.61	19	6,402.19		

WALKER LAKE BASIN

Walker Lake near Hawthorne, Nev.

Location.--Lat 38°35', long 118°42', in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T. 8 N., R. 29 E., 3 miles north-west of Hawthorne.

Records available.--August 1928 to September 1957. Occasional readings prior to August 1928.

Gage.--Bench mark, at United States Naval Depot, 4,053.41 ft above mean sea level, adjustment of 1912.

Extremes.--1928-57: Maximum elevation observed, 4,051.8 ft Mar. 13, 1928 (Indian Service); minimum observed, 3,990.25 ft Sept. 3, 1957.

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 U. S. Navy Department.

Elevation, in feet, water year October 1956 to September 1957

Oct. 3.....	3,991.87	May 2.....	3,991.48
Nov. 5.....	3,991.51	June 4.....	3,991.47
Dec. 3.....	3,991.60	July 1.....	3,991.35
Jan. 2.....	3,991.57	July 15.....	3,991.14
Feb. 5.....	3,991.47	Aug. 1.....	3,990.80
Mar. 7.....	3,991.49	Sept. 3.....	3,990.25
Apr. 8.....	3,991.54		

Virginia Creek near Bridgeport, Calif.

Location.--Lat 38°11', long 119°12', in W $\frac{1}{2}$ sec. 22, T. 4 N., R. 25 E., on right bank 3 miles upstream from mouth, 1 $\frac{1}{4}$ miles downstream from Clearwater Creek, and 4 $\frac{1}{2}$ miles southeast of Bridgeport.

Drainage area.--64 sq mi, approximately.

Records available.--October 1953 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,700 ft (from topographic map).

Extremes.--Maximum discharge during year, 54 cfs June 4 (gage height, 3.06 ft), maximum gage height recorded, 5.26 ft about Jan. 29 (backwater from ice); minimum discharge, 3.0 cfs Aug. 27, 28.

1953-57: Maximum discharge, 1,300 cfs Dec. 23, 1955 (gage height, 8.40 ft), from rating curve extended above 140 cfs on basis of slope-area determination of peak flow; minimum, 1.5 cfs July 8, 1954.

Remarks.--Records good. Flow partly regulated by Virginia Lakes and other lakes near headwaters. Diversions for irrigation of about 3,000 acres above station.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.2	2.0
2.3	4.0
2.5	10
2.8	25
3.1	50

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	17	14	14		18	16	16	24	21	5.4	4.8
2	17	19	14	14	a12	17	14	14	35	18	5.1	5.1
3	18	17	15	14		14	18	14	40	17	4.3	5.1
4	18	18	15	13	*12	14	20	15	*47	17	4.0	5.1
5	18	18	12	14	13	15	22	16	46	16	4.0	5.1
6	17	18	b10	14	12	16	20	17	49	16	*4.3	5.1
7	17	17	b10	b14	13	16	16	18	47	17	4.6	5.1
8	18	17	b10	14	14	16	16	18	46	14	4.3	5.1
9	18	17	b10	b12	14	16	17	16	41	14	4.3	5.1
10	16	16	b14	14	14	15	18	16	37	14	4.3	5.1
11	18	16	b22	14	14	14	18	17	*28	14	4.3	5.1
12	17	16	b19	14	16	15	16	16	25	12	4.3	*5.1
13	16	16	*18	b14	20	12	16	15	24	9.4	4.3	5.1
14	16	*14	17	b14	20	12	18	*14	25	10	4.3	5.1
15	16	14	15	b14	19	13	16	14	24	*10	4.3	4.8
16	*16	18	17	b13	20	12	15	14	20	9.0	4.0	4.6
17	16	18	14	b13	23	12	*15	14	19	8.1	4.0	5.1
18	16	16	16	b13	24	*12	15	20	18	8.4	4.0	5.1
19	16	b12	b12	b13	22	12	16	27	18	8.4	4.0	5.1
20	16	b10	b12	13	18	13	17	20	20	7.4	4.0	5.1
21	16	b14	b12	b14	18	12	18	23	22	7.4	4.0	5.1
22	16	16	b12	b14	18	12	18	20	20	6.8	4.0	4.8
23	16	15	14	14	18	11	21	24	20	6.8	4.6	4.8
24	15	14	b14		17	14	20	19	24	6.8	4.6	4.8
25	16	14	b12		19	18	18	16	25	6.8	4.6	4.8
26	18	14	b14		20	18	16	16	*30	7.4	4.3	4.8
27	18	14	b14	a12	*21	18	16	16	30	7.1	4.0	4.8
28	17	14	b14		19	18	18	18	28	7.1	3.4	4.8
29	16	14	14		-	17	17	19	28	7.1	3.8	5.1
30	19	15	14		-----	17	16	19	26	6.5	4.0	5.1
31	19	-----	14		-----	18	-----	20	-----	6.2	4.0	-----
Total	525	468	434	410	474	457	517	541	884	336.7	131.4	149.8
Mean	16.9	15.6	14.0	13.2	16.8	14.7	17.2	17.5	29.5	10.9	4.24	4.99
Ac-ft	1,040	928	861	813	940	906	1,030	1,070	1,750	668	261	297
Calendar year 1956: Max	87			Min 10		Mean 27.2		Ac-ft 19,760				
Water year 1956-57: Max	49			Min 3.4		Mean 14.6		Ac-ft 10,560				

Peak discharge (base, 50 cfs).--June 4 (1:30 p.m.) 54 cfs (3.06 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Green Creek near Bridgeport, Calif.

Location.--Lat 38°11', long 119°14', in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T. 4 N., R. 25 E., on right bank 100 ft downstream from county bridge and $\frac{5}{8}$ miles south of Bridgeport.

Drainage area.--19.4 sq mi.

Records available.--October 1953 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,850 ft (from topographic map).

Extremes.--Maximum discharge during year, 184 cfs June 3 (gage height, 2.78 ft); maximum gage height, 3.15 ft Dec. 9 (backwater from ice); minimum discharge, 4.4 cfs Mar. 23, 1953-57; Maximum discharge, 307 cfs Dec. 23, 1955, from rating curve extended above 220 cfs on basis of slope-area determination of peak flow and logarithmic plotting; maximum gage height, 3.46 ft Feb. 2, 1956 (backwater from ice); minimum discharge, 3.7 cfs Nov. 17, 1955.

Remarks.--Records good. Flow regulated by West, Green, East, Summit, and other lakes.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.6	4.6	2.2	39
1.7	7.4	2.4	66
1.8	11	2.6	110
2.0	22	2.8	179

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	14	12	b9.9	9.9	13	14	26	110	113	40	12
2	20	17	13	9.9	9.9	12	12	26	*141	98	38	11
3	19	14	12	9.9	9.9	b12	14	25	152	85	35	11
4	19	14	12	b9.9	9.9	12	16	26	149	79	34	11
5	19	15	9.9	b9.9	9.6	12	17	31	160	79	33	12
6	18	15	b9.6	9.6	9.6	12	19	33	164	81	*34	11
7	19	15	b9.5	b9.6	9.6	13	17	34	*149	76	32	11
8	19	15	b9.5		9.6	13	17	35	152	66	30	11
9	18	14	b9.0		9.9	12	17	32	149	63	28	10
10	18	14	b10		9.9	b11	18	32	119	62	27	10
11	18	14	b11		10	b11	19	28	*83	62	26	10
12	18	14	b12		10	12	19	26	79	57	24	*10
13	17	14	*13		11	12	18	27	90	52	25	9.9
14	17	*10	12		11	b11	20	*26	98	50	37	9.6
15	16	12	b12		11	b9.6	19	24	88	*46	36	9.6
16	15	12	12		12	b10	18	26	74	44	33	9.2
17	14	12	b11		12	b11	*17	29	68	44	31	8.5
18	14	12	11		11	*11	14	41	72	43	29	8.5
19	14	12	b10		11	9.9	16	50	88	38	28	8.1
20	14	b12	b10	a9.5	11	10	16	41	102	34	26	8.1
21	14	b12	b10		*11	9.9	15	40	105	32	24	7.4
22	a15	12	b10		10	9.6	15	39	105	30	22	7.1
23	a15	12	b10		9.9	b9.6	16	38	105	28	20	7.1
24	a15	12	b10		8.1	9.6	16	37	113	26	18	6.8
25	a15	12	b10		9.6	11	16	38	132	25	17	6.8
26	a15	12	b10		11	12	18	45	*160	27	16	6.6
27	a15	13	b9.9		12	12	20	56	156	16	15	6.6
28	a15	14	b9.9		13	14	22	*70	*138	47	14	6.3
29	a15	14	b9.9		14	14	23	76	132	45	13	6.3
30	*14	12	9.9		14	14	23	72	126	44	12	6.6
31	13	-----	9.9		15	15	-----	79	-----	43	12	-----
Total	507	396	330.0	296.7	292.4	360.2	521	1,208	3,559	1,665	809	269.1
Mean	16.4	13.2	10.6	9.57	10.4	11.6	17.4	39.0	119	53.7	26.1	8.97
Ac-ft	1,010	785	655	588	580	714	1,030	2,400	7,060	3,300	1,600	534
Calendar year 1956: Max	250			Min 9.0		Mean 49.6		Ac-ft 36,030				
Water year 1956-57: Max	164			Min 6.3		Mean 28.0		Ac-ft 20,260				

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for nearby streams.

b Stage-discharge relation affected by ice.

Summers Creek near Bridgeport, Calif.

Location.--Lat 38°09', long 119°15', in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 3 N., R. 25 E., $\frac{7}{8}$ miles south-west of Bridgeport.

Drainage area.--12.6 sq mi.

Records available.--October 1953 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 7,100 ft (from topographic map).

Extremes.--Maximum discharge recorded during year, 26 cfs May 21, June 7 (gage height, about 2.85 ft); minimum, 0.6 cfs Sept. 6, 7.
1953-57: Maximum discharge, 690 cfs Dec. 23, 1955 (gage height, 5.95 ft from recorder graph, 6.2 ft from floodmarks), from rating curve extended above 50 cfs on basis of slope-area determination of peak flow; minimum, that of Sept. 6, 7, 1957.

Remarks.--Records good except those for periods of no gage-height record, which are poor. Flow partly regulated by Tamarack Lake, several smaller lakes, and a transarea diversion to Twin Lakes. Diversions for irrigation of about 160 acres above station.

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Nov. 13		Nov. 14 to July 14		July 15 to Sept. 30	
2.3	7.0	2.2	2.7	2.3	1.0
2.4	11	2.3	4.2	2.4	3.2
		2.4	6.2	2.5	6.0
		2.6	12	2.6	9.7
		2.8	22		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a7.0	8.6	5.6	4.2	4.6	5.0	7.0	6.2	a7.0	a10	3.8	2.8
2	a8.0	8.6	5.6	4.2	4.6	4.8	6.5	6.2	*a7.5	a10	3.0	a3.0
3	a8.6	8.2	5.8	4.2	4.6	4.6	8.0	6.2	a8.3	a10	2.8	3.2
4	a8.6	8.6	5.8	3.9	4.6	4.8	7.8	6.2	*12	a9.5	1.7	a2.0
5	a8.6	8.6	6.0	4.0	4.6	5.4	7.8	6.0	16	a9.5	1.7	a1.5
6	a8.6	8.6	4.8	4.2	4.6	6.7	a8.3	4.8	19	a10	*3.5	1.2
7	a8.6	8.2	5.0	4.0	4.6	7.2	a8.5	5.0	*21	a9.5	4.0	0.8
8	a9.4	7.4	5.4	4.0	4.6	6.7	a8.0	4.8	17	a9.1	4.0	1.0
9	a9.0	7.4	5.6	4.0	4.6	8.0	a8.0	5.2	16	a9.1	4.0	1.2
10	a8.6	7.4	6.5	4.0	4.8	5.4	a8.5	5.8	13	a8.8	3.8	1.2
11	a8.6	7.0	7.8	4.0	4.8	5.6	a8.8	5.8	*17	a8.8	4.9	1.7
12	a8.6	7.0	6.7	4.2	5.2	5.4	a8.8	5.8	14	a8.5	a5.4	*2.3
13	a8.6	*7.0	*6.2	4.4	6.0	5.0	a8.0	5.4	13	a8.5	6.4	2.8
14	a8.6	*6.5	5.6	4.4	5.8	5.4	a7.5	*5.8	14	a9.1	a4.6	2.8
15	a8.6	7.0	5.2	4.4	5.4	5.4	a6.7	5.6	12	*9.7	a3.0	2.8
16	*8.4	7.5	5.6	4.4	6.0	5.0	a6.0	5.4	11	9.0	2.3	3.0
17	8.6	7.5	5.0	4.4	8.5	5.0	*5.6	5.4	10	7.8	a2.2	4.0
18	8.2	7.2	5.2	4.4	8.5	*5.0	6.0	8.3	9.1	7.8	a2.5	5.2
19	8.2	5.8	4.2	4.4	5.8	5.2	6.5	12	9.1	8.2	a2.5	4.9
20	8.2	5.4	4.2	4.0	5.4	6.0	6.7	10	9.5	7.8	2.8	4.6
21	8.2	6.7	4.0	4.8	*5.4	5.6	7.2	13	9.8	8.2	a2.5	4.3
22	7.8	7.0	3.9	4.8	5.2	5.0	7.0	10	8.5	7.8	a2.5	4.0
23	7.4	6.7	5.0	4.6	4.6	5.0	6.5	10	8.0	7.1	2.1	3.8
24	7.8	6.7	4.6	4.6	4.6	6.2	6.2	8.0	8.3	5.2	a1.8	3.5
25	9.0	6.2	4.4	4.6	5.0	7.8	6.0	7.0	9.5	3.0	a1.8	3.2
26	9.0	6.2	4.2	4.6	5.6	8.5	6.0	a6.7	*15	3.5	a1.7	3.2
27	9.8	6.2	4.2	4.6	5.8	9.1	6.0	a6.5	14	5.2	1.7	3.2
28	8.6	5.8	4.4	4.6	5.4	8.8	6.0	a6.5	11	4.6	2.1	3.2
29	8.2	5.8	4.4	4.6	-	9.5	6.2	a6.7	a11	4.3	2.8	3.2
30	9.0	5.8	4.6	4.6	-	8.5	6.2	a7.0	a10	4.3	3.0	3.2
31	8.2	-----	4.4	4.6	-----	8.8	-----	a7.0	-----	4.3	2.8	-----
Total	262.8	212.6	159.9	134.7	145.2	192.4	212.3	214.3	380.6	238.2	93.7	86.8
Mean	8.48	7.09	5.16	4.35	5.19	6.21	7.08	6.91	12.0	7.68	3.02	2.89
Ac-ft	521	422	317	267	288	382	421	425	715	472	186	172

Calendar year 1956: Max 33 Min - Mean 10.1 Ac-ft 7,290
Water year 1956-57: Max 21 Min 0.8 Mean 6.34 Ac-ft 4,590

Peak discharge (base, 20 cfs)--May 18 (10 p.m.) 20 cfs (2.75 ft); May 21 (4 p.m.) 26 cfs (2.85 ft); June 7 (about 9 a.m.) 26 cfs (about 2.85 ft); June 26 (about 9 a.m.) 20 cfs (about 2.76 ft).

* Discharge measurement made on this day.

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

Robinson Creek at Twin Lakes outlet, near Bridgeport, Calif.

Location.--Lat 38°10', long 119°19', in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T. 4 N., R. 24 E., on left bank a quarter of a mile downstream from Twin Lakes and 8 miles southwest of Bridgeport.

Drainage area.--34.7 sq mi.

Records available.--October 1953 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 7,050 ft (from topographic map).

Extremes.--Maximum discharge during year, 270 cfs June 7 or 8 (gage height, 3.71 ft); minimum daily, 2.9 cfs Oct. 29, Dec. 7.

1953-57: Maximum discharge, 445 cfs June 29, 1956 (gage height, 4.35 ft); no flow for many days in 1954-55.

Maximum discharge known, 660 cfs June 21, 1911 (gage height, 5.2 ft), at site $2\frac{1}{2}$ miles downstream.

Remarks.--Records good. Flow regulated by Twin Lakes.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-28, Dec. 13 to Apr. 3, Sept. 16-30)

1.1	2.0	2.0	35
1.2	3.5	2.5	77
1.4	7.5	3.0	137
1.7	17	3.7	268

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	9.2	6.5	18	15	34	20	54	76	229	113	87
2	40	9.2	6.5	18	15	31	18	54	78	206	110	85
3	40	9.2	5.7	18	15	27	49	53	86	183	108	83
4	41	9.2	4.5	17	15	24	58		*131	165	106	83
5	41	9.2	4.7	17	14	26	66		206	155	108	82
6	40	9.2	4.5	17	14	23	72		a236	129	*109	79
7	41	9.2	2.9	16	13	23	70		*268	130	108	78
8	41	9.2	3.0	16	15	23	69		a264	133	105	76
9	40	9.2	3.2	15	14	24	68		a236	131	103	74
10	39	9.2	4.3	16	14	23	67		a216	130	102	72
11	38	9.2	6.3	15	14	24	66		197	129	100	71
12	38	9.2	7.8	18	14	25	65		170	124	98	*69
13	38	8.2	10	30	15	22	64		155	119	96	67
14	38	*7.8	12	32	16	20	62		148	111	94	64
15	38	7.8	14	29	17	21	61		145	110	91	62
16	*38	7.8	16	26	18	21	60	80	137	105	89	61
17	38	7.8	17	24	20	20	60	80	130	102	88	57
18	38	7.1	18	22	21	20	59	81	123	99	91	55
19	38	6.5	19	20	21	20	59	76	123	98	94	53
20	38	6.3	19	24	21	22	58	74	137	96	95	50
21	38	6.3	18	24	*20	22	57	75	153	90	96	49
22	37	6.3	18	22	20	18	57	75	162	87	97	47
23	36	6.3	18	21	25	18	57	77	165	83	98	46
24	36	6.5	18	19	25	17	56	78	174	87	98	46
25	36	6.5	18	18	32	*18	55	78	188	91	98	45
26	34	6.5	18	19	34	17	54	78	214	84	97	42
27	34	6.3	*18	20	33	18	53	78	238	86	95	37
28	21	6.3	18	18	33	18	53	74	*244	89	95	34
29	2.9	6.5	18	18	-	20	53	75	244	81	92	29
30	5.1	6.5	18	17	-----	20	*53	74	242	97	91	26
31	9.2	-----	18	16	-----	27	-----	75	-----	120	89	-----
Total	1,072.2	233.7	382.9	620	543	686	1,719	2,167	5,286	3,679	3,054	1,809
Mean	34.6	7.79	12.4	20.0	19.4	22.1	57.3	69.9	176	119	98.5	60.3
Ac-ft	2,130	464	759	1,230	1,080	1,360	3,410	4,300	10,480	7,300	6,060	3,590

Calendar year 1956: Max 439 Min 2.9 Mean 90.3 Ac-ft 65,520
Water year 1956-57: Max 268 Min 2.9 Mean 58.2 Ac-ft 1,360

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage and weather records.

Buckeye Creek near Bridgeport, Calif.

Location.--Lat 38°14', long 119°19', in NE¼NE¼ sec. 4, T. 4 N., R. 24 E., on right bank at Buckeye Hot Springs, 0.6 mile downstream from Eagle Creek and 5½ miles southwest of Bridgeport.

Drainage area.--45 sq mi, approximately.

Records available.--November 1910 to September 1914 (fragmentary), October 1953 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,900 ft (from topographic map). November 1910 to September 1914, staff gage at site half a mile downstream at different datum.

Extremes.--Maximum discharge during year, 414 cfs June 3 (gage height, 3.43 ft); minimum, 13 cfs Feb. 9.

1953-57: Maximum discharge, 700 cfs Dec. 23, 1955 (gage height, 4.00 ft), from rating curve extended above 350 cfs on basis of slope-area determination of peak flow; minimum, 4.7 cfs Mar. 14, 1955, result of freezeup.

Flood of June 21, 1911, reached an observed stage of 4.8 ft (discharge not determined), site and datum then in use.

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

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 1 to Sept. 30)

1.5	17	2.4	107
1.7	28	2.8	188
1.9	43	3.2	320
2.1	64		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	36	28	b27	20	24	32	83	242	178	45	23
2	44	37	27	b25	20	24	29	80	*287	158	42	23
3	44	36	27	b25	21	23	33	69	309	145	41	23
4	a44	37	28	b24	b20	23	37	84	320	141	41	23
5	a44	37	26	b24	20	24	44	107	320	141	*40	24
6	a45	38	b26	b23	20	27	44	122	302	130	39	22
7	a46	38	b25	b28	20	27	41	132	272	124	37	22
8	a48	40	b24	b23	20	27	42	116	266	116	36	22
9	*45	41	b24	b24	b18	27	44	101	232	110	36	22
10	43	41	b30	b28	21	24	48	97	176	110	35	23
11	48	40	b44	b29	23	24	49	81	164	105	34	*22
12	46	38	39	b24	23	24	48	80	*194	101	33	22
13	45	37	31	b24	28	b22	49	87	210	97	32	22
14	43	*b32	29	b23	29	24	53	77	181	87	32	22
15	41	b33	29	b22	26	24	49	73	160	83	32	21
16	41	36	29	b22	28	24	47	80	151	77	31	20
17	40	35	28	b22	29	23	44	101	151	77	30	21
18	39	b32	28	b22	28	23	43	134	171	76	30	21
19	38	b27	*b27	b22	27	23	41	117	196	72	29	21
20	38	b28	b27	b22	26	23	41	91	202	67	29	20
21	37	b28	b25	b22	*25	23	40	87	191	62	27	20
22	37	b30	b24	b22	24	23	41	84	188	58	27	20
23	35	31	b27	22	24	22	40	78	191	57	27	20
24	37	30	b27	22	23	24	41	76	208	56	28	20
25	40	29	b27	b21	27	*27	43	87	226	55	27	19
26	41	29	b27	22	26	27	46	119	232	55	26	19
27	43	29	b27	b22	26	29	51	158	222	53	26	19
28	37	29	b27	b23	26	32	61	164	*226	50	26	20
29	37	29	b27	22	-	34	72	154	219	50	25	20
30	38	29	b27	21	-----	31	*73	151	199	50	25	20
31	35	-----	b27	22	-----	33	-----	188	-----	48	24	-----
Total	1,283	1,012	868	724	688	789	1,366	3,258	6,808	2,787	992	636
Mean	41.4	33.7	28.0	23.4	23.9	25.5	45.5	105	220	89.9	32.0	21.2
Ac-ft	2,540	2,010	1,720	1,440	1,320	1,560	2,710	6,460	13,110	5,530	1,970	1,260

Calendar year 1956: Max 455 Min - Mean 101 Ac-ft 72,960
Water year 1956-57: Max 320 Min 17 Mean 57.5 Ac-ft 41,630

Peak discharge (base, 100 cfs).--May 6 (11:30 p.m.) 151 cfs (2.64 ft); May 18 (10:30 p.m.) 181 cfs (2.77 ft); June 3 (11:30 p.m.) 414 cfs (3.43 ft); June 25 (11 p.m.) 316 cfs (3.19 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage.

b Stage-discharge relation affected by ice.

Swager Creek near Bridgeport, Calif.

Location.--Lat 38°17', long 119°18', in SE¼NW¼ sec. 23, T. 5 N., R. 24 E., on right bank three-quarters of a mile downstream from Yaney Canyon and 4 miles northwest of Bridgeport.

Drainage area.--53 sq mi, approximately.

Records available.--June 1911 to September 1915 (fragmentary), October 1953 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,700 ft (from topographic map). June 1911 to September 1915, staff gages at approximately same site at different datums.

Extremes.--Maximum discharge during year, 51 cfs May 18 (gage height, 2.95 ft); maximum gage height, 4.02 ft Jan. 24 (backwater from ice); minimum discharge, 1.6 cfs Aug. 26, 1911-15, 1953-57; Maximum discharge, 585 cfs Dec. 23, 1955 (gage height, 6.24 ft), from rating curve extended above 80 cfs on basis of slope-area determination of peak flow; no flow Apr. 20, 1912.

Remarks.--Records good. Diversions for irrigation of about 1,000 acres above station.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	1.0	2.2	8.7
1.9	2.0	2.4	16
2.0	3.7	2.7	33

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.0	9.7	9.4	b8.4	*8.7	15	15	14	29	4.6	2.0	4.6
2	10	11	b9.0	9.0	8.4	14	13	14	30	5.0	1.9	4.4
3	10	10	9.4	8.7	b8.4	11	14	14	31	3.7	1.8	4.1
4	10	11	9.7	b7.6	b9.0	13	18	15	31	4.4	2.3	4.1
5	10	11	9.0	7.3	b8.7	15	22	16	29	5.7	*2.5	4.4
6	9.7	11	b8.1	b8.4	8.4	16	19	15	27	5.7	2.8	4.4
7	10	11	b7.6	b7.6	8.7	15	16	18	26	5.5	3.0	4.4
8	11	11	b6.7	7.0	8.7	14	16	16	25	4.8	2.3	4.6
9	*10	11	b6.5	b7.0	b8.4	14	18	16	23	5.5	2.3	4.6
10	9.4	10	8.1	7.6	8.7	12	18	17	23	5.5	2.0	4.6
11	9.7	10	15	7.9	9.4	12	18	16	*18	3.9	2.3	*4.6
12	9.7	10	13	8.7	10	12	16	14	16	3.4	2.3	4.1
13	9.4	10	12	b8.7	11	11	12	13	15	3.4	2.2	2.0
14	9.4	*8.4	10	b8.4	11	11	11	13	11	3.5	2.5	1.9
15	9.4	9.4	9.7	b7.9	11	12	9.7	11	6.5	*3.7	2.0	2.0
16	9.4	10	10	b7.9	17	11	9.4	11	5.0	3.0	1.8	1.9
17	9.4	11	9.0	b7.9	19	11	9.0	11	6.7	2.8	1.8	1.9
18	9.4	10	9.7	b7.6	18	11	11	18	7.0	2.5	1.7	2.0
19	9.4	b7.6	*b7.3	b8.1	16	11	10	29	7.3	2.3	1.7	2.5
20	9.4	b7.6	b8.4	b8.4	13	11	12	22	7.9	2.3	1.7	2.5
21	9.4	b8.7	b8.4	b8.4	13	11	10	28	8.4	2.0	1.7	2.5
22	9.4	10	b5.9	b10	13	9.6	10	24	8.1	2.2	1.7	2.8
23	9.4	10	7.3	b9.0	12	10	11	25	7.0	2.8	1.7	2.8
24	9.4	9.7	7.0	b9.0	12	11	12	23	7.0	2.5	1.7	2.8
25	12	9.4	b6.5	b8.7	15	*12	12	21	6.5	2.2	1.7	2.8
26	12	9.7	b6.5	9.4	15	13	12	20	*6.7	2.2	1.8	3.7
27	12	9.7	b6.5	b9.7	16	14	13	21	5.7	2.5	4.6	3.4
28	10	b9.0	b7.6	b9.7	*14	16	14	*25	5.7	2.3	4.1	2.8
29	9.4	9.4	b8.4	b9.7	-	17	16	26	4.6	2.8	4.1	3.0
30	11	9.4	8.7	8.4	-----	16	*14	23	3.7	2.0	4.4	3.4
31	11	-----	b8.7	8.4	-----	16	-----	25	-----	1.8	4.4	-----
Total	308.7	295.7	269.1	260.5	331.5	397.6	411.1	574	437.8	107.5	74.8	99.6
Mean	9.96	9.86	8.68	8.40	11.8	12.8	13.7	18.5	14.6	3.47	2.41	3.32
Ac-ft	612	587	534	517	658	789	815	1,140	868	213	148	198

Calendar year 1956: Max 92 Min 5.9 Mean 21.0 Ac-ft 15,260
 Water year 1956-57: Max 31 Min 1.7 Mean 9.78 Ac-ft 7,080

Peak discharge (base, 25 cfs).--Feb. 16 (8 p.m.) 29 cfs (2.59 ft); Apr. 5 (9 p.m.) 29 cfs (2.62 ft); May 18 (10 p.m.) 51 cfs (2.95 ft); June 3 (8 p.m.) 35 cfs (2.72 ft).

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

Bridgeport Reservoir near Bridgeport, Calif.

Location.--Lat 38°19'30", long 119°12'50", in SE¹ 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 1957 in reports of Geological Survey. March 1926 to September 1957 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, 42,760 acre-ft July 1-4; maximum elevation, 6,460.12 ft July 2; minimum contents, 10,910 acre-ft Sept. 28-30; minimum elevation, 6,444.59 ft Sept. 28.
1926-57: 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 6,415 (approximate elevation of bottom of reservoir) and 6,460 ft (crest of spillway). Elevation of sill of outlet gate, 6,412 ft. 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).--WSP 1180: 1949.

Capacity table, water year 1956-57 (elevation, in feet, and usable contents, in acre-feet)

6,444	10,200	6,456	31,570
6,448	15,470	6,460	42,460
6,452	22,580		

Usable contents, in acre-feet, at 8 a.m., water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	27,440	26,640	27,440	31,090	35,170	42,310	42,170	38,570	35,040	42,760	30,850	17,230
2	27,200	26,640	27,440	31,090	35,300	42,460	42,170	38,430	35,300	42,760	30,360	16,900
3	26,980	26,640	27,440	31,210	35,570	42,310	42,020	38,010	35,700	42,760	29,760	16,500
4	26,860	26,640	27,660	31,330	35,700	42,170	42,020	37,730	36,230	42,760	29,280	16,190
5	26,860	26,750	27,900	31,450	35,830	42,020	42,020	37,460	36,760	42,460	28,820	15,870
6	26,750	26,750	27,900	31,570	35,830	41,880	42,020	37,180	37,180	42,610	28,240	15,470
7	26,750	26,750	27,900	31,700	35,960	41,730	42,020	36,900	37,730	42,610	27,900	15,170
8	26,640	26,750	27,900	31,820	36,100	41,580	41,880	36,760	38,290	42,460	27,440	14,800
9	26,530	26,750	28,120	31,950	36,230	41,290	41,880	36,500	38,840	42,310	26,980	14,430
10	26,530	26,860	28,240	32,080	36,360	41,150	41,880	36,230	39,400	42,020	26,530	14,060
11	26,530	26,860	28,360	32,080	36,500	40,850	41,730	36,100	39,690	41,880	26,090	13,650
12	26,310	26,860	28,580	32,200	36,630	40,850	41,580	35,830	39,830	41,440	25,650	13,240
13	26,200	26,860	28,700	32,330	36,900	40,710	41,580	35,570	39,980	41,150	25,210	12,900
14	26,090	26,860	28,930	32,460	37,040	40,850	41,290	35,300	40,120	40,710	24,770	12,570
15	25,980	26,860	29,040	32,840	37,320	41,150	41,150	35,170	40,270	40,270	24,450	12,320
16	25,980	26,980	29,280	32,970	37,460	41,150	41,000	34,900	40,420	39,690	24,040	12,070
17	25,980	26,980	29,280	33,090	38,010	41,290	40,850	34,640	40,420	39,260	23,620	11,880
18	25,980	26,980	29,520	33,220	38,430	41,440	40,850	34,510	40,270	38,710	23,200	11,690
19	25,980	27,090	29,640	33,350	38,980	41,580	40,710	34,640	40,120	38,010	22,790	11,630
20	26,090	27,090	29,760	33,480	39,400	41,730	40,560	34,640	40,120	37,460	22,380	11,570
21	26,090	26,980	29,760	33,600	39,690	42,020	40,270	34,640	40,120	36,760	21,990	11,500
22	26,090	27,090	30,000	33,860	39,830	41,880	40,420	34,770	40,120	36,230	21,500	11,500
23	26,200	27,090	30,000	33,980	40,120	42,020	40,270	34,770	40,120	35,570	21,110	11,390
24	26,090	27,200	30,120	34,110	40,710	42,020	40,120	34,640	40,270	35,040	20,720	11,260
25	26,200	27,200	30,240	34,240	41,150	42,170	39,830	34,640	40,560	34,380	20,250	11,140
26	26,310	27,200	30,360	34,380	41,580	42,310	39,690	34,640	41,000	33,860	19,800	11,030
27	26,420	27,320	30,490	34,640	41,880	42,310	39,400	34,640	41,580	33,480	19,240	10,970
28	26,420	27,320	30,490	34,770	42,170	42,460	39,120	34,770	41,880	32,970	18,870	10,910
29	26,420	27,320	30,610	34,900	-	42,460	38,980	34,770	42,170	32,460	18,440	10,910
30	26,530	27,440	30,730	35,040	-----	42,310	38,840	34,800	42,460	31,950	18,010	10,910
31	26,640	-----	30,970	35,040	-----	42,610	-----	35,040	-----	31,450	17,580	-----
(+)	6,453.88	6,454.23	6,455.73	6,457.37	6,459.89	6,460.07	6,458.74	6,457.33	6,460.00	6,455.94	6,449.32	6,444.62
(*)	-910	+800	+3,530	+4,070	+7,130	+440	-3,770	-3,800	+7,420	-11,010	-13,870	-6,670

Calendar year 1956..... + 7,970

Water year 1956-57..... + 16,640

+ Elevation, in feet, at end of month.

* Change in contents, in acre-feet.

East Walker River near Bridgeport, Calif.

Location.--Lat 38°19'40", long 119°12'50", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ 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 1957.

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.--34 years (1922-24, 1925-57), 132 cfs (95,560 acre-ft per year).

Extremes.--Maximum daily discharge during year, 385 cfs July 19-21 (gage height, 2.08 ft); minimum daily, 22 cfs Dec. 4-7.

1921-57: Maximum discharge, 1,240 cfs Jan. 22, 1943 (gage height, 4.5 ft); minimum daily, 0.2 cfs Nov. 2-29, Dec. 1-22, 25-28, 1955, Jan. 17-25, 1956.

Remarks.--Records excellent. Diversion for irrigation of meadow pasture lands near Bridgeport. Flow regulated by Bridgeport Reservoir (see preceding page).

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

0.4	15	0.8	61
.5	23	1.0	96
.6	33	1.5	212
.7	46	2.1	391

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	245	104	73	23	23	127	112	178	191	*262	329	268
2	242	104	73	23	23	196	112	194	191	268	329	265
3	217	104	48	23	23	223	98	226	191	265	320	245
4	178	104	22	23	*23	226	92	223	191	262	304	254
5	178	104	22	23	23	231	92	223	217	259	*304	236
6	176	104	22	23	23	231	92	223	231	277	280	239
7	174	104	22	23	23	228	92	236	231	283	268	239
8	174	104	23	23	23	228	94	245	231	304	268	239
9	174	104	23	23	23	228	106	245	265	314	268	239
10	176	104	23	23	23	226	112	245	277	314	268	239
11	176	104	23	24	23	184	112	245	*277	314	268	236
12	171	104	23	24	23	125	112	242	274	310	268	*236
13	168	104	23	24	23	68	134	242	274	335	268	223
14	168	*104	23	24	23	32	145	217	274	344	259	212
15	147	89	23	24	23	23	145	191	277	341	256	189
16	*134	73	23	24	23	23	145	189	277	357	254	181
17	114	73	23	24	24	24	145	189	277	363	254	143
18	102	73	23	24	24	24	145	189	277	376	254	131
19	102	73	23	24	24	24	145	189	277	385	254	116
20	102	73	23	24	24	24	145	191	277	385	254	112
21	102	73	23	24	24	24	145	189	265	385	251	112
22	102	73	23	24	24	24	145	191	259	382	251	112
23	102	73	23	23	24	24	154	189	259	366	251	112
24	102	73	23	23	24	24	178	189	242	360	262	112
25	102	73	23	23	25	*43	178	191	217	351	271	110
26	102	73	23	23	25	68	178	191	226	332	271	91
27	102	73	*23	23	*25	76	178	191	251	332	271	82
28	102	73	23	23	62	92	178	191	251	332	268	60
29	102	73	23	23	-	108	178	191	256	329	268	50
30	102	73	23	23	-----	112	*178	191	259	329	268	50
31	104	-----	23	23	-----	112	-----	191	-----	329	268	-----
Total	4,442	2,640	834	725	697	3,402	4,065	6,417	7,462	10,145	8,427	5,113
Mean	145	88.0	26.9	23.4	24.9	110	136	207	249	327	272	170
Ac-ft	8,810	5,240	1,650	1,440	1,380	6,750	8,060	12,730	14,800	20,120	16,710	10,140
Calendar year 1956: Max	905			Min	0.2		Mean	241		Ac-ft	175,000	
Water year 1956-57: Max	385			Min	22		Mean	149		Ac-ft	107,800	

* 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.

Drainage area.--1,100 sq mi, approximately.

Records available.--January 1947 to September 1957.

Gage.--Water-stage recorder. Datum of gage is 4,574.66 ft above mean sea level, datum of 1929.

Average discharge.--10 years, 134 cfs (97,010 acre-ft per year).

Extremes.--Maximum discharge during year, 318 cfs July 21 (gage height, 2.55 ft); minimum, 30 cfs Jan. 28.

1947-57: Maximum discharge, 1,640 cfs Dec. 24, 1955 (gage height, 6.87 ft), from rating curve extended above 1,100 cfs by logarithmic plotting; minimum, 3.1 cfs Mar. 21, 1948; minimum daily, 3.4 cfs Mar. 21-24, 1948.

Remarks.--Records good. Diversions for irrigation above station. Flow regulated by Bridgeport Reservoir (see p. 157).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	30	2.0	196
1.3	56	2.6	330
1.5	90		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	249	132	104	b48	b45	58	88	139	203	198	266	218
2	258	132	102	b48	b48	104	90	139	211	205	266	220
3	240	134	102	b47	b49	165	90	141	211	211	262	225
4	231	132	100	b47	b50	205	85	159	196	207	265	209
5	203	134	77	b45	b50	209	74	174	192	207	251	203
6	198	132	72	b44	b50	214	69	174	*211	203	249	200
7	194	132	66	b43	*50	211	70	174	211	220	229	200
8	196	132	66	b42	46	214	70	198	200	*222	*216	203
9	198	130	b60	b41	45	216	67	*207	211	225	216	*198
10	192	132	b63	b44	45	216	62	220	242	227	216	196
11	163	132	72	b52	45	218	61	225	242	229	214	187
12	187	132	70	b52	46	185	*59	214	229	233	214	185
13	194	132	64	b51	48	145	64	207	222	231	207	192
14	194	132	62	b50	50	114	69	209	225	255	207	185
15	*200	130	59	49	50	*85	83	205	229	262	194	172
16	194	*126	58	48	52	66	92	187	229	258	187	163
17	170	116	58	46	59	58	100	181	227	269	192	167
18	154	112	55	41	61	53	106	178	251	280	187	154
19	143	110	58	43	55	52	106	198	229	298	185	134
20	134	108	55	53	52	50	118	200	218	311	187	118
21	134	106	55	53	49	49	124	209	*207	316	196	106
22	134	110	b45	46	48	46	122	203	187	311	192	102
23	130	108	b44	45	48	45	118	218	198	313	185	106
24	134	108	b44	50	49	43	122	220	200	304	183	108
25	134	104	b43	45	55	43	141	211	185	311	189	106
26	134	104	*b43	b45	56	45	143	205	161	297	196	104
27	134	104	b43	b45	52	56	143	203	170	275	196	96
28	134	104	b44	b42	52	66	143	207	176	269	200	90
29	134	104	b45	b42	-	74	148	211	185	269	209	85
30	134	104	b47	b41	-----	81	145	205	187	255	214	77
31	134	-----	b48	b43	-----	83	-----	203	-----	249	220	-----
Total	5,362	3,608	1,924	1,431	1,405	3,467	2,972	6,024	6,225	7,919	6,580	4,709
Mean	173	120	62.1	46.2	50.2	112	99.1	194	208	255	212	157
Ac-ft	10,640	7,160	3,820	2,840	2,790	6,880	5,890	11,950	12,350	15,710	13,050	9,340
Calendar year 1956: Max	318			Min	43		Mean	260	Ac-ft	188,800		
Water year 1956-57: Max	316			Min	41		Mean	141	Ac-ft	102,400		

* 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,790 ft (from topographic map). April to August 1910 staff gage at site 1 mile upstream at different datum.

Average discharge.--13 years (1944-57), 51.4 cfs (37,210 acre-ft per year).

Extremes.--Maximum discharge during year, 340 cfs June 3 (gage height, 2.02 ft); minimum not determined, occurred during period of ice effect.

1910, 1944-57: Maximum discharge, 994 cfs Dec. 23, 1955 (gage height, 2.80 ft), from rating curve extended above 370 cfs on basis of slope-area determinations at gage heights 2.60 and 2.80 ft; maximum gage height recorded, 3.63 ft Jan. 3, 1945 (backwater from ice); minimum discharge recorded, 4.9 cfs Nov. 17, 1948, but may have been less during periods of ice effect.

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

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	34	25	22	17	26	*30	46	204	*149	37	22
2	34	*30	26			25	28	*45	*248	156	36	21
3	34	30	*25			23	27	43	273	123	34	21
4	33	30	20			23	32	50	273	116	33	22
5	31	30	20	20	17	29	36	59	*270	114	*33	23
6	30	30	19			30	36	66	245	103	33	20
7	31	30	18			30	32	69	234	103	31	20
8	33	30	17			17	28	32	63	220	95	30
9	*32	30	17	20	17	26	34	60	200	84	31	20
10	30	30	20			24	36	60	166	80	31	19
11	34	28	38			19	23	36	52	152	79	30
12	32	27	37			21	23	34	52	*161	76	30
13	32	27	26	19	31	34	23	34	53	166	66	28
14	31	23	24			34	24	36	55	155	60	28
15	30	24	23			23	23	33	51	144	58	28
16	30	25	22			42	22	29	58	136	56	23
17	30	26	22	(*)	37	23	28	66	139	53	22	19
18	29	25	21	19	26	30	22	30	82	152	53	22
19	29	23	21			26	22	27	88	169	52	23
20	28	23	20			23	22	28	72	175	53	25
21	28	25	20			*23	22	28	74	169	52	25
22	27	26	20	18	26	23	21	29	69	169	49	24
23	24	26	20			21	22	27	69	175	46	24
24	29	26	21			22	22	28	66	188	44	24
25	36	26	22			31	23	30	72	210	43	24
26	32	26	22	18	30	26	33	68	210	44	23	16
27	31	25	22			29	27	36	112	197	42	23
28	29	25	22			26	30	41	123	194	41	23
29	32	25	22			-	30	44	119	184	37	23
30	30	25	22	18	30	30	43	128	164	37	24	16
31	30	-----	22			30	-----	164	-----	37	23	-----
Total	954	810	691	608	672	774	975	2,274	5,742	2,181	848	553
Mean	30.8	27.0	22.3	19.8	24.0	25.0	32.5	73.4	191	70.4	27.4	18.4
Ac-ft	1,890	1,610	1,370	1,210	1,330	1,540	1,930	4,510	11,390	4,330	1,680	1,100
Calendar year 1956: Max		365			Min 17		Mean 89.0		Ac-ft 64,650			
Water year 1956-57: Max		273			Min 16		Mean 46.8		Ac-ft 33,890			

Peak discharge (base, 200 cfs).--June 3 (9 p.m.) 340 cfs (2.02 ft); June 25 (9 p.m.) 270 cfs (1.82 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Oct. 24, Nov. 15-17, Nov. 19 to Dec. 3, Dec. 6-12, 15, Dec. 17 to Feb. 6, Feb. 9, Mar. 13, 14.

West Walker River below East Fork, near Coleville, Calif.

Location.--Lat 38°22'45", long 119°27'00", in SE $\frac{1}{4}$ 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 1957.

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.--19 years, 260 cfs (188,200 acre-ft per year).

Extremes.--Maximum discharge during year, 2,070 cfs June 3 (gage height, 4.97 ft); minimum, 32 cfs Oct. 24, but may have been less during period of ice effect.

1938-57: 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.

Maximum discharge recorded prior to 1938, 5,800 cfs Dec. 11, 1937, by slope-area determination.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Station is above diversions except a few small ranch ditches. Flow very slightly regulated by Poor Lake Reservoir (capacity unknown), 7 miles upstream.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	34	2.5	401
.9	53	3.0	607
1.1	78	4.0	1,260
1.5	140	5.0	2,100
2.0	246		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	92	88	68	53	(*)	95	*123	398	1,400	*790	a140	72
2	92	*92	69	*56		91	113	*401	*1,650	a870	*132	69
3	94	86	*74			82	117	346	1,740	a570		128
4	91	88	60			82	132	408	1,760	a550		125
5	89	88	53		50	100	164	502	*1,760	a540		121
6	86	89	51			104	179	598	1,620	a530	118	72
7	88	92	47			102	171	638	1,440	a470	112	66
8	100	96	45	55		101	175	566	1,410	a450	106	65
9	101	102	45		50	98	177	454	1,200	a410	104	65
10	94	106	58		50	88	200	450	852	a390	100	65
11	112	102	100		57	91	210	373	778	a380	98	65
12	112	98	89	55	64	85	200	356	*960	a340	96	65
13	106	95	79	52	92	79	203	390	1,080	a320	98	64
14	100	79	70		104	84	228	366	932	a300	96	64
15	94	61	65		100	85	196	327	738	a270	96	63
16	89	85	66		123	84	179	373	672	a250	95	60
17	86	82	66		126	79	169	477	682	a240	92	60
18	84	77	69		113	82	164	602	814	a240	89	63
19	81	60	65		101	82	154	627	1,000	a230	86	60
20	79	63	63		91	84	151	434	1,030	a210	*82	58
21	77	84	60		86	82	142	387	967	a200	82	55
22	74	82	59	50	84	77	142	370	932	a190	82	53
23	66	79	59		82	75	138	356	953	a180	84	51
24	66	77	59		82	81	145	340	1,050	a170	81	48
25	68	74	59		104	88	162	412	1,180	a170	78	45
26	95	75	59		106	92	181	566	1,250	a160	75	41
27	96	73	58		104	101	219	808	1,120	a170	74	39
28	86	78	58		*98	117	276	884	1,090	a170	73	39
29	79	55	55			125	343	776	1,080	a150	72	39
30	91	75	53			125	346	766	905	a150	73	*43
31	77	-----	53			125	-----	1,080	-----	a140	*72	-----
Total	2,765	2,525	1,935	1,611	2,217	2,866	5,499	15,831	34,045	10,000	2,960	1,756
Mean	89.2	84.2	62.4	52.0	79.2	92.5	183	511	1,135	323	95.5	58.5
Ac-ft	5,480	5,010	3,840	3,200	4,400	5,680	10,910	31,400	67,530	19,830	5,870	3,480
Calendar year 1956: Max	1,970			Min 45			Mean 418				Ac-ft 303,800	
Water year 1956-57: Max	1,760			Min 39			Mean 230			Ac-ft 166,600		

Peak discharge (base, 1,120 cfs).--June 3 (11:30 p.m.) 2,070 cfs (4.97 ft); June 13 (2 a.m.) 1,200 cfs (3.85 ft); June 25 (10:30 p.m.) 1,520 cfs (4.25 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of weather records and record for West Walker River near Coleville.

Note.--Stage-discharge relation affected by ice Nov. 20-26, Nov. 30, Dec. 6-10, Dec. 14 to Jan. 11, Jan. 14 to Feb. 8 (no gage-height record Jan. 26-31).

West Walker River near Coleville, Calif.

Location.--Lat 38°31'00", long 119°27'20", in NE¹ sec. 28, T. 8 N., R. 23 E., on left bank a quarter of a mile downstream from Rock Creek and 5 miles southeast of Coleville.

Drainage area.--245 sq mi.

Records available.--October 1902 to July 1908, March 1909 to August 1910, June 1915 to March 1938, May to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,520 ft (from topographic map). Prior to July 31, 1908, staff gage at site half a mile upstream at different datum. Mar. 1, 1909, to Aug. 31, 1910, staff gage and June 18, 1915, to Aug. 15, 1919, water-stage recorder near present site at different datums. Aug. 16, 1919, to March 1938, water-stage recorder at site 1,000 ft upstream at different datum.

Average discharge.--27 years (1902-7, 1915-37), 277 cfs (200,540 acre-ft per year).

Extremes.--Maximum discharge during period May to September, 2,000 cfs June 4 (gage height, 3.87 ft); minimum, 46 cfs Sept. 27, 28.
1915-38, 1957: Maximum discharge, 6,500 cfs Dec. 11, 1937, from slope-area determination of peak flow; minimum, 5 cfs Dec. 3, 1924, Aug. 27, 1931.

Remarks.--Records good. Station is above diversions except for a few small ranch ditches. Flow very slightly regulated by Poor Lake Reservoir (capacity unknown) 17 miles upstream.

Revisions (water years).--WSP 880: 1917 (runoff in acre-feet). Revised figures of discharge, in cubic feet per second, for the water years 1918 and 1923, superseding those published in WSP 480 and 570, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1918		1923-Con.		1923-Con.		1923-Con.		1923-Con.	
Aug. 1	233	Apr. 5	192	Apr. 16	370	Apr. 27	226	May 8	864
2	212	6	253	17	370	28	259	9	943
3	212	7	205	18	331	29	285	10	971
4	202	8	195	19	295	30	285	11	880
5	165	9	190	20	292	May 1	307	12	838
		10	220	21	277	2	352	13	826
1923		11	226	22	256	3	388	14	887
Apr. 1	218	12	259	23	241	4	448	15	992
2	202	13	283	24	235	5	570	16	1,210
3	185	14	295	25	235	6	635	17	1,340
4	175	15	317	26	229	7	760		

Month	Maximum	Minimum	Mean	Runoff in acre-feet
August 1918.....	233	84	121	7,460
Water year 1917-18....	2,110	30	266	193,000
Calendar year 1918....	2,110	30	285	205,000
April 1923.....	370	175	253	15,070
May.....	1,360	307	907	55,790
Water year 1922-23....	1,570	34	298	215,800
Calendar year 1923....	1,570	30	296	214,700

Rating table, May 26 to Sept. 30, 1957 (gage height, in feet, and discharge, in cubic feet per second)

0.8	39	2.5	690
1.2	108	3.0	1,130
1.6	218	3.7	1,830
2.0	370		

Discharge, in cubic feet per second, 1957

Day	May	June	July	Aug.	Sept.	Day	May	June	July	Aug.	Sept.
1	-	1,340	*815	148	78	16	-	690	262	102	68
2	-	1,600	698	142	77	17	-	698	254	98	70
3	-	1,710	589	138	77	18	-	815	247	95	72
4	-	*1,760	568	132	73	19	-	1,010	240	93	68
5	-	1,740	568	128	80	20	-	1,040	225	*89	67
6	-	1,610	547	128	78	21	-	977	211	87	64
7	-	1,450	485	121	77	22	-	941	195	89	60
8	-	1,430	468	112	72	23	-	959	188	89	57
9	-	1,260	428	110	72	24	-	1,030	182	89	56
10	-	896	405	106	72	25	-	1,160	176	87	52
11	-	788	400	104	73	26	575	1,250	176	85	50
12	-	*995	354	102	73	27	851	1,120	*185	84	46
13	-	1,100	334	104	73	28	932	1,080	176	82	46
14	-	968	311	102	73	29	*833	1,090	164	80	48
15	-	779	281	104	72	30	815	950	158	80	*51
						31	1,070	-	150	*80	-
Total.....							-	34,236	10,439	3,190	1,995
Mean.....							-	1,141	337	103	66.5
Runoff in acre-feet.....							-	67,910	20,710	6,330	3,960

Peak discharge (base, 1.120 cfs).--June 4 (1:30 a.m.) 2,000 cfs (3.87 ft); June 13 (5 a.m.) 1,230 cfs (3.05 ft); June 25 (12 p.m.) 1,470 cfs (3.29 ft).

* Discharge measurement made on this day.

Topaz Reservoir near Topaz, Calif.

Location.--Lat 38°41', long 119°31', in sec. 28, T. 10 N., R. 22 E., 6 miles north of Topaz.

Records available.--October 1931 to September 1957.

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, 59,850 acre-ft June 14 (elevation, 5,005.18 ft); minimum, 9,700 acre-ft Sept. 30 (elevation, 4,978.49 ft).
1931-57: 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 (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 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.

Capacity table, water year 1956-57 (elevation, in feet, and usable contents, in acre-feet)

4,978	8,910	4,995	38,100
4,980	12,130	5,000	48,350
4,985	20,390	5,006	61,750
4,990	28,970		

Usable contents, in acre-feet, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33,050	34,510	37,900	43,640	49,030	56,820	59,140	52,140	51,720	59,550	38,840	18,970
2	32,910	34,690	-	43,800	-	57,110	59,070	51,810	53,020	59,480	37,940	18,470
3	32,750	-	-	-	-	-	58,980	51,480	55,460	59,440	37,170	17,960
4	32,660	-	38,520	-	-	57,660	58,910	51,000	55,960	59,280	36,420	17,500
5	32,590	35,370	38,800	-	-	57,910	58,770	50,650	56,770	59,000	35,800	16,950
6	32,510	-	38,980	-	-	58,020	58,590	50,460	57,430	58,520	34,970	16,440
7	32,440	35,820	-	45,590	-	-	58,340	50,310	57,950	57,980	34,290	15,930
8	32,300	36,050	-	-	50,500	58,140	58,180	50,110	58,430	57,570	33,690	15,400
9	32,260	36,290	-	-	-	58,160	57,950	49,870	58,820	56,960	33,050	14,900
10	32,240	36,460	39,570	-	50,500	58,230	57,700	49,510	59,100	56,230	32,420	14,400
11	32,230	-	-	-	50,720	58,180	57,480	49,270	59,440	55,490	31,730	13,890
12	32,260	36,790	40,060	-	50,980	58,140	57,200	48,840	59,670	54,800	31,050	13,420
13	32,350	36,940	-	-	51,240	58,160	56,870	48,470	59,780	54,020	30,380	12,980
14	32,440	37,090	-	45,870	-	58,230	56,530	48,200	59,850	53,130	29,760	12,540
15	32,550	37,220	40,810	-	51,920	58,390	56,350	47,980	59,760	52,250	29,150	12,130
16	32,660	37,360	-	-	52,250	-	58,010	47,660	59,670	51,440	28,530	11,740
17	32,770	37,420	41,230	-	52,750	58,620	55,670	47,370	59,440	50,590	27,960	11,350
18	32,870	-	-	-	53,090	-	55,380	47,260	59,460	49,740	27,380	11,080
19	32,960	-	41,610	46,770	53,460	58,840	55,110	47,580	59,460	48,860	26,800	10,850
20	33,050	37,530	41,800	-	53,460	58,980	54,860	47,880	59,530	47,980	26,160	10,680
21	-	-	-	47,200	-	59,100	55,690	47,880	59,600	47,130	25,550	10,550
22	33,240	-	42,100	-	54,310	59,160	54,530	47,880	59,580	46,310	24,930	10,340
23	-	-	-	-	54,570	59,260	54,330	47,750	59,440	45,550	24,330	10,340
24	33,430	37,530	-	-	54,950	59,350	54,040	47,770	59,440	44,800	23,700	10,230
25	-	-	-	47,830	55,490	59,440	53,770	47,790	59,620	44,090	23,070	10,130
26	33,650	-	-	48,050	55,920	59,440	53,490	47,810	59,720	43,250	22,440	10,000
27	-	-	-	48,240	56,210	59,460	53,240	48,130	59,690	42,430	21,830	9,900
28	-	-	-	48,450	56,530	59,440	53,000	48,880	59,600	41,760	21,240	9,810
29	-	-	-	-	-	59,420	52,780	49,530	59,620	41,030	20,650	-
30	-	37,840	-	-	-	59,350	52,510	50,180	59,600	40,320	20,060	9,700
31	34,360	-	43,470	48,680	-	59,300	-	50,810	-	39,570	19,470	-
(+)	-	-	4,997.68	-	5,003.72	5,004.94	5,001.92	5,001.14	5,005.07	4,995.75	4,984.45	4,978.49
(*)	+1,120	+3,480	+5,630	+5,410	+7,650	+2,770	-6,790	-1,700	+8,790	-20,030	-20,100	-9,770

Calendar year 1956..... * +23,750

Water year 1956-57..... * -23,540

+ Elevation, in feet, at end of month.

* Change in contents, in acre-feet.

West Walker River near Hudson, Nev.

Location.--Lat 38°49', long 119°14', in SW $\frac{1}{4}$ sec. 18, T. 11 N., R. 25 E., on left bank half a mile upstream from Wilson Canyon and 3 miles southeast of Hudson.

Drainage area.--964 sq mi.

Records available.--August 1914 to March 1925, January 1947 to September 1957. August 1914 to May 1921 published as "at Hudson."

Gage.--Water-stage recorder. Altitude of gage is 4,670 ft (from topographic map). Prior to May 1921, staff gage at site $2\frac{1}{2}$ miles upstream at different datum. May 1921 to March 1925 water-stage recorder at approximately same site at different datum.

Average discharge.--20 years (1914-24, 1947-57), 201 cfs (145,500 acre-ft per year).

Extremes.--Maximum discharge during year, 938 cfs June 7 (gage height, 3.57 ft); minimum, 39 cfs Jan. 11.

1914-25, 1947-57: Maximum discharge, 2,700 cfs Dec. 24, 1955 (gage height, 7.42 ft from floodmarks), from rating curve extended above 1,700 cfs; minimum daily, 13 cfs Aug. 7 to Sept. 21, 1920.

Remarks.--Records good except those for period of no gage-height record, which are poor. Flow regulated by off-channel storage in Topaz Reservoir since 1922 (see preceding page). Slight regulation by storage in Poor Lake Reservoir (capacity unknown). Many diversions above station for irrigation.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.0	39	2.0	312
1.2	68	4.0	1,110
1.5	140		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	107		120	b46	b46	55	107	275	339	458	225	149
2	102		100	b46	43	54	107	290	366	374	214	162
3	93	a100	76	46	b42	51	115	301	434	286	214	156
4	84		70	b44	b40	51	115	301	454	290	204	159
5	76		63	b44	b40	51	100	294	762	342	201	146
6	76		63	b44	42	65	105	290	*882	390	191	156
7	86		63	b43	*40	102	105	362	830	390	171	146
8	100	a90	b63	43	40	129	107	382	662	*382	*174	156
9	105		b58	b43	43	143	107	*378	634	394	197	*168
10	102		b57	b44	43	123	105	374	538	390	204	162
11	93		63	b44	43	149	118	374	370	374	214	152
12	83		65	43	46	152	*120	374	342	374	204	159
13	82	a100	65	49	47	132	331	542	358	194	159	
14	72		57	49	47	110	137	308	586	359	178	152
15	*72		55	48	47	*88	146	320	502	354	146	140
16	74	*110	54	46	47	76	162	308	438	323	162	137
17	76	129	52	43	48	72	168	301	462	290	159	149
18	76	143	51	b43	48	65	171	301	442	290	156	134
19	82	146	51	43	47	62	159	350	462	282	159	129
20	82	132	b51	48	46	58	146	366	498	279	162	129
21	82	b123	b52	49	44	55	146	350	*534	266	159	112
22	80	b129	b52	b46	44	51	162	342	502	305	165	95
23	76	134	b46	44	46	51	168	362	478	282	162	78
24	102	134	b46	b46	46	49	159	350	470	271	162	74
25	110	132	b47	b44	54	49	152	342	530	268	159	70
26	112	129	*b48	43	58	62	165	335	594	257	159	76
27	112	b129	b48	b44	57	72	152	355	674	250	134	68
28	110	b129	b48	b44	55	80	171	331	582	236	145	58
29	112	b129	b47	b44	—	93	191	354	576	236	162	52
30	102	129	b44	b44	-----	105	239	327	538	225	162	51
31	102	-----	b44	b49	-----	105	-----	335	-----	225	152	-----
Total	2,833	3,407	1,823	1,396	1,289	2,560	4,237	10,363	16,025	9,819	5,451	3,734
Mean	91.4	114	58.8	45.0	46.0	82.6	141	334	534	317	176	124
Ac-ft	5,620	6,760	3,620	2,770	2,560	5,080	8,400	20,550	31,790	19,480	10,810	7,410

Calendar year 1956: Max 1,440 Min 44 Mean 300 Ac-ft 217,600
Water year 1956-57: Max 882 Min — Mean 172 Ac-ft 124,800

Peak discharge (base, 500 cfs).--June 7 (2:30 a.m.) 938 cfs (3.57 ft); June 14 (2:00 a.m.) 622 cfs (2.75 ft); June 26 (12 p.m.) 702 cfs (2.95 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for nearby streams.

b Stage-discharge relation affected by ice.

CARSON RIVER BASIN

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. Prior to Sept. 17, 1957, at site 30 ft upstream.

Drainage area.--20 sq mi, approximately.

Records available.--December 1946 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,500 ft (from topographic map). Prior to Aug. 3, 1954, at site 180 ft upstream at datum 3.20 ft higher. Aug. 3, 1954, to Sept. 16, 1957, at site 30 ft upstream at datum 1.00 ft higher.

Average discharge.--10 years (1947-57), 46.7 cfs (33,810 acre-ft per year).

Extremes.--Maximum discharge during year, 432 cfs June 1 (gage height, 3.12 ft, site and datum then in use); minimum, 1.7 cfs Nov. 19.

1946-57: Maximum discharge, 1,520 cfs Dec. 23, 1955 (gage height, 6.09 ft, site and datum then in use), from rating curve extended above 450 cfs on basis of slope-area determination of peak flow; minimum, 0.7 cfs Oct. 25, 27, 28, 1954.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow partly regulated by three small reservoirs (total capacity, about 1,700 acre-ft).

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(shifting-control method used Jan. 20, May 1-8, June 23-26, Sept. 18-30)

0.2	1.7	1.0	34
.3	3.1	1.4	73
.4	5.1	2.0	166
.5	7.8	2.7	310
.7	16		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	8.2	5.3	5.1	4.0	15	25	125	*306	77	28	3.3
2	31	8.8	5.1	4.6	4.0	15	23	93	308	63	27	2.9
3	35	8.5	5.1	4.4	4.0	14	26	80	305	58	26	17
4	39	9.2	4.9	4.4	4.0	14	*38	109	308	54	25	28
5	36	11	4.6	4.4	4.0	17	46	141	308	51	24	20
6	34	12	5.3	4.4	3.8	18	50	162	259	42	24	8.4
7	37	12	5.8	4.2	3.8	*21	47	*159	250	43	21	2.8
8	36	14	a6.0	*4.2	4.0	19	44	134	236	37	21	2.6
9	31	15	a7.0	4.6	4.0	18	52	108	*196	33	*20	2.6
10	28	15	a8.5	4.4	4.9	16	65	99	172	*33	19	13
11	33	13	a10	3.8	12	16	61	90	179	28	18	24
12	24	12	a10	3.6	13	16	56	100	194	25	17	*15
13	11	11	a9.5	4.2	31	15	61	94	191	23	16	7.2
14	7.5	8.5	a8.5	4.4	*37	14	61	81	152	20	15	6.9
15	6.6	*8.5	a8.0	4.4	19	14	49	83	120	18	14	6.3
16	6.4	8.8	a7.5	4.2	18	13	45	106	109	17	13	6.6
17	*6.1	8.5	*6.9	4.0	19	13	40	140	115	42	12	a6.4
18	6.1	7.5	6.4	4.0	18	12	36	230	131	80	10	*6.1
19	5.8	4.6	5.8	4.2	18	12	32	176	141	76	9.2	6.1
20	5.6	5.8	5.8	5.0	16	13	30	115	136	74	5.8	5.6
21	5.3	5.8	5.8	4.4	14	13	28	*102	126	72	4.4	5.1
22	5.3	6.4	5.3	4.2	13	12	30	94	123	71	9.7	3.9
23	3.8	6.4	5.8	4.4	13	12	37	86	121	60	28	2.5
24	4.6	6.1	5.6	4.2	15	14	46	97	*125	37	17	2.2
25	8.1	6.1	5.6	4.0	18	16	51	141	131	36	7.8	2.1
26	14	6.1	5.6	4.2	18	18	60	183	121	36	7.5	2.1
27	12	6.1	5.6	4.2	17	25	77	224	117	33	7.8	1.9
28	8.8	5.6	5.3	4.2	17	30	102	*218	114	32	37	2.1
29	7.9	5.6	5.3	4.0	-	31	97	202	102	30	31	3.1
30	7.8	5.6	5.3	4.0	-	28	110	210	89	29	4.2	3.6
31	7.5	-----	5.1	4.0	-----	28	-----	256	-----	28	3.6	-----
Total	519.2	261.7	196.1	132.3	366.5	532	1,525	4,238	5,285	1,358	523.0	219.9
Mean	16.7	8.72	6.33	4.27	13.1	17.2	50.8	137	176	43.8	16.9	7.33
Ac-ft	1,030	519	389	262	727	1,060	3,020	8,410	10,480	2,690	1,040	436

Calendar year 1956: Max 395 Min 3.8 Mean 66.7 Ac-ft 48,430

water year 1956-57: Max 308 Min 1.9 Mean 41.5 Ac-ft 30,060

Peak discharge (base, 190 cfs).--May 6 (5 p.m.) 250 cfs (2.59 ft); May 18 (5 p.m.) 393 cfs (3.06 ft); June 1 (5 p.m.) 432 cfs (3.12 ft).

* Discharge measurement made on this day.

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

Hot Springs Creek near Markleeville, Calif.

(Formerly published as Markleeville Creek above Grover Hot Springs, near Markleeville)

Location.--Lat 38°42', long 119°51', in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 10 N., R. 19 E., on right 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 1957 (discontinued). Prior to October 1956, published as Markleeville Creek above Grover Hot Springs, near Markleeville.

Gage.--Water-stage recorder. Altitude of gage is 5,880 ft (from river-profile map, extended). Prior to July 31, 1953, at site 25 ft upstream at datum 0.05 ft higher.

Average discharge.--11 years, 28.6 cfs (20,710 acre-ft per year).

Extremes.--Maximum discharge during year, 341 cfs June 1 (gage height, 5.07 ft); minimum daily, 0.5 cfs Sept. 26, 1946-57; 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 good.

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 18-23, 27-29)

Oct. 1 to Feb. 23			Feb. 24 to Sept. 30		
2.4	0.9		2.1	0.5	2.8
2.5	1.9		2.2	1.2	3.0
2.6	4.2		2.3	2.2	3.3
2.7	8.5		2.4	3.6	3.6
2.8	14		2.5	5.8	4.0
2.9	21		2.6	8.7	4.5
					18
					33
					62
					99
					155
					236

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	4.0	3.0	3.7	4.2	16	19	106	*222	33	2.6	0.7
2	1.9	3.7	2.8	3.7	4.2	16	18	102	231	29	2.6	.8
3	2.1	3.7	3.0	3.5	4.2	15	19	81	224	25	3.0	.7
4	2.1	5.1	3.0	3.5	4.2	15	*24	102	217	23	1.7	.7
5	2.1	4.6	3.0	3.3	4.2	18	31	132	202	22	1.6	.7
6	2.1	5.5	3.3	3.3	4.6	18	35	*150	160	19	2.3	.7
7	4.0	5.5	3.3	3.0	4.6	*18	32	*172	146	21	2.0	.7
8	4.6	5.5	3.5	3.5	5.1	16	32	144	134	18	1.9	.7
9	3.0	5.9	3.5	3.0	5.1	16	38	122	*118	15	*1.6	.7
10	2.8	5.9	4.0	3.0	5.9	15	47	113	107	*14	1.5	.6
11	4.0	5.9	5.9	3.0	8.5	14	49	108	98	12	1.5	.6
12	3.3	5.1	5.9	3.3	9.6	15	48	109	99	11	1.3	.7
13	2.8	4.6	5.9	3.5	16	14	52	108	92	9.8	1.3	.7
14	2.6	4.2	5.1	3.7	*15	14	58	98	80	8.7	1.2	.7
15	2.4	4.0	4.6	3.7	12	14	47	90	70	8.4	1.2	.7
16	2.1	4.0	4.6	3.7	13	14	44	104	66	7.4	1.1	.7
17	*2.1	3.7	*4.2	3.5	15	13	40	119	60	6.8	1.0	*.7
18	1.9	3.7	3.7	3.5	15	13	35	176	62	6.6	.9	.8
19	1.9	3.0	3.5	3.7	15	13	29	173	63	6.0	.9	.8
20	1.8	3.5	3.7	4.6	13	13	27	113	62	5.6	.9	.7
21	1.8	*3.5	3.5	4.6	13	13	25	*90	57	4.9	.8	.7
22	1.8	3.3	3.7	4.2	12	13	32	90	53	4.6	.7	.6
23	2.1	3.3	3.7	4.0	15	13	26	92	50	4.6	.7	.6
24	2.6	3.3	3.7	4.0	22	13	32	106	*50	4.4	.8	.6
25	3.3	3.3	3.5	4.0	23	13	40	134	50	4.0	.7	.6
26	6.4	3.3	3.7	4.6	19	14	46	164	46	4.8	.7	.5
27	6.6	3.0	3.7	4.0	18	16	60	189	44	4.4	.7	.6
28	4.0	3.0	4.0	4.0	17	20	74	*200	42	3.5	.7	.7
29	5.5	3.0	4.0	4.0	-	24	80	176	40	3.1	.7	.7
30	4.2	3.0	4.0	4.0	-	21	99	173	37	2.7	.7	.7
31	4.0	-----	4.0	4.0	-	21	-----	181	2.6	.8	-----	-----
Total	91.7	123.1	121.0	114.6	317.4	481	1,228	4,027	2,982	344.9	40.2	20.5
Mean	2.96	4.10	3.90	3.70	11.3	15.5	40.9	130	99.4	11.1	1.30	0.68
Ac-ft	182	244	240	227	630	954	2,440	7,990	5,910	684	80	41
Calendar year 1956: Max	375											
Min	1.7											
Mean	46.2											
Ac-ft	33,520											
Water year 1956-57: Max	251											
Min	0.5											
Mean	27.1											
Ac-ft	19,620											

Peak discharge (base, 175 cfs).--May 7 (7:20 p.m.) 214 cfs (4.37 ft); May 18 (9 p.m.) 313 cfs (5.02 ft); June 1 (7 p.m.) 341 cfs (5.07 ft).

* Discharge measurement made on this day.

East Fork Carson River near Gardnerville, Nev.

Location.--Lat 38°51'30", long 119°41'50", in NE $\frac{1}{4}$ 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 1957.

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.--30 years (1890-93, 1901-3, 1908-10, 1925-28, 1935-37, 1939-57), 402 cfs (291,000 acre-ft per year).

Extremes.--Maximum discharge during year, 2,340 cfs June 2 (gage height, 4.37 ft); minimum, 50 cfs Dec. 7, 1890-93, 1900-1906, 1908-10, 1917, 1924-29, 1935-37, 1939-57: Maximum discharge, 17,600 cfs Dec. 23, 1955 (gage height, 11.88 ft), from rating curve extended above 6,000 cfs on basis of slope-area determinations at gage heights 9.66 and 11.88 ft; minimum observed, 8 cfs Dec. 4-10, 19-23, 1904.

Remarks.--Records good except those for periods of ice effect, which are fair. Station is above all diversions in Carson Valley. Diversions for irrigation above station. Flow slightly regulated by several small reservoirs (total capacity, about 5,000 acre-ft).

Revisions (water years).--WSP 1060: Drainage area. WSP 1214: 1938(M), 1942-43(M), 1945(M). Revised figures of discharge, in cubic feet per second, for the water years 1909-10, superseding those published in WSP 270, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1909		1909-Con.		1909-Con.		1909-Con.	
Aug. 4	240	Aug. 31	125	Sept. 27	125	Oct. 24	125
5	240	Sept. 1	125	28	125	25	125
6	240	2	125	29	125	26	125
7	240	3	125	30	125	27	125
8	200	4	125	Oct. 1	160	28	125
9	200	5	125	2	160	29	125
10	160	6	125	3	125	30	125
11	160	7	125	4	125	31	125
12	160	8	125	5	125	Nov. 1	125
13	160	9	125	6	125	2	125
14	160	10	125	7	125	3	125
15	160	11	125	8	125	4	125
16	160	12	125	9	125	5	125
17	125	13	125	10	125	6	125
18	125	14	125	11	125	7	125
19	125	15	125	12	125	8	125
20	125	16	125	13	125	9	125
21	125	17	125	14	125	10	125
22	125	18	125	15	125	11	125
23	125	19	125	16	125	12	125
24	125	20	125	17	125	13	125
25	125	21	125	18	125	14	125
26	125	22	125	19	125	15	125
27	125	23	125	20	125	16	125
28	125	24	125	21	125	17	125
29	125	25	125	22	125	18	125
30	125	26	125	23	125	19	125
						20	125

Month	Maximum	Minimum	Mean	Runoff in acre-feet
August 1909.....	290	125	169	10,400
September.....	125	125	125	7,440
Water year 1908-9.....	3,430	104	529	383,000
October 1909.....	160	125	127	7,820
November.....	2,070	125	282	16,800
Calendar year 1909.....	3,430	104	562	407,000
Water year 1909-10.....	2,070	75	426	308,000

East Fork Carson River near Gardnerville, Nev.--Continued

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.8	48	2.0	430
1.1	102	3.0	1,080
1.5	222	4.0	1,940

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	107	122	92	120	b130	298	290	804	1,710	612	152	68
2	117	124	85	114	b125	290	258	839	1,880	540	155	65
3	133	122	89	98	b120	247	251	636	1,850	470	149	*60
4	141	127	98	98	b120	233	286	725	*1,870	445	141	81
5	138	127	96	107	b120	311	362	916	1,880	425	135	89
6	133	130	77	102	122	311	421	1,040	1,650	393	138	74
7	138	135	60	94	114	311	393	1,130	1,470	384	135	67
8	168	*138	76	98	102	286	393	1,040	1,440	349	135	62
9	158	144	158	77	87	286	380	825	1,290	311	127	63
10	138	147	212	*b83	89	251	470	758	1,080	282	110	58
11	152	147	171	b110	*122	240	504	673	*979	278	96	74
12	*149	141	*161	133	161	244	460	660	1,040	*254	89	77
13	130	135	133	133	215	218	450	654	732	244	92	67
14	114	122	120	133	306	215	546	630	958	229	100	63
15	110	107	107	133	266	222	455	546	860	215	107	63
16	107	114	114	133	266	208	421	624	770	194	102	63
17	104	112	100	120	327	194	393	770	744	190	100	63
18	100	112	104	107	282	194	371	1,160	770	233	98	70
19	98	98	98	122	270	187	344	1,410	846	233	92	70
20	96	83	89	110	244	181	327	874	867	222	87	68
21	96	96	96	98	215	187	311	770	832	215	76	65
22	94	98	77	77	208	177	306	744	811	215	74	63
23	100	100	98	b100	358	161	302	*744	797	208	*87	62
24	85	96	102	110	487	177	340	699	818	*174	92	60
25	110	94	92	104	706	181	389	839	*846	158	76	58
26	141	96	87	102	*412	201	416	1,040	874	155	74	58
27	215	94	92	94	349	*212	492	1,240	818	177	72	56
28	135	92	98	98	311	266	618	1,410	797	161	81	58
29	112	89	114	b100	-	319	*744	1,260	770	155	100	56
30	138	94	124	b105	-----	306	699	1,250	692	147	87	63
31	158	-----	127	b120	-----	302	-----	1,430	-----	141	76	-----
Total	3,915	3,456	3,347	3,333	6,634	7,416	12,392	28,140	32,741	8,409	3,235	1,962
Mean	126	115	108	108	237	239	413	908	1,091	271	104	65.4
Ac-ft	7,770	6,820	6,640	6,610	13,160	14,710	24,580	55,810	64,940	16,680	6,420	3,890

Calendar year 1956: Max 2,700 Min 60 Mean 543 Ac-ft 394,100
 Water year 1956-57: Max 1,880 Min 56 Mean 315 Ac-ft 228,000

Peak discharge (base, 1,300 cfs).--May 7 (1:30 a.m.) 1,320 cfs (3.31 ft); May 19 (12:30 a.m.) 2,270 cfs (4.31 ft); June 2 (12:30 a.m.) 2,340 cfs (4.37 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

West Fork Carson River at Woodfords, Calif.

Location.--Lat 38°46'00", long 119°50'00", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ 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 3 $\frac{1}{4}$ 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 1957. April 1890 to March 1892 and 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 the same site at different datum.

Average discharge.--21 years (1901-3, 1905-6, 1939-57), 114 cfs (82,530 acre-ft per year).

Extremes.--Maximum discharge during year, 880 cfs May 18 (gage height, 5.10 ft); minimum, 14 cfs Aug. 23.

1900-1907, 1910-11, 1938-57: Maximum discharge, 4,810 cfs Dec. 23, 1955 (gage height, 8.86 ft), from rating curve extended above 1,000 cfs on basis of slope-area determinations at gage heights 8.35 and 8.86 ft; minimum (1900-1907, 1938-57), 8.2 cfs Nov. 30, 1954.

Flood of Dec. 11, 1937, reached a stage of 9.0 ft (present datum), from floodmarks (discharge, 3,500 cfs, by slope-area determination).

Remarks.--Records good. 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 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

1.6	12	3.0	136
1.8	20	3.5	227
2.0	31	4.0	362
2.3	55	5.0	790
2.6	84		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	44	30	30	27	61	98	346	*455	122	73	17
2	34	43	29	30	27	59	88	334	468	112	69	16
3	33	40	30	29	29	54	98	278	462	98	63	18
4	32	41	30	26	29	55	135	314	448	95	55	20
5	35	42	24	27	27	68	173	369	448	91	27	20
6	31	44	20	27	27	75	200	405	402	85	29	20
7	44	44	29	24	27	79	175	*440	353	84	32	20
8	52	47	35	22	26	75	177	385	337	77	29	20
9	40	50	34	25	27	71	200	305	311	63	27	20
10	37	50	38	30	29	62	234	283	*260	60	32	20
11	48	49	68	30	33	61	*227	258	234	58	22	20
12	*44	46	64	23	36	47	206	260	245	*53	32	20
13	40	44	56	27	47	60	210	260	255	52	47	20
14	37	40	46	28	56	58	243	245	214	50	50	20
15	36	37	40	29	60	57	194	221	192	48	48	20
16	34	38	40	29	69	55	173	243	173	44	44	20
17	34	38	36	29	71	51	151	280	161	67	41	21
18	34	37	36	30	66	50	144	463	161	69	37	21
19	35	30	34	29	66	50	133	486	175	73	20	20
20	32	30	32	23	62	51	129	376	177	82	17	20
21	32	32	31	29	58	52	122	283	170	76	16	20
22	32	33	28	32	53	48	130	262	163	41	16	18
23	29	*33	32	30	44	46	151	260	158	35	*15	20
24	35	32	30	30	47	49	177	236	161	*44	16	24
25	42	32	29	30	66	55	194	275	*165	46	16	24
26	51	31	27	30	*72	61	208	314	168	44	23	22
27	63	31	28	30	69	*74	250	362	158	46	35	21
28	48	30	29	31	66	98	299	434	154	40	29	20
29	41	30	29	29	-	125	305	416	154	65	24	20
30	44	30	30	29	-----	109	302	398	136	80	22	*20
31	39	-----	*30	*28	-----	114	-----	413	-----	77	18	-----
Total	1,199	1,148	1,074	881	1,316	2,030	5,526	10,144	7,518	2,077	1,024	602
Mean	38.7	38.3	34.6	28.4	47.0	65.5	184	327	251	67.0	33.0	20.1
Ac-ft	2,380	2,280	2,130	1,750	2,610	4,030	10,960	20,120	14,910	4,120	2,030	1,190
Calendar year 1956: Max	898				Min 20		Mean 160		Ac-ft 116,400			
Water year 1956-57: Max	486				Min 15		Mean 94.6		Ac-ft 68,510			

Peak discharge (base, 500 cfs).--May 6 (3:30 p.m.) 516 cfs (4.40 ft); May 18 (10 p.m.) 880 cfs (5.10 ft); June 2 (11:30 p.m.) 560 cfs (4.50 ft).

* Discharge measurement made on this day.

Clear Creek near Carson City, Nev.

Location.--Lat 39°07', long 119°49', in sec. 1, T. 14 N., R. 19 E., on left bank 3 miles upstream from mouth and 4 miles southwest of Carson City.

Drainage area.--15 sq mi, approximately.

Records available.--March 1948 to September 1957.

Gage.--Water-stage recorder and sharp-crested weir. Altitude of gage is 4,700 ft (from river-profile map).

Average discharge.--9 years, 6.26 cfs (4,530 acre-ft per year).

Extremes.--Maximum discharge during year, 29 cfs during period Feb. 23-25 (gage height, 1.01 ft, from recorded range in stage); minimum, 1.4 cfs Aug. 23.
1948-57: Maximum discharge, 117 cfs Dec. 23, 1955 (gage height, 2.03 ft); minimum, 1.0 cfs Aug. 4, 5, 6, 20, 1949.

Remarks.--Records good except those for periods of ice effect or doubtful or no gage-height record, which are fair. Four small diversions for irrigation of about 150 acres of hay meadows and pasture above station.

Revisions (water years).--WSP 1444: 1950(M), 1951, 1952(P).

Rating table, water year 1956-57, except periods of ice effect or doubtful gage-height record (gage height, in feet, and discharge, in cubic feet per second)

0.2	1.4	0.6	11
.3	2.9	.8	19
.4	5.0		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	5.6	4.0	5.5	4.8	9.0	7.4	6.1	5.8	2.4	2.0	1.8
2	2.8	5.6	4.8	5.3	5.0	7.2	6.9	5.8	5.5	*2.4	2.0	1.8
3	2.8	4.2	5.3	5.3	5.8	6.6	6.8	5.5	5.0	2.3	2.0	1.8
4	2.9	5.0	4.4	5.0	5.0	7.2	6.9	5.5	4.6	2.4	2.2	1.8
5	2.9	4.8	5.3	5.0	4.6	16	8.0	6.4	4.4	2.4	2.0	1.8
6	2.8	4.8	5.3	5.0	4.8	11	8.7	6.4	4.2	2.4	2.0	1.8
7	3.7	*4.7	5.0	4.4	4.8	11	8.0	5.8	4.0	2.6	2.0	1.8
8	4.0	4.6	b5.0	4.4	4.8	7.4	8.0	5.5	3.7	2.3	2.0	1.8
9	3.5	4.6	b6.0	4.4	4.8	11	8.4	5.5	4.2	2.2	1.8	1.8
10	3.3	4.6	b7.0	*b5.0	4.8	7.2	8.4	*5.3	*4.4	2.2	*1.8	1.8
11	4.6	4.6	8.7	b5.0	7.2	5.3	8.4	5.5	4.2	2.2	1.8	1.8
12	*4.0	4.6	*7.1	5.0	7.2	7.2	8.0	7.2	4.2	2.2	1.8	1.8
13	3.7	4.6	6.9	6.4	10	7.4	8.4	5.5	4.0	2.2	1.8	1.8
14	3.7	4.6	6.4	6.4	11	d6.5	9.0	5.8	3.7	2.3	1.8	1.8
15	3.7	4.6	6.1	6.4	10	d6.5	*8.0	5.5	4.0	2.3	1.8	1.8
16	3.5	4.6	6.4	6.1	8.4	d6.5	7.4	5.3	4.0	2.2	1.7	1.8
17	3.5	4.6	6.1	5.8	8.7	d6.5	7.4	5.5	3.7	2.2	1.7	2.3
18	3.7	4.6	6.1	6.4	8.4	d6.8	8.4	7.7	3.5	2.2	1.8	2.3
19	4.0	4.4	5.5	5.8	7.4	d7.0	7.2	9.7	3.3	2.2	1.8	2.3
20	4.0	4.6	5.5	6.1	6.1	d7.0	7.2	7.7	3.3	2.2	1.7	2.3
21	4.0	4.6	5.8	6.1	4.0	d7.0	6.9	7.2	3.3	2.2	1.7	2.2
22	4.0	4.6	6.4	7.2	2.9	d7.0	6.4	8.4	3.3	2.2	1.7	2.0
23	4.4	4.4	6.1	5.8	8.0	d7.0	6.1	8.7	3.3	2.2	1.7	2.0
24	4.8	4.2	6.1	6.1	a12	d7.0	5.5	6.9	2.9	2.2	1.7	2.0
25	5.8	4.2	5.8	5.8	*13	d7.0	6.1	6.6	2.9	2.2	1.7	2.0
26	6.1	4.2	6.1	5.8	11	*7.2	6.4	6.6	2.6	2.2	1.7	2.0
27	6.4	4.2	6.1	b5.5	10	7.2	6.4	6.6	2.4	2.2	1.7	2.0
28	5.5	4.0	5.8	b5.0	10	7.2	5.8	6.1	2.4	2.2	1.7	2.0
29	5.0	4.0	5.3	4.8	-	8.4	6.1	6.1	2.4	2.2	1.8	2.2
30	7.7	4.0	5.3	b4.5	-----	8.0	5.8	6.1	2.6	2.0	1.8	*2.3
31	6.9	-----	5.3	*b4.5	-----	7.7	-----	5.8	-----	2.0	1.8	-----
Total	130.5	141.1	179.3	189.8	204.0	240.2	218.2	198.3	111.8	69.6	56.5	58.7
Mean	4.21	4.70	5.78	5.48	7.29	7.75	7.27	6.40	3.73	2.25	1.82	1.96
Ac-ft	259	280	356	337	405	476	433	393	222	138	112	116
Calendar year 1956: Max	30			Min 2.6		Mean 7.58		Ac-ft 5,500				
Water year 1956-57: Max	16			Min 1.7		Mean 4.87		Ac-ft 3,530				

Peak discharge (base, 15 cfs).--Feb. 23-25 (time unknown) 29 cfs (1.01 ft); Mar. 5 (3:30 a.m.) 21 cfs (0.77 ft); May 12 (4:30 p.m.) 20 cfs (0.77 ft).

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

d Doubtful gage-height record; discharge estimated on basis of reconstructed gage-height graph and records for nearby streams.

Carson River near Carson City, Nev.

Location.--Lat 39°06'30", long 119°42'30", in NW¼ sec. 2, T. 14 N., R. 20 E., on left 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 1957.

Gage.--Water-stage recorder. Datum of gage is 4,621.48 ft above mean sea level, datum of 1929. Dec. 23, 1955, to Mar. 13, 1956, staff gage at same site and datum.

Average discharge.--18 years, 415 cfs (300,400 acre-ft per year).

Extremes.--Maximum discharge during year, 1,900 cfs June 3 (gage height, 3.99 ft); minimum, 11 cfs Aug. 30.

1939-57: Maximum discharge, 30,000 cfs Dec. 24, 1955 (gage height, 15.0 ft), from rating curve extended above 6,000 cfs on basis of slope-area determinations at gage heights 8.40 and 15.0 ft, computation of flow over dam at gage height 11.40 ft, and float measurement at gage height 9.60 ft; minimum daily, 4 cfs 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 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

-0.2	10	1.5	208
0.0	16	2.0	410
.3	29	3.0	1,000
.6	50	4.0	1,910
1.0	100		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	103	283	179	b175	211	554	390	543	1,550	425	27	15
2	105	287	167	174	214	521	356	698	1,700	360	28	17
3	105	239	162	186	192	460	291	698	*1,810	299	33	15
4	103	227	179	b175	176	420	268	620	1,730	257	36	16
5	103	220	186	b160	171	455	303	746	1,720	233	32	18
6	97	217	174	b160	176	538	405	951	1,760	186	27	18
7	105	224	151	b160	186	490	435	1,130	1,630	164	24	16
8	130	230	140	169	194	470	400	1,220	1,520	179	23	19
9	167	230	142	b135	235	460	320	1,100	1,490	169	22	20
10	179	236	174	b125	227	445	303	909	1,290	130	*18	19
11	167	239	220	b150	243	395	390	818	1,080	*105	23	20
12	167	239	283	208	375	400	445	758	958	96	28	20
13	197	233	271	217	440	385	375	716	930	82	19	18
14	194	227	239	214	554	360	400	674	895	76	18	19
15	186	220	211	189	592	356	490	638	782	73	20	20
16	179	211	203	192	526	346	425	592	692	75	19	23
17	169	211	203	192	598	328	370	604	838	64	20	21
18	167	205	189	176	576	320	395	734	638	52	19	22
19	159	197	189	169	532	311	405	1,460	650	48	21	22
20	151	181	176	214	485	299	385	1,680	*650	42	20	28
21	149	*164	169	208	430	291	395	1,180	632	44	22	31
22	*151	164	b175	192	410	279	370	986	609	51	*24	31
23	155	176	b160	189	410	261	324	*944	598	36	21	28
24	167	184	b170	208	692	257	283	951	598	31	17	28
25	159	184	b175	224	*1,150	261	*271	909	604	33	17	28
26	171	179	b165	184	972	*271	295	979	632	33	22	28
27	217	181	b160	160	656	279	295	1,140	609	30	20	23
28	291	176	b160	*b140	554	295	375	1,330	554	33	17	23
29	243	176	b165	b140	-	370	505	1,450	526	44	14	23
30	233	176	b170	b150	-----	450	570	1,390	485	36	12	*26
31	307	-----	*b170	b175	-----	400	-----	1,430	-----	29	12	-----
Total	5,176	6,286	5,677	5,510	12,175	11,727	11,234	29,978	29,960	3,515	675	655
Mean	167	210	183	178	435	378	374	967	999	113	21.8	21.8
Ac-ft	10,270	12,470	11,260	10,930	24,150	23,260	22,280	59,460	59,420	6,970	1,340	1,300

Calendar year 1956: Max 3,150 Min 52 Mean 653 Ac-ft 474,400
 Water year 1956-57: Max 1,810 Min 12 Mean 336 Ac-ft 243,100

Peak discharge (base, 1,600 cfs).--May 19 (10 p.m.) 1,860 cfs (3.95 ft); June 3 (5:30 p.m.) 1,900 cfs (3.99 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 1957.

Gage.--Water-stage recorder. Datum of gage is 4,216.34 ft above mean sea level (levels by Truckee-Carson Irrigation District). Prior to Apr. 25, 1924, staff gage at site 7½ 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.--46 years, 371 cfs (268,600 acre-ft per year).

Extremes.--Maximum daily discharge during year, 2,050 cfs June 6; no flow Aug. 1 to Sept. 30.

1911-57: Maximum daily discharge, 9,680 cfs Dec. 26, 1955; 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.

Revisions.--Revised figures of discharge, in cubic feet per second, for the period Jan. 14-29, 1917, superseding those published in WSP 460, are given herewith:

1917	1917-Con.	1917-Con.
Jan. 14..... 210	Jan. 20..... 250	Jan. 25..... 300
15..... 200	21..... 270	26..... 300
16..... 190	22..... 280	27..... 310
17..... 180	23..... 290	28..... 330
18..... 180	24..... 300	29..... 360
19..... 210		

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
January 1917.....	9,694	650	180	313	19,200
Water year 1916-17.....	-	3,050	27	645	467,000
Calendar year 1917.....	-	3,050	27	610	441,800

Note.--Stage-discharge relation affected by ice Jan. 14-29.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	81	213	122	130	189	406	350	450	1,670	420		
2	78	225	128	135	201	401	300	550	1,860	373		
3	72	216	131	135	189	393	270	550	2,010	314		
4	72	207	131	140	186	365	250	700	2,010	271		
5	69	192	137	140	180	333	230	700	1,960	243		
6	69	186	140	135	170	338	220	650	2,050	219		
7	69	183	140	135	170	373	250	800	2,040	176		
8	75	180	128	130	167	361	280	1,000	1,840	143		
9	84	176	110	130	173	338	310	1,100	1,850	119		
10	92	183	128	120	189	324	300	1,200	1,730	110		
11	107	186	158	110	192	314	270	1,100	1,460	95		
12	128	189	173	120	198	295	240	1,000	1,250	95		
13	134	186	201	140	281	281	300	900	1,110	88		
14	149	186	210	160	348	271	350	800	1,080	84		
15	158	180	207	170	411	255	300	698	981	78		
16	161	176	189	160	424	246	350	646	770	69		
17	161	170	173	150	397	243	350	601	653	66		
18	158	158	167	140	416	237	320	571	579	57		
19	149	158	161	140	424	231	300	700	571	51		
20	140	158	158	130	393	228	320	1,300	594	46		
21	134	149	149	130	369	222	320	1,730	586	39		
22	131	140	137	160	329	216	300	1,510	579	37		
23	128	134	128	150	300	216	270	1,160	564	34		
24	125	128	140	140	309	213	260	1,120	564	31		
25	125	128	140	150	520	207	240	1,060	571	30		
26	128	125	137	150	1,020	201	230	1,030	549	25		
27	134	124	137	130	705	201	230	1,170	586	22		
28	149	125	135	120	482	201	250	1,310	557	20		
29	192	125	135	115	-	210	280	1,640	482	17		
30	207	122	135	120	-	231	350	1,650	445	14		
31	207	130	140	140	-	262	-	1,640	41	-		
Total	3,866	5,009	4,595	4,255	9,332	8,613	8,590	31,436	33,571	3,397	0	0
Mean	125	167	148	137	333	278	286	1,014	1,119	110	0	0
Ac-ft	7,670	9,940	9,110	8,440	18,510	17,080	17,040	62,350	66,590	6,740	0	0
Calendar year 1956: Max		2,960		Min 10		Mean 658		Ac-ft 476,700				
Water year 1956-57: Max		2,050		Min 0		Mean 309		Ac-ft 223,500				

Note.--Stage-discharge relation affected by ice Dec. 28 to Jan. 31. Doubtful gage-height record Apr. 1 to May 14, May 19, 20; discharge estimated on basis of records for station near Carson City.

Marys River above Hot Springs Creek, near Deeth, Nev.

Location.--Lat 41°15', long 115°17', in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 24, T. 39 N., R. 59 E., on right bank 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 1957. Prior to October 1950, published as "below Hot Springs Creek, near Deeth."

Gage.--Water-stage recorder. Altitude of gage is 5,500 ft (from river-profile map). Prior to Nov. 3, 1950, at site $1\frac{1}{4}$ miles downstream at different datum.

Average discharge.--14 years, 61.2 cfs (44,310 acre-ft per year).

Extremes.--Maximum discharge during year, 510 cfs May 21 (gage height, 4.02 ft); minimum, 0.4 cfs Sept. 11.
1943-57: Maximum discharge, 1,250 cfs Apr. 29, 1952 (gage height, 6.57 ft); minimum, 0.1 cfs Sept. 5, 1950, Aug. 27, 1955.

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 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	4.1		a12	a11	64	79	161	370	74	3.4	0.9
2	1.3	4.3		a12	a11	57	72	169	357	68	3.0	.9
3	1.3	4.3		*a11	a10	54	65	193	344	62	2.8	.9
4	1.4	4.3		b10	a9.5	51	65	208	345	57	2.6	.9
5	1.4	4.1		b9.6	11	55	65	190	364	*50	2.3	.9
6	1.4	4.1		b9.0	11	56	70	180	408	44	a2.0	.8
7	1.4	4.1		8.7	11	54	94	200	402	37	a1.6	a.7
8	1.4	5.0		10	11	66	87	235	357	33	a1.3	a.6
9	1.6	5.8		b9.4	11	100	83	278	338	30	a1.1	a.6
10	1.6	7.2		b9.4	11	90	87	*329	*366	26	a.9	a.6
11	1.6	7.8		9.7	12	*77	99	368	323	23	a.8	.6
12	1.4	8.5		9.7	12	68	108	374	251	21	a.7	.6
13	1.4	9.3		10	13	64	111	398	202	18	a.6	.6
14	1.4	9.3		10	16	52	116	361	178	15	a.6	.6
15	1.4	9.3		10	19	52	*128	344	164	13	*.6	.6
16	*1.4	9.7		b9.8	47	56	135	316	148	11	.6	.6
17	1.4	9.7		b9.6	64	53	123	294	131	9.3	.6	.7
18	1.4	10		b9.8	64	49	132	293	118	14	.6	.8
19	1.6	8.5		10	62	48	139	311	107	17	.6	*.9
20	1.9	7.8		10	59	47	137	370	a99	15	.6	.9
21	2.1	7.5		b9.1	*68	48	144	498	*a90	14	.6	.9
22	2.3	7.2		b8.6	62	52	135	439	85	12	.6	.9
23	2.4	7.2		b9.0	72	47	134	*400	81	11	.7	.9
24	2.6	7.8		b9.4	110	45	133	355	80	10	.7	.9
25	2.8	7.8		b9.7	122	49	131	318	79	9.7	.7	.9
26	3.2	*7.8		b9.4	116	50	121	275	79	8.5	.8	.9
27	4.3	7.2		b9.0	93	58	117	256	79	7.5	.6	.8
28	3.6	7.2		b8.5	75	53	112	254	77	6.3	.6	.8
29	3.4	7.5		a8.2	-	56	122	285	79	5.8	.6	1.0
30	3.4	a7.5		a8.2	-----	69	145	338	78	4.8	.8	1.0
31	4.1	-----		a10	-----	81	-----	361	-----	3.8	.9	-----
Total	63.5	211.9	287.5	299.8	1,193.5	1,820	3,287	9,351	6,179	730.7	34.9	23.7
Mean	2.05	7.06	9.27	9.67	42.6	58.7	110	302	206	23.6	1.13	0.79
Ac-ft	126	420	570	595	2,370	3,610	6,520	18,550	12,260	1,450	69	47
Calendar year 1956: Max	580											
Water year 1956-57: Max	498											
				Min	0.4	Mean	72.8	Ac-ft	52,810			
				Min	0.6	Mean	64.3	Ac-ft	46,590			

Peak discharge (base, 200 cfs).--May 13 (6 a.m.) 402 cfs (3.54 ft); May 21 (9:30 a.m.) 510 cfs (4.02 ft); June 6 (5 to 11 p.m.) 418 cfs (3.62 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 station on North Fork Humboldt River.

b Stage-discharge relation affected by ice.

Lamoille Creek near Lamoille, Nev.

Location.--Lat 40°41'30", long 115°28'30", in NE¼ sec. 6, T. 32 N., R. 58 E., on left bank at Lamoille Creek bridge at mouth of canyon, 300 ft downstream from Elko-Lamoille powerplant and 3 miles south of Lamoille.

Drainage area.--25 sq mi, approximately.

Records available.--May 1915 to June 1923, October 1943 to September 1957.

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.--20 years (1915-16, 1917-22, 1943-57), 43.5 cfs (31,490 acre-ft per year).

Extremes.--Maximum discharge during year, 794 cfs June 4, caused by failure of diversion structure 200 ft upstream; minimum, 2.5 cfs Mar. 22.

1915-23, 1943-57: Maximum discharge recorded, that of June 4, 1957, but may have been exceeded by that of June 1917 when gage washed out; minimum, 1.0 cfs Jan. 24, 1918, Dec. 8, 1954.

Remarks.--Records good. 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 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.7	5.2	4.4	4.2	b3.6	4.4	5.9	20	275	293	55	13
2	5.7	5.2	4.2	4.2	3.6	4.6	6.8	*25	333	243	50	13
3	5.5	b4.4	4.2	4.2	3.4	4.4	6.8	28	407	242	46	12
4	5.5	5.2	4.2	*4.2	3.4	4.6	*6.8	29	539	231	45	12
5	5.5	5.4	4.4	4.2	3.4	*4.2	7.8	33	577	225	42	10
6	5.5	5.4	4.2	b4.0	3.4	4.4	8.8	46	*510	218	38	10
7	5.6	5.2	4.4	4.0	3.4	5.0	8.2	58	455	209	*34	10
8	6.0	5.2	b4.0	4.2	3.4	5.2	8.2	78	415	190	32	10
9	6.6	5.2	b4.0	b4.0	3.4	5.4	8.1	88	394	181	30	9.5
10	6.2	5.2	4.6	b4.0	3.3	5.2	8.7	91	330	181	29	9.2
11	6.5	5.4	7.6	4.0	3.4	5.2	9.2	90	285	*178	28	9.2
12	6.1	5.4	5.6	4.0	3.4	5.2	9.6	86	294	164	26	8.9
13	5.9	5.4	5.2	4.0	3.6	5.0	10	89	298	166	25	8.6
14	5.6	4.6	5.0	4.0	4.0	b5.4	11	82	*238	145	24	8.5
15	5.6	b4.0	4.4	4.0	3.6	5.4	11	79	209	131	22	8.2
16	5.6	5.2	4.8	b3.8	3.6	5.4	11	78	181	125	21	7.9
17	5.4	5.0	4.2	b3.6	3.6	5.2	11	84	165	119	20	7.9
18	5.4	5.0	4.8	b3.6	3.6	5.4	11	114	178	115	20	9.8
19	5.4	b4.4	4.4	3.8	3.4	5.4	11	143	217	111	19	9.9
20	5.4	b4.0	4.4	4.0	3.6	5.6	11	122	240	97	19	8.7
21	5.4	5.2	b4.4	3.8	3.8	5.6	11	108	236	88	19	*8.7
22	5.2	5.0	b4.0	3.8	3.8	5.0	12	100	248	80	19	8.4
23	*5.2	4.6	b4.2	3.8	4.4	5.4	12	98	261	75	18	7.7
24	4.8	4.4	4.6	3.8	4.4	5.4	12	93	289	71	18	7.7
25	5.2	4.4	4.4	3.8	4.6	5.9	12	95	323	69	16	7.5
26	5.9	4.4	4.4	3.8	4.4	5.6	12	109	326	68	16	7.5
27	6.2	4.4	4.4	3.8	4.6	5.6	12	*133	345	67	15	7.2
28	5.6	4.4	4.4	b3.6	4.4	5.9	12	167	338	65	14	6.9
29	5.0	*4.4	4.2	b3.4	-	6.5	13	190	322	65	13	7.7
30	5.4	4.4	4.2	b3.4	-----	6.8	16	201	318	61	13	7.7
31	5.2	-----	4.2	b3.6	-----	6.8	-----	221	-----	59	13	-----
Total	173.8	145.6	140.4	120.6	104.5	165.1	305.9	2,978	9,548	4,332	799	273.3
Mean	5.61	4.85	4.53	3.89	3.73	5.33	10.2	96.1	318	140	25.8	9.11
Ac-ft	345	289	278	239	207	327	607	5,910	18,930	8,590	1,580	542
Calendar year 1956: Max	411			Min 4.0		Mean 53.7		Ac-ft 38,990				
Water year 1956-57: Max	577			Min 3.3		Mean 52.3		Ac-ft 37,840				

Peak discharge (base, 310 cfs).--June 4 (7 p.m.) 794 cfs; June 27 (8 p.m.) 416 cfs.

* Discharge measurement made on this day.
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 SE $\frac{1}{4}$ 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 1957.

Gage.--Water-stage recorder. Datum of gage is 5,368 ft above mean sea level (Geological Survey planetable bench mark). November 1913 to September 1921 at site a quarter of a mile upstream at different datum.

Average discharge.--19 years (1914-19, 1943-57), 71.4 cfs (51,690 acre-ft per year).

Extremes.--Maximum discharge during year, 860 cfs Feb. 24 (gage height, 7.52 ft); minimum, 4.7 cfs Sept. 9.
1913-21, 1943-57: Maximum discharge, 2,450 cfs Apr. 20, 1952 (gage height, 9.63 ft); minimum, 1 cfs Aug. 20-28, Sept. 30, 1913.

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

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.0	16	20	(*)	15	150	148	159	329	88	21	7.8
2	9.0	14			15	126	135	170	300	87	20	7.8
3	9.0	11			15	109	117	174	281	81	16	9.0
4	9.0	12			14	*94	109	182	290	70	16	8.6
5	8.6	14			14	95	105	185	302	*64	15	7.8
6	8.6	16	20	14	15	104	140	173	327	58	14	7.0
7	8.6	17			16	104	171	170	354	52	14	6.6
8	9.5	18			18	244	158	179	339	48	14	6.2
9	10	18			18	248	144	185	344	44	14	6.2
10	11	18			18	187	147	237	371	38	14	6.2
11	13	18	17	12	19	142	150	262	*454	34	12	6.2
12	15	18			20	123	147	296	413	32	12	6.2
13	14	19			21	106	146	346	273	30	12	6.2
14	12	19			80	87	146	311	227	29	11	6.2
15	12	15			240	85	*154	294	210	27	*10	6.2
16	*11	18	17	12	250	96	154	279	192	27	10	6.2
17	10	18			270	100	153	277	185	26	10	6.6
18	10	16			260	91	154	281	174	27	9.0	7.8
19	11	15			251	102	176	408	153	27	9.0	*9.0
20	12	14			375	100	190	665	127	27	8.6	9.0
21	14	16	*18	12	*294	102	205	678	114	26	8.2	9.0
22	12	17			327	97	212	*542	106	26	8.2	8.6
23	13				542	79	184	435	102	27	7.8	8.2
24	13				*765	77	170	415	*99	28	7.4	8.2
25	14				578	81	154	358	88	29	6.6	8.2
26	14		18	12	582	102	148	284	64	26	6.6	8.2
27	16				282	130	144	253	63	26	6.2	8.2
28	16				198	102	137	242	87	24	7.0	7.4
29	16				102	100	138	244	74	24	7.0	8.6
30	15				-----	126	147	281	82	22	6.6	9.0
31	17	-----			-----	147	-----	302	-----	21	8.2	-----
Total	372.3	501	572	412	5,492	3,636	4,583	9,267	6,504	1,195	341.4	226.4
Mean	12.0	16.7	18.5	13.3	196	117	153	299	217	38.5	11.0	7.55
Ac-ft	738	994	1,130	817	10,890	7,210	9,090	18,380	12,900	2,370	677	449

Calendar year 1956: Max 1,060 Min 2.6 Mean 94.7 Ac-ft 68,740

Water year 1956-57: Max 765 Min 6.2 Mean 90.7 Ac-ft 65,640

Peak discharge (base, 170 cfs).--Feb. 24 (4:30 a.m.) 860 cfs (7.52 ft); Mar. 8 (7 p.m.) 303 cfs (4.64 ft); Apr. 22 (1 a.m.) 225 cfs (4.19 ft); May 20 (7:30 p.m.) 805 cfs (7.04 ft); June 11 (9 p.m.) 493 cfs (5.68 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 1-5, 14-16, Nov. 18 to Feb. 18.

Humboldt River near Elko, Nev.

Location.--Lat 40°56', long 115°38', in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T. 35 N., R. 56 E., on right bank 1 mile southwest of Ryndon, 5 miles downstream from North Fork, and 10 miles northeast of Elko.

Records available.--June 1895 to October 1902, October 1944 to September 1957.

Gage.--Water-stage recorder. Datum of gage is 5,142.32 ft above mean sea level, datum of 1929. June 1895 to October 1902, staff gage at site 11 miles downstream at different datum.

Average discharge.--18 years (1897-1902, 1944-57), 231 cfs (167,200 acre-ft per year).

Extremes.--Maximum discharge during year, 2,250 cfs June 12 (gage height, 7.79 ft); minimum, 1.1 cfs Oct. 1, 2.

1895-1902, 1944-57: Maximum discharge, 3,860 cfs Apr. 30, 1952 (gage height, 9.60 ft); no flow for several days in August and September 1948.

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

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	9.5	b19		b40	438	359	252	1,030	763	44	1.8
2	1.1	9.5	b20		b38	378	342	229	1,040	732	40	1.8
3	1.2	9.5	*20	(*)	b37	334	323	227	1,070	690	35	1.6
4	1.2	9.5	23		b37	317	306	220	1,150	635	29	1.6
5	1.2	11	27		b37	304	287	215	1,310	562	23	1.6
6	1.2	12	b24		b40	342	272	204	1,600	520	18	1.5
7	1.2	12	b18		b42	366	320	182	1,940	474	*15	1.5
8	1.2	12	b16		b45	375	342	206	2,040	444	11	1.5
9	1.3	12	b16		b50	474	337	204	1,960	411	9.0	1.5
10	1.3	14	b17		b55	468	317	234	*2,000	372	7.6	1.5
11	1.5	16	19		63	*402	312	323	2,100	*320	6.4	1.5
12	1.3	16	27		73	348	*304	450	2,180	301	5.6	1.6
13	1.3	16	69		84	320	293	523	1,960	290	4.3	1.6
14	1.3	19	115		104	274	285	650	1,680	274	3.1	1.5
15	1.3	18	115		146	239	282	770	1,540	256	2.6	1.5
16	2.0	21	120		224	252	295	860	1,520	239	2.4	1.6
17	3.7	21	b75		342	256	280	924	1,580	213	2.4	1.8
18	*4.0	22	b64		393	256	252	892	1,260	191	2.2	2.0
19	4.0	19	b58		462	252	309	940	1,080	174	2.0	*2.0
20	4.3	b18	b54		462	259	345	1,060	924	162	2.0	1.8
21	4.3	19	b50		551	252	411	1,320	*794	139	2.0	1.8
22	4.6	18	b47		526	249	438	*1,580	728	132	2.0	1.8
23	6.0	19	b45		523	229	447	1,560	693	125	2.0	1.8
24	6.8	19	b45	b35	644	206	402	1,380	686	104	2.0	1.8
25	6.8	18	b45		812	204	375	1,320	676	93	2.0	1.8
26	7.2	19	b42		*710	215	331	1,240	659	83	2.0	2.0
27	8.1	19	b40		710	249	282	1,090	644	74	2.0	2.0
28	8.5	19	b39		520	267	274	968	656	64	1.8	1.8
29	9.0	19	b38		-	242	269	916	690	59	1.8	2.0
30	11	19	b38		-----	259	246	916	732	52	1.8	2.0
31	11	-----	b37		-----	312	-----	964	-----	46	1.8	-----
Total	120.0	485.0	1,382	1,115	7,770	3,338	9,617	22,839	37,722	8,994	265.8	51.6
Mean	3.87	16.2	44.6	36	278	301	321	737	1,257	290	9.22	1.72
Ac-ft	238	962	2,740	2,210	15,410	18,520	19,080	45,300	74,820	17,840	567	102
Calendar year 1956: Max		2,120		Min	0.8		Mean	289	Ac-ft	209,710		
Water year 1956-57: Max		2,180		Min	1.1		Mean	273	Ac-ft	197,600		

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Huntington Creek near Lee, Nev.

Location.--Lat 40°33', long 115°43', in SW $\frac{1}{4}$ sec. 19, T. 31 N., R. 56 E., on right bank $\frac{5}{2}$ miles upstream from mouth and 6 miles west of Lee.

Records available.--December 1948 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,315 ft (from river-profile map).

Average discharge.--8 years (1949-57), 35.7 cfs (25,850 acre-ft per year).

Extremes.--Maximum discharge during year, 388 cfs June 6 (gage height, 3.91 ft); minimum, 1.2 cfs Aug. 17 (gage height, 1.12 ft).
1948-57: Maximum discharge, 1,210 cfs Apr. 29, 1952 (gage height, 6.54 ft), from rating curve extended above 530 cfs on basis of logarithmic plotting; minimum, 0.5 cfs Sept. 5, 1955.

Remarks.--Records good except those for periods of ice effect, which are fair. Diversions for irrigation of 17,700 acres above station.

Revisions (water years).--WSP 1244: 1949(M). WSP 1344: 1953.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 5-15, June 25 to Sept. 30)

0.9	1.3	2.0	64
1.0	2.8	2.5	121
1.1	5.1	3.0	198
1.3	12	4.0	410
1.6	30		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.3	7.0			8.0	23	33	13	160	53	5.1	2.8
2	3.5	6.0			7.0	24	31	12	168	*46	4.6	2.8
3	4.0	6.0			6.0	27	29	11	198	42	4.2	2.6
4	4.4	7.7		(*)	6.0	29	*28	9.9	261	39	4.0	2.6
5	4.4	8.0			7.0	*34	26	9.1	*323	35	3.3	2.6
6	4.2	7.3			8.0	35	30	9.9	371	32	3.0	2.6
7	4.2	7.3			10	34	35	9.5	331	29	3.0	2.6
8	4.0	7.0		7	12	31	37	10	290	26	2.8	2.6
9	4.9	6.7			14	30	34	10	267	21	*2.5	2.6
10	5.1	6.7			14	29	32	*8.3	323	20	2.1	2.6
11	6.9	6.7			16	26	32	9.1	286	19	2.1	2.8
12	7.7	7.0			16	24	33	17	220	18	2.0	3.0
13	6.4	7.0			16	24	34	26	184	20	2.0	3.0
14	5.7	6.0			15	22	34	54	*171	18	1.8	3.0
15	5.4	6.0			15	23	37	58	164	15	1.7	3.0
16	5.4	8.0		7	15	23	38	67	150	14	1.4	3.0
17	5.4	7.0			16	23	41	85	138	12	1.3	3.0
18	5.4	6.0			15	23	42	59	117	12	2.3	4.4
19	5.4	5.0			16	22	47	85	96	10	2.6	4.4
20	5.4	4.0			17	22	48	207	82	9.1	2.8	4.0
21	5.7	5.0			18	22	44	184	73	8.0	3.0	*4.0
22	*5.7	5.5			21	22	39	183	71	7.0	3.3	3.7
23	9.2	6.0			22	22	37	168	73	6.4	3.3	3.7
24	7.0	6.5		6	22	22	31	159	72	8.4	3.3	3.7
25	6.4	6.5			25	22	19	159	66	5.7	3.0	3.5
26	6.7	6.5			24	22	17	144	63	6.4	3.0	3.3
27	6.7	6.0			25	23	16	140	64	7.7	2.8	2.8
28	6.1	6.5			24	23	15	138	64	6.4	2.8	2.8
29	5.4	*6.5			-	23	11	*142	66	6.1	2.8	3.7
30	9.8	7.0			-----	30	12	156	62	5.7	2.6	4.0
31	8.3	-----			-----	35	-----	165	-----	5.7	2.8	-----
Total	178.1	194.4	217	201	430.0	794	942	2,487.8	4,974	561.6	87.3	95.2
Mean	5.75	6.48	7	6.48	15.4	25.6	31.4	60.3	166	18.1	2.82	3.17
Ac-ft	353	386	430	399	853	1,570	1,870	4,930	9,870	1,110	173	189
Calendar year 1956: Max 400				Min 1.1		Mean 49.6		Ac-ft 36,020				
Water year 1956-57: Max 371				Min 1.3		Mean 30.6		Ac-ft 22,130				

Peak discharge (base, 200 cfs).--May 20 (5:30 a.m.) 230 cfs (3.18 ft); June 6 (3 a.m.) 388 cfs (3.91 ft); June 10 (5 p.m.) 368 cfs (3.63 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 1-3, 14, 15, Nov. 17 to Feb. 14.

South Fork Humboldt River above Dixie Creek, near Elko, Nev.

Location.--Lat 40° 41'05", long 115°48'45", in NW $\frac{1}{4}$ sec. 5, T. 32 N., R. 55 E., $\frac{1}{2}$ miles upstream from Dixie Creek and 10 $\frac{1}{2}$ miles south of Elko.

Records available.--December 1948 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,140 ft (from topographic map).

Average discharge.--8 years (1949-57), 113 cfs (81,810 acre-ft per year).

Extremes.--Maximum discharge during year, 1,700 cfs June 6 (gage height, 5.58 ft); minimum, 4.0 cfs Sept. 9 (gage height, 1.97 ft).

1948-57: Maximum discharge, 1,700 cfs Apr. 29, 1952, June 6, 1957; maximum gage height, that of June 6, 1957; minimum discharge, 0.6 cfs Sept. 11, 1954, Sept. 15, 1955.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions for irrigation of 32,900 acres above station.

Revisions (water years).--WSP 1284: 1952(M).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 5-7, July 9-20)

2.0	4.3	3.3	184
2.1	7.5	3.6	280
2.2	12	4.0	456
2.4	25	4.5	766
2.6	45	5.0	1,180
2.8	75	5.5	1,750
3.0	111		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.4	b14			20	42	73	75	533	556	52	7.1
2	5.8	b13			18	73	68	73	850	483	48	6.8
3	5.8	b13			16	48	*67	80	856	401	43	6.4
4	6.1	17		(*)	15	50	66	73	1,130	383	40	5.4
5	6.4	19			18	68	64	73	*1,410	360	35	5.4
6	8.0	19			18	77	77	77	1,520	339	30	5.1
7	7.1	19			21	72	86	73	1,290	314	32	4.9
8	7.1	18		17	22	66	86	95	1,120	295	30	4.6
9	8.0	17			23	60	84	124	1,040	270	*28	4.3
10	8.4	17			23	57	80	135	1,080	256	26	4.6
11	10	17			28	53	78	160	959	256	21	4.6
12	12	17			32	53	78	173	752	*248	21	4.9
13	11	18			34	52	80	184	738	242	19	5.1
14	10	b15			33	46	82	207	683	229	17	5.1
15	9.8	b13			32	49	87	239	605	210	17	5.1
16	9.8	16	b20		32	48	95	242	551	196	15	5.1
17	9.8	18			33	50	91	*232	*478	179	15	5.1
18	9.8	b15			32	52	97	229	431	160	14	6.4
19	9.8	b13			34	50	107	307	421	150	13	8.0
20	9.8	b12			36	48	111	446	451	133	12	8.0
21	9.8	b14			40	49	107	467	461	124	13	*7.5
22	*9.8	b15			43	49	95	426	467	113	13	7.5
23	10	b17		16	45	45	81	421	472	103	12	7.5
24	13	b20			45	44	87	397	494	93	11	7.5
25	14	b20			*47	45	75	383	580	86	10	7.1
26	15	b20			45	49	68	369	605	78	9.8	7.1
27	14	b20			49	46	66	360	611	75	9.8	6.4
28	16	b20			48	45	66	388	656	72	8.8	5.8
29	15	*b20			-	46	67	416	643	68	8.0	7.1
30	15	b20			-	67	68	446	618	61	6.8	8.8
31	b15	-			-	77	-	478	-	50	6.8	-
Total	316.5	506	620	511	880	1,646	2,447	7,848	22,305	6,583	637.0	184.3
Mean	10.2	16.9	20	16.5	31.4	53.1	81.6	253	744	212	20.5	6.14
Ac-ft	628	1,000	1,230	1,010	1,750	3,260	4,850	15,570	44,240	13,060	1,260	386
Calendar year 1956: Max		1,260			Min 3.1	Mean 152		Ac-ft 110,500				
Water year 1956-57: Max		1,520			Min 4.3	Mean 122		Ac-ft 88,220				

Peak discharge (base, 400 cfs).--May 20 (9:30 p.m.) 505 cfs (4.09 ft); June 6 (12 m.) 1,700 cfs (5.58 ft); June 28 (12 m.) 717 cfs (4.43 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Jan. 1 to Feb. 25; discharge estimated on basis of 2 discharge measurements, weather records, trend of flow, and records for nearby streams.

South Fork Humboldt River near Elko, Nev.

Location.--Lat 40°43'25", long 115°49'45", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30, T. 33 N., R. 55 E., on right bank 0.1 mile upstream from head of canyon, 1.7 miles downstream from highway bridge, 8.8 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 5,100 ft (from topographic 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. October 1932 to Oct. 12, 1955, water-stage recorder at site 900 ft upstream at datum 1.97 ft higher.

Average discharge.--49 years (1896-1903, 1904-9, 1910-18, 1923-26, 1927-32, 1936-57), 128 cfs (92,670 acre-ft per year).

Extremes.--Maximum discharge during year, 1,590 cfs June 6 (gage height, 5.77 ft); minimum not determined, occurred during period of no gage-height record.

1896-1922, 1923-32, 1936-57: Maximum daily discharge, 2,400 cfs Jan. 26, 1914; maximum gage height observed, 12.0 ft Jan. 26, 1914 (affected by ice jam); no flow Aug. 10 to Oct. 24, 1954.

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

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
212	1906	June 16-24, 1906	1,010	5.00
650	1927	May 20, 1927	885	6.90
670	1928	May 27, 1928	957	6.90
690	1929	June 17, 1929	990	6.95

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Many diversions above station for irrigation. Station is below all diversions except those of Hunter & Banks ranch 3 miles downstream.

Revisions (water years).--WSP 1090: 1932. Revised figures of discharge, in cubic feet per second, for the water years 1906, 1927-29, superseding those published in WSP 212, 650, 670, and 690, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1906		1906-Con.		1906-Con.		1906-Con.	
June 3	510	June 23	1,010	July 13	540	June 17	642
4	540	24	1,010	14	540	18	648
5	570	25	940	15	510	19	642
6	605	26	940			20	631
7	605	27	905	1927		21	609
8	635	28	905	May 16	545		
9	670	29	905	17	565	1928	
10	670	30	905	18	565	May 26	642
11	705	July 1	635	19	515	27	957
12	735	2	635	20	858	28	880
13	805	3	635	21	885	29	846
14	840	4	805	22	560	30	836
15	905	5	605	23	525	31	820
16	1,010	6	605	24	515		
17	1,010	7	605	June 11	592	1929	
18	1,010	8	570	12	620	June 16	690
19	1,010	9	570	13	631	17	974
20	1,010	10	570	14	631	18	636
21	1,010	11	540	15	642		
22	1,010	12	540	16	642		

Month	Maximum	Minimum	Mean	Runoff in acre-feet
June 1906.....	1,010	480	812	48,300
July.....	635	102	408	25,100
Water year 1905-6.....	1,010	0	192	139,000
Calendar year 1906.....	1,010	0	191	138,400
May 1927.....	858	181	357	21,900
June.....	648	169	421	25,100
Water year 1926-27.....	858	-	108	78,400
Calendar year 1927.....	858	-	111	80,200
May 1928.....	957	-	258	15,800
Water year 1927-28.....	957	0	66.0	47,900
Calendar year 1928.....	957	0	64.5	46,800
June 1929.....	974	58	281	16,700
Water year 1928-29.....	974	0	62.8	45,500
Calendar year 1929.....	974	0	62.9	45,500

South Fork Humboldt River near Elko, Nev.--Continued

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	0.2	2.3	51
1.4	.8	2.6	92
1.5	2.0	3.0	169
1.6	4.2	3.5	300
1.7	7.9	4.0	476
1.8	13	5.0	990
2.0	25	5.7	1,490

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	11	(*)		15	35	81	71	560	547	42	2.7
2	2.1	10			13	34	73	*71	667	484	41	2.7
3	2.3	10			11	41	*71	78	852	404	37	2.3
4	2.5	13			10	43	67	71	1,110	382	34	al.5
5	2.7	16			11	64	68	68	*1,360	362	30	al.5
6	3.7	17	(*)		13	79	68	72	1,480	339	26	al.0
7	3.2	17			16	90	93	65	1,320	313	27	al.0
8	3.2	17			18	81	95	84	1,160	294	26	a.5
9	3.7	16			20	69	90	113	1,060	264	*24	a.5
10	4.2	15			20	62	85	124	1,140	245	22	al.0
11	6.3	15	13		23	56	85	146	*1,020	242	17	al.0
12	8.3	15			27	54	84	158	816	229	16	al.0
13	7.9	16			29	52	85	169	794	214	15	al.0
14	7.1	13			28	46	85	197	744	204	14	al.0
15	6.7	11			27	49	92	232	662	*183	13	al.0
16	6.7	13	11		27	49	97	245	596	165	12	al.0
17	6.3	14			28	48	93	232	521	150	11	*1.0
18	6.3	12			27	51	97	229	464	132	10	1.8
19	*6.3	11			29	50	104	322	445	126	9.2	2.7
20	6.3	10			31	49	113	460	456	111	8.8	3.4
21	6.3	10	11		33	50	106	517	*460	100	8.8	3.0
22	6.3	11			37	48	95	472	460	92	9.2	2.7
23	6.7	12			40	44	87	468	464	84	8.8	2.7
24	8.3	13			40	44	81	426	484	76	6.7	2.7
25	10	13			*43	44	69	411	560	71	5.9	2.5
26	11	13	11		41	49	62	393	592	64	5.2	2.5
27	13	13			41	48	59	*386	592	62	4.8	2.3
28	14	13			41	46	59	411	638	59	4.5	1.5
29	12	13			-	47	60	437	628	58	3.7	2.0
30	12	13			-----	71	62	476	596	51	3.2	3.4
31	12	-----	-----		-----	85	-----	509	-----	43	2.7	-----
Total	209.4	396	403	356	739	1,678	2,486	8,113	22,701	6,150	498.5	54.9
Mean	6.75	13.2	13	11.5	26.4	54.1	82.9	262	757	198	16.1	1.83
Ac-ft	415	785	799	706	1,470	3,330	4,830	16,090	45,030	12,200	989	109
Calendar year 1956: Max	1,230				0.6	Mean	154	Ac-ft	112,000			
Water year 1956-57: Max	1,480				0.5	Mean	120	Ac-ft	86,850			

Peak discharge (base, 410 cfs).--May 20 (12 p.m.) 574 cfs (4.20 ft); June 6 (1 p.m.) 1,590 cfs (5.77 ft); June 28 (2 p.m.) 702 cfs (4.50 ft).

* Discharge measurement made on this day.

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

Note.--Stage-discharge relation affected by ice Oct. 31 to Nov. 5, Nov. 14 to Feb. 24 (no gage-height record Dec. 29 to Feb. 24; discharge estimated on basis of 2 discharge measurements, weather records, and records for nearby streams).

Humboldt River near Carlin, Nev.

Location.--Lat 40°43'40", long 116°00'30", in sec. 21, T. 33 N., R. 53 E., on right bank 4 1/2 miles southwest of Moleen, 5 miles upstream from Susie Creek, 5 1/2 miles east of Carlin, and 15 miles southwest of Elko.

Drainage area.--4,310 sq mi, approximately.

Records available.--October 1943 to September 1957.

Gage.--Water-stage recorder. Datum of gage is 4,931.91 ft above mean sea level (levels by Nevada State Highway Department).

Average discharge.--14 years, 347 cfs (251,200 acre-ft per year).

Extremes.--Maximum discharge during year, 3,340 cfs June 10 (gage height, 7.22 ft); minimum, 4.8 cfs Oct. 23.
1943-57: Maximum discharge, 5,220 cfs May 1, 1952 (gage height, 9.35 ft); minimum, 0.3 cfs Sept. 10, Oct. 11, 1954.
High water in 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 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic-feet per second)

0.6	4.0	2.5	351
.7	8.0	3.0	545
.8	13	3.5	760
1.0	28	4.0	1,000
1.3	62	5.0	1,600
1.6	110	7.2	3,320
2.0	198		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	26	b38	b68	b74	673	395	298	1,330	1,220	99	7.6
2	13	25	b39	68	b66	585	*417	282	1,370	1,210	82	7.2
3	14	26	b37	68	b59	501	417	270	1,520	1,180	78	6.8
4	14	26	b38	68	b59	453	417	260	1,780	1,140	72	6.8
5	16	26	40	b66	b60	457	406	242	2,010	1,090	65	6.4
6	14	26	42	b65	b62	489	414	234	2,290	1,029	61	6.4
7	15	24	b45	b67	b66	477	414	231	2,560	925	52	6.4
8	17	23	b35	b68	b70	501	406	254	2,700	855	*48	6.4
9	18	23	b50	b67	b60	485	433	273	3,090	792	45	6.0
10	18	23	b56	b68	b95	497	437	298	3,290	724	37	6.4
11	16	22	61	b70	131	529	421	307	3,150	670	34	6.4
12	9.5	22	59	72	146	517	410	362	2,950	609	29	6.8
13	9.4	22	57	75	164	481	402	449	2,990	549	28	7.6
14	14	21	57	78	162	425	395	541	2,990	505	26	7.2
15	14	22	66	78	121	395	387	666	2,660	473	25	6.4
16	13	26	86	76	118	365	387	805	2,390	433	22	6.8
17	14	28	101	b74	125	348	380	880	*2,130	398	21	7.2
18	*16	32	103	b72	157	344	402	955	2,020	*358	18	9.0
19	21	31	69	b68	206	344	395	1,100	1,890	331	14	10
20	18	b31	84	b74	263	337	414	1,230	1,730	301	12	*9.5
21	14	b32	92	b70	327	337	445	1,300	1,570	270	12	9.0
22	7.6	b33	b84	b63	391	334	465	1,340	1,420	248	12	9.0
23	6.0	b34	b94	b63	457	324	477	*1,590	1,290	225	12	14
24	6.0	b36	b90	b64	493	314	473	1,940	1,190	212	10	15
25	10	b36	b90	b64	509	304	473	1,820	*1,180	186	9.5	14
26	14	b36	b85	b62	*577	298	437	1,670	1,240	168	10	14
27	16	b35	b80	b60	666	291	406	1,570	1,240	157	9.0	13
28	19	*b35	b73	b58	692	298	362	1,510	1,240	146	7.6	13
29	22	b35	b72	b57	-	324	*331	1,430	1,270	135	7.2	14
30	22	b36	b72	b57	-----	365	311	1,360	1,240	116	7.6	16
31	23	-----	*b68	b64	-----	360	-----	1,330	-----	110	7.6	-----
Total	455.5	853	2,083	2,092	6,396	12,758	12,329	26,797	59,720	16,756	972.5	274.3
Mean	14.7	26.4	67.2	67.5	228	412	411	864	1,991	541	31.4	9.14
Ac-ft	903	1,690	4,130	4,150	12,690	25,300	24,450	53,150	116,450	33,240	1,930	544
Calendar year 1956: Max		2,920		Min	6.0		Mean	440	Ac-ft	319,500		
Water year 1956-57: Max		3,290		Min	6.0		Mean	388	Ac-ft	280,600		

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

HUMBOLDT RIVER BASIN

Susie Creek near Carlin, Nev.

Location.--Lat 40°56', long 115°58', in SE $\frac{1}{4}$ sec. 12, T. 35 N., R. 53 E., on left bank half a mile upstream from Adobe Creek, 16 miles upstream from mouth, and 17 miles northeast of Carlin.

Records available.--October 1955 to September 1957.

Gage.--Water-stage recorder.

Extremes.--Maximum discharge during year, 161 cfs Feb. 25 (gage height, 3.36 ft); minimum daily, 0.1 cfs for many days in July and August, Sept. 9.
1955-57: Maximum discharge, 184 cfs Jan. 15, 1956 (gage height, 3.49 ft); minimum daily, 0.1 cfs for many days in 1956-57.

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

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	0	1.8	9.8
1.2	.3	2.1	23
1.3	1.2	2.5	50
1.4	2.4	3.0	104
1.6	5.4		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	0.8	0.5		2.0	7.6	14	13	5.4	0.4	0.1	0.3
2	.6	.8	.6		2.0	7.3	14	13	4.8	.4	.1	.2
3	.6	1.0	.8		1.6	5.8	12	11	4.4	.4	.1	.2
4	.6	.9	1.0		1.5	*6.5	12	9.8	4.0	.4	.1	.2
5	.6	1.4	1.3		1.5	19	15	9.0	3.7	.3	.1	.2
6	.5	1.1	b1.0	0.8	2.0	18	16	9.0	3.4	.3	.1	.2
7	.6	1.1	*b1.0	(*)	2.5	45	16	8.6	3.1	.3	.1	.2
8	1.1	1.0	b.8		3.0	37	15	8.8	3.0	.4	.1	.2
9	1.1	1.0	.5		3.5	29	14	8.6	5.6	.4	.1	.1
10	.9	1.0	.5		5.0	14	14	7.6	5.2	.2	.1	.2
11	1.2	1.0	b1.5		10	9.8	14	11	4.1	.2	.1	.2
12	1.4	.9	4.8		20	9.8	14	10	3.5	*.2	.1	.3
13	1.2	.8	7.8		40	6.4	13	9.0	5.4	.2	*.1	.3
14	1.1	.8	4.6		45	4.3	13	8.0	3.2	.2	.1	.2
15	1.0	.9	b1.8		40	6.7	14	9.0	3.1	.2	.1	.3
16	1.0	1.3	b1.4		40	*7.3	13	8.5	3.1	.2	.1	.4
17	1.0	1.3	1.2		42	6.3	14	*7.8	3.0	.2	.1	.4
18	1.1	.8	1.5	1.0	*42	7.1	15	11	2.5	.2	.1	.8
19	1.1	.8	1.0		43	7.3	*16	42	2.3	.2	.1	.6
20	1.0	.9	1.0		45	8.6	17	21	2.1	.2	.1	.4
21	1.1	.9	.9		55	10	19	18	1.9	.2	.1	.4
22	1.1	.9	.8		65	9.0	17	16	1.6	.2	.1	*.4
23	1.2	1.0			*80	10	15	16	1.4	.2	.1	.4
24	1.0	.9			34	10	14	16	*1.3	.2	.1	.4
25	.9	.6			91	11	12	12	1.3	.2	.1	.4
26	1.4	.7	.8		20	10	12	11	1.3	.1	.1	.4
27	1.9	.8			23	10	12	9.0	1.1	.1	.1	.3
28	1.1	*.8			13	12	13	8.3	1.1	.1	.1	.3
29	*.9	.7		.8	-	16	13	*8.0	1.0	.2	.1	.7
30	1.1	.5			-----	14	13	8.6	.5	.1	.2	.5
31	1.5	-----			-----	14	-----	6.5	-----	.2	.4	-----
Total	31.5	27.4	57.0	27.8	772.6	388.8	425	365.1	85.4	7.3	3.5	10.1
Mean	1.02	0.91	1.84	0.90	27.6	12.5	14.2	11.8	2.85	0.24	0.11	0.34
Ac-ft	62	54	113	55	1,530	771	843	724	169	14	6.9	20
Calendar year 1956: Max	82			Min 0.1		Mean 6.25		Ac-ft 4,530				
Water year 1956-57: Max	91			Min 0.1		Mean 6.03		Ac-ft 4,360				

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Note.--No gage-height record Nov. 26, 27, Dec. 23 to Feb. 23, Mar. 21 to Apr. 18, May 12-16, June 19-23; discharge estimated on basis of 3 discharge measurements, weather records, and records for Pine Creek near Palisade.

Humboldt River at Palisade, Nev.

Location.--Lat 40°36'25", long 116°12'05", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, 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 1957.

Gage.--Water-stage recorder. Datum of gage is 4,825.55 ft 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.--49 years (1903-6, 1911-57), 364 cfs (263,500 acre-ft per year).

Extremes.--Maximum discharge during year, 3,420 cfs June 10 (gage height, 7.11 ft); minimum, 19 cfs Oct. 15.

1902-6, 1911-57: Maximum discharge, 6,250 cfs Feb. 26, 1943 (gage height, 9.92 ft); minimum, 2 cfs Aug. 25-28, 1931.

Revisions.--Figures of maximum discharge observed for the water years 1903 and 1912 have been revised to 1,840 cfs June 13, 1903 (gage height, 6.0 ft), and 2,950 cfs June 15, 1912 (gage height, 7.5 ft), superseding figures published in WSP 100 and 330, respectively.

Remarks.--Records excellent except those for periods of ice effect, which are good. Diversion above station for irrigation of about 150,000 acres of hay and pasture land.

Revisions (water years).--Revised figures of discharge, in cubic feet per second, for the water years 1903-4, 1912, 1914, superseding those published in WSP 100, 133, and 390, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1903		1904-Con.		1912-Con.		1913-Con.		1914-Con.	
Jan. 14-39	a54	Feb. 3	70	June 27	1,300	Nov. 24	205	Aug. 3	182
30	80	4	70	28	1,190	25	205	4	161
31	80	5	70			26	205	5	161
Feb. 1	80	6	70	1913		27	205	6	141
2	80	7	70	Oct. 1	78	28	205	7	141
3	80	8	70	2	78	29	205	8	123
4	80	9-11	a60	3	92	30	205	9	107
5	75	12	93	4	92	1	205	10	107
6	75	13	101	5	92	2	182	11	92
7	75	14	101	6	92	3	182	12	92
8	75	15	101	7	92	4-10	a150	13	78
9	75	16	159	8	107	11	141	14	78
10	80	17	429	9	123	12	123	15	65
11	80	18	280	10	123	13	123	16	65
12	80	19	159	11	123	14	110	17	53
13	70	20	159	12	123	15	107	18	53
14	60	21	202	13	123	16-31	a100	19	43
15	60	22	1,310	14	123			20	43
16	65	23	1,810	15	123	1914		21	43
17	70	24	1,060	16	123	Jan. 1	150	22	43
18	75	25	1,110	17	123	2	205	23	43
19	75	26	1,260	18	123	3	256	24	43
20	75	27	1,285	19	123	4	256	25	43
June 4	1,040	28	1,410	20	123	5	256	26	43
5	1,080	29	1,160	21	123	6	256	27	43
6	1,340			22	123	7	256	28	43
7	1,380	1911		23	123	8	230	29	43
8	1,440	Dec. 12-31	a70	24	123	9	200	30	34
9	1,540			25	123	10	200	31	34
10	1,580	1912		26	123	11	205	Sept. 1	34
11	1,640	Jan. 1-12	a80	27	123	12	205	2	34
12	1,780	13	80	28	123	13	205	3	34
13	1,840	June 1	1,300	29	123	14	205	4	34
14	1,780	2	1,300	30	123	15	205	5	34
15	1,760	3	1,300	31	123	16	205	6	34
16	1,740	4	1,300	Nov. 1	123	17	230	7	34
17	1,640	5	1,530	2	123	18	205	8	34
18	1,540	6	1,650	3	123	19	182	9	34
19	1,440	7	1,770	4	141	20	182	10	34
20	1,410	8	1,900	5	141	21	182	11	34
21	1,360	9	2,040	6	141	24	1,450	12	34
22	1,240	10	2,320	7	141	Feb. 4	379	13	34
23	1,080	11	2,460	8	141	5	379	14	34
24	988	12	2,600	9	161	6	346	15	34
		13	2,670	10	161	7	346	16	34
1904		14	2,740	11	161	8	346	17	34
Jan. 1-6	a70	15	2,950	12	161	9	346	18	34
7-11	a60	16	2,740	13	182	10	346	19	34
12-18	a70	17	2,600	14	182	11	314	20	34
19-21	a60	18	2,460	15	182	12	314	21	34
22	70	19	2,320	16	182	13	314	22	34
23	70	20	2,110	17	205	14	314	23	34
24	70	21	1,900	18	205	15	314	24	34
25-29	a60	22	1,770	19	230	16	314	25	34
30	70	23	1,650	20	230	17	314	26	43
31	70	24	1,470	21	205	19	413	27	43
Feb. 1	70	25	1,300	22	205	Aug. 1	182	28	43
2	70	26	1,300	23	205	2	182	29	43
								30	43

a Average for period indicated.

Humboldt River at Pallsade, Nev.--Continued

Month	Maximum	Minimum	Mean	Runoff in acre-feet
January 1903.....	153	-	75	4,623
February.....	80	60	75	4,143
June.....	1,840	780	1,297	76,560
Water year 1902-3.....	1,840	21	332	240,540
Calendar year 1903.....	1,840	21	334	241,650
January 1904.....	-	-	65.8	4,046
February.....	1,810	-	448	25,640
Water year 1903-4.....	1,835	24	518	376,500
Calendar year 1904.....	1,835	-	542	393,800
December 1911.....	-	-	72.5	4,460
January 1912.....	139	-	103	6,340
June.....	2,950	1,090	1,870	111,400
Water year 1911-12.....	2,950	-	423	307,000
Calendar year 1912.....	2,950	-	459	333,000
October 1913.....	123	78	115	7,050
November.....	230	123	179	10,600
December.....	205	-	123	7,580
Calendar year 1913.....	1,270	60	338	245,000
January 1914.....	2,780	150	561	34,500
February.....	1,340	314	598	33,200
August.....	182	34	84.0	5,160
September.....	43	34	35.5	2,110
Water year 1913-14.....	2,780	34	755	547,000
Calendar year 1914.....	2,780	34	749	542,000

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	14	3.0	355
1.6	24	4.0	800
1.8	53	5.0	1,480
2.1	110	6.0	2,380
2.5	205	7.0	3,350

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*24	39	48	76	83	775	*474	*343	1,400	1,260	119	24
2	24	*40	47	75	72	680	488	341	1,420	1,240	104	23
3	25	40	50	74	65	596	492	341	1,530	1,220	95	23
4	24	42	53	76	65	542	496	352	1,740	1,170	89	23
5	25	42	63	70	65	578	488	320	2,030	1,140	83	23
6	24	42	63	b70	63	615	510	311	2,270	1,060	80	23
7	25	40	58	b70	63	625	532	320	2,530	975	76	22
8	27	40	40	74	65	*695	506	352	2,680	891	*70	22
9	29	40	63	72	68	655	524	362	3,000	833	67	23
10	29	43	63	b72	70	635	524	394	3,340	760	63	24
11	34	40	67	72	80	640	519	429	3,340	705	58	24
12	32	40	97	68	95	635	506	478	*3,140	645	55	24
13	25	40	87	70	130	600	488	542	3,040	582	51	24
14	24	40	89	76	245	528	488	625	3,100	524	51	25
15	26	39	63	76	421	501	465	750	2,920	496	50	25
16	28	42	102	75	299	469	449	867	2,610	*457	48	24
17	27	45	117	76	251	441	474	927	2,340	418	47	24
18	26	47	125	76	*257	429	492	1,000	2,160	366	43	24
19	30	47	117	72	290	425	514	1,310	2,030	355	40	24
20	33	43	106	81	341	418	519	1,420	1,670	327	37	*25
21	32	45	106	76	383	418	555	1,510	1,710	302	36	25
22	26	47	93	b69	478	411	564	1,520	1,560	278	33	25
23	24	48	104	b68	620	394	564	1,690	1,410	248	32	25
24	23	50	104	70	640	386	546	2,100	1,300	233	32	29
25	22	50	97	70	740	376	537	2,050	*1,240	212	29	30
26	25	48	91	b68	720	383	492	1,880	1,300	192	28	30
27	30	47	85	b66	760	372	441	1,720	1,300	178	28	30
28	32	47	87	b64	790	372	408	*1,660	1,300	168	25	30
29	36	47	87	b63	-	397	366	1,580	1,340	158	24	32
30	37	*48	81	b62	-----	445	352	1,490	1,300	139	24	32
31	39	-----	*80	b72	-----	461	-----	1,420	-----	128	24	-----
Total	871	1,308	2,553	2,224	8,219	15,927	14,773	30,409	62,250	17,680	1,641	761
Mean	28.1	43.6	82.4	71.7	294	514	492	981	2,075	570	52.9	25.4
Ac-ft	1,730	2,590	5,060	4,410	16,300	31,590	29,300	60,320	123,500	35,070	3,250	1,510
Calendar year 1956: Max			2,910	Min 20		Mean 485		Ac-ft 352,000				
Water year 1956-57: Max			3,340	Min 22		Mean 435		Ac-ft 314,600				

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Pine Creek near Palisade, Nev.

Location.--Lat 40°35'45", long 116°10'25" in NW 1/4 sec. 1, T. 31 N., R. 51 E., on right bank 1 1/4 miles upstream from mouth and 1 1/2 miles southeast of Palisade.

Records available.--November 1902 to December 1904 (gage heights only), January 1912 to September 1914, January 1946 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,900 ft (from topographic map). Prior to Jan. 1, 1946, staff gages at site 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.--13 years (1912-14, 1946-57), 13.6 cfs (9,850 acre-ft per year).

Extremes.--Maximum discharge during year, 60 cfs May 19 (gage height, 2.85 ft); no flow for many days in July to September.

1912-14, 1946-57: Maximum discharge, 1,010 cfs Mar. 27, 1952 (gage height, 4.69 ft), from rating curve extended above 330 cfs on basis of slope-area determination of peak flow; no flow for many days in 1951, 1953-55, 1957.

Revisions.--The maximum discharge observed for the water year 1914 has been revised to 1,000 cfs Jan. 25, 26, 1914 (gage height, 4.0 ft), superseding figure published in WSP 390.

Remarks.--Records good except those for periods of ice effect and those below 1 cfs, which are fair. Diversions above station for irrigation.

Revisions (water years).--WSP 1120: 1946 (calendar year mean). Revised figures of discharge, in cubic feet per second, for a period in the water year 1914, superseding those published in WSP 390, are given herewith:

1914
Jan. 24..... 100
25..... 1,000
26..... 1,000

Month	Maximum	Minimum	Mean	Runoff in acre-feet
January 1914.....	1,000	13	126	7,760
Water year 1913-14.....	1,000	2.5	36.7	26,600

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 7-27, Sept. 23-30)

1.8 0.1 2.2 8.5
1.9 4 2.4 17
2.0 2.0 2.6 31
2.1 5.0

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	*3.0	7.8	b7.5	b8.5	b8.0	14	12	*0.1	1.4	*0.1	0.1	0
2	3.3	*7.4	b7.5	b8.5	b7.5	16	12	.1	.9	.1	.1	0
3	3.0	7.1	b8.0	b8.5	b7.0	17	10	.1	*7.7	.1	.1	0
4	3.0	7.4	8.5	8.5	b6.5	19	9.3	.1	.5	.1	.1	0
5	3.0	7.4	9.3	b8.0	b6.0	27	9.3	.1	.2	.1	.1	0
6	3.0	7.4	8.9	b7.5	b6.0	24	11	.1	.2	.1	.1	0
7	3.3	7.1	b7.0	b7.2	8.0	18	11	.1	.1	.1	.6	0
8	4.3	7.1	b5.5	b7.0	7.4	*16	10	.1	.1	.1	*2.2	0
9	4.6	7.4	b6.0	b6.5	8.2	15	9.3	.1	3.2	.1	2.0	.1
10	5.0	7.4	b9.0	b6.5	8.2	13	8.9	.1	3.3	.1	2.0	.1
11	6.4	7.8	14	b6.4	11	13	8.5	.6	.6	.1	1.3	.1
12	6.0	7.8	14	6.4	12	13	*8.2	.1	.5	.1	0	2.5
13	5.7	8.5	13	8.5	16	14	8.2	.1	.7	.1	0	2.5
14	5.4	8.5	13	8.2	18	14	7.8	.1	.5	.1	0	2.5
15	5.4	b8.0	12	6.0	15	14	8.2	2.4	.4	.1	0	2.5
16	5.7	8.5	11	7.1	14	14	7.8	8.2	.9	.1	0	2.8
17	5.7	8.9	12	b7.0	14	14	8.2	5.0	3.6	.1	0	2.8
18	5.7	8.5	11	b6.5	*14	13	8.5	5.4	3.3	.1	0	2.8
19	5.7	7.8	b11	b6.7	14	12	8.5	22	3.0	.1	0	2.8
20	5.7	b7.0	b10	7.1	13	12	9.7	19	3.0	.1	0	*2.8
21	5.7	b6.0	b9.0	b7.0	15	10	9.3	16	3.0	.1	0	2.8
22	5.7	b6.0	b9.0	b6.5	15	10	9.3	8.4	2.8	.1	0	2.8
23	6.0	b6.0	b9.0	b6.5	16	11	8.9	3.0	2.8	.1	0	2.8
24	6.4	b6.5	b10	b7.0	16	11	7.8	2.8	2.8	.1	0	2.8
25	6.8	b7.0	b10	b7.5	17	11	7.8	1.6	2.0	0	0	2.8
26	7.4	b7.0	b9.0	b8.0	15	11	7.8	1.6	.6	0	0	2.8
27	7.8	b7.0	b9.0	b7.0	14	10	4.4	.9	.7	.1	0	2.8
28	7.8	b7.2	b9.0	b6.5	14	9.3	.1	1.2	.4	.1	0	2.8
29	7.4	b7.5	b9.0	b6.0	-----	9.3	.1	1.4	.1	.1	0	3.6
30	7.4	*b7.5	b8.5	b6.0	-----	13	.1	1.6	.1	.1	0	3.9
31	7.8	-----	*b8.5	b8.0	-----	12	-----	1.8	-----	.1	0	-----
Total	169.1	222.5	298.2	222.6	333.8	429.6	242.0	102.2	42.4	2.9	8.7	54.2
Mean	5.45	7.42	9.62	7.18	11.9	13.8	8.07	3.30	1.41	0.09	0.28	1.81
Ac-ft	335	441	591	442	662	852	480	203	84	5.8	17	108

Calendar year 1956: Max 135 Min 0.1 Mean 13.3 Ac-ft 9,670
Water year 1956-57: Max 27 Min 0 Mean 5.83 Ac-ft 4,220

Peak discharge (base, 50 cfs).--May 19 (8 a.m.) 60 cfs (2.85 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

HUMBOLDT RIVER BASIN

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 1957.

Gage.--Water-stage recorder.

Average discharge.--11 years, 304 cfs (220,100 acre-ft per year).

Extremes.--Maximum discharge during year, 2,680 cfs June 13 (gage height, 9.64 ft); minimum daily, 1.1 cfs Oct. 5, 6.

1946-57: Maximum daily discharge, 5,700 cfs May 2, 1952; minimum daily, 0.2 cfs Sept. 15 to Oct. 17, 1955.

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

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 15

Feb. 16 to Sept. 30

1.7	0.6	2.4	26	1.7	1.2	3.5	182
1.8	1.5	2.7	53	1.8	2.9	4.0	286
1.9	3.1	3.0	89	1.9	5.6	4.5	411
2.0	5.6	3.5	168	2.1	14	5.0	561
2.1	9.3	4.0	268	2.4	36	6.0	950
2.2	14			2.7	64	8.0	1,820
				3.0	102	9.6	2,660

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.2	29	b47	b70	b65	699	445	314	1,380	1,140	118	4.4
2	1.2	29	b46	b70	b72	695	454	295	1,320	1,120	110	4.1
3	1.2	29	b45	b68	b68	628	465	288	1,290	1,110	99	3.6
4	1.2	30	b46	b68	b65	564	465	286	1,330	1,100	90	3.6
5	1.1	*31	46	b65	b64	529	468	288	1,420	1,080	80	3.4
6	1.1	31	43	b60	b65	*584	468	273	1,540	1,040	73	3.1
7	1.2	32	b40	b60	b70	594	483	264	1,640	966	62	2.9
8	1.2	32	b35	b58	b66	597	504	284	1,740	910	54	2.7
9	1.3	32	27	*b60	66	649	489	282	1,940	830	50	2.5
10	1.3	32	29	b60	65	642	498	288	2,080	768	*45	2.5
11	1.6	32	*41	b63	65	608	501	343	2,320	721	43	2.5
12	1.5	32	48	b66	66	604	501	374	2,420	656	41	2.5
13	1.4	32	63	b70	84	591	489	403	*2,610	608	38	2.5
14	1.4	32	65	b72	103	561	483	480	2,450	545	32	2.3
15	2.3	b52	66	b72	217	510	474	564	2,360	489	28	2.3
16	4.2	33	69	b70	326	489	448	674	2,360	*451	25	2.3
17	4.8	35	71	66	268	465	*442	802	2,190	414	24	2.3
18	6.6	33	79	56	240	439	471	*866	2,000	384	23	2.3
19	7.3	34	b85	51	240	425	483	946	1,830	356	20	2.3
20	7.3	b33	b90	74	262	419	501	1,120	1,700	331	19	2.1
21	8.4	b32	b95	69	295	408	504	1,250	1,610	304	16	2.1
22	13	b34	b80	61	331	408	529	1,320	1,520	282	13	2.1
23	14	b36	b70	50	398	400	542	1,360	1,400	260	12	2.0
24	14	b42	b68	51	465	389	548	1,430	1,290	236	10	2.0
25	14	b45	b70	58	523	387	532	1,560	1,190	219	8.2	*2.0
26	14	b46	b70	53	601	381	526	1,700	*1,130	195	7.4	2.0
27	14	b45	b68	47	625	379	486	1,700	1,140	178	6.6	1.8
28	14	b48	b70	47	663	371	439	*1,620	1,140	166	5.6	1.8
29	16	b48	b70	b50	366	366	406	1,560	1,140	156	5.3	2.3
30	18	b47	b70	b52	392	392	346	1,520	1,160	141	5.0	4.7
31	35	-----	b70	b60	-----	431	-----	1,460	-----	128	4.7	-----
Total	224.8	1,058	1,882	1,897	6,438	15,574	14,390	25,894	50,640	17,304	1,167.8	79.0
Mean	7.25	35.3	60.7	61.2	230	502	480	835	1,688	558	37.7	2.63
Ac-ft	446	2,100	3,730	3,760	12,770	30,890	28,540	51,360	100,400	34,320	2,320	157
Calendar year 1956: Max 2,400 Min 1.1 Mean 431 Ac-ft 313,200												
Water year 1956-57: Max 2,610 Min 1.1 Mean 374 Ac-ft 270,800												

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Rock Creek near Battle Mountain, Nev.

Location.--Lat 40°51', long 116°36', in NE $\frac{1}{4}$ 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,600 ft (estimated from nearby Coast & Geodetic Survey bench mark). Prior to Mar. 26, 1918, staff gage at site about 11 miles upstream at different datum. Mar. 26, 1918, to Jan. 3, 1946, water-stage recorder at present site at different datum.

Average discharge.--16 years (1918-23, 1946-57), 32.7 cfs (23,670 acre-ft per year).

Extremes.--Maximum discharge during year, 785 cfs May 20 (gage height, 3.50 ft); no flow Aug. 2-31.
1918-25, 1927-29, 1946-57: Maximum discharge, 3,000 cfs Apr. 7, 1952 (gage height, 5.60 ft); no flow at times in July, August, September, and October nearly every year.

Remarks.--Records good except those for periods of ice effect, which are fair. Several diversions for irrigation 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).--WSP 1214: 1950(M).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.0	0	0.6	7.7	1.7	97
.1	.4	.8	14	2.0	163
.2	1.0	1.0	23	2.5	317
.3	2.0	1.2	36	3.0	510
.4	3.5	1.4	55	3.4	725

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.9	1.2	1.8	2.3	66	66	158	148	10	0.1	0.1
2	.5	.9	1.3	1.8	2.5	44	*65	140	101	9.1	0	.2
3	.5	.9	1.5	1.8	2.3	38	55	118	80	*7.2	0	.1
4	.5	.9	1.7	1.6	2.2	34	52	97	68	6.1	0	.2
5	.5	*.9	2.4	1.5	2.5	58	50	95	59	5.0	0	.2
6	.4	.9	2.4	1.5	2.7	129	59	86	57	3.7	0	.2
7	.5	.9	1.9	1.5	3.5	114	77	87	45	2.7	0	.2
8	.6	.9	1.3	1.5	3.1	110	62	97	45	2.0	0	.2
9	.7	.9	1.4	*1.6	2.8	108	56	138	55	1.4	0	.1
10	.9	.9	1.0	1.6	2.7	91	57	176	63	1.2	*0	.1
11	1.7	1.2	*2.1	1.6	2.8	63	61	204	75	1.1	0	.1
12	1.8	1.5	3.3	1.8	2.5	50	63	244	52	.9	0	.2
13	1.4	1.6	6.6	2.1	3.3	45	61	276	*40	.8	0	.3
14	1.0	1.2	5.4	2.1	6.0	35	80	359	35	.6	0	.1
15	.8	1.3	4.4	2.1	200	31	92	*352	35	.5	0	.4
16	.7	1.5	5.2	1.8	160	38	108	310	35	.4	0	.4
17	.7	1.7	3.3	1.6	127	37	106	300	30	.2	0	.4
18	.7	1.6	3.3		127	38	110	290	24	.2	0	.6
19	.7	1.3	2.5		108	49	136	384	20	.1	0	.6
20	.7	1.1	2.4		94	46	190	671	17	.1	0	.6
21	.7	1.0	2.1		63	43	210	660	15	.1	0	.4
22	.7	1.0	1.9		53	40	290	570	13	.1	0	.4
23	.8	1.2	1.9		56	33	280	525	11	.1	0	.4
24	.9	1.6	1.7		99	31	270	*461	9.1	.1	0	*.4
25	.9	1.4	1.7	1.8	120	33	250	403	7.5	.1	0	.3
26	.9	1.3	1.6		140	34	228	352	6.8	.2	0	.3
27	1.1	1.3	1.6		89	41	210	300	5.9	.2	0	.3
28	1.1	1.2	1.6		*89	35	187	273	7.7	.2	0	.3
29	.9	1.3	1.5		-	38	*166	270	8.3	.2	0	.4
30	.9	1.4	1.6		-----	40	160	199	10	.3	0	.4
31	.9	-----	1.7		-----	60	-----	176	-----	.3	0	-----
Total	25.5	35.7	73.5	54.5	1,568.2	1,652	3,857	8,771	1,176.3	55.2	0.1	9.3
Mean	0.82	1.19	2.37	1.76	56.0	53.3	129	283	39.2	1.78	0.003	0.31
Ac-ft	51	71	146	108	3,110	3,280	7,650	17,400	2,330	109	0.2	18
Calendar year 1956: Max				450	Min	0	Mean	31.5	Ac-ft	22,900		
Water year 1956-57: Max				671	Min	0	Mean	47.3	Ac-ft	34,270		

Peak discharge (base, 75 cfs).--Feb. 18 (1 p.m.) 283 cfs (2.40 ft); Feb. 25 (7:30 p.m.) 196 cfs (2.12 ft); Mar. 6 (8:30 a.m.) 163 cfs (2.00 ft); Apr. 22 (time unknown) 317 cfs (2.50 ft); May 14 (time unknown) 392 cfs (2.71 ft); May 20 (time unknown) 785 cfs (3.50 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Jan. 4 to Feb. 8, Feb. 14, 15.

HUMBOLDT RIVER BASIN

Humboldt River at Battle Mountain, Nev.

Location.--Lat 40°39', long 116°56', in SE $\frac{1}{4}$ 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.--May 1896 to December 1897, March 1921 to April 1924, January 1946 to September 1957.

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.--12 years (1921-22, 1946-57), 300 cfs (217,200 acre-ft per year).

Extremes.--Maximum discharge during year, 1,580 cfs June 16 (gage height, 9.50 ft); minimum daily, 0.1 cfs Oct. 3, 4.

1921-24, 1946-57: Maximum daily discharge, 5,800 cfs 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, 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.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	34	42	66	61	644	414	340	1,260	1,100	131	9.2
2	.3	30	42	66	64	678	422	319	1,220	1,080	121	9.2
3	.1	30	42	65	68	639	430	296	1,200	*1,060	111	9.2
4	.1	30	44	63	61	572	441	288	1,170	1,040	100	9.2
5	.2	30	45	60	60	517	443	276	1,150	1,040	90	8.0
6	.2	31	43	58	59	*508	443	274	1,170	1,010	82	7.3
7	.3	32	38	57	61	542	443	253	1,230	978	74	6.0
8	.4	33	33	59	63	545	466	252	1,280	934	65	5.1
9	.5	34	35	*68	62	584	464	239	1,310	868	58	4.6
10	.5	33	36	62	62	599	460	255	1,380	796	*54	4.3
11	.6	35	*40	56	70	584	473	279	1,430	734	49	4.0
12	.6	34	53	56	74	570	475	337	1,460	673	47	3.6
13	.6	35	62	66	82	572	471	376	1,500	615	45	3.1
14	1.4	37	78	70	100	559	454	445	1,530	561	41	2.9
15	1.4	37	78	68	140	520	445	531	1,550	504	36	3.1
16	1.7	36	74	67	318	486	441	632	1,570	464	32	2.7
17	1.8	36	74	67	296	466	*418	724	1,560	*428	29	2.7
18	3.8	36	80	62	227	439	441	*818	*1,560	398	27	2.7
19	5.4	35	84	56	216	412	451	876	1,550	371	25	2.7
20	7.6	31	90	57	222	402	477	926	1,520	342	23	2.7
21	8.4	29	80	70	258	398	477	1,010	1,480	321	21	2.5
22	10	28	70	70	294	388	486	1,080	1,460	294	19	2.5
23	12	29	67	61	344	386	504	1,150	1,430	274	16	2.5
24	*13	32	66	55	410	376	531	1,170	1,410	252	15	*2.4
25	13	57	66	56	477	369	554	1,200	1,380	233	13	2.3
26	13	40	68	52	517	363	549	1,230	1,280	214	12	2.3
27	14	42	68	47	584	357	533	1,240	1,180	194	10	2.3
28	13	41	66	45	606	354	482	*1,260	1,140	180	9.6	2.7
29	13	42	65	46	-	348	443	1,230	1,130	172	9.2	3.1
30	14	42	65	50	-----	355	396	1,210	1,110	157	9.2	3.1
31	20	-----	66	55	-----	386	-----	1,230	-----	142	9.2	-----
Total	171.1	1,031	1,860	1,856	5,856	14,918	13,927	21,746	40,600	17,429	1,383.2	128.0
Mean	5.52	34.4	60.0	59.9	209	481	464	701	1,353	562	44.6	4.27
Ac-ft	339	2,040	3,690	3,680	11,620	29,590	27,620	43,130	80,530	34,570	2,740	254
Calendar year 1956: Max	1,550			Min 0.1		Mean 387		Ac-ft 281,200				
Water year 1956-57: Max	1,570			Min 0.1		Mean 331		Ac-ft 239,800				

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 20 to Dec. 9, Dec. 20 to Jan. 6, Jan. 26-31.

Reese River near Ione, Nev.

Location.--Lat 38°51', long 117°28', in sec. 4, T. 11 N., R. 40 E., on right bank $2\frac{1}{2}$ 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 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 7,350 ft (from topographic map). Aug. 5, 1951, to Sept. 8, 1955, water-stage recorder at site 200 ft upstream at different datum. Sept. 9, 1955, to Oct. 2, 1956, water-stage recorder at same site and datum.

Average discharge.--6 years, 10.3 cfs (7,460 acre-ft per year).

Extremes.--Maximum discharge during year, 80 cfs June 5 (gage height, 1.43 ft); no flow part of each day Nov. 2, Dec. 7, result of freezeup.
1951-57: Maximum discharge, 512 cfs July 27, 1956 (gage height, 4.86 ft), from rating curve extended above 45 cfs on basis of slope-area determination of peak flow; no flow part of each day Nov. 2, Dec. 7, 1956, result of freezeup.

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

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Oct. 2

Oct. 3 to Sept. 30

0.1 2.6
.2 3.0

0.4 0.3 0.8 16
.5 2.0 1.0 32
.6 5.0 1.2 53
.7 9.5 1.4 82

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	b0.9	b0.7	2.6	2.0	2.9	4.4	18	60	16	5.0	3.8
2	*2.6	b1.2	b.5	2.6	2.0	2.9	3.5	18	63	15	5.0	3.5
3	2.6	b.4	b.4	2.6	2.0	2.9	*4.7	19	66	14	4.7	3.5
4	2.9	b.4	b1.6	2.3	2.0	2.9	5.4	18	74	14	4.7	3.5
5	3.2	b1.6	b.9	2.3	1.8	3.5	8.6	21	77	13	4.7	3.2
6	2.6	b2.0	b.3	1.8	2.0	4.1	9.0	*21	72	12	4.7	2.9
7	2.9	3.2	b.3	1.8	2.0	4.4	6.8	25	65	12	4.7	2.9
8	2.9	3.5	1.1	1.6	2.0	4.7	7.7	25	60	10	4.7	2.6
9	3.8	3.5	.9	1.8	1.8	5.0	7.2	22	*58	10	4.4	2.6
10	3.2	3.2	1.1	2.0	2.0	b3.8	9.0	21	60	10	4.4	2.6
11	3.8	3.2	3.5	2.3	2.3	b3.5	9.5	22	60	*10	4.1	2.9
12	3.5	3.2	3.2	2.6	2.9	3.8	8.6	22	57	9.0	4.1	2.6
13	3.2	2.9	2.6	2.6	2.9	b2.0	9.0	22	57	8.6	4.1	2.6
14	2.9	b.4	.9	2.0	3.5	b2.0	11	23	50	8.2	4.1	2.9
15	2.9	b.3	1.4	2.0	3.5	3.2	12	30	48	7.7	4.1	2.3
16	2.9	b.5	1.8	1.8	3.5	3.5	10	33	45	7.7	3.8	2.3
17	2.6	b2.0	1.4	1.4	3.5	b2.0	9.5	31	41	7.7	3.8	2.6
18	2.6	b.4	1.6	1.1	3.2	3.5	9.5	33	33	7.2	3.8	*2.9
19	2.9	b.3	1.6	.9	*2.6	b2.6	8.6	41	*30	7.2	3.8	2.9
20	2.6	.9	1.8	1.4	2.9	2.9	9.0	39	28	7.2	4.1	2.9
21	2.9	1.8	2.0	1.6	2.6	2.6	8.2	36	28	6.8	5.0	2.9
22	2.9	2.6	1.8	2.3	2.3	b1.1	8.6	36	26	6.8	6.4	2.9
23	2.9	b1.4	1.4	2.3	2.3	b1.6	8.2	48	23	6.4	4.7	2.9
24	1.4	b1.2	1.4	2.0	2.6	b2.0	8.2	51	22	6.4	4.1	2.9
25	2.0	b.9	1.8	2.0	3.2	3.5	8.2	48	21	5.9	3.8	2.9
26	*3.5	b.9	2.6	2.0	2.9	3.2	8.2	46	20	5.9	3.8	2.6
27	2.9	b.9	2.6	2.3	2.9	3.2	9.0	48	19	5.9	3.8	2.6
28	2.9	b.9	*2.0	b2.3	2.9	3.8	12	51	17	5.4	3.8	2.6
29	1.4	b.7	2.3	1.8	-	4.1	14	54	17	5.4	3.8	4.7
30	2.9	b.7	2.6	2.3	-----	4.4	15	53	16	5.4	4.1	4.7
31	2.3	-----	2.6	2.3	-----	4.4	-----	*57	-----	5.4	4.1	-----
Total	87.2	46.0	50.7	62.7	72.1	100.0	262.6	1,032	1,313	272.2	134.2	89.7
Mean	2.81	1.53	1.64	2.02	2.58	3.23	8.75	33.3	43.8	8.78	4.33	2.99
Ac-ft	173	91	101	124	143	198	521	2,050	2,600	540	266	178

Calendar year 1956: Max 73

Min 0.3

Mean 10.6

Ac-ft 7,720

Water year 1956-57: Max 77

Min 0.3

Mean 9.65

Ac-ft 6,980

Peak discharge (base, 130 cfs).--No peak above base.

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Humboldt River near Valmy, Nev.

Location.--Lat 40°48', long 117°04', in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 30, T. 34 N., R. 44 E., on left bank $\frac{3}{2}$ miles east of Valmy and 13 miles northwest of Battle Mountain.

Records available.--March 1950 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,440 ft (from topographic map).

Extremes.--Maximum discharge during year, 1,320 cfs June 20 (gage height, 8.10 ft); no flow Oct. 1-24.
1950-57: Maximum daily discharge, 5,800 cfs May 5, 6, 1952; no flow at times in most years.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation. Flow bypassing station at high stages not included in this record.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 10-25, Dec. 4, 5, Apr. 1-10, July 2-10, 17-22, Sept. 18-25)

0.8	0	1.7	27
.9	.5	2.0	62
1.0	1.5	2.4	135
1.1	2.8	3.0	262
1.2	4.5	5.0	643
1.3	7.0	7.0	1,060
1.5	15	8.1	1,330

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	11	43	63	55	538	387	381	1,100	984	144	12
2	0	17	42	63	60	556	403	342	1,100	966	131	11
3	0	19	40	61	63	573	411	322	*1,080	958	120	11
4	0	20	46	60	66	553	419	310	1,060	950	112	11
5	0	21	46	58	62	527	426	299	1,040	944	104	10
6	0	21	*48	56	60	494	434	288	1,010	954	93	9.8
7	0	22	46	54	60	*488	430	*280	984	924	87	9.1
8	0	22	38	52	61	509	434	266	980	*914	82	7.4
9	0	24	34	52	62	513	*449	262	1,010	890	75	5.9
10	0	26	36	54	60	533	447	256	1,060	840	69	5.4
11	0	27	39	54	60	546	424	266	1,080	788	65	5.2
12	0	29	42	54	65	546	434	303	1,120	756	*59	4.9
13	0	30	48	55	70	540	434	340	1,150	684	56	4.3
14	0	30	52	*56	90	538	430	360	1,190	630	52	3.9
15	0	30	60	56	120	531	417	415	1,230	579	48	3.7
16	0	32	68	58	160	507	413	469	1,260	535	43	3.7
17	0	34	70	58	250	478	403	525	1,280	*490	40	3.0
18	0	34	70	56	210	459	392	585	*1,300	453	35	3.1
19	0	33	72	54	190	432	407	630	1,310	424	32	3.2
20	0	25	75	54	180	409	419	671	1,320	396	29	3.4
21	0	26	75	56	210	403	432	715	1,310	388	26	2.6
22	0	26	65	60	250	398	434	762	1,290	343	25	2.1
23	0	24	62	58	300	388	436	804	1,280	320	22	1.5
24	*0	26	62	54	340	387	451	838	1,250	295	21	1.1
25	.1	29	62	52	379	378	471	875	1,220	272	19	*.8
26	.2	31	62	50	422	370	488	900	1,190	252	17	.8
27	.2	37	63	45	463	363	494	928	1,150	227	16	.6
28	4.3	40	62	43	511	361	486	976	1,120	210	14	.8
29	7.7	43	62	45	-	358	451	1,030	1,060	194	13	.8
30	9.4	41	63	48	-----	352	420	1,070	1,020	179	13	.8
31	10	-----	63	52	-----	360	-----	1,100	-----	161	13	-----
Total	31.9	830	1,716	1,691	4,879	14,398	12,976	17,568	34,554	17,860	1,675	143.1
Mean	1.03	27.7	55.4	54.5	174	464	433	567	1,152	576	54.0	4.77
Ac-ft	63	1,650	3,400	3,350	9,680	28,560	25,740	34,850	68,540	35,420	3,320	284

Calendar year 1956: Max 1,250 Min 0 Mean 346

Water year 1956-57: Max 1,320 Min 0 Mean 297

Ac-ft 251,400

Ac-ft 214,900

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 28 to Feb. 24; discharge estimated on basis of weather records, trend of flow, and records for other stations on Humboldt River. Stage-discharge relation affected by ice Nov. 26 to Dec. 3, Dec. 6, Dec. 15 to Jan. 27.

Humboldt River at Comus, Nev.

Location.--Lat 41°00', long 117°19', in SE $\frac{1}{4}$ 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 1957.

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.--16 years (1917-22, 1946-57), 263 cfs (190,400 acre-ft per year).

Extremes.--Maximum discharge during year, 1,540 cfs June 24 (gage height, 9.21 ft); minimum daily, 0.3 cfs Nov. 6-8, Sept. 24-29.

1917-23, 1925-26, 1946-57: Maximum discharge, 5,860 cfs May 6, 1952 (gage height, 11.52 ft); no flow during periods in 1918-20, 1954-56.

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

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
530	1921	June 24-26, 1921	3,880	10.9
550	1922	May 17, 1922	2,970	10.3
630	1926	Mar. 20, 1926	354	3.5

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

Revisions (water years).--Revised figures of discharge, in cubic feet per second, for the water years 1921-22, 1926, superseding those published in WSP 530, 550, and 630, are given herewith.

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1921		1921-Con.		1921-Con.		1921-Con.		1922-Con.	
Apr. 1	1,440	May 2	1,260	June 2	2,100	July 3	2,200	Feb. 1-15	a100
2	1,400	3	1,240	3	2,350	4	2,000	8	1,850
3	1,340	4	1,210	4	2,350	5	1,800	9	2,040
4	1,280	5	1,210	5	2,280	6	1,700	10	2,160
5	1,220	6	1,210	6	2,100	7	1,600	11	2,350
6	1,300	7	1,210	7	2,100	8	1,400	12	2,380
7	1,170	8	1,200	8	2,100	9	1,300	13	2,490
8	1,170	9	1,200	9	2,100	10	1,220	14	2,520
9	1,160	10	1,180	10	2,220	11	1,170	15	2,720
10	1,120	11	1,160	11	2,220	12	1,100	16	2,800
11	1,150	12	1,140	12	2,480	13	1,060	17	2,970
12	1,180	13	1,140	13	2,490	14	969	18	2,830
13	1,180	14	1,100	14	2,350	15	910	19	2,800
14	1,160	15	1,100	15	2,350	16	869	20	2,800
15	1,160	16	1,090	16	2,490	17	815	21	2,640
16	1,160	17	1,090	17	2,720	18	750	22	2,460
17	1,160	18	1,090	18	2,880	19	674	23	2,280
18	1,150	19	1,090	19	2,880	20	574	24	2,120
19	1,150	20	1,090	20	3,060	21	526	25	1,940
20	1,110	21	1,080	21	3,150	22	467	26	1,810
21	1,160	22	1,180	22	3,440	23	433	27	1,810
22	1,200	23	1,180	23	3,650	24	411		
23	1,240	24	1,200	24	3,880	25	389	1925	
24	1,240	25	1,200	25	3,880	26	372	Dec. 16-31	a150
25	1,270	26	1,220	26	3,880	27	346		
26	1,270	27	1,220	27	3,650	28	326	1926	
27	1,270	28	1,300	28	3,240	29	306	Jan. 1-31	a80
28	1,280	29	1,520	29	3,060	30	286	Feb. 1-15	a150
29	1,280	30	1,640	30	2,880				
30	1,280	31	1,780	July 1	2,600	1922			
May 1	1,280	June 1	1,910	July 2	2,400	Jan. 1-31	a100		

Month	Maximum	Minimum	Mean	Runoff in acre-feet
April 1921.....	1,440	1,110	1,220	72,690
May.....	1,780	1,080	1,220	74,960
June.....	3,880	1,910	2,740	163,100
July.....	2,600	277	1,010	61,980
Water year 1920-21.....	3,880	0.1	692	501,600
Calendar year 1921.....	3,880	14	700	506,900
January 1922.....	-	-	100	6,150
February.....	378	-	149	8,280
May.....	2,970	1,390	2,118	130,200
Water year 1921-22.....	2,970	-	535	367,300
Calendar year 1922.....	2,970	-	536	368,400
December 1925.....	231	-	172	10,570
January 1926.....	-	-	80	4,920
February.....	-	-	188	10,340
Calendar year 1925.....	1,180	-	298	214,500
Water year 1925-26.....	354	-	92.1	66,700

a Average for period indicated.

Humboldt River at Comus, Nev.--Continued

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.4	29			450	350	424	1,050	1,270	184	8.5
2	.4	.4	32			472	366	378	1,050	1,180	170	7.5
3	.4	.4	32			502	384	336	1,080	1,110	157	6.0
4	.4	.4	*32			522	392	294	1,050	1,050	147	5.7
5	.4	.4	b33			528	404	287	1,020	1,020	134	4.8
6	.4	.3	b30		b50	512	412	277	1,010	990	122	3.9
7	.4	.3	b26			*480	412	*266	1,000	962	112	3.3
8	.4	.3	b24			470	414	250	980	940	104	2.6
9	.4	4.9	b23			486	*416	252	972	*918	93	2.0
10	.5	9.0	b25			492	430	247	1,010	895	85	1.7
11	.5	9.5	b30			508	428	245	1,020	859	76	1.4
12	.5	11	b35			522	416	273	*1,090	818	*71	1.2
13	.5	13	39		b60	520	418	292	1,140	758	64	.9
14	.4	13	39	(*)	b80	508	418	310	1,140	694	58	.6
15	.4	16			b100	504	414	326	1,160	637	52	.5
16	.4	17		b43	b130	500	406	350	1,210	568	48	.4
17	.4	20			170	482	402	364	1,270	*532	45	.4
18	.4	19			198	458	380	414	1,330	504	40	2.1
19	.4	15			312	440	344	476	1,360	472	37	.6
20	.4	21			330	416	364	508	1,400	442	32	.4
21	.4	20			285	400	378	578	1,440	414	29	.4
22	.4	16			279	390	388	637	1,500	386	26	.4
23	.4	17	b48		275	382	396	661	1,520	360	23	.4
24	.4	16			281	376	392	686	1,530	336	21	.3
25	.4	17			316	374	400	728	1,520	312	18	*.3
26	.4	16			356	368	442	763	*1,500	290	17	.3
27	.4	16			390	360	478	792	1,460	272	15	.3
28	.4	18			420	354	474	821	1,420	252	13	.3
29	.4	20			-	352	476	918	1,420	236	12	.3
30	*.4	26			-	348	442	975	1,360	218	10	1.2
31	.4	-			-	346	-	1,010	-	202	9.5	-
Total	12.8	353.3	1,245	1,333	4,582	13,820	12,238	15,148	36,972	19,917	2,024.5	58.7
Mean	0.41	11.8	40.2	43	164	446	408	489	1,232	642	65.3	1.96
Ac-ft	25	701	2,470	2,640	9,010	27,410	24,270	30,050	73,330	39,500	4,020	116

Calendar year 1956: Max 1,200

Min 0.3

Mean 334

Ac-ft 242,600

Water year 1956-57: Max 1,530

Min 0.3

Mean 295

Ac-ft 213,500

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

Little Humboldt River near Paradise Valley, Nev.

Location.--Lat 41°25', long 117°22', in SE $\frac{1}{4}$ sec. 20, T. 41 N., R. 41 E., on right bank $3\frac{1}{2}$ miles downstream from Bullshead Ranch and $9\frac{1}{2}$ miles southeast of Paradise Valley.

Drainage area.--1,030 sq mi, approximately.

Records available.--October 1921 to June 1928 (fragmentary), October 1943 to September 1957.

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.--14 years (1943-57), 24.7 cfs (17,880 acre-ft per year).

Extremes.--Maximum discharge during year, 182 cfs May 14 (gage height, 3.11 ft); minimum daily, 5.9 cfs Jan. 31 to Feb. 10.
1921-28, 1943-57: Maximum discharge, 1,100 cfs Feb. 2, 1952 (gage height, 7.71 ft); minimum, 4.5 cfs Aug. 12, 1954.

Remarks.--Records good. Bullshead Ranch diverts water for irrigation above station. Station is above all diversions in Paradise Valley.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 19, 20)

1.4	4.4	2.0	47
1.5	8.4	2.4	101
1.6	13	3.1	181
1.8	27		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.1	*6.7	7.1	7.5	5.9	*144	107	83	115	8.4	7.1	6.3
2	7.1	6.7	7.1	7.5	5.9	111	95	98	104	8.9	7.1	6.3
3	7.1	7.1	7.1	7.5	5.9	78	78	104	89	8.9	6.7	6.3
4	6.7	6.7	7.1	7.5	5.9	65	64	114	81	9.3	6.7	6.3
5	7.1	6.7	7.1	7.1	5.9	57	81	104	77	9.3	6.7	6.3
6	7.1	6.3	*7.1	7.1	5.9	55	64	89	65	9.3	6.7	6.3
7	7.1	6.3	7.1	6.7	5.9	65	78	77	58	9.3	6.7	6.3
8	7.1	6.7	a7.1	6.7	5.9	77	104	84	55	9.3	6.7	6.3
9	7.5	6.3	a6.9	6.7	5.9	122	86	*101	54	*9.3	6.7	6.3
10	7.5	6.3	a6.7	6.7	5.9	131	77	132	58	8.9	6.7	6.3
11	7.5	6.7	a7.0	6.7	7.1	112	*81	144	57	9.3	6.7	6.3
12	7.5	6.7	a8.0	6.7	7.1	81	92	158	54	8.4	*6.7	6.3
13	7.1	7.1	a9.8	7.1	7.1	67	93	163	45	8.0	6.7	6.3
14	7.1	7.5	a9.2	7.1	8.9	56	91	177	39	7.5	6.3	6.3
15	7.1	7.1	a9.5	7.1	8.0	47	78	175	36	7.5	6.3	6.3
16	7.1	7.5	a9.5	*7.1	8.4	46	84	166	34	7.5	6.3	6.3
17	6.3	7.5	a9.5	6.7	9.8	45	92	158	30	7.5	6.3	6.3
18	6.3	7.5	a9.4	6.7	11	41	91	141	27	7.1	6.3	6.7
19	6.3	7.5	9.3	6.7	11	35	98	148	23	7.1	6.3	6.7
20	7.1	7.1	9.3	7.5	*13	33	120	151	*19	7.1	6.3	6.7
21	6.7	7.5	8.9	6.7	18	33	136	170	17	7.1	6.3	6.3
22	6.7	7.5	8.4	6.7	25	34	126	178	14	7.1	6.3	6.3
23	6.7	7.1	8.0	6.7	31	41	124	164	12	7.1	6.3	6.3
24	6.7	6.7	7.5	6.7	47	39	109	157	11	6.7	6.3	6.3
25	6.7	6.7	7.5	6.7	71	36	92	*151	10	6.7	6.3	6.3
26	6.7	7.1	7.5	6.7	99	36	81	136	9.3	6.7	6.3	6.3
27	6.3	7.1	7.5	6.7	141	47	74	119	9.8	6.7	6.3	*6.3
28	6.3	7.1	7.5	6.7	141	78	67	109	9.3	6.7	6.3	6.3
29	6.3	7.1	7.5	6.3	-	71	66	109	8.9	7.1	6.3	6.3
30	6.7	7.1	7.5	6.3	-----	67	70	109	7.5	7.1	6.3	6.3
31	6.7	-----	7.5	5.9	-----	80	-----	114	-----	7.1	6.3	-----
Total	213.3	209.0	246.2	212.5	723.4	2,030	2,679	4,077	1,228.8	244.0	201.3	190.2
Mean	6.88	6.97	7.94	6.85	25.8	65.6	89.3	132	41.0	7.87	6.49	6.34
Ac-ft	423	415	498	421	1,430	4,030	5,310	8,090	2,440	484	399	377
Calendar year 1956: Max			146		Min 6.1		Mean 24.7		Ac-ft 17,890			
Water year 1956-57: Max			178		Min 5.9		Mean 33.6		Ac-ft 24,310			

Peak discharge (base, 35 cfs).--Feb. 27 (10 to 12 p.m.) 153 cfs (2.72 ft); Mar. 10 (6 a.m.) 141 cfs (2.64 ft); Apr. 1 (8 to 10 a.m.) 112 cfs (2.47 ft); Apr. 8 (4 to 5 p.m.) 111 cfs (2.46 ft); Apr. 21 (6 to 8 a.m.) 144 cfs (2.68 ft); May 14 (5 to 9 p.m.) 182 cfs (3.11 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of recorded range in stage, weather records, and records for nearby streams.

Martin Creek near Paradise Valley, Nev.

Location.--Lat 41°32'00", long 117°25'40", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 12, T. 42 N., R. 40 E., on left bank 0.6 mile upstream from Humboldt County Recreation Park and 7 miles northeast of Paradise Valley.

Drainage area.--172 sq mi.

Records available.--October 1921 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,700 ft (from extension of river-profile map). Prior to Oct. 22, 1946, at several sites within 400 ft of present site at different datums.

Average discharge.--35 years (1921-26, 1927-57), 29.8 cfs (21,570 acre-ft per year).

Extremes.--Maximum discharge during year, 684 cfs Feb. 25 (gage height, 4.21 ft); minimum 3.9 cfs Nov. 19.

1921-57: Maximum discharge, 9,000 cfs Jan. 21, 1943 (gage height, 11.1 ft, site and datum then in use), by slope-area determination of peak flow; minimum, 1.8 cfs Feb. 6, 1945.

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

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
610	1925	Feb. 4, 1925	550	8.60
630	1926	Mar. 4, 1926	220	6.15
650	1927	Feb. 21 or 22, 1927	2,000	12.0
705	1930	(a)	85	5.05
750	1933	Aug. 18, 1933	570	9.30
860	1938	Apr. 19, 1938	1,000	11.0
900	1940	Feb. 27, 1940	441	4.09
1040	1945	Feb. 2, 1945	1,500	5.00

a Sometime in May 1930.

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

Revisions (water years).--Revised figures of discharge, in cubic feet per second, for the water years 1940 and 1945, superseding those published in WSP 900 and 1040, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1940		1940-Con.		1940-Con.		1940-Con.		1940-Con.	
Feb. 27	198	Apr. 2	129	Apr. 15	108	Apr. 28	75	May 11	111
28	284	3	111	16	89	29	75	12	121
29	119	4	97	17	80	30	70	13	121
Mar. 23	68	5	88	18	83	May 1	69	14	111
24	74	6	78	19	92	2	83	15	105
25	96	7	76	20	97	3	97	16	97
26	109	8	79	21	92	4	98	17	91
27	185	9	73	22	91	5	88	18	84
28	118	10	71	23	91	6	82	19	79
29	116	11	70	24	89	7	78	20	75
30	118	12	75	25	87	8	80	21	70
31	240	13	87	26	89	9	87		
Apr. 1	184	14	102	27	83	10	98	1945	
								Feb. 2	720

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
February 1940.....	946	284	9	32.6	1,880
March.....	2,017	240	24	65.1	4,000
April.....	2,711	184	70	90.4	5,380
May.....	2,456	121	38	79.2	4,870
Water year 1939-40.....	10,019	284	4	27.4	19,880
Calendar year 1940.....	10,147	284	4	27.7	20,130
February 1945.....	2,087.7	720	8.1	74.6	4,140
Water year 1944-45.....	16,905.6	720	4.9	46.3	33,520
Calendar year 1945.....	17,149.8	720	4.9	47.0	34,010

Martin Creek near Paradise Valley, Nev.--Continued

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

1.1	3.0	1.4	14	2.5	148
1.2	5.6	1.6	29	3.0	262
1.3	9.4	2.0	71	2.5	416

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.6	*9.4	7.0	9.0	6.6	*47	59	146	166	23	5.3	5.3
2	5.6	9.0	7.0	9.0	6.6	50	52	152	164	21	5.3	5.3
3	5.9	9.4	7.4	9.0	7.4	42	56	113	156	19	5.3	5.3
4	5.9	9.0	8.9	8.1	8.1	44	58	106	144	18	5.3	5.3
5	5.9	9.0	8.1	6.6	8.6	70	79	101	137	16	5.6	5.3
6	5.9	9.8	*7.0	5.9	8.1	72	117	132	127	14	5.6	5.0
7	6.3	9.8	6.3	5.9	8.1	107	74	152	115	13	5.6	5.0
8	6.6	9.8	5.9	6.3	8.6	87	71	205	106	12	5.6	5.0
9	7.4	9.4	5.3	6.6	8.6	72	83	*198	100	*12	5.6	5.0
10	7.4	9.8	5.6	7.0	8.6	55	90	191	92	11	5.6	5.3
11	8.1	10	19	7.4	9.0	48	*88	183	81	11	5.6	5.3
12	7.7	10	28	7.4	9.0	45	90	236	76	9.8	*5.6	5.3
13	7.4	10	23	8.6	10	38	87	219	71	9.4	5.0	5.3
14	7.4	9.7	27	9.4	59	34	101	194	65	9.0	5.0	5.3
15	7.4	8.2	16	9.4	43	36	100	172	63	8.6	5.0	5.3
16	7.4	9.4	17	*9.4	31	35	94	154	55	8.1	5.0	5.3
17	7.0	9.4	12	6.6	32	30	88	156	48	7.7	5.0	5.3
18	7.0	8.0	13	6.6	30	32	87	181	45	7.7	5.0	5.9
19	7.4	6.5	11	7.0	36	32	83	236	45	7.4	5.0	5.9
20	7.4	6.3	9.6	7.7	*44	35	84	194	*43	7.4	*4.7	5.9
21	7.4	7.7	8.7	8.1	38	40	107	176	41	7.0	5.0	5.9
22	7.4	8.2	6.3	8.1	84	34	104	176	39	7.0	5.0	5.9
23	8.1	8.4	8.6	7.7	252	32	97	174	36	7.0	5.0	5.9
24	8.6	8.2	9.8	8.1	135	35	92	156	34	6.6	5.0	5.6
25	8.1	7.7	9.8	8.1	302	57	84	*152	32	6.6	5.0	5.6
26	9.4	7.4	8.6	8.1	125	67	78	156	31	6.3	5.0	5.6
27	11	7.5	8.1	7.7	124	50	81	164	29	6.3	5.0	*5.8
28	9.4	7.2	8.6	7.7	62	51	94	172	28	6.3	5.0	5.6
29	8.1	7.7	9.4	7.7	-	71	116	181	29	5.9	5.0	5.9
30	8.6	7.7	9.4	6.6	-----	75	137	200	26	5.9	5.3	6.6
31	17	-----	9.4	6.3	-----	67	-----	189	-----	5.6	5.3	-----
Total	239.8	259.6	340.8	237.1	1,504.3	1,590	2,631	5,317	2,224	315.6	161.3	164.8
Mean	7.74	8.65	11.0	7.65	53.7	51.3	87.7	172	74.1	10.2	5.20	5.49
Ac-ft	476	515	676	470	2,980	3,150	5,220	10,550	4,410	626	320	327

Calendar year 1956: Max 506 Min 4.9 Mean 39.5 Ac-ft 28,710
 Water year 1956-57: Max 302 Min 4.7 Mean 41.1 Ac-ft 29,720

Peak discharge (base, 100 cfs).--Feb. 14 (5 p.m.) 164 cfs (2.63 ft); Feb. 25 (4 a.m.) 684 cfs (4.21 ft); Mar. 6 (11 p.m.) 166 cfs (2.64 ft); Mar. 25 (11:30 p.m.) 118 cfs (2.37 ft); Mar. 30 (12:30 a.m.) 107 cfs (2.31 ft); Apr. 6 (3:30 a.m.) 172 cfs (2.65 ft); Apr. 15 (12:30 a.m.) 120 cfs (2.37 ft); Apr. 21 (10 to 11 p.m.) 137 cfs (2.47 ft); May 2 (1 to 3 a.m.) 189 cfs (2.71 ft); May 12 (8:15 a.m.) 262 cfs (2.99 ft); May 19 (5:45 a.m.) 287 cfs (3.07 ft); May 31 (5 p.m.) 273 cfs (3.01 ft).

* Discharge measurement made on this day.

HUMBOLDT RIVER BASIN

Humboldt River near Rose Creek, Nev.

Location.--Lat 40°52', long 118°00", in NW $\frac{1}{4}$ sec. 36, T. 35 N., R. 35 E., on right bank $\frac{5}{8}$ miles southwest of Rose Creek and $1\frac{1}{2}$ miles southwest of Winnemucca.

Records available.--April 1948 to September 1957.

Gage.--Water-stage recorder.

Average discharge.--9 years, 243 cfs (175,900 acre-ft per year).

Extremes.--Maximum discharge during year, 1,140 cfs July 1 (gage height, 5.52 ft); minimum, 23 cfs Nov. 23, result of freezeup.

1948-57: Maximum discharge, 5,810 cfs May 8, 1952 (gage height, 11.41 ft); minimum, 5.8 cfs Dec. 4, 1955, result of freezeup.

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

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 7 to Sept. 30)

1.3	28	3.0	315
1.6	58	4.0	600
2.0	112	5.5	1,130
2.5	202		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	36	39		60	303	291	247	507	*1,110	254	74
2	32	35	39		60	320	301	259	531	1,130	241	74
3	32	34	39		55	338	303	268	558	1,120	225	73
4	32	34	*39		49	353	303	277	621	1,100	215	73
5	32	33	42		47	371	301	270	667	1,090	202	70
6	32	33	40	58	50	396	303	266	674	1,080	190	69
7	32	33	39		50	407	284	*238	633	1,040	178	66
8	32	33	37		50	410	266	234	667	989	171	66
9	32	32	37		51	413	266	236	723	954	161	65
10	32	32	42		52	413	*275	190	754	908	154	64
11	32	32	46	60	54	407	303	196	793	874	*147	63
12	32	32	51	62	56	413	313	202	*768	842	143	60
13	32	32	51	64	63	415	315	212	737	814	138	60
14	32	32	54	*65	70	424	310	277	740	846	131	59
15	32	32	63	65	73	433	310	282	716	807	130	58
16	32	34	60		75	441	308	291	716	751	118	57
17	31	35	57		76	441	310	296	762	*712	106	56
18	31	37	57		87	444	313	305	790	667	102	56
19	31	35	57		102	441	313	318	807	627	97	55
20	30	33	57		117	430	320	335	814	582	96	55
21	30	35	57	64	133	413	318	350	772	546	93	58
22	31	37	56		174	396	313	374	807	492	89	59
23	32	40	58		202	374	332	413	856	447	87	56
24	31	40			215	353	332	453	905	441	84	52
25	31	40			232	328	315	474	916	418	84	50
26	32	40		60	238	313	315	486	940	396	82	49
27	32	40		54	247	320	325	513	989	377	80	*48
28	37	40		48	*273	313	275	526	1,020	335	80	49
29	39	39		45		303	263	531	1,050	282	76	48
30	*37	39		45	-----	295	245	519	1,080	273	76	47
31	36	-----		55	-----	293	-----	510	-----	268	75	-----
Total	1,004	1,059	1,596	1,843	3,011	11,715	9,041	10,350	23,313	22,318	4,105	1,789
Mean	32.3	35.3	51.5	59.5	108	378	301	334	777	720	132	59.6
Ac-ft	1,990	2,100	3,170	3,660	5,970	23,240	17,930	20,530	46,240	44,270	8,140	3,550
Calendar year 1956: Max			940	Min	15	Mean	278	Ac-ft	202,000			
Water year 1956-57: Max			1,130	Min	30	Mean	250	Ac-ft	180,800			

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 19 to Dec. 3, Dec. 6-11, Dec. 21 to Feb. 9.

Humboldt-Lovelock Irrigation, Light & Power Co.'s feeder canal near Imlay, Nev.

Location.--Lat 40°40', long 118°12', in NE $\frac{1}{4}$ 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,170 ft (from topographic map).

Extremes.--No flow for entire year.

1946-57: Maximum discharge, 117 cfs Apr. 25, 1952 (gage height, 3.69 ft); no flow for long periods.

Remarks.--No flow since June 16, 1953. This canal diverts water from Humboldt River in NW $\frac{1}{4}$ sec. 29, T. 33 N., R. 35 E., for storage in Taylor-Pitt Reservoir near Humboldt. During irrigation season, water is released 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.

Humboldt River near Imlay, Nev.

Location.--Lat 40°41'30", long 118°12'10", in SE $\frac{1}{4}$ sec. 25, T. 33 N., R. 33 E., on right bank 1 mile upstream from old Calahan Dam and 4 miles northwest of Imlay.

Drainage area.--13,500 sq mi, approximately.

Records available.--June 1935 to September 1941, April 1945 to September 1957.

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. Apr. 28, 1945, to Aug. 20, 1947, at present site at datum 1 ft higher.

Average discharge.--18 years, 166 cfs (120,200 acre-ft per year).

Extremes.--Maximum discharge during year, 1,040 cfs July 5 (gage height, 7.08 ft); minimum, 30 cfs Oct. 6.
1935-41, 1945-57: Maximum discharge, 6,080 cfs May 9, 1952 (gage height, 12.15 ft); no flow at times in many years.

Remarks.--Records good except 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. No diversion into Pitt-Taylor Reservoir this water year. Flow affected by many other diversions above station for irrigation.

Rating table, water year 1956-57, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 2-9, June 25 to July 1, July 9-13, Sept. 23-30)

1.2	27	4.0	396
1.6	57	5.0	583
2.0	97	6.0	780
3.0	223	7.2	1,050

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	39	42		55	264	292	245	524	970	291	70
2	32	38	42		54	298	294	245	524	1,000	279	69
3	32	38	42		50	315	296	255	543	1,030	265	66
4	32	38	43		46	342	296	265	566	1,030	249	64
5	31	37	45		46	*364	*296	269	602	1,030	234	63
6	31	36	43	54	47	383	292	265	623	1,030	222	60
7	32	36	41		48	396	292	262	642	1,020	211	60
8	34	36	40		48	409	274	*250	*617	1,010	197	58
9	35	36	44		48	414	257	239	646	968	187	56
10	34	36	47		50	416	253	237	696	935	179	55
11	35	36	*52	55	52	414	260	207	718	896	168	53
12	35	35	53	57	54	409	286	216	746	864	160	53
13	33	36	53	58	58	414	286	217	738	864	152	*51
14	33	36	54	59	60	419	299	220	720	828	146	50
15	33	34	56	(*)	65	423	291	269	716	830	140	49
16	33	36	58		68	432	286	282	702	810	*135	48
17	33	36	62		72	436	282	286	704	762	124	48
18	33	37	58		75	436	287	294	740	726	114	48
19	33	36	54		82	437	292	317	760	*686	105	48
20	33	35	53	60	*93	434	296	331	776	650	99	48
21	32	38	52		108	428	311	353	788	604	95	48
22	32	41	52		126	416	304	367	770	570	93	48
23	33	43	53		164	396	296	387	784	522	89	50
24	*33	43	54		195	374	311	419	814	482	85	48
25	33	43			210	353	315	450	846	471	85	46
26	33	43		52	226	324	299	471	864	454	81	44
27	35	43		47	234	313	301	482	880	434	80	44
28	35	43	56	45	239	319	310	488	*916	410	77	43
29	36	42		44	-	313	269	518	947	365	76	44
30	40	42		44	-----	304	255	541	954	311	75	44
31	39	-----		48	-----	299	-----	530	-----	298	73	-----
Total	1,041	1,148	1,585	1,709	2,673	11,694	8,698	10,177	21,866	22,860	4,564	1,576
Mean	33.6	38.3	51.1	55.1	95.5	377	290	328	729	737	147	52.5
Ac-ft	2,060	2,280	3,140	3,390	5,300	23,190	17,230	20,190	43,370	45,340	9,050	3,130

Calendar year 1956: Max 878 Min 18 Mean 274 Ac-ft 198,800
Water year 1956-57: Max 1,030 Min 31 Mean 245 Ac-ft 177,700

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 19 to Feb. 17.

Rye Patch Reservoir near Rye Patch, Nev.

Location--Lat 40°28'15", long 118°18'20", in NE 1/4 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 1957.

Gage--Mercury indicating gage. Datum of gage is at mean sea level (Southern Pacific Railroad Co. datum).

Extremes--Maximum contents during year, 76,990 acre-ft July 23-26 (elevation, 4,121.70 ft); minimum, 29,030 acre-ft Oct. 16, 17 (elevation, 4,111.65 ft).
1936-57: Maximum contents, 196,900 acre-ft Apr. 9, 1946 (elevation, 4,134.62 ft); no contents Aug. 7-11, 1955.

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 trashrack 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.

Capacity table, water year 1956-57 (elevation, in feet, and usable contents, in acre-feet)

4,110	24,540	4,120	65,420
4,115	39,800	4,125	102,300

Total contents, in acre-feet, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	31,100	30,090	31,560	34,380	37,890	43,070	63,870	62,310	51,450	69,410	76,280	62,620
2	30,940	30,090	31,710	34,550	38,070	43,460	64,370	62,000	51,610	69,740	76,280	62,310
3	30,790	30,090	31,710	34,710	38,070	43,880	64,800	60,760	51,610	70,070	75,790	61,690
4	30,640	30,090	31,710	34,610	38,240	44,560	65,110	60,140	51,760	71,070	75,090	61,380
5	30,550	30,090	31,880	34,870	38,240	45,470	65,560	58,540	51,970	71,400	75,230	60,450
6	30,490	30,090	32,010	34,940	38,410	45,930	66,290	58,050	51,870	71,730	75,230	59,830
7	30,400	30,090	32,010	35,030	38,410	46,610	65,760	57,190	52,130	71,730	75,230	58,910
8	29,890	30,090	32,100	35,200	38,590	47,520	65,890	56,210	52,290	72,560	74,880	58,630
9	29,890	30,090	32,170	35,360	38,590	48,200	66,420	55,000	52,500	73,470	74,880	58,050
10	29,740	30,090	32,170	35,460	38,690	48,360	66,420	54,020	52,920	73,890	74,880	57,190
11	29,740	30,090	32,290	35,520	38,760	48,830	66,620	53,230	53,180	74,170	74,880	56,030
12	29,660	30,120	32,470	35,620	38,930	50,040	66,220	52,650	54,020	74,310	74,880	55,170
13	29,320	30,120	32,620	35,850	39,100	51,190	66,090	52,130	55,170	74,530	74,880	54,880
14	29,170	30,790	32,780	36,010	39,280	51,610	64,800	51,610	55,460	74,530	74,530	54,020
15	29,060	30,790	32,870	36,170	39,450	52,390	65,420	51,080	56,320	75,020	74,170	53,180
16	29,030	30,790	32,870	36,240	39,620	53,230	65,420	50,820	57,470	75,580	73,820	52,920
17	29,050	30,790	32,830	36,340	39,800	53,900	65,110	50,610	58,170	76,280	73,470	52,390
18	29,170	30,790	33,080	36,440	39,980	54,710	64,620	50,300	58,310	76,630	72,770	52,390
19	29,320	30,940	33,240	36,610	40,070	55,750	64,490	50,040	59,830	76,630	71,400	52,390
20	29,320	30,940	33,410	36,880	40,180	56,320	64,490	49,770	61,070	76,630	70,740	52,390
21	29,400	30,940	33,570	36,860	40,380	57,470	64,180	49,250	61,690	76,630	69,740	52,650
22	29,460	30,940	33,630	36,930	40,380	57,760	64,490	49,250	62,620	76,630	68,740	52,650
23	29,460	31,040	33,730	37,030	39,280	58,340	64,060	49,770	63,870	76,990	68,210	52,650
24	29,460	31,040	33,730	37,200	40,380	58,910	63,870	49,510	64,490	76,990	67,420	52,650
25	29,460	31,100	33,730	37,270	41,150	59,830	63,870	49,770	65,110	76,990	66,750	52,650
26	29,460	31,100	33,800	37,380	41,720	60,570	63,560	50,040	66,220	76,990	66,090	52,650
27	29,600	31,250	33,900	37,550	42,110	61,070	63,560	50,560	67,420	76,630	65,110	52,760
28	29,600	31,250	33,960	37,720	42,880	61,570	63,560	50,930	68,410	76,630	64,800	52,760
29	29,740	31,400	34,060	37,790		62,060	63,250	50,820	68,740	76,630	64,490	52,760
30	29,890	31,400	34,220	37,890		62,620	62,620	50,820	69,080	76,490	63,870	52,760
31	30,090		34,290	37,890		63,060		51,140		76,280	62,940	
(†)	12.02	12.45	13.37	14.45	15.60	19.62	19.55	17.56	20.55	21.60	19.60	17.87
(*)	-1.100	+1.310	+2.890	+3.600	+4.990	+20.180	-440	-11,480	+17,940	+7,200	-13,340	-10,180

Calendar year 1956..... * +30,650

Water year 1956-57..... * +21,570

† Elevation, in feet, at end of month.

* Change in contents, in acre-feet.

Note.--Add 4,100 feet to obtain elevation above mean sea level.

Humboldt River near Rye Patch, Nev.

Location.--Lat 40°27'33", long 118°18'30", in NE $\frac{1}{4}$ sec. 18, T. 30 N., R. 33 E., on left bank 1,000 ft downstream from Rye Patch Dam and 1 $\frac{1}{2}$ 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 1957. 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.--43 years (1899-1909, 1910-16, 1917-22, 1930-32, 1935-41, 1943-57), 204 cfs (147,700 acre-ft per year).

Extremes.--Maximum discharge during year, 797 cfs May 7 (gage height, 3.92 ft); minimum not determined, occurred during period of no gage-height record. 1896-1922, 1924-32, 1935-41, 1943-57: Maximum discharge, 4,720 cfs May 11, 12, 1952 (gage height, 10.26 ft); no flow at times in some years.

Remarks.--Records good except those for periods of doubtful or no gage-height record, which are poor. Flow completely regulated by Rye Patch Reservoir (see preceding page). Many diversions above station for irrigation. Records of chemical analyses and water temperatures for the water year 1957 are given in WSP 1523.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 14 to Sept. 8)

0.6	1.3	1.2	35
.7	3.0	1.5	77
.8	5.9	2.0	179
.9	11	3.0	436
1.0	17	4.0	839

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	90							486	433	555	279	235
2	101							526	433	599	282	235
3	99						a0.7	562	410	647	276	235
4	101							580	385	643	164	264
5	99					(**)	(**)	639	366	643	115	360
6	95						111	713	385	639	115	357
7	66						164	751	396	631	126	344
8	23						166	*781	*399	627	103	355
9	36						200	736	371	639	88	363
10	81						214	695	317	664	115	385
11	99		(*)				264	596	279	639	138	404
12	134						302	519	254	639	164	401
13	136						304	452	235	639	209	*357
14	99						320	413	*186	533	237	322
15	54						325	416	161	458	279	246
16	al.0	a0.8	a0.7	a0.6	a0.6	a0.6	344	*387	130	458	*344	2.4
17							352	404	155	477	366	
18							352	436	149	489	424	
19							374	464	320	*473	424	
20						(**)	387	458	250	455	404	
21							376	396	207	433	401	
22							312	347	209	390	390	
23							312	312	259	390	390	a.1
24	**a.6						344	279	292	371	360	
25							363	266	294	341	330	
26							336	307	317	304	317	
27							312	385	368	304	312	
28							338	439	*439	304	309	
29							387	455	486	304	304	
30							427	424	555	294	294	
31								419		279	282	
Total	1,323.0	24.0	21.7	18.6	16.8	18.6	7,689.5	15,043	9,420	15,261	8,321	4,866.8
Mean	42.7	0.80	0.70	0.60	0.60	0.60	256	485	314	492	268	162
Ac-ft	2,820	48	43	37	33	37	15,250	29,840	18,680	30,270	16,500	9,650
Calendar year 1956: Max	752						Mean 193		Ac-ft 140,400			
Water year 1956-57: Max	781						Mean 170		Ac-ft 123,000			

* Discharge measurement made on this day.

** Field estimate made on this day.

a Doubtful or no gage-height record; discharge estimated on basis of 1 discharge measurement, engineers' notes, and trend of flow.

Humboldt River near Lovelock, Nev.

Location.--Lat 40°03', long 118°28', in NE $\frac{1}{4}$ 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, June 1950 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 3,900 ft (from topographic map). Prior to June 17, 1912, staff gage and June 17, 1912, to September 1927, water-stage recorder, at site 600 ft downstream at different datums. June 14, 1950, to Nov. 13, 1951, water-stage recorder at site 300 ft upstream at same datum.

Average discharge.--16 years (1913-16, 1918-22, 1924, 1927, 1950-57), 91.4 cfs (66,170 acre-ft per year).

Extremes.--Maximum discharge during year, 130 cfs Oct. 7; maximum gage height, 3.47 ft Sept. 18; no flow July 27 to Aug. 3.

1912-27, 1950-57: Maximum discharge, 3,540 cfs May 19, 1952 (gage height, 9.36 ft); no flow for several months in many years prior to construction of Rye Patch Dam.

Remarks.--Records fair. Flow regulated by Rye Patch Reservoir (since Feb. 20, 1936) and irrigation in Lovelock Valley.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 14 to Sept. 30)

0.9	0.2	1.4	6.6
1.0	.5	1.5	10
1.1	1.1	1.8	24
1.2	2.2	2.1	45
1.3	4.0	2.4	72

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.6	4.7	b1.5		b4.5	8.9	3.6	2.0	0.7	0.3	0	20
2	8.9	4.5	b1.4		b4.7	8.9	3.1	2.0	.6	.1	0	28
3	8.9	4.7	b1.5		b4.9	8.5	3.1	2.4	1.0	.1	0	29
4	9.2	4.5	b1.8		b5.0	8.9	3.1	5.5	3.1	.4	.4	23
5	10	3.6	2.2		b5.5	*9.6	*3.1	6.3	5.2	.6	2.2	7.2
6	9.2	3.1	b2.0		b6.0	10	3.3	3.8	6.6	4.7	4.5	3.1
7	48	3.0	b1.6		6.3	8.9	3.1	2.8	5.5	4.0	5.8	3.3
8	72	2.8	b1.6		b6.9	8.5	3.3	*8.5	*3.6	1.5	6.3	1.8
9	30	2.4	b1.8		b6.9	7.9	3.6	9.6	3.6	.5	2.0	1.2
10	30	2.4	b2.3		6.9	7.5	6.9	22	5.0	1.9	1.3	1.0
11	16	2.2	*b2.7	b3	6.9	7.5	12	13	1.4	1.1	6.6	1.3
12	13	2.0			7.2	5.2	4.5	4.7	1.6	1.4	6.6	1.6
13	16	2.2			8.2	1.5	8.3	4.0	6.0	1.4	6.3	*2.0
14	6.3	2.4			8.5	2.2	2.8	1.8	1.3	.7	6.0	6.0
15	25	b2.3		(*)	7.5	3.3	4.8	1.0	1.3	2.2	6.3	21
16	15	2.2			7.9	3.1	3.6	1.0	4.8	5.8	*6.6	14
17	8.9	2.0			8.2	3.0	2.6	1.8	12	3.1	1.9	20
18	6.9	1.9			7.9	3.0	2.4	1.0	1.3	7.9	.6	68
19	6.9	b1.6			8.2	3.0	2.3	1.0	.9	*12	.8	33
20	6.6	b1.4			*8.2	3.0	2.8	.9	.7	4.7	.8	23
21	5.5	b1.9	b2.8		8.5	3.0	3.3	1.2	.7	7.5	1.6	23
22	5.2	b2.4			10	3.1	4.5	13	.4	10	4.7	24
23	4.5	b2.3			10	3.3	2.3	9.2	.4	7.8	3.8	23
24	*3.8	b2.2			9.6	3.1	5.5	1.3	.3	.3	3.6	13
25	3.3	b1.8			10	3.1	5.2	.7	.2	.3	4.5	20
26	2.6	b1.6		b3.5	9.6	3.3	4.0	.7	.2	.2	6.3	22
27	1.9	b1.5			8.9	3.3	3.0	.9	.2	0	6.9	22
28	1.6	b1.5			8.9	3.3	4.9	1.0	**2	0	24	23
29	1.3	b1.5				3.6	2.6	.9	.5	0	15	24
30	2.3	b1.5				3.8	2.6	.6	.5	0	13	26
31	5.0					3.8		.7		0	7.2	
Total	393.4	74.1	76.4	98.5	211.8	159.1	120.2	124.3	69.8	80.5	155.8	527.5
Mean	12.7	2.47	2.46	3.18	7.56	5.13	4.01	4.01	2.33	2.60	5.03	17.6
Ac-ft	780	147	152	195	420	316	238	247	138	180	309	1,050

Calendar year 1956: Max 72 Min 0.4 Mean 6.17 Ac-ft 4,480
Water year 1956-57: Max 72 Min 0 Mean 5.73 Ac-ft 4,150

* Discharge measurement made on this day.

** Field estimate made on this day.

b Stage-discharge relation affected by ice.

Pyramid Lake near Nixon, Nev.

Location.--Lat 39°50'30", long 119°58'00", in SE¹/₄ sec. 24, T. 33 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 1957.

Gage.--Bench mark N-21 of U. S. Coast and Geodetic Survey at elevation of 3,940.29 ft above mean sea level, datum of 1929, supplementary adjustment of 1956. From January 1934 to September 1955, elevations were determined from bench mark N-21 using elevation of 3,940.04 ft, datum of 1929 (to convert these records to supplementary adjustment of 1956, add 0.25 ft). Prior to January 1934, elevations were determined from bench mark No. 1 of General Land Office using elevation of 3,882.26 ft, adjustment of 1912 (to convert these records to supplementary adjustment of 1956, add 0.81 ft).

Extremes.--1926-57: Maximum elevation observed, 3,848.75 ft, June 1926; minimum observed, 3,801.68 ft Nov. 15, 1950.

Revisions (water years).--WSP 880: 1934-38 (bench mark). WSP 1090: 1926(M).

Elevation, in feet, October 1956 to September 1957

Oct. 8.....	3,804.25	June 12.....	3,803.53
Jan. 11.....	3,804.33	July 31.....	3,802.86
Apr. 9.....	3,803.46	Aug. 27.....	3,802.28

Truckee River near Truckee, Calif.

Location.--Lat 39°17'30", long 120°12'30", in SW¹/₄ 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.--565 sq mi.

Records available.--December 1944 to September 1957.

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

Average discharge.--12 years (1945-57), 357 cfs (256,500 acre-ft per year).

Extremes.--Maximum discharge during year, 2,040 cfs June 5 (gage height, 4.24 ft); minimum, 54 cfs Aug. 4.

1944-57: Maximum discharge, 7,760 cfs Dec. 23, 1955 (gage height, 7.92 ft), from rating curve extended above 1,500 cfs on basis of slope-area determinations at gage heights 7.62 and 7.92 ft; minimum, 11 cfs Jan. 27, 1948.

Remarks.--Records excellent. Flow regulated by Lake Tahoe (operating capacity, about 730,000 acre-ft). Records of chemical analyses for the water year 1957 are given in WSP 1523.

Revisions.--WSP 1394: Drainage area.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

1.0	54	2.0	338
1.2	92	3.0	990
1.5	164	4.0	1,620

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	382	316	362	272	268	151	156	284	485	154	68	467
2	329	316	348	268	268	148	143	295	448	*143	67	457
3	325	312	362	268	268	136	146	243	645	133	65	467
4	325	312	367	268	268	131	167	261	1,130	128	63	461
5	325	312	372	268	268	240	195	299	1,550	124	65	467
6	325	316	372	265	265	217	220	334	1,670	174	67	473
7	329	316	367	265	250	201	192	329	1,370	710	67	473
8	329	321	367	268	226	392	195	299	1,100	710	65	473
9	329	263	362	272	223	745	214	257	773	498	65	473
10	334	284	*362	268	223	724	226	243	550	272	65	473
11	353	264	398	265	233	710	223	230	504	265	63	473
12	329	264	409	272	233	710	211	217	387	197	63	473
13	329	312	367	284	257	698	214	214	*299	96	61	473
14	329	308	321	276	295	683	285	201	261	92	61	473
15	329	295	295	276	280	745	233	195	237	90	61	473
16	329	267	291	272	247	927	206	223	223	86	61	467
17	329	276	267	272	198	941	186	250	217	64	59	473
18	343	272	284	268	195	1,170	170	748	226	62	59	473
19	392	267	284	272	198	*1,310	156	601	233	82	59	431
20	392	338	254	284	192	1,310	146	362	233	80	58	392
21	392	358	284	272	167	1,310	141	299	217	76	59	367
22	367	367	280	*276	124	1,300	141	*284	189	78	*58	397
23	334	367	276	272	143	1,280	154	250	184	76	238	367
24	*334	367	276	272	195	1,300	167	250	284	76	492	367
25	338	367	276	272	295	1,310	178	267	*641	74	492	398
26	358	367	276	272	*230	1,320	*186	343	1,140	74	467	398
27	334	367	276	272	195	1,350	208	414	703	74	448	398
28	316	367	272	268	167	1,310	237	414	372	70	454	398
29	312	367	272	272	-	1,090	247	398	184	*70	461	398
30	334	362	272	272	-----	169	265	414	164	68	467	336
31	321	-----	272	268	-----	178	-----	426	-----	68	467	-----
Total	10,526	9,662	9,907	8,411	6,371	24,338	5,820	9,664	16,819	5,004	5,365	13,169
Mean	340	322	320	271	228	765	194	318	561	161	173	439
Ac-ft	20,880	19,160	19,650	16,680	12,640	48,270	11,540	19,560	33,360	9,930	10,640	26,120

Calendar year 1956: Max 1,450 Min 80 Mean 395 Ac-ft 286,500

Calendar year 1956-57: Max 1,670 Min 58 Mean 343 Ac-ft 248,400

* Discharge measurement made on this day.

Prosser Creek near Boca, Calif.

Location.--Lat 39°22', long 120°07', in NW¹ 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 1957.

Gage.--Water-stage recorder. Datum of gage is 5,572.66 ft above mean sea level (levels by Bureau of Reclamation). June 1951 to September 1956 at datum 2.00 ft higher. April 1889 to November 1890 and October 1902 to June 1903, staff gages at same site at different datums.

Average discharge.--6 years, 98.4 cfs (71,240 acre-ft per year).

Extremes.--Maximum discharge during year, 1,300 cfs May 18 (gage height, 5.29 ft); minimum, 6.2 cfs Sept. 8.
1951-57: Maximum discharge, 4,560 cfs Dec. 23, 1955 (gage height, 10.13 ft, present datum), from rating curve extended above 890 cfs on basis of slope-area determination of peak flow; minimum, 4.0 cfs Sept. 7, 1955.
Flood of November 20, 1950, reached a stage of 11.0 ft (present datum), from flood-marks (discharge, 4,320 cfs by slope-area determination).

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

Rating table, water year 1956-57, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 6-16)

1.1	3	2.5	144
1.3	11	3.0	247
1.5	22	3.5	395
1.7	37	4.0	610
2.0	69		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	35	20	24	25	121	*119	212	321	96	14	8.6
2	14	32	20	23	25	119	105	228	318	89	14	8.2
3	14	29	20	22	24	102	114	164	*286	78	13	7.8
4	17	28	19	22	23	99	137	181	292	74	12	7.8
5	*16	30	18	22	23	223	168	221	312	72	12	7.8
6	14	30	16	22	22	197	189	240	262	67	12	7.0
7	17	*31	18	22	23	170	151	237	228	65	12	7.0
8	23	31	18	21	23	146	157	203	214	*59	*12	6.6
9	17	35	25	18	22	142	177	*186	195	55	12	6.6
10	17	39	30	20	22	111	197	162	160	52	11	7.0
11	34	38	33	21	25	100	191	160	157	47	11	7.0
12	25	35	35	23	28	90	173	142	164	44	11	7.4
13	21	33	39	23	32	89	170	146	166	42	11	*7.4
14	20	30	40	23	37	85	242	139	141	40	10	7.4
15	18	29	40	23	42	83	179	127	127	39	9.8	7.4
16	17	28	38	23	45	76	151	153	*116	34	9.0	7.8
17	17	26	36	24	44	72	132	185	111	32	9.0	11
18	17	26	35	24	43	70	122	526	119	31	9.0	12
19	18	21	33	24	44	73	108	530	130	30	8.6	11
20	17	20	33	24	43	76	104	250	124	28	8.6	10
21	16	24	32	24	42	*74	95	197	122	26	8.6	9.8
22	16	25	32	26	42	62	98	191	121	25	8.2	9.4
23	18	25	32	*27	42	62	111	170	117	24	8.2	9.4
24	22	23	31	27	a120	67	130	166	124	23	8.2	9.0
25	23	23	30	27	*289	76	141	199	124	21	7.8	9.0
26	40	23	28	26	240	81	146	242	121	20	7.8	9.0
27	54	21	27	26	193	95	166	283	116	20	7.4	9.0
28	31	20	26	26	141	129	193	275	121	19	7.8	10
29	27	20	26	26	-----	173	205	254	116	18	8.2	11
30	42	20	26	25	-----	149	199	294	102	17	8.2	12
31	37	-----	25	25	-----	142	-----	500	-----	16	8.6	-----
Total	693	826	879	733	1,724	3,354	4,570	6,943	5,127	1,301	310.0	260.4
Mean	22.4	27.5	28.4	23.6	61.6	108	152	224	171	42.0	10.0	8.68
Ac-ft	1,370	1,640	1,740	1,450	3,420	6,650	9,060	13,770	10,170	2,580	615	516

Calendar year 1956: Max 705 Min 13 Mean 126 Ac-ft 91,620
Water year 1956-57: Max 530 Min 6.6 Mean 73.2 Ac-ft 52,980

Peak discharge (base, 300 cfs).--Feb. 25 (time unknown) about 360 cfs; May 5 (11:30 p.m.) 300 cfs (5.20 ft); May 18 (10:30 p.m.) 1,300 cfs (5.29 ft); June 2 (12:30 a.m.) 430 cfs (3.60 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. 19 to Feb. 23 (no gage-height record Feb. 3-23; discharge estimated on basis of 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 $7\frac{1}{2}$ miles northwest of Hobart Mills.

Drainage area.--33 sq mi, approximately.

Records available.--December 1946 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 6,330 ft (from topographic map).

Average discharge.--10 years (1947-57), 93.6 cfs (67,760 acre-ft per year).

Extremes.--Maximum discharge during year, 1,570 cfs May 18 (gage height, 5.23 ft); minimum, 2.5 cfs Sept. 3, 4.

1946-57: 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 table, water year 1956-57, except periods of ice effect, or indefinite stage-discharge relation (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 12 to Sept. 27)

0.6	2.0	2.0	100
.7	3.6	2.5	196
.8	5.8	3.0	320
1.0	12.5	3.5	480
1.3	28	4.0	700
1.6	53	4.5	970

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.0	24	12	b13	b17	64	73	e307	610	49	3.1	3.4
2	8.4	*23	12	b13	b17	61	67	e320	630	37	3.1	3.4
3	8.7	20	12	b12	b17	59	72	e261	560	25	3.1	3.1
4	9.0	20	11	*b13	b16	54	86	e278	552	20	3.8	3.1
5	9.4	20	11	b12	b16	80	102	e339	588	17	4.3	4.5
6	9.0	20	b6.8	b12	b16	90	116	e396	500	15	4.0	4.5
7	10	20	b6.8	b13	15	86	108	e399	396	12	3.8	4.0
8	14	20	b7.4	b13	17	76	123	*e350	361	*9.7	*4.0	4.0
9	11	22	b10	b12	17	79	146	*281	315	8.0	3.4	3.8
10	12	23	b12	b14	15	68	175	265	276	7.4	3.6	3.8
11	31	24	b18	b14	16	64	187	256	263	6.8	3.4	3.8
12	18	23	b20	b14	17	50	182	237	266	6.1	3.4	4.0
13	15	22	b20	b15	19	61	175	230	261	5.8	3.3	*4.5
14	13	18	b20	b15	24	58	227	215	218	5.6	4.0	4.0
15	12	18	b25	b15	29	53	178	201	178	5.4	3.3	4.0
16	11	18	b23	b15	34	50	156	251	*150	4.9	3.4	3.8
17	11	18	b22	b15	32	46	139	297	126	4.9	3.4	5.1
18	11	18	b20	b16	31	44	119	933	130	4.9	3.4	5.6
19	11	12	b19	b16	32	*43	105	970	139	4.5	3.4	5.1
20	11	14	*b18	b16	29	42	99	428	133	4.0	3.4	4.0
21	10	14	b18	b16	28	44	94	317	124	3.8	3.0	4.7
22	10	13	b18	*b16	28	42	100	294	119	3.8	3.0	4.7
23	11	13	18	b15	29	39	113	261	119	3.6	3.3	5.1
24	11	13	17	b15	48	40	128	265	114	3.6	3.3	4.3
25	14	12	16	b15	105	42	144	310	108	3.4	3.4	4.0
26	31	12	15	b16	*106	45	*162	387	100	3.4	4.5	4.0
27	26	*12	14	b16	92	50	e194	476	92	3.4	4.5	4.5
28	18	12	14	b16	74	71	e237	488	92	3.3	3.4	6.8
29	16	12	14	b16	-	90	e261	472	79	3.3	3.3	6.8
30	17	12	13	b16	-----	85	e273	508	64	3.0	3.4	8.7
31	20	-----	13	b17	-----	80	-----	*504	-----	3.1	3.4	-----
Total	427.5	522	476.0	452	936	1,856	4,341	11,490	7,663	290.7	109.1	136.0
Mean	13.8	17.4	15.4	14.6	33.4	59.9	145	371	255	9.38	3.52	4.53
Ac-ft	848	1,040	944	897	1,860	3,680	8,610	22,790	15,200	577	216	270
Calendar year 1956: Max		1,010			3.0	Mean	126	Ac-ft	91,770			
Water year 1956-57: Max		970			3.0	Mean	78.6	Ac-ft	56,930			

Peak discharge (base, 500 cfs).--May 18 (8 p.m.) 1,570 cfs (5.23 ft); June 2 (12:30 a.m.) 770 cfs (4.10 ft).

* Discharge measurement made on this day.

b Stage-discharge relation affected by ice.

e Stage-discharge relation indefinite; discharge estimated on basis of partly estimated back-water adjustments for obstruction in channel.

Sagehen Creek near Truckee, Calif.

Location.--Lat 39°25'50", long 120°14'10", in NE 1/4 sec. 7, T. 18 N., R. 16 E., on left bank 1.5 miles upstream from bridge on State Highway 89 and 7.5 miles north of Truckee.

Drainage area.--11.1 sq mi.

Records available.--October 1953 to September 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 6,400 ft (from topographic map). Prior to Dec. 2, 1953, staff gage at site 100 ft upstream at different datum.

Extremes.--Maximum discharge during year, 212 cfs May 18 (gage height, 3.64 ft), from rating curve extended above 70 cfs on basis of slope-area determination at gage height 4.28 ft; minimum, 1.7 cfs Aug. 20.

1953-57: Maximum discharge, 495 cfs Dec. 23, 1955 (gage height, 4.28 ft), from rating curve extended above 70 cfs on basis of slope-area determination of peak flow; minimum, 1.3 cfs Aug. 24, 1954.

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

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

1.4	1.3	2.1	17
1.5	2.0	2.3	28
1.6	2.9	2.6	48
1.7	4.5	2.9	76
1.9	9.5	3.3	134

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	4.5	2.9	2.8	3.0	8.9	12	39	34	6.8	2.2	1.9
2	2.5	4.3	2.8	2.9	3.0	8.9	12	*41	33	6.1	2.2	1.9
3	2.5	4.1	2.8	2.9	3.2	8.4	14	36	32	5.6	2.2	1.9
4	2.8	4.3	2.9	2.8	3.2	7.6	19	38	32	5.4	2.2	1.9
5	2.8	4.5	3.9	2.8	3.0	16	24	40	33	4.9	2.2	1.9
6	2.6	4.7	4.1	2.8	3.0	14	25	41	30	4.9	2.2	1.9
7	4.5	4.9	3.6	2.8	*3.0	13	22	39	28	4.7	2.2	1.9
8	3.6	5.1	3.4	2.7	3.0	12	24	35	27	4.3	2.2	1.9
9	2.9	5.6	3.3	3.3	3.0	11	28	32	25	3.9	2.1	1.9
10	3.8	5.8	3.8	3.2	3.2	9.8	30	32	23	3.8	2.1	1.9
11	6.8	5.4	7.1	2.9	3.8	8.9	28	30	21	3.6	2.1	1.9
12	3.6	4.9	6.6	2.9	3.9	8.1	28	27	*20	3.4	2.2	1.9
13	3.2	*4.5	6.1	3.4	6.1	7.8	30	28	18	3.4	*2.2	1.9
14	2.9	3.8	4.9	3.2	6.6	8.1	39	27	17	3.3	2.2	1.9
15	2.9	3.4	4.5	3.0	5.6	7.1	31	25	16	3.2	2.0	1.9
16	2.8	3.4	3.9	3.2	5.1	6.6	26	26	14	3.0	1.9	1.9
17	2.7	3.4	3.8	3.2	5.1	6.3	23	27	13	3.0	1.9	2.2
18	2.8	3.3	*3.6	3.2	5.1	6.1	21	97	12	2.9	1.9	2.2
19	2.9	2.9	3.6	3.2	4.9	5.8	19	63	12	2.8	1.9	2.1
20	2.8	2.9	3.4	3.2	4.7	6.1	18	46	11	2.7	1.9	2.0
21	2.9	2.8	3.2	3.3	4.3	*6.1	18	40	11	2.7	1.9	2.0
22	2.8	2.9	3.2	3.6	4.3	6.3	21	37	10	2.8	1.9	1.9
23	3.2	2.9	3.2	3.2	5.8	6.3	24	34	9.8	2.8	1.9	1.9
24	3.3	2.9	3.0	3.2	14	6.1	27	33	9.2	2.6	1.9	1.9
25	4.5	2.9	2.9	3.2	21	6.8	28	33	8.7	2.5	1.9	1.9
26	10	2.9	2.9	3.2	18	7.6	30	34	8.4	2.5	1.9	1.9
27	6.6	2.9	2.9	3.2	14	9.5	33	34	8.1	2.5	1.8	2.0
28	4.5	2.8	2.8	3.2	10	13	36	34	7.8	2.4	1.9	2.2
29	3.9	2.8	2.8	3.2	--	16	36	35	7.6	2.3	1.9	2.2
30	5.1	2.9	2.9	2.9	--	14	36	36	7.1	2.2	1.9	2.2
31	5.4	--	2.9	3.0	--	13	--	33	--	2.2	1.9	--
Total	116.0	114.4	113.7	95.6	172.9	284.5	762	1,152	538.7	109.2	62.8	59.0
Mean	3.74	3.81	3.67	3.08	6.18	9.18	25.4	37.2	18.0	3.52	2.03	1.97
Ac-ft	230	227	226	190	343	564	1,510	2,280	1,070	217	125	117

Calendar year 1956: Max 124 Min 2.3 Mean 18.8 Ac-ft 13,630
 Water year 1956-57: Max 97 Min 1.8 Mean 9.81 Ac-ft 7,099

Peak discharge (base, 50 cfs).--May 18 (4:30 p.m.) 212 cfs (3.64 ft).

* Discharge measurement made on this day.

Dog Creek near Verdi, Nev.

Location.--Lat 39°33'55", long 120°01'25", in SW¼ sec. 30, T. 20 N., R. 18 E., on left bank 3½ miles upstream from mouth and 4 miles northwest of Verdi.

Drainage area.--16.2 sq mi.

Records available.--October 1956 to September 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,660 ft (from topographic map).

Extremes.--Maximum discharge during year, 157 cfs Feb. 24 (gage height, 1.58 ft); minimum daily, 0.2 cfs July 3 to Sept. 30.

Maximum discharge known, 880 cfs Dec. 23, 1955, from slope-area determination of peak flow.

Remarks.--Records excellent.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

0.1	0.1	0.6	11
.2	.3	.8	25
.3	.8	1.0	47
.4	2.0	1.2	77
.5	5.4		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0.8	0.5	0.7	0.7	1.6	9.8	2.6	1.0	0.3	0.2	0.2
2		.9	.5	.8	.7	14	7.4	*3.5	8.0	.3	.2	.2
3		.7	.5	.9	.7	12	7.4	2.6	6.4	.2	.2	.2
4		.8	.5	.7	.7	11	7.4	2.3	4.6	.2	.2	.2
5		.9	.5	.7	.7	16	8.0	2.3	3.8	.2	.2	.2
6	a0.5	.8	.5	.7	.7	16	8.0	2.3	2.9	.2	.2	.2
7		.7	.6	*.6	.7	14	6.9	2.6	2.6	.2	.2	.2
8		.7	.6	.5	.7	*13	6.4	2.6	2.3	.2	.2	.2
9		.7	.6	.5	.7	15	*6.4	2.6	2.6	.2	.2	.2
10		.6	.6	.5	.8	10	6.4	3.2	2.6	.2	.2	.2
11	*.4	.6	4.1	.6	.9	9.2	5.9	2.9	1.6	.2	.2	.2
12	.3	.6	1.4	.6	.9	11	5.4	2.3	1.4	.2	.2	.2
13	.3	.6	*1.1	.6	1.4	9.2	5.0	2.9	1.3	.2	.2	*.2
14	.3	.6	.9	.6	3.5	8.6	9.8	3.2	1.1	.2	.2	.2
15	.3	.5	.9	.6	4.6	9.2	5.9	2.3	1.1	.2	.2	.2
16	.3	*.6	.9	.6	3.5	5.9	5.4	2.0	*1.0	.2	.2	.2
17	.3	.6	.9	.6	3.5	6.4	5.4	1.8	.9	.2	.2	.2
18	.3	.6	.9	.6	4.6	5.4	5.9	14	.8	.2	.2	.2
19	.3	.5	.7	.6	5.9	5.9	4.6	13	.7	.2	.2	.2
20	.3	.5	.7	.7	3.8	5.9	5.0	8.0	.7	.2	.2	.2
21	.4	.5	.7	.7	3.5	6.4	4.6	6.4	.6	.2	.2	.2
22	.4	.5	.6	.7	5.0	4.6	4.2	*6.4	.6	.2	.2	.2
23	.5	.5	.7	.7	26	4.2	4.2	7.4	.5	.2	.2	.2
24	.6	.6	.7	.7	67	4.6	3.2	4.6	.4	.2	.2	.2
25	a.7	.6	.7	.7	*58	5.4	3.2	3.2	*.4	.2	.2	.2
26	.7	.6	.6	.7	33	5.9	2.6	3.8	.3	*.2	.2	.2
27	.8	.6	.6	.7	21	6.4	2.6	4.6	.3	.2	.2	.2
28	.6	.5	.7	.7	15	8.6	2.6	4.2	.3	.2	.2	.2
29	.5	.5	.7	.6	-	11	2.6	21	.3	.2	.2	.2
30	1.9	.6	.7	.6	-----	11	2.6	23	.3	.2	.2	.2
31	.9	-----	.7	.7	-----	10	-----	14	-----	.2	.2	-----
Total	16.1	18.8	25.3	20.2	268.2	291.8	164.8	177.6	60.4	6.4	6.2	6.0
Mean	0.52	0.63	0.82	0.65	9.58	9.41	5.49	5.73	2.01	0.21	0.20	0.20
Ac-ft	32	37	50	40	532	579	527	352	120	13	12	12

Calendar year 1956: Max - Min - Mean - Ac-ft -
 Water year 1956-57: Max 67 Min .2 Mean 2.91 Ac-ft 2,110

Peak discharge (base, 40 cfs).--Feb. 24 (4 p.m.) 157 cfs (1.58 ft); May 18 (6 p.m.) 41 cfs (0.95 ft); May 29 (7 p.m.) 59 cfs (1.32 ft).

* Discharge measurement made on this day.

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

Truckee River at Reno, Nev.

Location.--Lat 39°32', long 119°47', in sec. 12, T. 19 N., R. 19 E., on left bank half a 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 1957.

Gage.--Water-stage recorder. Datum of gage is 4,431.97 ft above mean sea level (levels by Corps of Engineers). July 1906 to September 1919, staff gage at site 1 mile upstream at different datum.

Average discharge.--23 years, 814 cfs (589,300 acre-ft per year).

Extremes.--Maximum discharge during year, 4,100 cfs May 19 (gage height, 6.97 ft); minimum, 80 cfs July 3.
1906-19, 1947-57: Maximum discharge, 20,800 cfs Dec. 23, 1955, from rating curve extended above 14,000 cfs; maximum gage height, 13.83 ft Nov. 21, 1950; minimum discharge observed, 18 cfs July 2, 3, 1912.

Remarks.--Records good. Flow regulated by Lake Tahoe, Boca Reservoir, Donner and Independence Lakes, and by several powerplants. Many diversions above station.

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 24-28, May 19 to June 10)

1.9	80	4.0	1,010
2.2	145	5.0	1,780
2.5	242	6.2	3,050
3.0	450		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	228	460	480	515	510	600	610	*738	1,750	178	145	163
2	204	465	475	505	418	570	455	868	1,850	145	142	166
3	201	460	470	480	400	550	432	744	1,700	95	140	157
4	207	455	500	470	432	495	448	808	2,140	101	145	157
5	224	470	555	432	510	748	510	916	2,560	120	154	157
6	218	560	540	414	490	802	610	968	*3,000	151	169	157
7	218	575	520	418	410	758	515	886	2,330	360	191	148
8	*253	640	545	423	432	615	465	802	1,980	580	172	157
9	261	640	661	428	423	1,090	446	683	1,670	414	160	160
10	250	635	650	580	410	1,090	500	585	1,140	162	175	169
11	288	645	545	590	450	1,040	668	545	1,040	169	188	157
12	288	635	605	438	446	1,040	850	490	934	185	201	160
13	392	645	600	500	500	989	732	475	808	138	181	172
14	414	635	620	446	515	961	892	615	710	296	178	154
15	414	550	560	436	515	968	796	580	610	165	169	157
16	410	*540	540	432	495	1,140	688	650	515	*160	142	166
17	374	520	515	428	432	1,160	625	760	446	145	142	214
18	369	505	515	423	418	1,240	635	1,310	405	138	148	332
19	392	500	505	423	*414	1,520	*570	2,580	418	130	140	344
20	396	485	500	446	418	1,540	565	*1,370	418	136	132	292
21	387	495	*530	432	392	*1,520	540	892	405	183	140	265
22	382	505	510	418	423	1,450	520	845	352	151	*130	272
23	432	520	520	540	535	1,430	432	694	336	151	138	246
24	432	510	525	*530	977	1,450	441	600	*344	160	145	246
25	441	505	520	500	1,600	1,490	441	620	506	151	145	261
26	460	505	515	418	1,070	1,490	455	749	1,470	148	145	272
27	545	480	510	500	*880	1,520	520	1,320	778	163	151	253
28	480	480	520	530	710	1,630	580	1,530	635	154	135	242
29	436	470	520	540		1,760	718	1,530	336	142	154	269
30	490	465	520	525	-----	820	640	1,800	232	163	163	296
31	570	-----	520	535	-----	672	-----	1,660	-----	148	157	-----
Total	11,036	15,995	16,611	14,693	15,625	34,128	17,293	29,413	31,618	5,684	4,817	6,361
Mean	356	533	536	474	558	1,101	576	949	1,061	183	155	212
Ac-ft	21,890	31,730	32,950	29,140	30,990	67,690	34,300	58,340	63,110	11,270	9,550	12,620
Calendar year 1956: Max			3,280		Min 118		Mean 982		Ac-ft 713,000			
Water year 1956-57: Max			3,000		Min 95		Mean 557		Ac-ft 403,600			

Peak discharge (base, 1,600 cfs).--Feb. 24 (11 p.m.) 1,920 cfs (5.06 ft); Mar. 29 (8 a.m.) 1,820 cfs (4.99 ft); May 19 (2:30 a.m.) 4,100 cfs (6.97 ft); June 6 (5 a.m.) 3,280 cfs (6.29 ft); June 26 (8 a.m.) 1,670 cfs (4.78 ft).

* Discharge measurement made on this day.

McDermitt Creek near McDermitt, Nev.

Location.--Lat 41°58', long 117°50', in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 8, T. 47 N., R. 37 E., on left bank $\frac{6}{16}$ miles southwest of McDermitt.

Records available.--October 1948 to September 1957.

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

Average discharge.--9 years, 32.4 cfs (23,460 acre-ft per year).

Extremes.--Maximum discharge during year, 1,270 cfs Feb. 26 (gage height, 6.72 ft), from rating curve extended above 460 cfs as explained below; minimum, 0.8 cfs Nov. 28, 1948-57: Maximum discharge, 2,100 cfs Jan. 15, 1956 (gage height, 8.60 ft, from floodmarks), from rating curve extended above 460 cfs on basis of slope-area determinations at gage heights 7.74 and 8.60 ft; no flow Aug. 12, 1954, and Sept. 8-15, 1955; minimum discharge unaffected by regulation, 0.3 cfs Sept. 2, 1955.

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

Revisions (water years).--WSP 1214: 1949-50(P).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.6	1.2	2.2	26
1.7	1.9	2.5	66
1.8	3.4	3.0	153
1.9	6.4	4.0	396
2.0	11	5.0	690

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	8.5	5.4	7.6	a10	121	80	60	84	11	3.0	2.2
2	2.2	6.0	5.1	7.6	a10	*113	66	66	80	10	3.0	1.9
3	2.2	7.2	5.0	6.5	a10	80	64	63	72	9.8	2.8	1.7
4	2.2	8.9	7.6	6.4	a10	66	64	63	66	8.5	2.7	1.6
5	2.2	8.0	*6.8	5.6	a10	109	82	50	62	8.5	2.5	1.6
6	2.2	8.5	5.9	4.6	a11	96	113	47	58	7.6	2.5	1.6
7	2.2	8.5	6.5	5.6	a11	194	79	58	52	7.6	2.8	1.5
8	2.4	8.5	6.0	6.0	a11	254	74	*99	50	*7.2	2.7	1.4
9	2.5	8.0	b6.0	6.4	a11	165	84	116	52	6.4	2.4	1.4
10	3.0	8.0	6.2	6.8	a10	99	*92	129	56	5.6	2.3	1.4
11	4.4	8.0	13	8.0	a12	80	87	140	41	5.6	*2.2	1.6
12	5.0	8.0	57	8.9	20	74	72	181	35	5.0	2.2	1.7
13	4.1	8.0	35	b9.0	26	58	68	147	32	4.6	2.0	1.7
14	3.8	6.8	b30	b9.0	21	51	74	136	33	4.1	1.9	1.7
15	3.8	5.7	b23	*b9.0	20	56	72	118	29	3.8	1.8	1.8
16	3.6	6.8	b22	8.5	21	54	69	102	27	5.0	1.8	1.8
17	3.4	8.0	b20	b7.0	21	47	82	94	25	5.0	1.7	1.8
18	3.6	7.2	b16	b5.5	23	45	56	111	23	5.3	1.7	1.7
19	3.8	4.4	b15	b10	*35	47	56	198	*23	4.6	1.6	1.8
20	4.1	4.2	b13	11	56	54	58	177	20	5.0	1.5	1.9
21	3.8	4.2	b13	8.9	34	66	64	142	20	5.6	1.5	2.0
22	3.8	5.5	b12	b12	227	48	*79	130	20	5.6	1.5	2.0
23	4.6	7.0	b12	b16	557	44	60	123	17	5.3	1.6	1.9
24	4.6	6.7	14	b15	370	47	51	106	16	5.6	1.5	1.9
25	4.4	6.0	10	14	537	102	47	*96	15	6.4	1.5	1.9
26	6.0	6.1	8.9	11	589	108	44	90	14	5.6	1.4	*2.0
27	10	6.2	7.6	b11	365	79	41	90	13	5.3	1.4	1.9
28	8.0	5.7	7.6	b10	165	79	38	92	13	5.0	1.5	1.9
29	6.4	6.7	8.0	b9.5	-	102	48	97	14	4.4	1.8	2.0
30	7.2	6.5	8.0	b10	-----	108	57	106	14	3.6	2.0	2.7
31	*8.9	-----	8.5	a10	-----	92	-----	90	-----	3.4	2.2	-----
Total	130.4	207.8	414.1	281.4	3,203	2,738	2,001	3,317	1,076	186.0	63.0	54.0
Mean	4.21	6.93	13.4	9.08	114	88.3	66.7	107	35.9	6.00	2.03	1.80
Ac-ft	259	412	821	558	6,350	5,430	3,970	6,580	2,130	369	125	107
Calendar year 1956: Max	690			Min 1.4		Mean 43.7		Ac-ft 31,760				
Water year 1956-57: Max	589			Min 1.4		Mean 37.5		Ac-ft 27,110				

Peak discharge (base, 150 cfs).--Feb. 26 (10 p.m.) 1,270 cfs (6.72 ft); Mar. 8 (8 p.m.) 490 cfs (4.32 ft); Mar. 25 (9:50 p.m.) 214 cfs (3.30 ft); May 12 (11 a.m.) 225 cfs (3.35 ft); May 19 (9 p.m.) 249 cfs (3.44 ft).

* Discharge measurement made on this day.

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

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 1957.

Gage.--Water-stage recorder.

Average discharge.--9 years, 28.2 cfs (20,420 acre-ft per year).

Extremes.--Maximum discharge during year, 609 cfs Feb. 26 (gage height, 6.13 ft); minimum daily, 1.3 cfs Oct. 1, 6, Sept. 8.
1948-57: Maximum discharge, 1,270 cfs Jan. 15, 1956; minimum, 0.1 cfs Sept. 6, 7, 1955.

Remarks.--Records good except those for periods of backwater from beaver dams or no gage-height record, which are fair.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1	1.3	5.7	4.9	7.4	6.6	*92	85	65	58	8.1	c2.0	c1.5	
2	1.4	6.4	4.9	7.6	6.6	*80	72	70	51	7.6			
3	1.4	6.9	5.3	7.1	6.6	65	75	64	45	6.9			
4	1.4	8.1	5.5	5.7	6.5	75	82	60	41	6.4			
5	1.4	8.4	*5.5	5.7	6.9	93	162	55	38	5.9			
6	1.3	12	4.5	5.5	6.9	118	126	57	34	5.3	c2.0	c1.5	
7	1.4	15	4.7	6.6	6.9	276	91	59	32	5.1			
8	1.8	13	3.2	6.4	6.9	317	92	*79	31	*5.1			
9	1.9	11	4.0	a6.0	6.9	219	104	94	32	4.9			
10	1.9	10	4.9	a5.5	6.4	124	*104	102	30	4.9			
11	2.9	10	55	a6.0	7.4	91	95	93	26	4.5	(*)	1.5	
12	3.5	10	42	a7.0	7.4	81	88	211	25	4.1			
13	3.5	10	105	a7.5	9.0	70	85	135	24	3.8			
14	3.2	9.3	36	a8.0	19	61	86	131	23	3.6			
15	3.0	7.6	23	*a6.5	21	59	85	114	23	3.8			
16	2.9	8.1	21	5.9	20	58	78	99	21	3.6	c1.8	1.6	
17	2.7	8.4	16	5.3	20	51	70	90	19	3.5			
18	2.9	7.6	16	6.1	19	52	74	95	17	3.2			
19	3.2	6.1	14	6.1	*22	58	76	245	*16	3.0			
20	3.2	5.3	12	7.1	25	61	83	196	15	3.5			
21	3.2	5.5	11	6.6	42	61	150	156	14	c3.0	c1.8	1.6	
22	3.2	6.6	8.7	6.5	101	54	133	153	13				
23	4.0	6.4	9.0	6.6	164	50	83	162	12				
24	3.6	6.1	10	6.6	250	84	74	*131	11				
25	3.6	6.1	8.7	6.6	360	140	67	115	10				
26	4.3	5.7	8.1	6.5	361	116	62	101	9.9	c3.0	c1.8	*1.8	
27	4.7	5.7	7.9	6.5	282	88	59	91	9.3				
28	4.3	5.5	7.9	6.0	154	90	60	83	9.0				
29	3.8	5.5	8.1	6.0	-	150	64	75	9.0				
30	5.3	5.7	8.1	6.4	-----	128	65	73	8.1				
31	*7.9	-----	7.9	6.4	-----	104	-----	66	-----				
Total	94.1	237.7	482.8	199.7	1,951.0	3,146	2,630	3,320	706.3	129.8	57.8	47.8	
Mean	3.04	7.92	15.6	6.44	69.7	101	87.7	107	23.5	4.19	1.86	1.59	
Ac-ft	187	471	956	396	3,870	6,240	5,220	6,590	1,400	257	115	95	
Calendar year 1956: Max				646	Min		1.0	Mean		31.8	Ac-ft		23,090
Water year 1956-57: Max				361	Min		-	Mean		35.6	Ac-ft		25,800

Peak discharge (base, 100 cfs).--Dec. 13 (3 p.m.) 160 cfs (4.21 ft); Feb. 26 (8 p.m.) 609 cfs (6.13 ft); Mar. 8 (5:15 p.m.) 465 cfs (5.50 ft); Mar. 25 (3:30 p.m.) 249 cfs (4.50 ft); Mar. 29 (6:30 p.m.) 230 cfs (4.40 ft); Apr. 5 (10 p.m.) 201 cfs (4.22 ft); Apr. 21 (10 p.m.) 242 cfs (4.48 ft); May 12 (5 a.m.) 281 cfs (4.69 ft); May 19 (7:30 p.m.) 393 cfs (5.23 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.

c Backwater from beaver dam; discharge estimated on basis of 1 discharge measurement, gage heights, engineers' notes, and records for nearby streams.

Quinn River near McDermitt, Nev.

Location.--Lat 41°47', long 117°48', in SW $\frac{1}{4}$ sec. 15, T. 45 N., R. 37 E., on left bank $\frac{1}{2}$ miles upstream from Flat Creek and 15 $\frac{1}{2}$ miles south of McDermitt.

Records available.--October 1948 to September 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,240 ft (from river-profile map).

Average discharge.--9 years, 36.5 cfs (26,420 acre-ft per year).

Extremes.--Maximum discharge during year, 482 cfs May 14 (gage height, 4.23 ft); minimum daily, 0.5 cfs Jan. 21, 30, 31.
1948-57: Maximum discharge, 1,580 cfs Apr. 27, 1952 (gage height, 8.39 ft); minimum, 0.2 cfs Dec. 22, 1948, Sept. 6, 7, 8, 1955.

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

Rating table, water year 1956-57, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.2	0.2	1.5	46
.3	.8	2.0	87
.4	1.8	2.5	151
.5	3.4	3.0	230
.7	8.0	3.5	321
1.0	19	4.3	500

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	0.8	0.8	0.8	b0.8	*174	184	103	162	4.7	1.3	1.0
2	.7	.8	.8	.7	1.1	140	157	106	143	4.3	1.3	1.0
3	.7	.8	.8	.7	1.1	122	136	114	122	3.9	1.3	1.0
4	.7	.8	.8	.7	1.1	113	123	126	105	3.7	1.3	1.0
5	.7	.8	*.8	.8	1.0	123	126	126	87	3.4	1.3	1.0
6	.7	.8	.8	.8	1.0	147	158	113	72	2.8	1.2	1.0
7	.7	.8	.8	.8	1.0	191	176	104	63	2.7	1.1	1.0
8	.8	.8	.8	.8	a1.0	287	160	*130	56	*2.4	1.1	1.0
9	.7	.8	.8	.8	a1.0	323	151	174	54	2.1	1.0	1.0
10	.8	.8	.8	.8	a.9	296	*148	213	56	2.0	1.0	1.1
11	1.0	.8	.9	.6	a1.0	240	148	254	51	1.8	*1.1	1.0
12	.8	.8	.8	.6	a1.5	199	144	358	45	1.6	1.1	1.0
13	.7	.8	.8	.8	a2.0	160	136	485	40	1.7	1.1	1.0
14	.7	.8	.8	.8	a2.0	131	130	*470	35	1.6	1.0	1.0
15	.7	.8	2.5	*.8	a2.5	115	123	435	32	1.5	1.0	1.0
16	.7	.8	5.0	.7	a8.0	105	123	390	31	1.5	1.0	1.0
17	.7	.8	3.4	.7	a12	95	113	327	29	1.5	1.1	1.0
18	.7	.8	3.2	.7	a11	83	134	287	27	1.5	1.1	1.0
19	.7	1.0	2.1	.7	*a10	76	195	345	*25	1.4	1.1	1.0
20	.7	.8	2.0	.6	a6.0	72	189	433	24	1.4	1.2	.9
21	.7	.8	2.1	.5	6.7	73	180	485	22	1.4	1.2	.9
22	.7	.8	1.2	.6	9.9	75	218	480	19	1.4	1.2	.9
23	.8	.8	.9	.6	28	71	213	478	16	1.4	1.2	.9
24	.7	.8	.8	.6	41	67	180	*440	13	1.4	1.2	.9
25	.7	.8	.8	.6	65	71	151	377	10	1.3	1.2	.9
26	.8	.8	.8	.6	110	98	130	317	8.6	1.3	1.2	*.8
27	.8	.8	.8	.6	163	124	113	270	7.2	1.3	1.2	.8
28	.7	.8	.8	.9	196	131	103	238	6.7	1.4	1.1	.8
29	.8	.8	.8	b.6	---	145	99	210	6.7	1.4	1.1	.9
30	.9	.8	.8	b.5	---	164	99	192	5.7	1.4	1.0	1.0
31	*.8	---	.8	b.5	---	176	---	176	---	1.4	1.0	---
Total	23.0	24.2	40.1	21.5	685.6	4,587	4,440	6,734	1,373.9	62.8	35.3	28.8
Mean	0.74	0.81	1.29	0.69	24.5	142	148	282	45.8	2.03	1.14	0.96
Ac-ft	46	48	80	43	1,360	6,700	6,810	17,320	2,730	125	70	57
Calendar year 1956: Max				392	Min	0.6	Mean	49.0	Ac-ft	35,570		
Water year 1956-57: Max				485	Min	0.5	Mean	54.4	Ac-ft	39,390		

* Discharge measurement made on this day.

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

b Stage-discharge relation affected by ice.

Susan River at Susanville, Calif.

Location.--Lat 40°25', long 120°40', in NE $\frac{1}{4}$ 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 1957.

Gage.--Water-stage recorder. Datum of gage is 4,325.72 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1950, staff gages at several sites in vicinity of old power-plant about 0.9 mile upstream at various datums.

Average discharge.--10 years (1917-20, 1950-57), 90.7 cfs (65,660 acre-ft per year).

Extremes.--Maximum discharge during year, 1,700 cfs Feb. 24 (gage height, 5.23 ft), from rating curve extended above 840 cfs as explained below; minimum, 5.5 cfs Sept. 7. 1900-1905, 1913, 1917-21, 1950-57: Maximum discharge, 3,540 cfs Dec. 23, 1955 (gage height, 6.62 ft), from rating curve extended above 840 cfs on basis of slope-area determination of peak flow; minimum, 0.8 cfs Aug. 10, 1918 (site then in use).

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by McCoy Flat and Hog Flat Reservoirs (combined capacity, 25,300 acre-ft). Divisions for irrigation of about 1,400 acres above station. Records of chemical analyses for the water year 1957 are given in WSP 1523.

Revisions (water years).--WSP 1445: 1951, 1953-54(P).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.37	5.5	1.6	34	3.5	320
.5	5.9	2.0	57	4.0	560
.7	7.1	2.4	97	4.5	960
.9	9.7	3.0	202	5.0	1,440
1.2	18				

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.1	33	22	16	12	242	138	108	93	15	140	6.2
2	9.1	30	27	16	11	224	120	130	85	107	147	6.0
3	9.2	27	25	17	10	194	123	106	77	125	147	5.9
4	9.4	25	19	15	11	190	128	98	70	142	145	5.9
5	9.6	25	17	13	13	340	135	103	66	145	142	5.9
6	11	24	16	13	15	302	136	109	60	147	138	5.9
7	18	*24	16	13	17	278	120	106	56	149	135	5.8
8	23	24	16	12	19	244	117	103	52	147	122	5.6
9	17	24	16	10	19	283	117	97	54	142	75	5.6
10	16	25	19	12	19	208	117	92	63	143	40	*5.6
11	31	24	39	18	20	184	112	86	49	142	19	5.6
12	23	24	39	19	21	192	108	82	46	138	10	5.6
13	19	26	34	21	24	167	104	80	45	142	8.5	5.7
14	16	22	29	20	30	152	190	80	41	140	7.6	5.6
15	14	20	24	*20	38	150	145	75	40	140	7.2	5.6
16	14	21	24	19	42	138	126	71	45	149	6.9	5.6
17	13	20	20	18	40	122	122	70	40	149	6.4	5.8
18	13	18	20	17	44	114	123	223	37	150	6.2	6.3
19	13	16	20	17	46	*110	109	266	34	149	6.1	6.2
20	13	16	21	18	52	114	106	218	33	147	6.1	6.2
21	14	17	21	16	58	130	104	180	31	149	6.0	6.2
22	14	18	20	15	74	103	93	*163	30	*147	6.1	6.1
23	17	19	22	15	263	93	150	89	27	145	6.0	6.1
24	19	19	19	15	1,150	93	90	133	24	143	5.9	6.4
25	18	19	18	15	780	103	86	126	22	143	8.0	6.0
26	30	20	17	15	723	104	85	120	21	142	5.9	5.8
27	32	20	17	10	*485	104	89	115	19	147	6.0	8.3
28	26	20	18	10	299	122	95	112	17	145	6.0	9.7
29	21	21	15	10	-	138	98	114	16	143	6.0	9.4
30	52	22	16	10	-	138	108	109	16	142	6.2	14
31	44	-----	16	13	-----	147	-----	100	-----	140	6.2	-----
Total	587.4	663	662	468	4,335	5,223	3,433	3,725	1,309	4,294	1,381.3	194.6
Mean	18.9	22.1	21.4	15.1	155	168	114	120	43.6	139	44.6	6.49
Ac-ft	1,170	1,320	1,310	928	8,600	10,360	6,810	7,390	2,600	8,520	2,740	386
Calendar year 1956:	Max	1,340	Min	7.5	Mean	188	Ac-ft	136,300				
Water year 1956-57:	Max	1,150	Min	5.6	Mean	72.0	Ac-ft	52,130				

Peak discharge (base, 300 cfs).--Feb. 24 (10 p.m.) 1,700 cfs (5.23 ft); Mar. 5 (2 a.m.) 356 cfs (3.59 ft); Mar. 9 (6 a.m.) 336 cfs (3.54 ft); May 18 (7 p.m.) 470 cfs (3.84 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 20-22, 26-29, Dec. 6-9, 22, 23, Jan. 4-10, Jan. 17 to Feb. 7.

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.

Drainage area.--92.5 sq mi, excludes that of Eagle Lake basin.

Records available.--October 1950 to September 1957.

Gage.--Water-stage recorder. Datum of gage is 4,836.27 ft above mean sea level, unadjusted.

Average discharge.--7 years, 31.0 cfs (22,440 acre-ft per year).

Extremes.--Maximum discharge during year, 564 cfs Feb. 24 (gage height, 5.01 ft); minimum daily, 12 cfs many days in June and July.

1950-57: Maximum discharge, 712 cfs Dec. 23, 1955 (gage height, 5.36 ft), from rating curve extended above 420 cfs on basis of logarithmic plotting; minimum, 8.1 cfs Nov. 16, 1951.

Remarks.--Records good. Diversions for irrigation of about 5,200 acres above station. Some flow at times enters Willow Creek from Eagle Lake through abandoned tunnel.

Revisions (water years).--WSP 1445: 1952(M).

Rating table, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

2.2	12	3.6	162
2.4	20	4.0	245
2.6	33	4.5	380
2.8	52	5.0	560
3.2	100		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	38	36	31	31	162	34	18	22	12	18	14
2	18	38	34	31	32	146	34	18	20	12	15	14
3	18	38	33	32	35	127	33	16	18	12	16	13
4	18	37	34	30	35	117	32	15	17	12	16	14
5	18	38	34	28	35	114	32	14	16	12	15	14
6	18	37	30	28	35	111	32	14	15	13	14	13
7	18	*37	30	30	35	103	30	18	14	14	14	13
8	20	37	29	26	32	92	30	19	14	14	14	14
9	19	44	27	25	32	84	29	19	14	16	14	14
10	20	49	30	27	31	81	27	19	15	16	14	*14
11	24	54	38	27	30	75	23	19	15	16	14	14
12	25	50	42	29	30	75	15	18	14	15	14	14
13	25	46	39	32	32	83	14	18	14	14	14	14
14	26	41	38	31	34	82	13	18	14	15	14	14
15	27	39	36	*30	46	75	14	16	14	16	14	14
16	28	38	35	30	53	66	13	16	13	16	14	14
17	28	29	34	28	69	60	13	16	13	18	14	14
18	28	30	33	28	83	58	14	16	13	18	14	14
19	28	32	33	30	82	*54	14	31	13	18	14	14
20	28	31	33	28	90	51	16	33	13	18	14	14
21	27	31	32	30	93	53	20	26	13	18	14	14
22	27	28	30	28	93	47	28	*24	13	18	14	14
23	28	27	31	28	148	41	27	30	13	*18	14	14
24	27	27	31	28	390	39	27	30	12	18	14	14
25	28	27	30	35	528	38	25	30	12	19	14	14
26	28	28	30	32	422	37	24	32	12	18	14	15
27	28	31	29	32	*298	35	22	32	13	18	14	15
28	28	35	30	32	200	34	20	30	13	18	14	16
29	27	37	30	31		33	18	28	13	18	14	16
30	32	37	31	31	-----	33	18	25	12	18	14	16
31	37	-----	31	31	-----	34	-----	24	-----	18	14	-----
Total	767	1,091	1,013	919	3,054	2,240	691	684	427	496	445	425
Mean	24.7	36.4	32.7	29.6	109	72.3	23.0	22.1	14.2	16.0	14.4	14.2
Ac-ft	1,520	2,160	2,010	1,820	6,060	4,440	1,370	1,360	847	984	883	843
Calendar year 1956: Max	364			Min 11		Mean 48.6		Ac-ft 35,280				
Water year 1956-57: Max	528			Min 12		Mean 33.6		Ac-ft 24,300				

Peak discharge (base, 200 cfs).--Feb. 24 (8:30 p.m.) 564 cfs (5.01 ft).

* Discharge measurement made on this day.

Pine Creek near Westwood, Calif.

Location.--Lat 40°35', long 121°06', in SE¹ 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 1957.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 5,700 ft (from topographic map).

Average discharge.--7 years, 8.20 cfs (5,940 acre-ft per year).

Extremes.--Maximum discharge during year, 143 cfs May 18 (gage height, 3.80 ft), from rating curve extended above 90 cfs by logarithmic plotting; minimum, 0.3 cfs Sept. 8, 9, but may have been less during period of ice effect.
1950-57: Maximum discharge, 174 cfs Dec. 23, 1955 (gage height, 3.95 ft), from rating curve extended above 90 cfs by logarithmic plotting; no flow Sept. 1, 2, 6-9, 11-13, 1955.

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

Rating table, water year 1956-57, except periods of ice effect or doubtful gage-height record (gage height, in feet, and discharge, in cubic feet per second)

2.6	0.6	3.1	16
2.7	1.6	3.2	23
2.8	3.4	3.3	33
2.9	6.6	3.4	48
3.0	11	3.6	87

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.0	5.2	1.1		1.1	6.0	1.9	5.0	14	3.6	1.4	0.8
2	2.0	2.6	1.1		1.1	5.5	2.0	7.0	13	3.4	1.3	.7
3	2.0	2.6	1.0		1.1	5.2	3.1	6.0	12	3.4	1.2	.8
4	2.0	3.4	1.0		1.1	4.8	4.8	4.0	10	3.1	1.3	.6
5	2.2	3.4	1.1		1.1	3.6	6.3	4.5	9.8	2.8	1.4	.7
6	2.0	3.6	1.4		1.1	3.6	5.5	4.0	9.3	2.8	1.3	.8
7	2.0	*3.4	1.3		1.1	4.6	3.4	3.5	8.9	2.8	1.3	.8
8	2.4	2.6	.9		1.1	4.8	3.4	3.0	8.9	2.6	1.3	.6
9	2.4	2.6	.8		1.1	5.8	3.6	3.0	8.9	2.6	1.3	.6
10	2.8	3.4	1.1		1.1	4.2	3.4	3.0	8.5	2.4	1.2	*.6
11	4.6	3.9	2.5		1.1	3.4	1.9	3.0	8.1	2.4	1.2	.6
12	3.5	2.8	6.0		1.3	3.0	1.7	2.8	7.7	2.2	1.2	.7
13	2.6	2.2	4.5		1.5	2.7	1.6	2.5	7.3	2.2	1.1	.7
14	2.4	1.8	3.0		3.0	3.5	2.0	2.4	6.9	2.2	1.1	.8
15	2.2	1.5	2.5		2.5	3.2	7.0	4.5	6.9	2.0	1.0	.8
16	2.2	1.4	2.0									
17	2.0	1.6	1.7	1.1 (*)	2.0	2.8	5.5	4.0	6.6	2.0	1.0	.8
18	2.0	1.8	1.5		1.8	2.6	4.5	3.5	6.3	2.0	1.1	1.0
19	2.2	1.4	1.4		1.7	2.5	3.8	87	5.8	1.9	1.0	1.0
20	2.2	1.2	1.4		1.7	2.5	3.6	68	5.8	1.9	1.0	.8
						*2.7	3.5	37	5.8	1.8	.9	.9
21	2.0	1.1	1.3		1.6	2.7	5.0	28	5.5	2.2	.8	.8
22	2.0	1.1	1.3		1.5	2.3	4.5	*24	5.2	2.6	.8	.8
23	2.0	1.1	1.3		1.5	2.2	3.5	22	4.6	*2.2	.8	.6
24	2.8	1.1	1.3		3.0	2.4	3.1	20	4.6	2.0	.9	.6
25	3.4	1.1	1.3		1.5	2.5	2.8	20	4.6	1.9	.9	.6
26	5.8	1.1	1.2		13	2.7	2.6	21	4.6	1.9	.8	.7
27	3.6	1.1	1.2		9.0	2.9	2.5	21	4.2	1.8	.8	9.5
28	2.6	1.1	1.2		8.0	3.4	3.0	20	4.2	1.7	.8	5.5
29	2.6	1.1	1.2		-	4.2	3.3	18	4.2	1.6	.8	2.8
30	2.2	1.1	1.1		-----	3.4	4.0	18	3.9	1.4	.9	4.8
31	4.6	-----	1.1		-----	2.4	-----	18	-----	1.6	1.0	-----
Total	81.3	63.4	50.8	34.1	81.9	108.1	112.8	487.7	216.1	71.0	32.9	41.8
Mean	2.62	2.11	1.64	1.10	2.32	3.49	3.76	15.7	7.20	2.29	1.06	1.59
Ac-ft	161	126	101	68	162	214	224	967	429	141	65	83
Calendar year 1956: Max	138				Min	0.8	Mean	15.1	Ac-ft	10,990		
Water year 1956-57: Max	87				Min	0.6	Mean	3.79	Ac-ft	2,740		

Peak discharge (base, 35 cfs).--May 18 (3:30 p.m.) 143 cfs (3.80 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Nov. 14 to Mar. 3, Mar. 12-27. Doubtful gage-height record Apr. 12 to May 17; discharge estimated on basis of weather records and records for nearby streams.

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.

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 1957.

Gage.--Water-stage recorder and concrete control. Datum of gage is 4,560.83 ft (revised) 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 0.9 ft higher.

Average discharge.--22 years (1910-15, 1918-19, 1940-44, 1945-57), 50.0 cfs (36,200 acre-ft per year).

Extremes.--Maximum discharge during year, 1,850 cfs Feb. 24 (gage height, 10.41 ft), from rating curve extended above 630 cfs on basis of contracted-opening determination of peak flow; minimum, 0.5 cfs Dec. 2 (gage height, 1.96 ft). 1910-16, 1917-19, 1921-22, 1940-57: Maximum discharge, 3,260 cfs Dec. 23, 1955 (gage height, 14.80 ft); no flow part of Sept. 7, 1955.

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

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
1214	1951	Feb. 7, 1951	1,990	9.8
1244	1952	Apr. 6, 1952	2,000	9.85
1284	1953	Jan. 18, 1953	1,690	9.16
1344	1954	Mar. 9, 1954	1,480	8.32

† From floodmark.

Remarks.--Records good except those for periods of ice effect, which are poor. Diversions for irrigation of 240 acres above station.

Revisions (water years).--WSP 1090: 1945. Revised figures of discharge, in cubic feet per second, for high-water periods in the water years 1951-53, superseding those published in WSP 1214, 1244, and 1284, are given herewith:

1951
Feb. 7..... 1,320

1952
Apr. 5..... 1,370
6..... 1,550
7..... 1,450

1953
Jan. 18..... 1,350

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
February 1951.....	6,178	1,320	11	221	12,250
Water year 1950-51.....	18,123	1,320	2.4	49.7	35,960
Calendar year 1951.....	17,608.6	1,320	2.4	48.2	34,930
April 1952.....	26,360	1,550	353	879	52,280
Water year 1951-52.....	45,921.3	1,550	3.2	125	91,080
Calendar year 1952.....	46,003.0	1,550	4.2	126	91,240
January 1953.....	6,575.5	1,330	8	212	13,040
Water year 1952-53.....	23,095.2	1,330	3.7	63.3	45,810
Calendar year 1953.....	23,419.5	1,330	3.7	64.2	46,450

Revised peak discharge.--1952: Apr. 6 (9 p.m.) 2,000 cfs (9.85 ft); Apr. 18 (9 p.m.) 1,670 cfs (8.74 ft); Apr. 25 (6:30 p.m.) 2,000 cfs (9.83 ft). 1952-53: Jan. 9 (9 p.m.) 1,160 cfs (7.05 ft); Jan. 13 (1 a.m.) 1,100 cfs (6.79 ft); Jan. 18 (5 p.m.) 1,690 cfs (9.16 ft); Mar. 23 (9:30 p.m.) 1,460 cfs (8.23 ft); May 19 (11 p.m.) 1,280 cfs (7.50 ft); June 7 (1 p.m.) 1,240 cfs (7.34 ft).

Twentymile Creek near Adel, Oreg.--Continued

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.1	1.9	3.0	100
2.2	3.5	4.0	290
2.3	7.0	9.0	1,430
2.5	25		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.5	6	3	3.5	3.5	164	176	88	122	16	3.2	3.3
2	3.5	7	3	3.5	3.5	248	139	84	117	14	2.5	3.2
3	3.5	9.4	2.5	3.5	3	106	125	68	109	13	2.7	3.2
4	3.5	13	2.5	3.5	3	249	109	78	103	13	2.9	3.2
5	3.5	21	2.5	3.5	**2.5	483	112	80	94	7.8	2.4	3.0
6	3.5	37	2.5	3.5	2.5	462	106	100	92	8.6	3.3	2.9
7	3.8	42	3	3.5	2.5	328	67	*110	84	8.6	3.0	2.9
8	4.9	40	5	3.5	2.5	156	61	186	79	7.8	2.7	2.9
9	*5.2	43	8	4	2.5	108	55	122	76	6.0	3.0	3.0
10	5.2	34	11	4.5	2.5	73	*55	103	70	4.6	3.3	3.2
11	7.0	37	41.6	5	2.5	66	60	130	56	4.2	3.3	3.2
12	6.6	21	222	6	2.5	64	56	139	55	3.5	3.3	3.2
13	6.0	14	311	7	3	50	50	110	55	3.2	3.2	3.2
14	5.6	10	73	6	5	49	67	91	50	3.3	3.2	3.2
15	5.2	8.6	30	5	9	72	54	80	46	3.3	3.2	3.3
16	*4.9	9.4	24	4	15	92	48	84	40	3.8	3.2	3.3
17	4.6	7.8	19	4.5	30	66	54	92	32	4.2	3.2	3.5
18	4.9	7.0	18	5	50	90	44	143	28	4.2	3.2	3.5
19	5.6	6.0	15	4.5	92	192	52	234	26	3.8	3.2	3.5
20	5.2	4.9	14	4	118	188	55	212	*28	4.6	3.2	3.5
21	4.9	4.5	9.4	3.5	121	103	117	148	31	4.9	3.2	3.5
22	4.9	4.5	6.6	3.5	792	*52	75	103	30	5.6	3.2	3.5
23	5.6	4	6	3	1,090	62	46	112	26	5.6	3.2	3.5
24	5.2	4	6	3	1,260	112	*40	90	26	5.6	3.0	3.3
25	6.0	4	5.5	3	1,060	214	43	82	24	4.2	2.9	3.3
26	7.8	3.5	5	3	1,100	126	38	85	24	4.2	2.9	3.3
27	8.6	3.5	5	3	555	68	42	90	22	4.2	2.9	3.3
28	6.3	3.5	4.5	3	250	64	52	106	22	3.8	2.7	3.5
29	6.0	3	4.5	3.5	-	118	67	115	22	3.5	2.4	3.8
30	5.5	3	4	3.5	-----	115	85	120	18	3.3	2.5	4.9
31	5	-----	4	4	-----	145	-----	127	-----	*3.3	2.9	-----
Total	161.5	415.6	1,245.5	123.5	6,583.0	4,465	2,150	3,512	1,607	185.7	93.0	100.1
Mean	5.21	13.9	40.2	3.98	235	145	71.7	113	53.6	5.99	3.00	3.34
Ac-ft	320	824	2,470	245	13,060	8,900	4,260	6,970	3,190	368	164	199

Calendar year 1956: Max 1,370 Min 2.5 Mean 77.2 Ac-ft 56,020
 Water year 1956-57: Max 1,260 Min 2.4 Mean 56.6 Ac-ft 40,990

Peak discharge (base, 400 cfs).--Dec. 11 (5 p.m.) 1,100 cfs (7.69 ft); Feb. 24 (8 p.m.) 1,850 cfs (10.41 ft); Mar. 5 (1 a.m.) 986 cfs (7.13 ft); Mar. 19 (11 p.m.) 422 cfs (4.63 ft).

* Discharge measurement made on this day.

** Field estimate made on this day.

Note.--Stage-discharge relation affected by ice Oct. 30 to Nov. 2, Nov. 21 to Dec. 9, Dec. 23 to Feb. 18.

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 1957.

Gage.--Water-stage recorder. Datum of gage is 5,472.41 ft above mean sea level (Oregon State Highway Department construction survey bench mark). Sept. 11, 1912, to May 9, 1915, water-stage recorder or staff gage at site 500 ft upstream at different datum.

Average discharge.--9 years (1912-14, 1950-57), 51.4 cfs (37,210 acre-ft per year).

Extremes.--Maximum discharge during year, 605 cfs Feb. 26 (gage height, 3.83 ft); minimum, 3.8 cfs Aug. 21 (gage height, 0.44 ft).
1912-14, 1949-57: Maximum discharge, 1,630 cfs Dec. 22, 1955 (gage height, 5.15 ft), from rating curve extended above 340 cfs on basis of slope-area determination of peak flow; minimum, 1.5 cfs Aug. 4, 1955.

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of about 1,200 acres above station.

Revisions.--WSP 410: Drainage area.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 11					Dec. 12 to Sept. 30				
0.5	3.2	1.1	30		0.4	3.0	2.0	127	
.6	6.0	1.5	59		.5	5	2.5	215	
.7	10	2.0	113		.7	12	3.0	325	
.8	15	2.5	195		1.0	28	3.5	475	
					1.5	66			

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.7	b18	b13	b10	b11	186	121	211	78	15	5.6	4.2
2	5.7	18	b14	11	b10	178	103	217	71	14	5.6	4.2
3	5.7	22	b14	10	b9.5	114	103	184	64	14	5.6	4.0
4	5.7	22	b13	b8.5	b9	112	112	180	59	13	5.6	4.0
5	5.7	29	b12	b7	9.2	133	133	174	55	12	5.6	4.0
6	5.7	37	b10	b6.5	8.4	156	141	184	51	12	5.6	4.0
7	5.4	39	b10	b6	9.6	241	115	*195	47	11	5.6	4.0
8	6.6	37	b12	b6.5	10	243	116	247	47	11	5.6	4.0
9	6.8	37	b14	b7	7.7	205	129	199	46	10	5.6	4.2
10	9.2	41	16	b8	7.1	138	*143	187	45	9.6	5.3	4.2
11	17	43	b145	b9	7.1	146	156	205	40	9.2	5.0	4.2
12	21	40	229	10	7.1	104	162	225	39	8.8	5.0	4.2
13	18	b35	189	8.8	b5.5	94	164	187	35	8.4	5.0	4.4
14	16	30	90	7.4	7.1	102	192	182	34	8.4	4.8	4.4
15	13	b29	67	6.5	b10	97	159	153	34	8.4	4.8	4.4
16	*12	25	57	5.6	b11	89	143	148	32	8.0	4.6	4.4
17	10	35	51	a6	b13	78	133	137	30	7.7	4.4	4.4
18	12	b30	43	a7	b15	80	124	159	28	7.4	4.4	4.4
19	16	b25	b40	a6	b17	87	140	205	26	7.4	4.6	4.6
20	14	b22	b35	a5	18	94	129	169	*24	7.1	4.6	4.6
21	12	b20	b30	a5.5	18	80	120	138	25	7.1	4.0	4.6
22	10	b18	b25	a6	36	69	120	127	24	10	4.0	4.6
23	10	b17	b23	a5.5	94	66	127	111	22	10	4.0	4.4
24	8.0	b16	b21	a5	201	68	*126	99	20	9.6	4.0	4.4
25	14	b15	b20	a5	176	135	118	92	19	8.4	4.0	4.4
26	57	b14	b18	a5	382	*129	122	85	18	7.7	4.0	4.4
27	46	b15	b16	a5	350	111	137	82	17	7.4	4.0	4.6
28	24	b15	b15	a5	243	127	157	77	16	6.8	4.0	5.3
29	b20	b15	b12	a5	-	148	186	77	16	6.2	4.2	5.6
30	b19	b14	b11	b6	-----	127	199	88	16	5.9	4.2	7.4
31	b18	-----	*b10	b9	-----	146	-----	87	-----	*5.6	4.2	-----
Total	449.4	773	1,275	213.8	1,703.3	3,883	4,137	4,811	1,077	287.1	147.5	134.5
Mean	14.5	25.8	41.1	6.90	60.8	125	138	155	35.9	9.26	4.76	4.48
Ac-ft	891	1,530	2,530	424	3,380	7,700	8,210	9,540	2,140	569	293	267

Calendar year 1956: Max 420 Min 4.8 Mean 75.3 Ac-ft 54,640
Water year 1956-57: Max 382 Min 4.0 Mean 51.8 Ac-ft 37,470

Peak discharge (base, 200 cfs).--Dec. 11 (11:30 p.m.) 345 cfs (3.15 ft); Feb. 26 (6 p.m.) 605 cfs (3.83 ft); Mar. 7 (10:30 p.m.) 295 cfs (2.88 ft); Apr. 14 (11 a.m.) 215 cfs (2.50 ft); May 7 (3:30 a.m.) 302 cfs (2.91 ft); May 18 (11 p.m.) 237 cfs (2.61 ft).

* Discharge measurement made on this day.

a No gage-height record, discharge estimated on basis of weather records, and records for Deep Creek above Adel and Drake Creek near Adel.
b Stage-discharge relation affected by ice.

Drake Creek near Adel, Oreg.

Location.--Lat 42°12', long 120°00', near center of sec. 9, T. 39 S., R. 23 E., on left bank 400 ft downstream from highway bridge, 700 ft downstream from Parsnip Creek, 1 mile upstream from mouth, and 6½ miles west of Adel.

Drainage area.--47 sq mi, approximately.

Records available.--March to May 1915, December 1922 to May 1923, December 1949 to September 1957.

Gage.--Water-stage recorder. Datum of gage is 5,076.42 ft above mean sea level (Oregon State Highway Department construction survey bench mark). Prior to May 9, 1923, staff gage at highway bridge at different datum. Dec. 16, 1949, to June 21, 1951, water-stage recorder at site 900 ft upstream at different datum.

Average discharge.--7 years (1950-57), 15.4 cfs (11,150 acre-ft per year).

Extremes.--Maximum discharge during year, 594 cfs Feb. 24 (gage height, 3.02 ft), from rating curve extended above 300 cfs by logarithmic plotting; minimum, 2.0 cfs Jan. 25 (gage height, 0.50 ft).
1915, 1922-23, 1949-57: Maximum discharge, 1,100 cfs Dec. 23, 1955 (gage height, 3.93 ft), from rating curve extended above 300 cfs by logarithmic plotting; minimum, 1.9 cfs Mar. 1, 1955 (gage height, 0.44 ft).

Remarks.--Records fair except those for periods of ice effect, which are poor. Diversions for irrigation of about 620 acres above station.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.1	4.5	1.2	51
.7	8.0	1.5	96
.8	14	2.0	215
1.0	29	2.5	375

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.6	8.0	b7	7.6	b6	27	26	11	8.0	7.6	7.3	6.6
2	7.6	7.6	b7	7.0	b5.5	35	28	13	8.0	7.6	a7.3	6.6
3	7.6	7.3	b7	b6.5	b5	20	36	13	8.0	7.6	a7.3	6.2
4	7.6	9.2	b7	b6	b5	20	26	11	8.0	8.0	a7.0	6.2
5	7.6	8.6	b6.5	5.6	b6	36	20	12	8.6	8.0	a7.0	6.2
6	7.6	7.6	b6.5	5.6	b7	38	17	11	8.6	8.6	a6.6	6.2
7	7.6	b10	b6	6.2	b8	75	13	*9.8	8.6	8.6	a6.6	6.2
8	8.6	13	b7	5.9	b9	37	12	13	9.2	8.6	6.6	6.6
9	8.0	12	8.0	5.9	b10	23	10	12	9.2	8.6	6.6	6.6
10	8.6	10	9.8	7.0	b11	13	*10	14	9.8	8.6	a6.6	6.6
11	11	8.6	39	7.3	b12	12	10	18	9.2	8.6	a6.6	6.6
12	9.2	8.0	20	6.2	13	13	10	17	9.8	8.6	a6.6	7.0
13	8.0	8.0	17	5.6	16	12	11	15	9.8	8.6	a6.6	7.0
14	7.6	8.0	12	5.6	32	11	13	13	9.2	8.6	a6.6	6.6
15	7.6	8.6	9.2	5.6	41	18	12	12	9.2	8.6	a6.6	7.0
16	*7.3	8.6	8.6	5.2	74	22	10	12	9.2	8.6	6.6	7.0
17	6.6	8.0	8.0	5.6	65	18	9.8	11	8.6	8.0	6.6	7.0
18	7.3	7.6	7.6	5.2	61	41	10	13	8.6	7.6	6.6	6.6
19	7.0	b8	7.3	5.9	101	68	12	15	8.6	7.6	6.6	7.0
20	7.0	b8	7.3	4.8	117	54	13	13	*8.6	7.6	6.6	7.0
21	6.6	b8	b7.5	4.8	89	27	15	13	8.6	8.0	6.6	*7.0
22	6.6	7.6	b8	6.2	283	18	12	12	8.0	9.2	6.6	7.0
23	7.0	7.6	b7.5	6.2	292	14	11	11	7.6	8.0	6.6	6.6
24	6.6	7.6	7.3	4.8	338	13	*9.2	9.8	7.6	7.6	6.6	6.6
25	7.3	7.3	b7	b5	239	20	8.6	9.8	7.3	7.6	6.6	6.2
26	7.6	7.6	b7	4.8	290	*23	8.6	9.2	7.3	7.6	6.6	6.2
27	7.3	b7.5	b7.5	b4.5	94	17	8.6	9.2	7.3	7.6	7.0	6.6
28	6.6	b7.5	b7.5	b4.5	43	15	8.6	8.6	7.3	7.6	7.0	6.6
29	6.6	b7	b7	b4.5	-	15	9.8	8.6	7.3	7.6	7.0	6.6
30	12	b7	7.0	b4.5	-----	14	10	9.2	7.3	7.6	7.0	8.0
31	8.6	-----	*7.3	b5	-----	18	-----	8.6	-----	7.6	7.0	-----
Total	239.8	249.4	288.4	175.1	2,272.5	787	410.2	367.8	252.4	250.2	209.5	200.2
Mean	7.74	8.31	9.30	5.65	81.2	25.4	13.7	11.9	8.41	8.07	6.76	6.67
Ac-ft	476	495	572	347	4,510	1,560	814	730	501	496	416	397
Calendar year 1956: Max			340	Min	6	Mean	19.9	Ac-ft	14,440			
Water year 1956-57: Max			338	Min	4.5	Mean	15.6	Ac-ft	11,310			

Peak discharge (base, 150 cfs).--Feb. 24 (7 p.m.) 594 cfs (3.02 ft).

* Discharge measurement made on this day.

a No gage-height record; discharge interpolated.

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 1957 in reports of Geological Survey. September 1922 to September 1923 and October 1929 to September 1941 in reports of State engineer.

Gage.--Water-stage recorder. Datum of gage is 4,966.7 ft above mean sea level (Oregon State Highway Department construction survey bench mark). Prior to Dec. 21, 1922, staff gage at same site and datum.

Average discharge.--29 years (1922-23, 1929-57), 119 cfs (86,150 acre-ft per year).

Extremes.--Maximum discharge during year, 1,690 cfs Feb. 24 (gage height, 4.92 ft); minimum, 13 cfs Aug. 16-19, 21, 24-28.

1922-23, 1929-57: 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, which are poor. Diversions for irrigation of about 5,500 acres above station.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	13	2.0	188
.8	22	2.5	320
1.0	37	3.0	500
1.2	56	4.0	1,010
1.5	95	5.0	1,780

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	40	29	38	60	402	357	564	524	47	15	17
2	21	45	28	36	55	402	314	568	512	44	15	17
3	21	50	27	35	50	284	317	504	464	42	15	16
4	21	56	26	35	45	296	317	496	428	41	15	16
5	21	67	25	35	53	410	*364	480	406	37	15	15
6	21	84	25	35	42	420	420	524	388	30	15	15
7	20	104	25	35	38	665	326	*572	341	27	15	15
8	24	96	30	38	38	820	317	700	323	26	15	15
9	*29	92	40	40	35	512	341	635	302	24	15	16
10	28	100	50	50	32	357	368	576	263	22	15	16
11	58	108	400	55	31	360	396	600	240	20	14	16
12	48	90	887	68	31	302	399	640	219	20	14	18
13	43	70	492	58	35	255	410	605	206	20	14	16
14	39	60	258	45	51	260	484	564	192	20	14	15
15	35	50	186	40	79	278	410	492	182	19	14	15
16	*32	55	167	38	143	278	371	468	167	19	13	15
17	31	60	141	40	130	242	344	500	149	18	13	15
18	31	76	132	45	128	260	326	584	134	18	13	15
19	45	54	106	40	172	317	364	655	121	18	13	15
20	38	50	102	35	186	332	335	544	*121	18	14	15
21	35	45	83	37	162	260	317	468	123	18	13	15
22	32	42	74	35	463	198	305	440	112	22	14	15
23	31	40	70	33	679	188	320	399	102	22	14	15
24	28	38	65	32	1,070	184	*314	371	84	20	13	15
25	39	36	60	30	866	279	302	364	76	19	13	15
26	112	35	55	30	1,120	350	308	374	72	18	13	15
27	108	33	50	32	851	278	335	392	66	17	13	15
28	55	32	48	35	516	287	385	436	66	17	13	28
29	49	31	45	40	-	347	460	460	58	16	14	22
30	45	30	42	45	-----	311	520	498	53	15	14	30
31	42	-----	40	50	-----	357	-----	540	-----	*15	15	-----
Total	1,203	1,769	3,608	1,241	7,141	10,291	10,846	15,985	6,493	729	435	494
Mean	38.8	59.0	116	40.0	255	332	362	516	216	23.5	14.0	16.5
Ac-ft	2,390	3,510	7,160	2,460	14,180	20,410	21,510	31,700	12,880	1,450	863	980
Calendar year 1956: Max	1,200				Min 19		Mean 231		Ac-ft 167,600			
Water year 1956-57: Max	1,120				Min 13		Mean 165		Ac-ft 119,500			

Peak discharge (base, 600 cfs).--Dec. 11 (12 p.m.) 1,210 cfs (4.31 ft); Feb. 24 (5 p.m.) 1,690 cfs (4.92 ft); Mar. 7 (1 a.m.) 745 cfs (3.53 ft); May 8 (7 a.m.) 795 cfs (3.63 ft); May 19 (2 a.m.) 755 cfs (3.55 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Oct. 30 to Nov. 2, Nov. 13-17, Nov. 20 to Dec. 11, Dec. 23 to Jan. 11, Jan. 17-20, Jan. 22 to Feb. 4, Feb. 10.

Honey Creek near Plush, Oreg.

Location.--Lat 42°25', long 119°55', in NW¹ 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 1957 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.--27 years (1910-14, 1930-41, 1945-57), 27.0 cfs (19,550 acre-ft per year).

Extremes.--Maximum discharge during year, 720 cfs Feb. 24 (gage height, 5.70 ft); minimum daily, 0.5 cfs Sept. 1-27.

1909-15, 1921-22, 1930-57: Maximum discharge, about 3,840 cfs Apr. 15, 1915 (gage height, 9.20 ft, site and datum then in use), from rating curve extended above 2,300 cfs by logarithmic plotting (flood caused by failure of storage dam on Snyder Creek); maximum discharge due to natural causes, 2,240 cfs Feb. 24, 1910 (gage height, 6.30 ft, site and datum then in use); no flow at times.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversion for irrigation of about 2,300 acres above station.

Revisions.--WSP 410: Drainage area.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 14

Feb. 15 to Sept. 30

0.4	0.5	1.0	24	-0.3	0.5	0.2	7.0	2.0	125
.5	2.0	1.5	57	-.2	1.1	.5	17	3.0	248
.6	5.0	2.0	100	-1.1	2.0	1.0	41	4.0	390
.7	9.0			0.0	3.3	1.5	78	5.0	580

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	7.5	5	3.5	2	93	78	144	86	14	1	0.5
2	3.8	8.6	5	3.5	2	84	78	145	81	13	1	.5
3	3.5	9.0	5	3	1.5	58	78	118	73	12	1	.5
4	3.8	9.5	5	3	1.5	49	79	117	64	11	1	.5
5	3.8	10	5	3	**1.5	48	*103	129	60	10	1	.5
6	4.1	8.6	5	3	1.5	47	105	135	53	8.2	1	.5
7	4.1	12	8	3	1.5	99	78	*137	54	7.6	1	.5
8	4.4	14	7	3	1.5	140	70	159	53	6.8	1	.5
9	4.7	14	10	3.5	1.5	103	66	139	49	*6.2	1	.5
10	5.0	16	15	4	2	66	77	140	50	5.8	1	.5
11	6.2	22	40	4.5	4	58	90	199	45	5	.8	.5
12	6.6	18	30	5	20	56	87	342	40	4.5	.8	.5
13	4.7	16	25	4.5	50	45	92	183	35	4	.8	.5
14	4.4	14	20	4	98	46	104	151	34	3.5	.8	.5
15	3.8	12	18	3.5	150	60	94	126	36	5	.8	.5
16	*3.8	11	16	3	66	56	84	135	34	3	.8	.5
17	4.1	10	13	3.5	46	40	74	128	30	3	.8	.5
18	4.4	9	10	4	39	47	67	132	27	3.3	.8	.5
19	5.4	8	8	3.5	40	59	79	160	24	3	.8	.5
20	5.4	7.5	7	3	39	82	79	140	23	3	.8	.5
21	4.7	7	6.5	3	40	72	81	124	23	3.5	.6	** .5
22	4.4	6.5	5	2.5	43	*46	78	127	21	5.4	.6	.5
23	4.7	6.5	6.5	2.5	57	38	76	110	18	4.2	.6	.5
24	4.1	6	5.5	2	256	37	*72	94	*15	3	.6	.5
25	4.7	6	5	2	257	55	64	86	14	2.5	.6	.5
26	7.4	6	5	2	399	107	64	81	11	1.9	.6	.5
27	14	5.5	5	2	237	76	71	77	10	1.5	.6	.5
28	10	5.5	4.5	2	128	75	90	*75	13	1.5	.6	.5
29	8.2	5	4	2.5	107	113	80	111	1.5	1.5	.6	.5
30	7.5	5	4	2.5	94	129	113	15	1	1	.6	.5
31	7	-----	3.5	2.5	-----	83	-----	95	-----	1	.6	-----
Total	166.5	295.7	309.5	96.5	1,985.5	2,128	2,500	4,121	1,102	156.9	24.6	15.9
Mean	5.37	9.86	9.98	3.11	70.9	68.6	83.3	133	36.7	5.06	0.79	0.53
Ac-ft	330	587	614	191	3,940	4,220	4,960	8,170	2,190	311	49	32

Calendar year 1956: Max 548 Min 0.6 Mean 55.7 Ac-ft 40,440

Water year 1956-57: Max 399 Min 0.5 Mean 55.3 Ac-ft 25,590

Peak discharge (base 200 cfs).--Feb. 15 (10 p.m.) 374 cfs (3.89 ft); Feb. 24 (8 p.m.) 720 cfs (5.70 ft); May 12 (10:30 a.m.) 426 cfs (4.23 ft).

* Discharge measurement made on this day.

** Field estimated made on this day.

Note.--No gage-height record Dec. 7-13, Jan. 27 to Feb. 13, June 23, July 11-17, 19-21, 24, 25, July 27 to Sept. 20, Sept. 22-30; discharge estimated on basis of weather records and records for Deep Creek above Adel and Twentymile Creek near Adel. Stage-discharge relation affected by ice Oct. 30 to Nov. 1, Nov. 16 to Dec. 6, Dec. 18 to Jan. 26.

Chewaucan River near Paisley, Oreg.

Location.--Lat 42°42', long 120°35', in SW 1/4 sec. 26, T. 33 S., R. 18 E., on left bank 1 1/2 miles downstream from Mill Creek and 1 1/2 miles southwest of Paisley.

Drainage area.--275 sq mi.

Records available.--April 1912 to September 1921, May 1924 to September 1957. Published as "above Mill Creek near Paisley" November 1912 to September 1914, and as "above Conn ditch, near Paisley" May 1924 to September 1955 (Conn ditch not used since 1940).

Gage.--Water-stage recorder. Datum of gage is 4,430 ft above mean sea level (river-profile survey). Apr. 3 to July 13, 1912, reference point at site 1 mile upstream at different datum. Nov. 6, 1912, to Sept. 30, 1914, staff gage and Oct. 1, 1914, to Sept. 30, 1921, water-stage recorder, at various sites about 2 miles upstream above Mill Creek at various datums. May 1924 to December 1955, water-stage recorder at site 1 1/2 miles upstream at different datum. January to September 1956, staff gage at site 1 mile downstream at different datum.

Average discharge.--42 years, 135 cfs (97,740 acre-ft per year).

Extremes.--Maximum discharge during year, 1,750 cfs Feb. 26 (gage height, 4.86 ft); maximum gage height, 5.50 ft Dec. 11 (ice jam); minimum discharge, 25 cfs Aug. 28 (gage height, 2.01 ft).

1912-21, 1924-57: Maximum discharge, 3,260 cfs Dec. 22, 1955 (gage height, 7.8 ft, from floodmarks); no flow part of each day Dec. 7, 1927 (corrected), Dec. 12, 1932, result of freezeup.

Maximum discharge known, 4,000 cfs Nov. 23, 1909, from records at site 1 mile 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.--WSP 860: Drainage area.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1-6

Oct. 7 to Sept. 30

2.0	40	2.0	24	3.5	410
2.1	50	2.2	51	4.0	700
		2.5	105	4.5	1,200
		3.0	225		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	46	60	40	32	45	297	286	588	624	97	41	36
2	40	70	40	30	40	272	*249	594	606	95	41	34
3	40	81	*40	30	38	225	262	546	564	101	41	34
4	44	89	40	30	35	258	276	582	516	89	40	33
5	42	87	38	30	32	448	318	606	480	81	40	33
6	42	91	35	30	32	357	361	824	450	*74	40	36
7	a42	95	35	32	30	383	304	688	410	71	40	33
8	a45	89	50	35	30	*401	304	*764	378	71	40	33
9	a50	89	80	40	30	378	325	724	361	64	40	33
10	a60	95	150	45	30	300	341	693	353	62	38	33
11	a80	97	330	50	30	370	357	724	300	61	38	33
12	a75	87	380	55	30	440	392	732	280	56	37	33
13	a70	70	*272	60	32	318	392	716	262	56	37	33
14	a65	60	200	50	40	290	430	665	246	57	37	33
15	*61	50	138	45	60	300	374	612	228	59	36	33
16	61	60	138	40	90	286	365	612	210	56	36	33
17	59	70	107	40	120	243	353	618	195	*54	36	37
18	54	81	95	45	110	266	349	182	54	54	36	34
19	64	60	87	40	100	262	401	1,040	172	53	36	36
20	56	55	85	35	100	280	357	825	172	50	36	34
21	56	50	83	35	110	234	318	708	172	50	36	34
22	53	45	43	35	150	192	311	644	155	62	36	34
23	56	45	40	32	550	180	*325	594	142	57	36	*34
24	47	42	40	30	800	195	333	564	132	53	34	34
25	67	42	40	30	507	286	318	558	130	47	34	34
26	172	40	38	30	1,070	280	329	552	*121	45	34	34
27	140	40	36	30	564	243	349	576	117	45	34	43
28	83	40	35	30	374	252	396	606	113	44	*33	76
29	70	40	35	35	-	283	475	651	105	*43	32	62
30	65	40	35	40	-----	297	552	716	99	41	36	74
31	60	-----	35	50	-----	318	-----	*651	-----	41	36	-----
Total	1,965	1,960	2,840	1,173	5,179	9,134	10,502	20,605	8,275	1,887	1,147	1,138
Mean	63.4	65.3	91.6	37.8	185	285	350	665	276	60.9	37.0	37.9
Ac-ft	3,900	3,890	5,630	2,330	10,270	18,120	20,830	40,870	16,410	3,740	2,280	2,260

Calendar year 1956: Max 1,700 Min 35 Mean 316 Ac-ft 229,500
 Water year 1956-57: Max 1,070 Min 30 Mean 180 Ac-ft 130,500

Peak discharge (base, 500 cfs).--Dec. 11 (9 p.m.) 870 cfs (4.20 ft); Feb. 26 (6 p.m.) 1,750 cfs (4.86 ft); Mar. 5 (5 a.m.) 612 cfs (3.87 ft); Mar. 12 (1 a.m.) 679 cfs (3.97 ft); May 8 (6 a.m.) 845 cfs (4.17 ft); May 19 (2 a.m.) 1,200 cfs (4.50 ft); May 30 (6 a.m.) 807 cfs (4.13 ft).

* Discharge measurement made on this day.
 a No gage-height record; discharge estimated on basis of weather records and records for Deep Creek above Adel and Silver Creek near Silver Lake.

Note.--Stage-discharge relation affected by ice Oct. 29 to Nov. 2, Nov. 13-17, Nov. 19 to Dec. 11, Dec. 18, Dec. 23 to Feb. 24.

Ana River near Summer Lake, Oreg.

Location.--Lat 43°00', long 120°45', in SE $\frac{1}{4}$ 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 1957 in reports of Geological Survey. October 1929 to September 1939 (river only), May to September 1928, and April 1931 to July 1941 (fragmentary records for Summer Lake Canal only) 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.

Average discharge.--9 years (1930-32, 1935-36, 1951-57), 91.0 cfs (65,880 acre-ft per year).

Extremes.--Maximum discharge during year, 102 cfs Oct. 5, 6; minimum daily, 23 cfs May 7, 1929-39, 1951-57; Maximum discharge, 186 cfs Sept. 15, 1936 (gage height, 3.87 ft), no flow in canal; minimum daily, 6 cfs May 16, 1952.

Remarks.--Records good. Records include flow in Summer Lake Canal which diverts 300 ft above station for irrigation of lands along west side of Summer Lake. Flow regulated by gates at diversion dam. Source of stream is Ana River Springs, three-quarters of a mile above station, which are flooded over by pondage behind diversion dam.

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	85	91	91	92	88	91	94	92	84	83	84	90
2	85	91	90	92	88	93	94	92	84	85	84	93
3	85	91	90	92	88	93	94	91	85	86	79	89
4	85	91	90	*92	88	93	94	91	88	94	80	88
5	90	91	90	93	88	93	94	91	83	91	81	88
6	102	*91	90	93	87	93	94	60	83	89	82	88
7	100	91	90	93	87	93	94	23	84	88	83	88
8	99	91	90	93	87	93	94	*34	84	88	83	88
9	98	91	90	94	87	94	94	73	84	88	82	88
10	96	91	90	94	87	94	94	80	84	86	82	88
11	96	91	90	94	87	94	94	83	84	86	82	88
12	95	91	90	93	87	94	94	83	86	86	81	88
13	95	91	88	93	87	94	94	88	86	86	82	88
14	94	91	88	93	*87	94	94	84	82	85	74	88
15	*94	91	94	93	87	94	94	86	84	85	77	88
16	93	91	95	93	87	94	94	84	84	*85	83	*88
17	93	91	94	93	87	94	94	85	*84	85	88	86
18	93	91	94	93	87	94	94	86	85	85	87	86
19	92	91	94	93	87	94	94	87	85	85	87	86
20	92	91	94	93	87	94	94	87	85	85	87	86
21	92	91	94	93	90	94	94	87	86	85	*87	86
22	92	91	93	92	91	94	94	84	86	85	91	86
23	91	91	93	92	91	94	*94	81	86	85	93	86
24	91	91	92	92	91	94	94	83	86	85	91	84
25	91	91	92	91	91	94	93	84	84	85	88	84
26	91	91	92	91	91	94	92	84	85	85	86	84
27	91	91	92	91	91	94	92	85	86	85	87	84
28	91	91	92	91	91	94	92	86	86	85	89	84
29	91	91	92	90	-	94	92	85	83	85	98	84
30	92	91	92	90	-----	94	92	83	83	85	94	84
31	92	-----	92	88	-----	94	-----	84	-----	85	94	-----
Total	2,867	2,730	2,838	2,860	2,472	2,904	2,809	2,506	2,539	2,666	2,646	2,606
Mean	92.5	91.0	91.5	92.3	88.3	93.7	93.6	80.8	84.6	86.0	85.4	86.9
Ac-ft	5,690	5,410	5,630	5,670	4,900	5,760	5,570	4,970	5,040	5,290	5,250	5,170
Calendar year 1956: Max	102			Min 31		Mean 89.5		Ac-ft 64,940				
Water year 1956-57: Max	102			Min 23		Mean 88.9		Ac-ft 64,350				

* Discharge measurement made on this day.

Silver Creek near Silver Lake, Oreg.

Location.--Lat 43°07', long 121°04', in SW $\frac{1}{4}$ sec. 28, T. 28 S., R. 14 E., on right bank $\frac{1}{2}$ miles downstream from diversion dam of Silver Lake Irrigation District, $\frac{1}{2}$ 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 1957.

Gage.--Water-stage recorder and, since Sept. 15, 1932, concrete control. Datum of gage is 4,361.22 ft 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 outlet $\frac{1}{2}$ miles upstream at different datum.

Average discharge.--45 years (1905-6, 1909-27, 1929-41, 1943-57), including Silver Lake Irrigation District Canal, not used since 1941, 27.9 cfs (20,200 acre-ft per year).

Extremes.--Maximum discharge during year, 366 cfs Feb. 28 (gage height, 4.82 ft); minimum, 1.5 cfs Feb. 19 (gage height, 1.56 ft).
1905-7, 1909-57: 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 1931-32, 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 $\frac{1}{2}$ miles above station and by Thompson Valley Reservoir (capacity, 17,400 acre-ft) 11 miles above station, both of which are owned by the Silver Lake Irrigation District.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to May 2						May 3 to Sept. 30			
1.6	2.0	2.0	18	3.0	100	1.9	12	2.5	49
1.7	4.7	2.2	30	4.0	228	2.0	17	3.0	95
1.8	8.5	2.5	53	5.0	400	2.2	28	4.0	220

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	6.6	3.1	3.1	a4	214	106	137	55	43	20	14
2	4.2	6.2	3.1	b3.5	a3.5	185	99	163	51	43	18	14
3	4.2	6.2	3.1	b3.5	a3.5	150	91	170	54	43	18	14
4	3.9	6.2	3.1	*b3.5	a3.5	129	91	163	53	42	17	14
5	3.9	6.2	3.1	b3.5	a3	149	98	163	51	41	16	14
6	3.9	6.2	b3	b3.5	a3	157	104	165	48	41	16	14
7	3.9	5.8	b3	b3.5	a3	159	102	169	47	41	16	14
8	3.9	5.8	3.1	b3.5	a3	168	99	*183	46	40	16	14
9	3.6	6.2	2.8	b3.5	a3	171	99	194	45	40	15	14
10	3.6	6.2	2.8	b3.5	a3	161	102	188	46	40	15	13
11	4.7	5.8	4.2	b3.5	a3	140	106	176	47	40	14	13
12	5.8	5.8	7.7	3.6	a3	158	108	169	48	40	14	13
13	6.2	5.8	9.8	3.6	a3	134	110	160	48	40	14	13
14	6.2	5.5	9.4	3.4	3.6	118	119	150	48	40	14	13
15	*6.2	4.7	8.5	3.4	3.6	102	126	131	48	40	14	13
16	5.8	4.4	7.7	b3.5	3.6	98	119	114	48	*40	14	*13
17	5.5	4.4	7.0	b4	3.6	89	109	103	47	33	14	13
18	5.5	4.7	6.2	b4	3.9	84	102	110	47	27	14	13
19	5.1	4.4	5.5	4.2	4.2	82	99	135	47	25	14	13
20	4.7	4.2	5.1	4.2	4.4	81	100	140	46	24	14	14
21	4.7	3.6	4.4	3.9	5.8	76	93	134	46	24	*14	14
22	4.7	3.4	3.9	3.6	14	67	87	117	46	25	14	14
23	4.7	3.4	3.4	3.6	26	61	*81	99	45	24	14	14
24	4.7	3.4	3.4	3.6	92	58	78	88	44	24	14	14
25	4.4	3.4	3.4	3.6	87	53	75	77	43	24	14	13
26	5.5	3.4	b3	b3.5	144	69	74	68	43	24	14	13
27	7.7	3.4	b3	a3.5	265	*72	74	62	43	24	14	16
28	7.7	3.1	b3	a3.5	265	74	75	55	43	23	14	20
29	7.7	3.1	b3	a3.5	-	82	89	58	43	23	14	20
30	7.7	3.1	2.8	a4	-----	92	110	57	43	23	14	21
31	7.4	-----	2.8	a4.5	-----	100	-----	58	-----	23	14	-----
Total	162.1	144.6	137.4	112.8	967.2	3,541	2,929	3,956	1,409	1,024	461	429
Mean	5.23	4.82	4.43	3.64	34.5	114	97.6	128	47.0	33.0	14.9	14.3
Ac-ft	322	287	273	224	1,920	7,020	5,810	7,850	2,790	2,030	914	851
Calendar year 1956: Max	604			Min 2.8		Mean 82.0		Ac-ft 59,540				
Water year 1956-57: Max	265			Min 2.8		Mean 41.8		Ac-ft 30,290				

* Discharge measurement made on this day.

a No gage-height record; discharge estimated on basis of records for Deep Creek above Adel and Chewaucan River near Paisley.

b Stage-discharge relation affected by ice.

Silvies River near Burns, Oreg.

Location.--Lat 43°43', long 119°11', in NW $\frac{1}{4}$ 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 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,190 ft (by barometer). 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 1 $\frac{1}{2}$ miles downstream at different datum. Apr. 7, 1922, to Oct. 1, 1941, water-stage recorder at present site and datum. Oct. 2, 1941, to Oct. 3, 1951, water-stage recorder at site 400 ft downstream at present datum.

Average discharge.--44 years (1903-5, 1909-12, 1917-21, 1922-57), 161 cfs (116,600 acre-ft per year).

Extremes.--Maximum discharge during year, 3,110 cfs Feb. 25 (gage height, 14.17 ft); minimum, 9.4 cfs Aug. 23, 24.
1903-6, 1908-57: Maximum discharge, 4,960 cfs about Apr. 6, 1952 (gage height, 15.2 ft); 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 floodwaters.

Revisions.--WSP 860: Drainage area.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 25

Feb. 26 to Sept. 30

1.3	16	9.0	1,000	0.9	7.0	6.0	586
1.5	30	11.0	1,400	1.0	10	9.0	1,030
2.0	71	13.0	2,110	1.2	18	11.0	1,460
3.0	176	14.0	2,920	1.5	37	13.0	2,130
6.0	575			2.0	60	14.0	2,920
				3.0	188		

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	55	44	45	50	1,510	995	653	288	33	16	12
2	20	45	40	45	48	925	896	666	255	29	14	12
3	19	56	41	45	45	548	878	698	254	29	14	11
4	18	53	36	44	42	431	835	684	246	28	13	11
5	17	52	*35	42	40	474	874	768	220	27	13	10
6	17	53	35	41	40	473	1,060	865	199	26	*13	10
7	17	55	34	42	50	551	1,100	816	186	28	13	10
8	17	57	32	44	60	708	1,060	829	184	28	12	10
9	17	58	39	43	65	768	1,090	814	187	32	12	10
10	19	56	44	42	60	764	*1,060	776	173	28	12	10
11	29	60	59	40	70	643	1,070	811	158	25	12	10
12	36	56	160	45	100	*537	1,100	836	*151	*23	11	10
13	34	53	131	48	150	449	1,180	835	141	23	11	10
14	30	52	144	50	188	370	1,160	822	134	23	11	10
15	33	45	140	45	168	353	1,230	769	134	25	11	10
16	*35	51	114	42	157	355	*1,180	727	133	23	10	10
17	35	54	113	40	157	351	1,130	680	132	22	10	10
18	34	53	91	42	157	356	1,070	635	125	20	10	10
19	34	44	85	45	169	362	997	684	114	20	10	11
20	33	54	81	50	180	412	952	700	109	20	*10	12
21	32	53	70	45	597	403	913	664	107	19	10	12
22	32	53	65	40	1,640	382	865	666	95	21	9.7	12
23	32	52	59	36	2,350	332	822	639	89	23	9.7	12
24	35	51	55	*34	2,340	334	787	564	81	23	9.7	12
25	38	49	50	32	2,680	467	734	495	76	24	10	12
26	53	48	45	30	2,500	555	688	445	73	22	10	12
27	56	49	40	30	2,200	510	662	403	68	23	10	12
28	52	49	40	30	1,870	488	643	363	58	22	11	12
29	51	46	40	30	-	538	636	333	52	19	11	13
30	60	47	42	35	-----	703	641	346	41	18	12	14
31	67	-----	45	40	-----	884	-----	324	-----	17	12	-----
Total	1,022	1,559	2,049	1,262	18,173	16,916	28,309	20,310	4,263	743	353.1	332
Mean	33.0	52.0	66.1	40.7	649	546	944	655	142	24.0	11.4	11.1
Ac-ft	2,030	3,090	4,060	2,500	36,050	33,550	56,150	40,280	8,460	1,470	700	659
Calendar year 1956: Max		1,990		Min 8.8		Mean 291		Ac-ft 211,200				
Water year 1956-57: Max		2,680		Min 9.7		Mean 261		Ac-ft 189,000				

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 17, Feb. 26, 27; discharge estimated on basis of records for Malheur River near Drewsey and Silver Creek near Riley. Stage-discharge relation affected by ice Dec. 5-7, 19, 21, 22, Dec. 24 to Jan. 5, Jan. 10 to Feb. 12.

Donner und Blitzen River near Frenchglen, Oreg.

Location.--Lat 42°47', long 118°52', in NW $\frac{1}{4}$ sec. 20, T. 32 S., R. 32 $\frac{1}{2}$ E., on left bank $\frac{1}{2}$ miles upstream from upper diversions for Malheur Migratory Waterfowl Refuge, 2 miles downstream from Fish Creek, $\frac{3}{4}$ miles southeast of Frenchglen.

Drainage area.--180 sq mi, approximately.

Records available.--December 1937 to September 1957 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 (levels by U. S. Fish and Wildlife Service). Prior to December 1937, staff gages at several sites downstream at various datums.

Average discharge.--27 years (1911-13, 1914-16, 1917-21, 1938-57), 127 cfs (91,940 acre-ft per year).

Extremes.--Maximum discharge during year, 2,560 cfs May 18 (gage height, 6.13 ft); minimum, 15 cfs Jan. 17, result of freezeup.
1910-21, 1937-57: Maximum discharge, 3,390 cfs May 19, 1953 (gage height, 6.29 ft), from rating curve extended above 1,100 cfs on basis of velocity-area studies and logarithmic plotting; minimum, 8 cfs Jan. 14, 1940 (ice jam upstream).

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

Revisions.--WSP 330: Drainage area (former site). WSP 860: Drainage area (present site).

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.9	24	3.1	260
2.2	46	3.5	440
2.5	86	4.0	740
2.8	155	5.0	1,480

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	70	47	54	55	158	233	332	936	228	62	49
2	42	61	49	57	50	182	161	354	1,050	202	61	47
3	42	62	49	59	46	134	158	284	859	176	60	47
4	42	104	55	37	50	428	159	284	775	161	58	47
5	42	117	46	37	55	463	199	304	866	155	58	47
6	42	80	*42	36	50	582	260	354	761	170	57	46
7	42	73	37	40	55	458	182	415	616	147	57	46
8	42	69	30	46	50	352	176	610	574	137	56	45
9	42	69	52	40	45	268	206	586	514	132	55	46
10	47	67	65	46	42	179	244	526	395	129	54	47
11	61	67	446	50	48	150	252	573	381	120	54	47
12	64	66	256	48	48	139	256	1,040	430	115	53	46
13	78	66	300	55	104	120	248	*691	381	*104	52	46
14	55	58	145	50	503	113	284	*658	309	100	50	46
15	48	56	108	46	357	132	224	480	272	100	49	46
16	48	64	104	40	158	132	232	450	236	92	49	46
17	47	62	90	26	96	113	*213	475	220	90	48	47
18	50	56	92	30	89	113	196	*1,010	240	84	48	47
19	59	45	76	40	163	113	199	1,370	276	83	48	48
20	49	49	76	50	152	113	188	780	300	80	46	48
21	48	55	76	44	131	102	213	532	252	78	*46	*47
22	47	55	54	38	670	94	192	460	248	78	47	46
23	47	54	60	*40	638	86	196	415	236	76	46	46
24	*46	54	65	42	493	92	192	390	256	73	46	45
25	52	50	61	38	340	219	158	395	248	72	46	45
26	92	53	56	30	657	150	161	430	268	70	46	44
27	113	50	48	32	359	122	179	485	327	69	47	44
28	84	50	54	40	*213	129	210	550	288	67	48	45
29	67	50	60	36	-	164	309	740	268	67	49	44
30	259	50	61	46	-----	192	350	*1,080	256	65	49	48
31	147	-----	58	50	-----	307	-----	852	-----	62	49	-----
Total	1,986	1,882	2,818	1,303	5,717	6,097	6,429	17,905	13,038	3,382	1,594	1,388
Mean	64.1	62.7	90.9	42.0	204	197	214	578	435	109	51.4	46.3
Ac-ft	3,940	3,730	5,590	2,580	11,340	12,090	12,750	35,510	25,860	6,710	3,160	2,750
Calendar year 1956: Max	1,400			Min	28			Ac-ft	109,700			
Water year 1956-57: Max	1,370			Min	26			Ac-ft	126,000			

Peak discharge (base, 650 cfs).--Dec. 11 (2:30 p.m.) 1,010 cfs (4.38 ft); Feb. 14 (8 p.m.) 1,180 cfs (4.62 ft); Feb. 22 (7:30 p.m.) 1,580 cfs (5.12 ft); Mar. 9 (9 p.m.) 1,370 cfs (4.86 ft); May 12 (9 a.m.) 1,520 cfs (5.05 ft); May 18 (8 p.m.) 2,560 cfs (6.13 ft); May 30 (6 p.m.) 1,520 cfs (5.05 ft).

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 23, 24, Jan. 7-16, Jan. 18 to Feb. 8.

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, 3½ miles northeast of Frenchglen.

Drainage area.--30 sq mi, approximately.

Records available.--March 1911 to September 1916, December 1937 to September 1957.

Gage.--Water-stage recorder and concrete control. Datum of gage is 4,184.93 ft above mean sea level (levels by U. S. Fish and 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.--23 years (1912-16, 1938-57), 14.3 cfs (10,350 acre-ft per year).

Extremes.--Maximum discharge during year, 289 cfs May 19 (gage height, 3.06 ft), from rating curve extended above 59 cfs by logarithmic plotting; minimum, 10 cfs Dec. 9-11. 1911-16, 1937-57: Maximum discharge, 301 cfs (revised) May 19, 1953 (gage height, 2.73 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.

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

WSP	Water year	Date	Discharge (cfs)	Gage height (feet)
930	1941	June 7, 1941	81	1.69
960	1942	May 28, 1942	186	2.23
980	1943	Feb. 22, 1943	253	2.55
1284	1953	May 19, 1953	301	2.73
1394	1955	May 19, 1955	215	2.37

Remarks.--Records excellent except those for period of no gage-height record, which are fair. No regulation or diversion above station. Low-water flow is sustained by large springs.

Rating tables, water year 1956-57 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 21		Feb. 22 to Sept. 30	
0.9	6.7	1.0	11
1.0	11	1.1	16
1.1	16	1.2	24
1.3	31	1.4	39
		1.8	77
		2.2	127

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	11	11	12	12	20	25	40	21	12	14	14
2	11	11	11	12	12	27	24	33	21	12	14	14
3	11	11	11	12	12	19	25	25	19	12	14	14
4	11	15	11	12	12	38	25	25	17	12	14	14
5	11	13	11	12	12	29	26	26	16	12	14	14
6	11	12	*11	12	12	32	25	25	15	12	14	14
7	11	11	11	12	12	35	24	29	15	12	14	14
8	11	11	11	12	12	29	24	40	15	12	14	14
9	11	11	10	12	12	25	26	39	15	13	14	14
10	12	11	10	12	12	21	25	31	14	13	14	14
11	12	11	20	12	12	20	26	33	14	13	14	14
12	20	11	14	12	12	18	26	84	14	13	14	14
13	13	11	14	12	15	16	26	*55	14	*14	14	14
14	12	11	12	12	30	15	26	49	14	14	14	14
15	12	11	12	12	26	16	26	40	14	14	14	14
16	12	11	12	12	20	15	25	35	13	14	14	14
17	12	11	12	12	15	14	*25	33	13	14	14	14
18	12	11	12	12	13	15	26	59	12	14	14	14
19	12	11	12	12	22	15	26	118	12	14	14	14
20	12	11	12	12	20	15	25	98	12	14	14	14
21	12	11	12	12	18	15	27	74	12	14	*14	14
22	12	11	12	12	75	14	26	59	12	14	14	*14
23	12	11	12	*12	70	13	26	50	12	14	14	14
24	*12	11	12	12	55	15	25	44	12	14	14	14
25	11	11	12	12	40	29	23	38	12	14	14	14
26	11	11	12	12	60	22	24	34	12	14	14	14
27	12	11	12	12	40	20	26	32	12	14	14	14
28	12	11	12	12	*25	21	33	29	12	14	14	14
29	12	11	12	12	-	26	40	*26	12	14	14	14
30	17	11	12	12	-----	29	43	26	12	14	14	14
31	14	-----	12	12	-----	28	-----	24	-----	14	14	-----
Total	377	337	372	372	688	664	799	1,352	420	414	434	420
Mean	12.2	11.2	12.0	12.0	24.6	21.4	26.6	43.6	14.0	13.4	14.0	14.0
Ac-ft	748	668	738	738	1,360	1,320	1,580	2,680	833	821	861	833
Calendar year 1956: Max 35 Min 9.9 Mean 14.2 Ac-ft 10,320												
Water year 1956-57: Max 118 Min 10 Mean 18.2 Ac-ft 13,180												

Peak discharge (base, 30 cfs).--Oct. 12 (9 a.m.) 34 cfs (1.33 ft); Dec. 11 (10 a.m.) 35 cfs (1.37 ft); about Feb. 14 (time and discharge unknown); about Feb. 22 (time unknown) 140 cfs (2.29 ft); Mar. 4 (5 p.m.) 92 cfs (1.93 ft); Mar. 25 (10 a.m.) 35 cfs (1.35 ft); Apr. 29 (9 p.m.) 49 cfs (1.51 ft); May 12 (3 a.m.) 124 cfs (2.18 ft); May 19 (6 p.m.) 289 cfs (3.06 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 24 to Feb. 27; discharge estimated on basis of weather records, recorded range in stage, and records for Donner and Blitzen River near Frenchglen.

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 1957.

Gage.--Water-stage recorder. Altitude of gage is 4,450 ft (by barometer).

Average discharge.--6 years, 53.1 cfs (38,440 acre-ft per year).

Extremes.--Maximum discharge during year, 1,120 cfs Feb. 23 (gage height, 6.27 ft); minimum, 1.6 cfs Sept. 7, 8, 9.
1951-57: Maximum discharge, 1,300 cfs Apr. 6, 1952 (gage height, 6.65 ft); minimum, 0.4 cfs Sept. 7, 1955.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Diversions above station for irrigation of 500 acres.

Rating tables, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 23					Feb. 24 to Sept. 30				
1.4	2.3	2.4	64		1.2	1.4	2.1	45	
1.5	4.2	3.0	151		1.3	3.2	2.5	87	
1.6	6.7	4.0	365		1.4	5.8	3.0	160	
1.7	10	5.0	640		1.5	9.1	4.0	365	
2.0	28	6.0	1,010		1.6	13	5.0	640	
					1.8	24	6.0	1,010	

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.0	6.7	5.5	4.6	6.0	*172	455	115	61	14	3.2	2.6
2	2.8	6.4	5.0	4.4	5.5	160	390	120	55	13	3.2	2.4
3	2.8	7.0	4.4	4.2	5.0	124	385	108	51	13	3.2	2.0
4	2.8	6.7	4.6	4.0	4.8	140	398	99	47	12	3.0	2.0
5	2.8	6.4	*3.0	3.8	5.0	150	455	106	43	11	3.0	1.9
6	2.8	7.3	2.8	4.0	4.8	151	550	96	39	9.8	3.2	1.9
7	2.8	7.0	2.6	4.4	5.0	193	422	86	39	9.4	3.2	1.7
8	3.0	7.3	2.8	4.2	7.0	283	395	87	40	9.1	3.2	1.7
9	3.2	7.0	4.0	3.8	6.5	285	392	92	36	8.8	3.2	1.7
10	3.4	6.7	8.0	4.0	6.0	227	412	90	34	8.0	3.0	1.9
11	6.4	7.0	14	4.2	8.0	197	402	83	32	7.4	2.8	2.2
12	8.6	6.2	13	4.4	10	174	385	87	31	7.0	2.6	2.2
13	6.4	6.4	10	4.8	20	145	350	81	30	*6.7	2.6	2.0
14	5.1	5.7	9.0	5.0	80	127	362	76	31	6.7	2.4	2.0
15	4.6	5.7	10	5.0	196	122	320	71	32	6.1	2.4	2.0
16	4.2	6.7	9.0	4.6	171	110	291	66	29	5.8	2.2	2.0
17	4.2	7.3	10	4.4	156	91	*265	61	26	5.5	2.0	2.0
18	4.2	6.4	8.0	4.2	137	96	245	91	25	5.5	2.0	2.0
19	4.2	5.5	9.0	4.4	129	97	229	138	24	5.2	2.0	2.2
20	4.2	4.8	6.0	4.8	165	120	217	145	23	4.9	1.9	2.4
21	4.0	5.0	5.0	4.4	158	97	203	144	23	4.6	1.9	2.4
22	4.0	5.5	4.0	*4.0	181	85	183	144	22	8.0	*2.8	2.4
23	*4.2	5.5	3.6	3.8	646	79	172	136	20	7.0	2.8	2.2
24	4.4	4.8	3.2	3.6	643	99	162	122	19	6.1	2.2	2.0
25	6.4	5.0	3.6	3.4	358	194	145	108	18	5.5	1.9	2.0
26	12	4.6	3.4	3.2	543	195	136	96	17	4.9	1.9	2.0
27	9.6	4.2	3.2	2.6	324	181	130	87	17	4.4	2.2	2.6
28	7.3	4.0	3.4	3.4	201	189	130	79	16	3.9	3.4	3.2
29	5.9	4.2	4.0	2.8	--	305	127	*77	15	3.6	3.2	3.6
30	8.6	5.0	4.4	3.6	---	418	121	88	14	3.4	3.0	3.6
31	7.6	---	5.0	5.0	---	558	---	68	---	3.2	2.8	---
Total	155.5	178.0	183.5	127.0	4,181.6	5,544	8,829	3,047	910	223.5	82.4	66.8
Mean	5.02	5.93	5.92	4.10	149	179	294	98.3	30.3	7.21	2.66	2.23
Ac-ft	308	353	364	252	8,290	11,000	17,510	6,040	1,800	443	163	132
Calendar year 1956: Max	810			Min 2.6		Mean 65.0		Ac-ft 47,210				
Water year 1956-57: Max	646			Min 1.7		Mean 64.5		Ac-ft 46,660				

Peak discharge (base, 350 cfs).--Feb. 23 (6:30 p.m.) 1,120 cfs (6.27 ft); Feb. 25 (9 p.m.) 818 cfs (5.52 ft); Mar. 31 (10:30 a.m.) 631 cfs (4.97 ft); Apr. 6 (3:30 a.m.) 684 cfs (5.14 ft).

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 27 to Feb. 10; discharge estimated on basis of recorded range in stage, weather records, and records for Donner und Blitzen River near Frenchglen. Stage-discharge relation affected by ice Nov. 19 to Jan. 26, Feb. 11-14.

Trout Creek near Denio, Oreg

Location.--Lat 42°10', long 118°28', in SW¹ 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 1957.

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.--26 years (1922-23, 1932-57), 15.0 cfs (10,860 acre-ft per year).

Extremes.--Maximum discharge during year, 211 cfs May 11 (gage height, 3.98 ft); minimum, 2.2 cfs Jan. 17.

1911-12, 1922-23, 1925-57: 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), probably occurred in 1924 or 1925.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Diversions for irrigation of 800 acres above station.

Rating table, water year 1956-57, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.5	2.5	2.3	25
1.6	3.2	2.6	44
1.7	4.2	3.0	80
1.8	5.7	3.5	138
2.0	11	4.0	215

Discharge, in cubic feet per second, water year October 1956 to September 1957

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.7	6.8	5.8	6.2	6	24	33	105	103	18	4.2	4.2
2	3.7	8.3	5.6	6	5.5	24	32	114	105	18	4.1	4.0
3	3.7	8.3	5.4	5.5	a5	22	30	82	98	16	3.9	3.9
4	3.7	8.6	5.2	4.6	a5	23	29	71	86	15	3.6	3.8
5	3.8	8.9	5.0	4.5	a5	24	33	70	77	15	3.8	3.7
6	3.8	8.9	4.8	4.5	a5	27	42	87	73	17	*4.6	3.7
7	3.7	8.9	4.5	4.5	a5	30	37	109	62	17	5.0	3.5
8	3.5	9.2	4.5	5	a5	32	35	130	55	16	5.1	3.3
9	3.7	9.2	10	5	a4.8	35	38	129	50	14	4.4	3.4
10	3.9	8.9	15	5.2	a4.5	32	43	115	53	13	3.9	3.6
11	5.6	9.2	18	5.5	a5	30	46	148	46	12	4.0	3.6
12	5.1	8.9	*14	6	a6	29	45	151	*42	11	4.2	3.5
13	5.4	8.9	13	6	6.6	26	43	158	40	10	4.4	3.4
14	5.2	7.8	13	5.5	8.9	23	49	134	35	10	4.4	3.4
15	5.1	6.8	11	5	7.5	23	51	132	35	10	4.4	3.3
16	5.1	9.2	10	4.5	5.7	22	50	124	33	10	4.1	3.2
17	*5.1	8.3	10	4.1	5.7	20	46	123	30	8.9	3.8	3.2
18	5.6	7.5	9	4	5.7	19	42	134	29	7.3	3.9	3.3
19	6.8	6.6	8	4.5	6.6	18	40	144	26	6.8	4.1	3.6
20	5.9	5.2	7	5	6.8	17	45	125	18	6.6	4.1	3.7
21	5.6	6	6	4.8	7.3	18	49	113	16	5.9	4.1	3.6
22	5.6	6.5	5.6	4.5	9.2	17	46	106	18	6.2	*4.1	3.8
23	5.9	7	7.1	4	9.8	16	46	99	18	5.9	4.1	3.7
24	5.9	7.8	7	3.8	11	16	50	97	17	4.5	4.0	3.6
25	6.4	8.0	6.5	3.5	14	20	46	98	18	4.1	4.0	3.5
26	8.0	7.5	5.5	3.2	20	24	43	102	18	4.5	3.9	3.5
27	8.6	7	5	3	*31	22	48	111	18	4.8	3.9	3.4
28	6.8	6.2	5.5	3	26	24	66	113	18	4.6	4.0	3.4
29	5.8	6	6	3.5	-	26	94	132	20	4.6	4.1	3.5
30	8.6	6	6.2	4	-----	32	107	*107	22	4.5	4.0	4.0
31	8.9	-----	6.5	5	-----	33	-----	108	-----	4.4	4.2	-----
Total	169.2	232.4	245.7	143.4	243.6	750	1,404	3,551	1,279	305.6	128.4	107.3
Mean	5.46	7.75	7.93	4.63	8.70	24.2	46.8	115	42.6	9.86	4.14	3.58
Ac-ft	336	461	487	284	483	1,490	2,780	7,040	2,540	606	255	213

Calendar year 1956: Max 99 Min 2.6 Ac-ft 12,160

Water year 1956-57: Max 158 Min 3 Mean 23.5 Ac-ft 16,980

Peak discharge (base, 50 cfs).--Apr. 30 (3:30 a.m.) 133 cfs (3.46 ft); May 11 (12:30 a.m.) 211 cfs (3.98 ft).

* Discharge measurement made on this day.

No gage-height record; discharge estimated on basis of weather records and records for Malheur River near Drewsey and Donner und Blitzen River near Frenchglen.

Note.--Stage-discharge relation affected by ice Nov. 21-23, 27, Nov. 29 to Dec. 4, Dec. 6-8, 16, 18-21, Dec. 24 to Jan. 3, Jan. 5-16, Jan. 18 to Feb. 2.

East Fork Little Bear River near Avon, Utah

Location.--Lat 41°31', long 111°45', in NE $\frac{1}{4}$ sec. 17, T. 9 N., R. 2 E., 0.2 mile downstream from Porcupine Creek, 0.4 mile upstream from Pole Creek, and 4 miles east of Avon.

Drainage area.--50 sq mi, approximately.

Records available.--January 1938 to December 1950 (discontinued).

Gage.--Water-stage recorder. Altitude of gage is 5,250 ft (from topographic map). Prior to Mar. 29, 1939, staff gage and Mar. 30, 1939, to Oct. 31, 1945, water-stage recorder, at site 0.3 mile downstream at different datum.

Average discharge.--12 years (1938-50), 36.3 cfs (26,280 acre-ft per year).

Extremes.--1938-50: Maximum discharge, 960 cfs Apr. 18, 1946 (gage height, 5.30 ft); minimum, 5.0 cfs Feb. 14, 1949.

Remarks.--No diversion above station.

Revisions.--Revised figures of discharge, in cubic feet per second, for the water year 1941, superseding those published in WSP 980, are given herewith:

Date	Discharge	Date	Discharge
1941		1941-Con.	
Nov. 4	9.0	Dec. 2	8.5
5	9.5	3	8.5
6	9.5	4	8.7
7	9.5	5	8.5
8	9.5	6	8.5
9	9.5	7	8.5
10	9.5	8	8.0
11	9.5	9	8.0
12	9.0	10	8.0
13	8.5	11	7.5
14	8.5	12	7.5
15	8.5	13	7.5
16	8.0	14	7.5
17	8.0	15	7.5
18	8.0	16	7.0
19	8.0	17	7.0
20	7.5	18	7.0
21	7.5	19	7.0
22	7.5	20	7.0
23	7.0	21	7.5
24	7.0	22	7.5
25	7.0	23	8.0
26	7.5	24	8.0
27	7.5	25	8.0
28	7.5	26	8.0
29	8.0	27	8.0
30	8.5	28	8.0
Dec. 1	8.5	29	8.0

Month	Cfs-days	Maximum	Minimum	Mean	Runoff in acre-feet
November 1940.....	251.5	9.5	7.0	8.38	499
December.....	243.7	8.7	7.0	7.86	485
Calendar year 1940...	6,694.7	94	6.5	19.3	13,280
Water year 1940-41...	7,080.2	128	7.0	19.4	14,040

DISCHARGE MEASUREMENTS AT POINTS OTHER THAN GAGING STATIONS

Measurements of streamflow made at points other than regular gaging stations in the area covered by this report are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. Measurements believed to have been made under base-flow conditions are identified by an asterisk (*) to the left of the discharge figure. These measurements when correlated with the simultaneous discharge of a nearby stream where continuous records are available will give a picture of the low-flow potentiality of stream. The column headed, "Measured previously" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at points other than gaging stations during water year 1957						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Date	Discharge (cfs)
Great Salt Lake basin						
Logan River..	Little Bear River.	SW 1/4 sec. 36, T. 12 N., R. 1 E., 100 ft upstream from Logan Northern Canal, 300 ft below State Dam, and 2 1/2 miles east of Logan, Utah. At site of regular gaging station operated 1913-14.	219	1956	Nov. 13 July 19 Aug. 12 Aug. 17	*125 *232 *186 *171
Cub River....	Bear River...	Lat 43°08'20", long 111°38', at lower edge of Willow Flat, 0.2 mile upstream from Hillyards Canyon, and 13 miles northeast of Preston, Idaho.	5.0		July 20	*43.3
Do.....	do.....	Lat 42°08'10", long 111°39'00" 7/8 mile downstream from Hillyards Canyon and 12 miles northeast of Preston, Idaho.	8.6		July 20 Aug. 12 Sept. 16	*73.2 *42.6 *23.1
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, 5 1/2 miles northwest of Malad City, Idaho, and 8 1/2 miles upstream from Little Malad River. At site of regular gaging station operated 1931-32, 1940-47.	a3.3	1948-56	Oct. 5 Nov. 12 Dec. 7 Jan. 20 Feb. 24 Mar. 31 May 6 May 21 June 16 July 26 Aug. 27	*6.89 *6.63 *7.35 *6.48 10.9 13.7 12.9 10.8 *9.06 *8.22 *8.75
Sevier Lake basin, Utah						
Lower Asay Creek Spring.	Asay Creek...	Sec. 33, T. 37 S., R. 6 W., 9 miles southwest of Hatch.	-	1953	Oct. 26 Nov. 28 Mar. 13	13.8 12.8 11.3
Pavant Valley, Utah						
Corn Creek...	Pavant Valley.	Sec. 35, T. 23 S., R. 5 W., 4 miles southeast of Kanosh.	-	1944-46	Oct. 12	3.91
Meadow Creek.	do.....	Sec. 17, T. 22 S., R. 4 W., 4 miles east of Meadow.	-	1944-46, 1954	Oct. 12	1.28
Escalante Valley, Utah						
Terry Ranch Spring.	Shoal Creek..	Sec. 3, T. 38 S., R. 18 W., 16 miles southwest of Enterprise.	-		Oct. 16	0.28
Malheur and Harney Lakes basin, Oreg.						
Donner und Blitzen River.	Malheur Lake.	Sec. 2, T. 27 S., R. 31 E., 2 miles southwest of Voltage. At site of regular gaging station operated during 1916-19, 1921-22, 1938-46.	b760	1947-49 1951-55	Oct. 23	75.7
Malheur Lake Outlet.	Harney Lake..	Sec. 26, T. 26 S., R. 31 E., at highway bridge 21 miles south of Burns.	b2,150	1943, 1952-53 1955-56	Apr. 18 May 13	296 341

* Base flow.

a Flow derived largely from springs.

b Approximately.

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